IX. ASC 2025 / SPRING CONGRESS

BİLDİRİ ÖZETLERİ KİTAPÇIĞI / ABSTRACT BOOK

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Dr. Nida PALABIYIK

IX. ASC 2025 / SPRING

Sustainable Society from the Perspective of Human, Technology, and Artificial Intelligence



May 15-18, 2025

Hosted by

İstanbul Gedik University in İstanbul, Türkiye

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Preface

As we approach the second quarter of the 21st century, the global society is undergoing profound transformation. The rapid acceleration of digitalization and artificial intelligence-based technologies is reshaping not only economic activities but also individual decision-making processes, institutional operations, ethical values, and societal norms, ushering in a new world order characterized by multilayered uncertainties. This transformation necessitates reconsidering not only technological advancements but also humanity's search for meaning, value systems, and societal structures.

In this era shaped by digital transformation, the concept of sustainability can no longer be addressed solely in terms of environmental or economic dimensions. Building a sustainable society demands a holistic vision that integrates technological capability, ethical responsibility, and social diversity through a human-centered approach. With this perspective, the IX. International Academic Studies Congress (ASC-2025/SPRING) was successfully hosted by Istanbul Gedik University between May 15–18, 2025, under the main theme "Sustainable Society from the Perspective of Humans, Technology, and Artificial Intelligence."

Structured around 13 sub-themes, the congress brought together multiple disciplines including science, education, management, healthcare, environment, innovation, and international relations. A total of **316 paper** submissions were received from **22 countries**, and after a rigorous peer-review process, **280 papers** were presented. With contributions from **222 academics from Turkiye**, a total of **452 participants** enriched the multidisciplinary and diverse nature of the congress. Organized as a hybrid event, combining face-to-face and online sessions, the congress enhanced the global accessibility of knowledge sharing.

An essential element strengthening the academic depth of the congress was the contribution of leading invited speakers in their fields. During the opening session, **Prof. Dr. İbrahim Sirkeci** (The International Business School, UK) addressed migration, human mobility, and higher education policies; **Prof. Dr. Dustin Van Der Haar** (University of Johannesburg, South Africa) explored the impact of the digital age on educational systems; and **Prof. Dr. Himmet Karadal** (Bolu Abant İzzet Baysal University) contributed valuable insights on sustainable communication and management.

In subsequent days, valuable presentations were delivered on artificial intelligence ethics and development by **Prof. Dr. Yu-Feng (Winnie) Lee** (New Mexico State University, USA), digital identity and financial sustainability by **Dr. Meerbek Kudaibergenov** (Seoul National University of Science and Technology, South Korea), industrial development by **Dr. Sharofiddin Xoshimjonov** (Andijan State University), and environmental management models by **Prof. Dr. Muhammad Ashvaq** (University of Faisalabad, Pakistan).

Additionally, a forum session titled "Sustainable Society from the Perspective of Humans, Technology, and Artificial Intelligence" convened prominent figures from academia and the private sector. Chaired by **Murat Koç,** Rector of Çağ University, the panel featured distinguished names including **Fethi Şimşek** (Chairman of Doğa College), **Dr. Ahmet Erkasap** (İstanbul Gedik University), **Ali Eşelioğlu** (CEO of CoinTR), **Assoc. Prof. Dr. Azamat Maksüdünov** (Kyrgyzstan-Türkiye Manas University), and **Şakir Oral** (Chairman of the Board, Baysaş Inc.) discussed societal dimensions of technological transformation based on their sectoral experiences.

Workshops conducted during the congress also attracted attention. Particularly, the workshop "Publishing in Quality Journals and Book Editing," featuring experienced academics such as **Prof. Dr**. **Cemal Zehir**, **Assoc. Prof. Dr. Mehmet Bağış**, **Asst. Prof. Dr. Gerçek Özparlak** and **Dr. Ebru Bağcı**, provided a platform for strategic knowledge sharing on academic production processes.

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In conclusion, ASC-2025/SPRING transcended being merely a venue for academic presentations, creating a multifaceted scientific ecosystem centered on human aspects and addressing the societal, ethical, and structural dimensions of digital transformation. It facilitated intellectual connections and new collaborations among participants, and our greatest wish is for this scientific gathering to continue growing in the years to come.

IX. International Academic Studies Congress – ASC 2025

Congress Organizing Chairs

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Önsöz

21. yüzyılın ikinci çeyreğine yaklaşırken, küresel toplum derin bir dönüşüm sürecinden geçmektedir. Dijitalleşmenin ivme kazandığı, yapay zekâ temelli teknolojilerin yalnızca ekonomik faaliyetleri değil; bireylerin karar alma biçimlerinden kurumların işleyişine, etik değerlerden toplumsal normlara kadar pek çok alanı yeniden şekillendirdiği bu yeni dünya düzeni, çok katmanlı bir belirsizlik ortamını da beraberinde getirmektedir. Bu dönüşüm, yalnızca teknolojik bir değişimi değil; aynı zamanda insanın anlam arayışını, değer sistemlerini ve toplumsal yapıları yeniden düşünmeyi zorunlu kılmaktadır.

Dijital dönüşümün etkisiyle şekillenen bu çağda, sürdürülebilirlik kavramı artık yalnızca çevresel ya da ekonomik boyutlarıyla sınırlı olarak ele alınamaz hâle gelmiştir. Sürdürülebilir bir toplum inşası, insan-merkezli bir yaklaşımla; teknolojik kapasiteyi, etik sorumluluğu ve toplumsal çeşitliliği birlikte gözeten bütüncül bir vizyon gerektirmektedir. İşte bu anlayış doğrultusunda, IX. Akademik Çalışmalar Kongresi (ASC-2025/BAHAR), "İnsan, Teknoloji ve Yapay Zekâ Perspektifinden Sürdürülebilir Toplum" ana temasıyla 15–18 Mayıs 2025 tarihleri arasında İstanbul Gedik University ev sahipliğinde başarıyla gerçekleştirilmiştir.

13 alt tema etrafında şekillenen kongre; bilim, eğitim, yönetim, sağlık, çevre, inovasyon ve uluslararası ilişkiler gibi çok sayıda disiplini bir araya getirmiştir. **22 farklı ülkeden** toplam **316 bildiri** başvurusu alınmış; titiz bir hakemlik süreci sonunda **280 bildirinin** sunumu gerçekleştirilmiştir. **Türkiye'den 222 akademisyenin** katkısıyla, **toplam 452** katılımcı, kongrenin çok sesli ve çok disiplinli yapısına katkı sunmuştur. Yüz yüze ve çevrim içi oturumlarla hibrit olarak düzenlenen kongre, bilgi paylaşımının küresel ölçekte erişilebilirliğini artırmıştır.

Kongrenin akademik derinliğini pekiştiren önemli unsurlardan biri de, alanında öncü davetli konuşmacıların katkısı olmuştur. Açılış oturumunda; göç, insan hareketliliği ve yükseköğretim politikaları çerçevesinde **Prof. Dr. İbrahim Sirkeci** (The International Business School, UK), dijital çağın eğitim sistemleri üzerindeki etkilerini ele alan **Prof. Dr. Dustin Van Der Haar** (University of Johannesburg, South Africa) ve sürdürülebilir iletişim-yönetim ekseninde değerlendirmelerde bulunan **Prof. Dr. Himmet Karadal** (Bolu Abant İzzet Baysal University) önemli katkılar sunmuştur.

İzleyen günlerde ise yapay zekâ etiği ve kalkınma üzerine **Prof. Dr. Yu-Feng Winnie Lee** (New Mexico State University, USA), dijital kimlik ve finansal sürdürülebilirlik üzerine **Dr. Meerbek Kudaibergenov** (Seoul National University of Science and Technology, South Korea), sanayinin gelişimi üzerine **Dr. Sharofiddin Xoshimjonov** (Andijan State University) ve çevresel yönetim modelleri üzerine **Prof. Dr. Muhammad Ashvaq** (University of Faisalabad, Pakistan) değerli sunumlar gerçekleştirmiştir.

Ayrıca, "İnsan, Teknoloji ve Yapay Zekâ Perspektifinden Sürdürülebilir Toplum" başlıklı forum oturumunda, akademi ve özel sektörden önemli isimler bir araya gelmiştir. Oturum Başkanlığını Çağ Üniversitesi Rektörü **Murat Koç'**un yaptığı panelde; **Fethi Şimşek** (Doğa Koleji Başkanı), **Dr. Ahmet Erkasap** (İstanbul Gedik University), **Ali Eşelioğlu** (CoinTR CEO), **Doç. Dr. Azamat Maksüdünov** (Kırgızistan – Türkiye Manas University), **Şakir Oral** (Baysaş A.Ş. Yönetim Kurulu Başkanı) gibi isimler, teknolojik dönüşümün toplumsal boyutlarını sektör deneyimleriyle tartışmaya açmıştır.

Kongre kapsamında gerçekleştirilen atölye çalışmaları da dikkat çekmiştir. Özellikle "Nitelikli Dergilerde Yayıncılık ve Kitap Editörlüğü" başlıklı atölye, **Prof. Dr. Cemal Zehir**, **Doç. Dr. Mehmet Bağış**, **Dr. Gerçek Özparlak ve Dr. Ebru Bağcı** gibi deneyimli akademisyenlerin katkılarıyla, akademik üretim süreçlerine dair stratejik bilgi paylaşımına zemin oluşturmuştur.

Sonuç olarak ASC-2025/BAHAR, sadece akademik bilgi sunumlarının yapıldığı bir platform olmanın ötesine geçerek; insanı merkeze alan, dijital dönüşümün toplumsal, etik ve yapısal boyutlarını tartışmaya açan çok yönlü bir bilimsel ekosistem yaratmıştır. Katılımcılar arasında düşünsel bağların ve yeni iş birliklerinin kurulmasına vesile olan bu bilimsel buluşmanın, gelecek yıllarda da artarak devam etmesi en büyük temennimizdir.

IX. Akademik Çalışmalar Kongresi – ASC 2025

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Prof. Dr. Muhammad Ashvaq (University of Faisalabad) PAKISTAN

Prof. Dr. Dustin Van Der Haar (University of Johannesburg) SOUTH AFRICA

Prof. Dr. Himmet Karadal (Bolu Abant İzzet Baysal University) TÜRKİYE

Dr. Meerbek Kudaibergenov (Seoul National University of Science and Technology) SOUTH KOREA

Dr. Sharofiddin Xoshimjonov (Andijan State University) UZBEKISTAN

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BALE VE DANS KONUSUNDAKI ULUSAL LİSANSÜSTÜ TEZLERİN ANTRENMAN İLE METODOLOJİ AÇISINDAN İNCELENMESİ

Gökçe Akgün (İstanbul Esenyurt University)

Araştırmanın amacı, Türkiye'de bale ve dans konusunda yayınlanmış lisansüstü tezlerden antrenman ile metodoloji içeriğine sahip olanların derlenmesidir. Lisansüstü tezlerde bale ve dans eğitimi içeren antrenman uygulamalarının oransal ve içerik dağılımının tespit edilmesi amaçlanmıştır. Belge incelemesi yapılan çalışmada Yükseköğretim Kurulu Ulusal Tez Merkezi Veri Tabanı kullanılmıştır. Araştırma için incelenen veri tabanına tanımlı 193 konu başlığından "Bale ve Dans" seçilmiştir. Bale ve Dans konulu tezler durumu onaylandı ve hazırlanıyor/işlemde olmalarına göre iki ayrılmıştır. Onaylandı ibaresi bulunan tüm tezler konu içeriklerine göre bale, halk oyunları ve diğer danslara göre gruplara ayrılmıştır. Onaylandı ibaresi olmayan tezler resmi olarak tamamlanmadığı için araştırma dışında tutulmuştur. Tespit edilen lisansüstü tezlerin türlerine, üniversitelere, yayın yıllarına ve dans türlerine göre genel sınıflamalar yapılmıştır. Tez konusu antrenman ile metodoloji içeriği olanlar ana inceleme yapılan grubu oluşturmuş, verisel dağılım kontrol edilmiştir.

Yükseköğretim Kurulu Ulusal Tez Merkezi Veri Tabanı Tez Merkezi verilerine göre 1989-2024 yılları arasında Türkiye'de toplam 246 tane "Bale ve Dans" konulu lisansüstü tezin onaylandığı tespit edilmiştir. Hazırlanıyor ve işlemde olan 30 tez araştırma dışında tutulmuştur. İncelenen tezler 46 farklı üniversitede yayınlanmıştır. Mimar Sinan Güzel Sanatlar University 59, Hacettepe University 40, Ege University 23 lisansüstü tez yayınıyla ilk üç sırada yer almıştır. Tezlerin 203 tanesi yüksek lisans, 20 tanesi sanatta yeterlilik, 23 tanesi doktora türündedir. En çok tezin 2019 yılında yayınlandığı, sadece bale ve dans konusu olan 82 tane tez olduğu tespit edilmiştir. Diğer tezlere toplam 28 farklı başka konu başlığının eklendiği anlaşılmıştır. Bale ve Dans konulu tezlere en çok Sahne ve Görüntü Sanatları, Halk Bilimi (Folklor) ve Spor konuları eklenmiştir. İncelenen tezlerinin bale, halk oyunları, modern dans, Arjantin tangosu, Latin danslar, Hint dansı, hiphop, göbek dansı, Roman dansı, bolero, vals ve genel dans bilgileri türlerinde olduğu anlaşılmıştır. Tez konusu antrenman ile metodoloji içeriğine sahip olan 94 tane tez içerik yönünden incelenmiştir. Bale ve Dans konulu tezlerin %13,41'i antrenman, %24,80'i teknik ve metodoloji içeriklidir. Antrenman uygulamalarının %48,57'si bale, %28,57'si halk oyunları, %8,57'si genel dans, %5,71'i Arjantin tangosu, %2,86'sı modern dans, %2,86'sı bolero, %2,86'sı vals ve %2,86'sı Latin dansı dağılımındadır. Antrenman veya teknik/metodoloji içeren tezlerin 12 tanesinde "Spor" konusu da eklenmiştir. Halk oyunlarına ait antrenman çalışmaları tekniksel uygulamaları içerirken bale konulu lisansüstü tezlerde iki tür ön plana çıkmaktadır. Bale antrenman yapısındaki tezlerin 10 tanesi eğitim sürecindeki hareketlerin uygulanma biçimlerini üzerinedir. Tezlerde; temel bale, fiziksel uygunluk gelişimi, kondisyon, esneklik, koordinasyon, zihinsel ve koreografi bilgisi içerikli antrenmanların metot yaklaşımı açıklanmıştır. Bale antrenmanı içeren 7 tezde ise farklı haftalar süren (4, 6, 8, 10 ve 20) antrenman uygulamalarının etkilerini incelenmiştir. Tezler büyük oranda konservatuvar bale öğrencilerinin yaş aralığına uygun hazırlanmıştır. Bale eğitimi olan tezlerde çoğunlukla kondisyon gelişimini temel alan antrenman türleri uygulanmıştır. Diğer tezlerde dans türünün eğitim çalışmaları ağırlık olduğu anlaşılmıştır. Teknik ve metodoloji içerikli tezler bale eseri teknikleri ile metodoloji olmak üzere iki alt başlıkta incelenmiştir. Araştırma kapsamında incelenen tezlerden 14 tanesi bir bale eserinin teknik özelliklerinin incelemesini içermektedir. En çok teknik incelemesi yapılan bale 3 lisansüstü tez içeriğiyle Kuğu Gölü balesidir. İncelenen metodoloji tezlerinin %68,63'ü bale, %13,73'ü halk oyunları, %11,76'sı modern dans, %3,92'si genel dans ve %1,96'sı Arjantin tangosu hakkında teknik bilgileri kapsamaktadır. Bale tezlerinde eğitim sürecindeki sınıflara ait teknik aşamaların yer aldığı anlaşılmıştır.

Araştırma sonucunda Bale ve Dans konulu çalışmalarda en çok bale içerikli tezlerin yayınlandığı anlaşılmıştır. Bale ve dans konulu tezlerde metodoloji konularına oranla antrenman uygulamalarının eksikliği tespit edilmiştir. Kuvvet, dayanıklılık ve denge içerikli programların dans eğitiminde etkili olacağı düşünülmektedir. Gelecek çalışmalarda bale ve dans performansı gelişimini inceleyen çalışmaların hazırlanması önerilmektedir.

Keywords: Bale eğitimi, Bale ve Dans, Bale antrenmanı,
Ballet education, Ballet and Dance, Ballet training

STRATEJİK PLANLAMANIN YÜKSEKÖĞRETİM KURUMLARINDA YÖNETİME ETKİSİ

Taleh KHALILOV (Nakhchivan State University)

Stratejik planlama, yükseköğretim kurumlarında etkin bir yönetim sürecinin temel taşlarından biridir. Bu çalışma, stratejik planlamanın yükseköğretim kurumlarında yönetim sistemine etkilerini incelemeyi amaçlamaktadır. Araştırma, stratejik planlamanın yönetim süreçlerine entegrasyonu, karar alma mekanizmalarına etkisi ve kurumların rekabet gücünü artırmadaki rolü üzerine odaklanmaktadır. Bu çalışma, nitel ve nicel yöntemler kullanılarak gerçekleştirilmiştir. Literatür taraması, anket ve mülakat yöntemleriyle yükseköğretim kurumlarındaki yöneticiler ve akademisyenlerle görüşüler yapılmıştır. Elde edilen bulgular, stratejik planlamanın, öğretim kalitesinin artırılması, finansal süreçlerin düzenlenmesi, insan kaynaklarının etkin yönetilmesi ve kurumsal sürekliliğin sağlanması açısından önemli katkılar sunduğunu ortaya koymuştur.
Araştırmanın temel bulgularından biri, stratejik planlamanın yönetim mekanizmalarına entegre edilmesinin kurumların hedeflerine ulaşmasında kritik bir rol oynadığıdır. Stratejik planlama, yöneticilere uzun vadeli perspektif kazandırmakta, kurumların misyon ve vizyonlarıyla uyumlu politikalar geliştirmelerine yardımcı olmaktadır. Ayrıca, akademik ve idari personelin stratejik hedeflere yönelik bilinçlendirilmesi ve motivasyonunun artması, kurumsal başarıyı olumlu yönde etkilemektedir. Bu çalışma, yükseköğretim kurumlarının sürekli gelişim ve yenilenme ihtiyacına yanıt vermek amacıyla stratejik planlamayı daha etkin bir şekilde kullanmalarının önemini vurgulamaktadır. Stratejik planlamanın başarıyla uygulanması için önerilen modeller ve yaklaşımlar sunularak, gelecekteki araştırmalar için de öneriler geliştirilmiştir.

Keywords: Stratejik planlama, yükseköğretim, yönetim, kurumsal strateji, akademik yönetim, karar alma süreci.

COVID-19 AND ITS IMPACT ON SMES IN HERAT, AFGHANISTAN

Khaled Sediqian (Ghalib University)

The COVID-19 pandemic has had a profound impact on businesses worldwide, with small and medium-sized enterprises (SMEs) being particularly vulnerable due to their limited financial reserves, market reach, and operational flexibility. This study aims to analyze the effects of the pandemic on SMEs in Herat, Afghanistan, a region where SMEs play a crucial role in economic development. The research employs a descriptive approach using first-hand data collected through a structured questionnaire, distributed among 385 SME owners and managers. Due to the absence of official statistics on the number of SMEs in Herat Province, the study applied an indefinite sample size method to determine a representative sample. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy test confirmed that the sample size had an adequacy of 89.8%, ensuring the reliability of the data collected. The study examines four key areas affected by the pandemic: financial stability, market performance, workforce management, and operational costs. The findings reveal that COVID-19 had a significant negative impact on SMEs, reducing their financial capacity, disrupting supply chains, decreasing consumer demand, and increasing costs related to pandemic management, such as health and safety measures. Statistical analysis using hypothesis testing at a 95% confidence interval confirmed that COVID-19 had a statistically significant impact on all four factors analyzed. The study utilized a non-parametric Chi-square test due to the non-normal distribution of the collected data, ensuring the robustness of the results.

Financially, SMEs in Herat experienced a severe decline in revenue and profitability, leading to difficulties in meeting operational expenses and repaying external debts. Many businesses faced liquidity crises, forcing them to either downsize their operations or shut down completely. Market disruptions further exacerbated the financial distress, as supply chain breakdowns led to shortages of raw materials, while consumer demand plummeted due to decreased purchasing power and uncertainty about the future. Many SMEs also struggled with inventory management, facing either excessive unsold stock or an inability to meet demand due to supply constraints.

The impact on employees was also significant. Many SMEs had to lay off workers due to financial constraints, while others reduced working hours or salaries to cope with declining revenues. Employee turnover rates increased, and workforce morale suffered as businesses struggled to provide job security. The transition to remote work posed additional challenges, particularly for businesses that lacked the necessary technological infrastructure. In some cases, businesses faced difficulties in recruiting new employees due to ongoing uncertainty and health concerns.

Operational costs increased considerably during the pandemic as SMEs had to invest in health and safety measures such as personal protective equipment (PPE), sanitization protocols, and modified workspaces to comply with COVID-19 regulations. Additionally, costs associated with transportation, logistics, and online business operations rose significantly. For businesses that shifted to digital platforms, investments in e-commerce solutions, digital marketing, and cybersecurity further strained their financial resources. Comparing these findings with global trends, SMEs in Herat faced challenges similar to those in other parts of the world, but with added complexities due to Afghanistan’s pre-existing economic difficulties. Unlike SMEs in more developed countries that benefited from government stimulus packages, Afghan SMEs received minimal financial support. The lack of a structured economic relief program meant that businesses had to rely on their limited reserves or seek informal financial assistance. Additionally, the

ongoing security issues, political instability, and infrastructural deficiencies in Afghanistan further complicated the recovery process for SMEs. One unique aspect of this study is that, despite the economic downturn caused by COVID-19, some SMEs in Herat reported a relatively lower impact compared to SMEs in other countries. This is partly attributed to Afghanistan's informal economy and the population's adaptation to crises due to decades of instability. Many businesses in Herat continued operations despite lockdown measures, as economic survival often outweighed health concerns. Unlike in developed economies where strict lockdowns were enforced, compliance with pandemic-related restrictions in Afghanistan was inconsistent, allowing some businesses to continue functioning in a limited capacity.

The study highlights the urgent need for policy interventions to support SMEs in their recovery. Recommendations include government-backed financial assistance programs, improved access to credit, and tax relief measures to ease the financial burden on struggling businesses. Additionally, investment in digital infrastructure and training programs can help SMEs adapt to the changing business landscape by embracing online sales, digital payments, and remote work solutions. Strengthening supply chain resilience through local sourcing and diversification strategies is also critical to ensuring business continuity in future crises.

In conclusion, this study provides valuable insights into the challenges faced by SMEs in Herat, Afghanistan, during the COVID-19 pandemic. The research confirms that COVID-19 had a significant negative impact on SMEs, affecting their financial stability, market operations, employee dynamics, and operational costs. However, the extent of the impact was influenced by Afghanistan's unique economic and social conditions. The findings contribute to the growing body of literature on the economic consequences of COVID-19, particularly in developing economies with fragile business environments. Policymakers, business owners, and stakeholders must work collaboratively to implement strategies that enhance the resilience of SMEs, ensuring their survival and growth in the post-pandemic era.

Keywords: COVID-19, Small and Medium Enterprises, Finance, Market, Cost, Employment, Afghanistan

HOW DO CULTURAL DIFFERENCES AND ETHNIC IDENTITY INFLUENCE THE ADAPTATION OF STUDENTS FROM ARAB COUNTRIES STUDYING IN RUSSIA

Vera Fedotova (HSE - Perm)

In the current era of globalization, there are an increasing number of students seeking higher education outside of their native culture (Rienties, Tempelaar, 2013). Educational experiences in host cultures provide an opportunity to expand an individual's intercultural knowledge and worldview, which enhances personal development and future career prospects (Rienties, Tempelaar, 2013). As scientists note, international students adapting to a foreign cultural environment experience a sense of loneliness (Wang et al., 2015), face difficulties caused by changes to their usual way of life (Szabo et al., 2016), discrimination, and experience cultural differences (Hirai et al., 2015). Many factors, including ethnicity and cultural differences, influence the success of the adaptation of a student to a foreign country.

In this paper, we consider ethnic identity, which is defined as a complex social phenomenon, as an awareness of one's unity with a local group. Ethnic identity refers to an individual's sense of self in belonging to a particular ethnic group (Liebkind et al., 2016). The second predictor of sociocultural adaptation is cultural distance. Cultural distance (how dissimilar cultures are in language, religion, values, etc.) has regularly affected the successful adaptation of immigrants. The key research question is whether a pronounced ethnic identity and cultural distance affect the socio-cultural adaptation of foreign students from Arab countries receiving education in a foreign country? The research was based on data obtained from first, second and third-year students from Arabic-speaking countries (Morocco, Syria and Egypt), studying at institutions of higher education in Perm, Moscow, Astrakhan, Kazan, Nizhny Novgorod and St. Petersburg. The overall number of respondents was 248 (56 from Syria, 84 from Egypt, 108 from Morocco). The average age of the respondents was 28 years (min – 20, max – 34 years).

The following methodics were user: scales for measuring sociocultural adaptation (Ward, Kennedy, 1999). The respondents were asked to assess the level of difficulty they had experienced in various social situations in the new society. Scales for measuring the strength of ethnic identity (Phinney, Ong, 2007). The abbreviated questionnaire contained five statements. The average score for all questions is a general indicator of the expression of ethnic identity .Scales for measuring cultural distance (Wark, Galliher, 2007). To measure cultural distance, the respondent needed to evaluate the indicators in terms of differences between the two cultures. The question asked was "How similar and how different are the following indicators in Russia and in your country?" These indicators included food intake, attitude toward family, raising children, attitude toward women, religion, traditions and customs, values and beliefs, etc.

Analyzing the peculiarities of ethnic identity, we found that Arab students have a rather strong ethnic identity; they take pride in their ethnic group and feel a strong attachment to it. Indeed, Arab students have a positive ethnic self-identification, but the influence of ethnic identity on the sociocultural adaptation has not been revealed. The level of cultural distance is still quite high. When feeling a high cultural distance, it is extremely difficult for a foreign student to adapt to life and study in a foreign culture. Arab students studying in Russia note the differences between Arab and Russian culture in terms of language, appearance, attitude toward women and food intake. However, they note that Russians have somewhat similar views to them with regards to family relations and parenting. It was revealed that cultural distance affects the sociocultural adaptation among Arab students studying

in Russia; a high level of cultural distance leads to a low level of sociocultural adaptation. The distance between cultures is directly proportional to the number of changes that a migrant will have to make in his or her behavior to adapt to a new cultural environment. Also, it was found that the difference between the two cultures in terms of values, traditions and customs, appearance and values affect the process of adaptation of foreign students from Arab countries in a foreign cultural environment.

The compiled research data provided an answer to the question posed at the beginning of the study: whether a pronounced ethnic identity and cultural distance affect the sociocultural adaptation of students from Arab countries receiving education in a foreign country. Although Arab students can be definitively said to have a positive ethnic self-identification, the influence of ethnic identity on the sociocultural adaptation has not been conclusively determined. Regardless, the high cultural distance of students from Arab countries makes it difficult for them to adapt to the educational environment of another country.

The limitations of the study are the impossibility of extrapolating the results to all representatives of the studied cultures, however, the results can serve as a basis for further research in this area. We hope that further research on a sample of other groups of foreign students will help establish additional determinants of the sociocultural adaptation of young migrants in Russia.

Keywords: Cultural Distance, Ethnic Identity, Socio-Cultural Adaptation

ÖRGÜTLERDE YAPAY ZEKÂ UYGULAMALARININ ETKİN YÖNETİM SÜRECİNE ETKİLERİ: LİTERATÜR TARAMASI

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Yapay zekâ uygulamaları ile örgütlerde çok hızlı ve daha doğru veri girişi sağlanmakta, elde edilen veriler en tutarlı şekilde analiz edilerek değerlendirilmekte ve örgütsel süreçlerde kullanılabilmektedir. Günümüzde yapay zekâ uygulamaları örgütlerde önemli bir rekabet aracı haline gelmiştir. Yapay zekâ uygulamaları ile örgütlerde elde edilmiş olan veriler analitik teknikler ile işlenmekte ve bu verilerin örgütlerde kullanılması daha etkili ve başarılı sonuçlar ortaya çıkartmaktadır. Yapay zekâ bilgilerin algılanması ve bu bilgilerin örgütsel süreçlerde kullanılması örgütlerde etkinliği artıracaktır. Örgütlerde yapay zekâ uygulamaları ile birçok süreç gerçekleştirilmekte ve faaliyetler daha kısa sürede, daha verimli şekilde gerçekleştirilmektedir. Örgütlerde bilgisayar donanımı ve yapay zekâ uygulamaları ile örgüt içinde verilerin toplanması ve işlenmesi, bulut tabanlı hizmetlerin artması, örgütsel süreçlerde maliyetlerin düşmesi gibi olumlu sonuçlar ortaya çıkmaktadır. Örgütlerde yapay zekâ uygulamaları ile strateji geliştirme, planlama ve tüm yönetim süreçlerinde uygulanmaları ile örgütsel verimlilik ve etkinlik artacaktır. Bu uygulamalar ile örgüt performansında artışın sağlanacağını ve örgüt faaliyetlerinde köklü değişikliklerin ortaya çıkacağını söylemek mümkündür. Örgütlerin stratejik planlarında amaç ve politikalarının belirlenmesinde ve örgüt faaliyetlerinin bu amaçlar doğrultusunda gerçekleştirilmesi sürecinde her aşamada yapay zekâ uygulamalarından faydalanılması örgütlerde maliyetleri düşürecek ve performansı artıracaktır. Örgütlerde çalışan bireylerin yapacakları tüm faaliyetlerinin yapay zekâ uygulamaları ile gerçekleştirilmesi örgütlerde zamandan tasarruf edilmesi, daha düşük maliyetlerle faaliyetlerin gerçekleştirilmesi ve etkinliğin artırılması mümkün olacaktır. Günümüzde örgütlerde finans, pazarlama, üretim, insan kaynakları, lojistik olmak üzere tüm sektörlerde yapay zekâ uygulamaları gerçekleştirilmektedir.

Keywords: Yapay Zekâ, Örgüt Yönetimi, Yapay Zekâ Uygulamaları

TÜRKİYE'DEKİ ORMAN REKREASYON ALANLARININ CBS SİSTEMİ İLE ANALİZİ

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İnsan nüfusunun fazla olduğu kent merkezlerinde yaşayanlar için iyi bir yaşam kalitesi, büyük ölçüde kentsel çevrenin kalitesi ile ilişkilendirilmektedir. Kentsel çevrenin kalitesinin en önemli belirleyicisini de yeşil alanlar oluşturmaktadır. Yeşil alan, boyutu ve işlevi ne olursa olsun, her türlü bitki örtüsüyle kaplı, özel ve kamusal alanlarda oluşan bir arazi yüzeyi türüdür. Günümüz modern toplumları yapısı itibariyle insanı doğal çevre ile düzenli temasını kısıtladı ve bu durum kişilerde fiziksel, sosyal ve psikolojik sorunların ortaya çıkmasını veya mevcut sorunların artmasını tetiklemiştir. Ekonomik, toplumsal ve teknolojik gelişmeler kırsal nüfusun azalmasına ve kentsel alanlarda ekolojik hayatın tahrip edilmesine/yok olmasına yol açmıştır. Bu durum kent merkezlerinde sıcaklık artışları, fırtınalar, kuraklık, su taşkınlıkları gibi olumsuzlukların yaşanmasına da neden olmaktadır. Bu olumsuzlukların önlenmesinde veya etkisinin azaltılmasında ormanlık alanların etkisi oldukça önemlidir. Bununla birlikte yeşil alanların varlığı kişilerin beden ve ruh sağlığına, ruhen yenilenmeye ve doğa sevisini tattırmaya yardımcı olmasının yanı sıra kaya tırmanışı, doğa yürüyüşü, kuş gözlemi, sportif faaliyetler gibi alternatif turizm faaliyetlerinin de gerçekleştirilmesine imkân sağlamaktadır. Türkiye'de açık alan rekreasyon alanları içerisinde yer alan orman parkları A, B, C ve D Tipi olmak üzere dört grup altında sınıflandırılmıştır. A Tipi (Konaklamalı), B Tipi ve C Tipi mesire alanları şehir merkezlerinin dışında yer almalarına rağmen, D Tipi orman parkları ise şehir ya da kent ormanı olarak isimlendirilmekte ve şehir merkezlerinde yer alan mesire alanlarıdır. A Tipi orman parkları kişilerin konaklamalarına imkan veren ve "Toplumun çeşitli dinlenme, eğlenme ve spor ihtiyaçlarını karşılamak, yurdun güzelliğine katkı sağlamak ve turistik hareketlere imkân vermek maksadıyla yüksek ziyaretçi potansiyeline sahip, günübirlik kullanım imkânı yanında gecelemeye de imkân sağlayan, çadır, lüks çadır, karavan, motor-karavan ve kır evi, kır lokantası, kır kahvesi gibi çok katlı olmayan, doğa ile uyumlu yapı ve tesisler ile yöresel ürünler sergi ve satış yeri, piknik üniteleri, kameriye ile diğer rekreasyonel yapı ve tesisleri ihtiva eden alanlar" olarak kabul edilen mesire alanları ve orman parklarıdır. B Tipi, C Tipi ve D Tipi konaklamasız orman parkları sadece kişilerin günübirlik ziyaret etmelerine imkân veren mesire alanlarıdır. B Tipi, C Tipi ve D Tipi orman parkalarının amaçları; kişilerin dinlenme, spor ve eğlence gibi ihtiyaçlarını karşılamak, ülkenin güzelliklerine katkıda bulunmak ve bölgedeki turistik hareketliliğinin artmasını sağlamak şeklinde sıralanabilir. Çok katlı yapılardan ziyade doğa ile uyumlu yapı ve tesislerin yapımına izin verilen B Tipi, C Tipi ve D Tipi orman parkalarında; kır kahvesi, kır lokantası, yöresel ürünlerin sergilendiği ve satışının yapıldığı yerler, kameriye ve piknik üniteleri gibi alanlar bulunmaktadır.

Bu çalışmanın temel amacı, Türkiye'deki orman parklarının CBS (Coğrafi Bilgi Sistemleri) ile analiz edilmesidir. Bu amaç doğrultusunda 1591 adet orman parkının ArcGIS 10.4.1 Programı kullanılarak haritalandırılması amaçlanmaktadır. Araştırma bulgularına göre A Tipi (Gece Konaklamalı) orman parkı sayısının 182 olduğu tespit edilmiştir. B Tipi (Günübirlik) orman parkı sayısının 403 olduğu görülmektedir. C Tipi (Günübirlik) orman parkı sayısının 871 olduğu ve D Tipi (Şehir Ormanı) orman parkı sayısının 135 olduğu tespit edilmiştir. Mevcut orman parkalarının gruplarına göre haritalandırılması ile birlikte orman parklarının hangi bölgelerde yoğunlaştırıldığı tespit edilmektedir. A tipi (Gece Konaklamalı) orman parklarının haritalandırılması ile kamp, karavan rotalarının oluşturulacağı düşünülmektedir. B tipi (Günübirlik), C tip (Günübirlik) ve D tipi (Kent Ormanı) orman parklarının haritalandırılması ile birlikte hangi kentlerin sınırları içerisinde kaç tane mesire alanının olduğunun tespit edilmesiyle birlikte rekreasyon orman parklarının arz kaynaklarının tespit edilmesi açısından önemli olacağı düşünülmektedir. Ayrıca orman parkları eko turizm rotalarının

oluşturulmasında ve kuş gözlemciliği, kaya tırmanışı, doğa yürüyüşü, sportif aktiveler gibi alternatif turizm çeşitlerinin artırılmasında önemli turizm arz kaynağını içerisinde barındırmaktadır. Bu açıdan destinasyonların doğa ile uyumlu alternatif turizm çeşitlerini artırmada orman parkların yönetimin etkin kullanılmasının faydalı olacağı düşülmektedir. İlgili literatür ve bulgular neticesinde geliştirilen bazı öneriler şu şekilde sıralanmaktadır:

- Orman parklarının temizliğinin ve tanıtımın yerel turizm politikacılarınca etkin bir şekilde uygulanması,
- A Tipi orman parklarında yer alan tesislerin standartlarının artırılması ve geliştirilmesi, Şehir merkezlerinde yer alan D Tipi orman parklarının sayısının artırılması ve özellikle D Tipi orman parkına sahip olamayan illerin bu hususta gerekli çalışmaları yaparak ormanların oluşturulmasının sağlanması,
- Bu hususta çalışma yapmak isteyen araştırmacıların ilerleyen çalışmalarda orman parklarını ziyaret eden ziyaretçilerin öneri ve şikayetlerine yer verdiği araştırmaların yapılması önerilmektedir.

Keywords: Rekreasyon, Orman Parkları, CBS.

SÜRDÜRÜLEBİLİR TÜKETİM: DİJİTAL OYUNCULAR ÜZERİNE BİR İNCELEME

Semih Sezgin (Sinop University)

Günümüzde sürdürülebilirlik kavramının öneminin gittikçe arttığı belirtilebilir. Bunun temel nedenlerini; rekabetin artması, tüketici davranışlarındaki değişim, iklim krizi, uluslararası pazarlama seçeneklerinin artması vb. şeklinde ifade etmek mümkündür. Sürdürülebilir tüketim davranışı, çevresel ve sosyal sürdürülebilirliği destekleyen tüketim davranışı şeklinde ifade edilebilir. Bu davranış biçimini hem kaynak kullanımı hem de atıkları ve kirliliği azaltmaya yönelik çabalar şeklinde özetlemek mümkündür. Sürdürülebilir tüketim kavramı; yüzeysel sürdürülebilir tüketim davranışı ve gerçek sürdürülebilir tüketim davranışı olarak iki boyutta ifade edilmektedir. Yüzeysel sürdürülebilir tüketim davranışı ile ekonomik fayda elde etme amacı ifade edilmiştir. Bunun başlıca nedeni ise tüketimin üretim ile ilişkisine atıf yapılmasıdır. Buna karşılık olarak gerçek sürdürülebilir tüketim davranışında ise ekonomik fayda ön planda değildir. Başka bir bakış açısı ile sürdürülebilir tüketim kavramı tasarruf etme eğilimi ve çevresel yönelimler olarak iki boyutta ele alınmaktadır. Buna göre, tasarruf etme eğilimi doğrudan çevreyi koruma eğilimine göre daha fazla tercih edilmektedir. Sürdürülebilir tüketim davranışı üzerinde tasarruf etme etkisinin daha etkin olduğunu belirtmek mümkündür. Sürdürülebilirlik olgusu pek çok farklı disiplin tarafından ilgi odağı olmasından dolayı ilgili konuya yönelik çalışmaların türü ve miktarlarının fazla olmasına neden olmuştur. Sürdürülebilir tüketim bireylerin temel ihtiyaçlarına cevap verebilen ve yaşam kalitesini artıran bir tüketim modeli ile aynı zamanda gelecek nesillere de ihtiyaçlarını karşılayabilme olanağının sunulduğu ve insan ve toplum sağlığına zarar verebilecek maddelerin en az düzeyde kullanıldığı davranış biçimi şeklinde tanımlamak mümkündür. Bununla birlikte tüketimden mümkün olduğunca kaçınmak, tüketimi niÇeliksel anlamda azaltmak, kendi içinde ekolojik ürünleri tercih etmek ve tüketmeyi ve tüketilen ürünlerden en az bir tanesinin ekolojik ürün olmasına dikkat etmek ile sürdürülebilir tüketim kavramı açıklanabilir. Tüketim davranışını belirleyen birçok etken içerisinde bireylerin yaşam tarzlarının da yer aldığı düşünüldüğünde oyun olgusunun tüketim davranışına yön verdiği ifade edilebilir. Oyun kavramı insanoğlu için çok öncelere dayanan bir sosyalleşme olarak kabul edilmektedir. Ancak, günümüzde özellikle oyun enstrümanlarının sayısallaştırılarak televizyon ekranı, bilgisayar monitörü gibi elektronik araçlar ile oynanmasına fırsat sunan yazılımlar ile e-ortamlara aktarılması neticesinde olgusal değişime uğradığı belirtilebilir. Dolayısıyla, internet teknolojisinin sunduğu imkanlar ile dijitalleşen oyun olgusu mobilize durumda olan tüketicilerin sıklıkla başvurduğu bir enstrüman haline gelmiştir. Oyunlar, sürdürülebilir tüketim davranışlarını etkilemek için güçlü bir araç olarak kullanılabilir. Bilinçlendirme, eğitim, ödüllendirme ve topluluk desteği gibi yöntemler, oyuncuların sürdürülebilirlik konusunda daha bilinçli ve sorumlu tüketim alışkanlıkları geliştirmelerine yardımcı olabilir. Dijital oyuncuların çevresel etkilerin altında kalma düzeyleri ve yaşam pratiklerini belirleyen etmenlerden dolayı farklı tüketim davranışları gösterebileceği göz önünde bulundurulabilir. Dijital oyuncuların tüketim davranışlarını belirlerken bu davranışları hangi düzeyde sürdürülebilir bir noktaya taşıdıkları sorgulanabilecek bir durum olarak görülebilir. Bu bağlamda, araştırmanın temel amacının değişen tüketici profilleri çerçevesinde oluşan gruplar arasında gösterilen dijital oyuncuların tüketim davranışlarının sürdürülebilir tüketim davranışına etkisinin varlığını incelemektir.

Bu çalışmada, Dijital oyunların tüketim davranışını sürdürülebilirlik temelinde yönetebilmek hususunda bir araç olarak kullanılabilirliği incelenmiştir. Veri analizine yönelik tanımlayıcı istatistikler, güvenilirlik ve normallik testleri IBM SPSS 21 paket programı kullanılarak, Doğrulayıcı Faktör Analizleri (DFA) ve Yol analizleri ise IBM SPSS AMOS 24 paket programı aracılığıyla gerçekleştirilmiştir. DFA analizi neticesinde oluşan modifikasyon indeksleri incelenmiş ve modellere yönelik düzeltmeler yapılmıştır.

Yol analizi ile kurulan hipotez test edilerek çalışma bulguları değerlendirilmiştir. Araştırma sonucuna göre, oyun motivasyonunun sürdürülebilir tüketim davranışı üzerinde etkisi istatistiksel olarak anlamlı bulunmuştur.

Keywords: Sürdürülebilir Tüketim, Dijital Oyuncular, Pazarlama

NUMERICAL SIMULATION OF ECO BLUE BIN

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The Eco Blue Bin is an innovative and environmentally friendly solution designed to tackle the growing issue of floating waste in marine and river environments. Positioned strategically at jetties, rivers, and marinas, the Eco Blue Bin functions as a trash collector that targets the accumulation of floating debris, bio-waste, and plastic bottles. These materials, often seen drifting in large quantities in water bodies, contribute significantly to environmental pollution, impacting not just the aesthetic beauty of these areas, but also posing serious threats to marine life and water ecosystems. With its ability to collect waste in these locations, the Eco Blue Bin is emerging as a potential game-changer for coastal and riverside communities, offering an efficient, sustainable, and low-maintenance solution for managing waste. What sets the Eco Blue Bin apart from other trash collectors is its unique design, which utilizes the Bernoulli principle to capture waste without the need for energy-consuming mechanisms. This principle works by generating a swirling flow in the water that naturally draws debris toward the collector, making it an energy-efficient solution. The Eco Blue Bin also incorporates renewable energy technology, utilizing the flow of water to generate electricity through an internal impeller rotation mechanism. This feature further enhances the device's sustainability by allowing it to operate without relying on external power sources. The combination of a simple trash collection mechanism and renewable energy use makes the Eco Blue Bin a truly innovative approach to marine waste management.

In this study, the focus is to perform a computational fluid dynamic (CFD) simulation study on the design of blades rotator to investigate the flow velocity, swirl flow pattern, pressure and the swirl effect. An Ansys fluent software R18.2 student version is used to analyse the fluid dynamics of the rotator. The results will determine the best rotator that will be used at the real prototype. Hence, the Eco Blue Bin prototype is modelled in Ansys Fluent to study the swirl flow effect by using two (2) types of rotator design that is round blade and six-blades shaped rotator. Two different rotator designs were modelled and tested: a round blade design and a six-blade shaped rotator. The results of the CFD analysis revealed significant differences between the two designs. The six-blade shaped rotator outperformed the round blade design in terms of pressure distribution, producing higher maximum pressure and negative pressure, which are crucial for capturing waste more efficiently. Additionally, the six-blade rotator generated a more effective swirl flow velocity, creating streamlined flow patterns that were more effective at pulling debris into the Eco Blue Bin. Although the velocity value does not differ much for the two types rotator but the flow streamlines of six-blades shaped rotator does show 2-3 wakes extra created to show a high swirl flow effect. The negative pressure increases by 266% and the maximum pressure increases by 593 % when compared the rotation of 20 rad/s between round and six-blades shaped rotator. This design of the six-blades shaped rotator was found to be superior in both the waste collection process and the generation of renewable energy, making it the optimal choice for use in the final prototype.

Keywords: Bin, Numerical Simulation, Swirl flow, CFD

AI AND EMPLOYEE ADAPTATION: DEVELOPMENT AND VALIDATION OF A NEW SCALE

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This study aimed to develop a valid and reliable measurement tool to assess employees' awareness perceptions regarding artificial intelligence (AI) integration and employee adaptation. The study followed a three-stage scale development process to ensure validity and reliability. In the first stage, qualitative research methods were used to develop an initial set of items for the scale. In-depth interviews were conducted with employees from various industries, including information technologies, education, and customer service. The interviews focused on employees' awareness, perceptions, and adaptation processes related to AI integration in the workplace. Thematic content analysis was conducted to extract key themes from the responses. As a result of this analysis, a pool of 40 potential scale items was generated. These items were designed to capture different aspects of AI awareness and adaptation, such as employees' understanding of AI-driven processes, their perceived ease of adapting to AI-based systems, and their confidence in working with AI technologies. In the second stage, the preliminary item pool was refined to ensure clarity and relevance. Experts in organizational behavior, AI integration, and psychometrics were consulted to review the items. The expert panel evaluated the items based on semantic clarity, face validity, and content validity. Based on their feedback, redundant or ambiguous items were eliminated or revised, and a more structured draft scale was developed. At the end of this process, a revised version of the scale consisting of 30 items was created. This version was considered more refined and representative of the construct being measured. In the final stage, the 30-item draft scale was tested empirically. The scale was administered to a sample of 281 employees working in the information technologies, education, and customer service sectors. These sectors were chosen because they are among the industries most affected by AI integration, making them ideal for evaluating employees' awareness and adaptation processes. The data collected from the survey were analyzed using SPSS 21.0 and AMOS 22.0 software. Exploratory factor analysis (EFA) was conducted to determine the underlying structure of the scale. The results indicated that the scale had a one-dimensional structure, meaning that all items measured a single underlying construct related to AI integration and employee adaptation. Following the EFA, confirmatory factor analysis (CFA) was performed to test the model fit and validate the factor structure. The CFA results showed that the scale had an acceptable level of fit. The factor loadings of the remaining 6 items in the scale were all above 0.40, indicating strong relationships between the items and the underlying construct. Additionally, the t-values for all items were statistically significant, confirming the robustness of the scale. To assess the reliability of the scale, the Cronbach's Alpha coefficient was calculated. The overall Cronbach's Alpha for the scale was found to be 0.94, indicating a very high level of internal consistency. This suggests that the items within the scale measure the same construct consistently. Furthermore, item-total correlation analysis was conducted, and it was determined that the item-total correlation values for all 6 items were above 0.30, specifically ranging between 0.76 and 0.89. These values further support the reliability of the scale. The validity of the scale was examined through content validity, construct validity, and convergent validity analyses. The expert evaluation process ensured content validity, while the factor analyses provided evidence of construct validity. The significant factor loadings and high model fit indices from the CFA results also confirmed that the scale accurately measures the intended construct. Based on the findings

from the validity and reliability analyses, the Artificial Intelligence Integration and Employee Adaptation Scale was determined to be a psychometrically sound instrument. The final version of the scale consists of 6 items and has a one-dimensional structure, making it a concise and efficient tool for assessing employees' perceptions of AI integration and adaptation in the workplace. Given its strong statistical properties, this scale can be effectively used in future research and practical applications in human resource management, organizational behavior, and AI-related workplace studies. This study contributes to the literature by providing a validated measurement tool that can help organizations assess and enhance employees' adaptation to AI-driven changes. Future research could expand on these findings by applying the scale in different industries and cultural contexts to further validate its applicability and generalizability.

Keywords: Artificial intelligence integration, employee adaptation, scale development, validation study

AUTOMATED RAINWATER HARVESTING SYSTEM FOR PLANT IRRIGATION

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In order to promote sustainable agriculture, this project intends to create a rainwater harvesting system. This research focuses on the use of rainwater as an efficient alternative source in light of the growing awareness of the significance of managing water resources, particularly in the agricultural sector, which frequently faces the challenge of water scarcity. This encourages the more sustainable and responsible use of natural resources while also lessening reliance on traditional water sources. The proposed system is designed to detect soil moisture and activate automatic irrigation when needed by the plants. The ESP32 microcontroller technology will be used to manage this system, ensuring efficient and effective use of rainwater. By automating the irrigation process based on soil moisture data, this system can ensure that plants receive the right amount of water at the right time, avoiding waste and improving crop yields. By introducing this innovative solution, the project is expected to make a significant contribution in addressing the issue of water scarcity in the field of agriculture. The comparison between the Automated Rainwater Harvesting System for Plant Irrigation project and previous studies using rainwater harvesting technology in the context of agriculture shows different approaches in managing water resources for plant irrigation. In this study, key elements such as component selection, control systems, and technology application are used in each system to ensure the effectiveness and efficiency of rainwater usage. The findings obtained from various literature studies provide perspectives on the advantages and challenges in the application of rainwater harvesting technology, as well as how these systems contribute to sustainable agricultural practices and the reduction of water resource wastage. This comparison aims to examine whether the developed project provides a better solution or supports improvements to existing technology. The aim of this project is to create an effective autonomous rainwater collection system in order to solve the problem of agricultural water scarcity. The system's goal is to catch surface-level rainfall and hold it in a collection tank for use in irrigation. The entire operation is controlled by an ESP32 microcontroller, and the water level in the tank is tracked by a water level sensor. The water level falls below a certain threshold, which triggers the water pump to move water into the collection tank. The system's many parts work together to guarantee steady water flow, enabling the effective use of the rainwater gathered for farming purposes. The system's ability to effectively collect and store rainfall increases the amount of water available for plant irrigation, according to the study's findings. The electrical circuits and component interactions can be optimized to provide more stable and long-lasting performance, even while the system functions well as is. The system's dependability can also be increased by making it more resilient to harsh weather events like intense rain or high temperatures. Overall, by offering an automated solution for improved water management, lowering water waste, and guaranteeing a more reliable water supply for plants, this initiative significantly benefits the agricultural industry. The suggested enhancements could further increase the system's effectiveness and relevance in tackling upcoming water scarcity issues.

Keywords: Autonomous; Plant Irrigation; Harvesting System

IoT PET FEEDING BOX

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Pet owners frequently struggle to feed their cats consistently high-quality food at regular times in this increasingly hectic and busy world. A key component of maintaining our pets' health and well-being is meeting their exact dietary requirements. One of the issues with pet care is traditional feeding. Due to their hectic work schedules, pet owners frequently neglect to feed and hydrate their animals. In order to overcome this difficulty, our project will create a novel gadget called the IOT Pet Feeding Box. The purpose of this gadget is to make it easier for cat owners to feed their animals in a systematic and regulated way. In addition to providing the cat with the appropriate amount of food at the appropriate time, this gadget lets owners remotely control the process using a smartphone application. Pets can be fed with this gadget without getting in the way of the owner's work. When their pets get hungry, owners can feed them. This IOT Pet Feeding Box uses the ESP-WROOM-32, which is a generic Wi-Fi module, generic Bluetooth LE MCU targeting a wide range of applications, from low-power sensor networks to the most challenging tasks, such as voice encoding, music streaming, and MP3 decoding. The core of this module is the ESP32-D0WDQ chip, which is an embedded chip designed to be scalable and adaptive. There are two CPU cores that can be individually controlled, and the CPU clock frequency can be adjusted from 80 MHz to 240 MHz. This chip also has a low-power co-processor that can be used instead of the CPU to save power when performing tasks that do not require much computing power, such as peripheral monitoring. Therefore, pet owners can use their smartphone to keep an eye on when their pet feeds. With the development of the Internet of Things (IOT), microcontrollers, and mobile applications, automatic and technologically sophisticated pet feeding systems have also changed. High-tech pet feeding systems are creative tools to assist pet owners in giving their pets better care. The IOT Pet Feeding Box may now receive notifications from the device and feed in accordance with the owner's preferences as a result of testing. This project can be used in areas with Wi-Fi coverage or networks only, according to the many study scopes that have been established. Additionally, animal areas like cow barns and other similar spaces can employ this method. All of this is intended to address some of the issues that come up when using the current techniques, such as owners' challenges in feeding their pets, particularly if they live far from the pettle area. The goal of this project is to create an IOT Pet Feeding Box. According to the current manual, one more element affecting pet welfare is livestock owners' failure to provide animal feed management systems. The outcome of the IOT Pet Feeding Box was to facilitate user control over pet food management and this idea can beneficial both owners and pets. This project is inexpensive and simple to operate. Additionally, it has a security system that allows customers to utilize the BLYNK app on their cellphones to keep an eye on the amount of food and drink their pets are receiving. It will result in a perfect project that is very relevant for use today and stays up to date with the most recent technical advancements.

Keywords: KEYWORDS: Internet of Things; Pet; Feeding Box

TOPLUMSAL BÜTÜNLÜK AÇISINDAN MÜZİK ALANINDA YAPAY ZEKÂYI BEKLEYEN TARTIŞMALAR

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Müzik, insan ve duyular arasında hem bilimsel hem deneysel hem de düşsel olarak ses dünyasında gerçekleşen bağlantılar bütünlüğünün toplumdaki karşılığıdır. Bu nedenle ses dünyasının evrenselliğini, duyularla birlikte şekillenen deneyimlerinin insan üzerinde olan etkisi belirler. Bu açıdan duyusal engeli olan veya olmayanlar arasındaki fark, ses dünyasında duyudan öte, kuramsal olarak karşılık bulur. Buna karşın kişisel yetiler ve kullanılan yöntemler dışında müzik, çevresel tüm sosyal faktörlerden etkilenir. Böylelikle çağın teknolojik araç ve imkânları ile toplumda karşılık bulduğu gibi duyusal tepkilerini de beraberinde taşır.

Dijital çağ olarak adlandırılan bu yüzyıl, kuramsal olmaktan öte beğenilere göre şekillenmektedir. Bu beğenilerin günümüz müzik türlerine olan etkisi duyusal olduğundan hiçbir biçimde müzikal kuramı etkilememektedir. Müzikal farklılığı belirleyen kuram, çalgı ve müzik yazısının ortak noktası akustik çalışmalardır. Asya'da başlayan bu akustik çalışmaların Antik Yunan sonrası Şark ve Avrupa'da yapılanları ile ortak noktalarının duyu olduğu görülür. Duyu, insanlık tarihi içerisinde gelişme gösteren farklılıkları ile işitme temelinde yapılandıran bir bilişsel süreci yansıtır. Bu nedenle yapay zekâ ile birlikte tartışılması beklenen konulara arasında insan ve duyusunun bilişsel sürecinin etkin olacağı düşünülmektedir.

Dünya müzik tarihinin kuramsal ya da geleneksel ilk örneklere yapılan arkeolojik kazılarla Anadolu ve Mezopotamya topraklarında rastlanmaktadır. Buna karşın bugünkü gelişkin örnekler Avrupa Müziği ile karşımıza çıkmaktadır. Tüm bu gelişmelere rağmen yirminci yüzyıl ve sonrasında diğer müzik türleri dışında etnik müziklerin sürdürülebilir olması insan duyularının duyarlılığını ortaya koymaktadır. Bu nedenle sanayileşme gibi toplumsal tüm etkilerden uzaklaştığı gibi savaş ve suni müdahalelerde de etnik müziklerin kendini korunduğu görülmektedir.

Etnik müzikler insan ve hafızasının toplumda yer edinen davranışlarının duyusal karşılıklarını yansıtır. Böylelikle insan ve duyusunun müzik üzerinde olan etkisi ile algı ya da bilişi etkiler. Bu nedenle çağa uygun olarak gelişen müzik yapılarında ritim dışında ses ve ses alanlarının uyumunu ezgiler ile korumaya alır. Bu açıdan yalnız Türk Halk Ezgileri incelendiğinde, birçok bilimsel alanda farklı konu içeriğine rastlanmaktadır. Makam müzikleri olarak ele alınacak bu yapıların dikkat çeken yanı irticalen yapılan bir oluşa işaret etmektedir. Bu yapılar bir oluş biçimi olan makamlarla birlikte biçim ve formu da ortaya çıkarmaktadır.

Değişen dünyanın olanakları yalnız insan ve yaşamını etkilemekle kalmayıp aynı zamanda uyumunu (adaptasyon) ele almaktadır. Bu nedenle ulusal müziklerin ötesinde evrensel duyu ve biliş farklılıkları, yapay zekâ farklarının da bir nedeni olacaktır. Yakın yüzyıl içerisinde dünya ve müzik tarihi incelendiğinde, makine çağı doğrultusunda genetik ile başlayan çalışmaların bilgisayarlarla dijital olarak insanı dışında tutmaktadır. Fakat ortaya konulan ürünler insana özgü olacağı düşünüldüğünde, duyular ve bilişin göz ardı edilmesini tartışmaya açacaktır.

On dokuzuncu yüzyıldan günümüze kadar geçen süre içerisinde müziğin yapısal değişimi söz konusu olsa da gelişimi tartışmalıdır. Özellikle yirminci yüzyıl içerisinde hem dünyayı hem de ülkemizi etkileyen savaşlar ve sonrasında olan değişimler, müzik alanında kendini açıkça göstermektedir. Aynı yüzyıl içerisinde ele alınan genetik konusunun müzik alanında elde edilen sonuçları, insan ve duyularının farklılığını, coğrafi olarak da etkilemekte olduğunu göstermektedir. Bu açıdan müzik alanında biliş, genetik ile yapay zekâ arasındaki en önemli farkı ortaya koyacağı düşünülmektedir.

Günümüzde biyolojik olarak insanın beşeri özellikleri açıklanabilse dahi duyusal farklılık, tartışmalarının ileri zamanlarda sürdürülmesinin bir nedeni olacaktır. Tüm bunlarla birlikte insan zekâsının gelişimine yardımcı olan yetenek ve beceri gibi insana özgü yetiler, yapay zekânın da tıpkı bilgisayar programları gibi çeşitliliğine neden olacaktır. Bu nedenle tek program altında tüm toplumu yapay zekâ çerçevesinde toplamak imkânsız gibi görünmektedir.

Keywords: Yapay Zekâ, İnsan, Biliş, Duyular

SHRINKING AGRICULTURAL LAND: A THREAT TO SUSTAINABLE RURAL SOCIETY IN PAKISTAN

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Pakistan is an agriculture based country that mainly depends on Agriculture. Agriculture is the backbone of country. The country growth is directly related to this sector. The share of agriculture is 22% to the GDP and provides around 37.4% employment. Faisalabad (Manchester of Pakistan) is the third main city of Pakistan. The total geographical area of Faisalabad is 1363 ha. Only 1ha is under forest.65 ha is not available for cultivation. The net sown area of Agricultural land of Faisalabad is 514 ha.Net cropped area of Faisalabad is 709ha.Faisalabad is a multicroping city. But unfortunately mostly Agricultural land of Faisalabad is shrinking due to rapid urbanization and housing colonies. There are six tehsils in district Faisalabad, named as Faisalabad City, Faisalabad Sadar, Jaranwala, Samundri, Chak Jhumra and Tandaliawala. Research was conducted in tehsil Faisalabad (Sadar). Five villages were selected by using snow ball sampling technique. Sample size was calculated by using online website (www.surveysystem.com). Keeping Confidence Level 95% and confidence interval 8 which is 124. A pre-tested and validated interview schedule was used for data collection. SPSS (Statistical Package for Social Sciences) was used analyzing the data. The study results described that more than half (54.8%) farmers were belonged to crop and livestock farming sector as the major source of their income. About 8.9% of the farmers were government servant and farming while 25% had agriculture and business as a source of income. Majority (79.8%) of the respondents were small farmers who had less than 12 acres of land while only 4.8% of the respondents belonged to progressive or large farming community. Among the different reasons of urbanization of agricultural land commercial and retail expansion was at 1st in rank order according to the W.S. 510 and mean 4.11 followed by unplanned or poorly managed urban sprawl at 2nd rank order with W.S.509 and mean 4.10 and laying between agree to strongly agree at five-point Likert scale but tending towards agree. Rapid population growth (W.S.=508, m=4.09), land speculation and investment (W.S.=506, m=4.08),) and infrastructure development (W.S.=505, m=4.07), at 3rd, 4th and 5th in rank order and laying between agree to strongly agree at five-point Likert scale but tending towards agree. Among the different strategies farmers can adopt in case of urbanization of agricultural land, collective bargaining and advocacy was at 1st in rank order according to the W.S. 506 and mean 4.08 followed by diversification of livelihood sources at 2nd rank order with W.S. 497 and mean 4 and laying between agree to strongly agree at five-point Likert scale but tending towards agree. It was recommended that development and enforcement of land use rules that prioritize the renovation of agricultural land. This can encompass zoning regulations that restrict city improvement in agricultural areas and sell using vacant city land for improvement rather and Invest in agricultural infrastructure such as irrigation systems, garage centers, and transportation networks to enhance the efficiency and productiveness of agricultural land. This study will leave an impact for future researcher to dig-out main challenges for rural society.

Keywords: Farmer, Cultivated Land, Challenges, Urbanization

YÜKSEKÖĞRETİM KALİTE GÜVENCE FAALİYETLERİNDEKİ İYİ UYGULAMA ÖRNEKLERİ: NİTEL BİR ARAŞTIRMA

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Yükseköğretim kurumları, toplumsal, ekonomik ve siyasi gelişimin yanı sıra bireylerin yaşam kalitesini artırmada kilit bir rol üstlenir. Üniversiteler, bilgi toplumu olma hedefi doğrultusunda eğitim, araştırma ve nitelikli insan kaynağı yetiştirme gibi temel görevlerini yerine getirmek için sürekli çaba harcar. Kalite güvencesi, bu süreçte planlı ve sistemli bir yaklaşımı gerektirir. Öğrencilerin kazanımlarının ve yetkinliklerinin ölçülmesi, eğitim çıktılarının etkin bir şekilde değerlendirilmesi için güçlü mekanizmaların kurulması büyük önem taşır. Kurumsal hedeflerle uyumlu bir şekilde yürütülen faaliyetler, kalite güvencesinin sağlanmasında temel bir unsur olarak öne çıkar. Yükseköğretimde iyi uygulamalar, eğitim kalitesini yükseltmek, öğrencilerin sürece aktif katılımını sağlamak ve öğrenmeyi destekleyici bir ortam oluşturmak amacıyla gerçekleştirilen çalışmalardır. Teknolojinin eğitime entegre edilmesi, yenilikçi öğretim yöntemlerinin benimsenmesi ve öğrencilerin sürece dahil edilmesi, eğitim süreçlerinin etkililiğini artıran önemli unsurlardır. Özellikle teknolojinin doğru kullanımı, öğrencilerin kendi kendine öğrenme becerilerini geliştirir ve özerk bir öğrenme süreci sağlar. Bunun yanı sıra, öğretim uygulamalarının düzenli olarak geri bildirimlerle iyileştirilmesi, eğitim standartlarının yüksek tutulması açısından büyük önem taşır. Genel olarak yükseköğretimdeki iyi uygulamalar yalnızca eğitim kalitesini artırmakla kalmaz, aynı zamanda yükseköğretim kurumlarının genel başarısına ve performansının sürdürülebilirliğine de katkıda bulunur.

Üniversite sıralama sistemlerinde öne çıkan The Times Higher Education (THE) sıralamasına ilk sıralara giren üniversitelerin akademik, sosyal ve kültürel alanlardaki iyi uygulamalarının ortaya konulması amacıyla gerçekleştirilen bu araştırma nitel araştırma yöntemine uygun olarak gerçekleştirilmiştir. Çalışmada yazılı belgelerin sistematik olarak incelendiği içerik analizi yöntemi kullanılmıştır. Araştırma kapsamında, 2023 Times Higher Education (THE) sıralamasında ilk 50'de yer alan üniversitelerin web siteleri, kalite politikaları ve iyi uygulama örnekleri analiz edilmiştir. Toplanan veriler, Avrupa Komisyonu'nun Avrupa Eğitim Alanı ve Yükseköğretim Kalite Kurulu (YÖKAK) kriterleri temel alınarak sınıflandırılmıştır. Özellikle mikro kimlik bilgileri, çevrimiçi öğrenme, eşitlik, çeşitlilik, kapsayıcılık, sürdürülebilirlik ve toplum katılımı gibi temalar üzerinde durulmuştur. Araştırma sonucunda, THE sıralamasında üst sıralarda yer alan üniversitelerin, öğrencilerini ve toplumu modern dünyanın değişen koşullarına hazırlamak için çeşitli girişimlerde bulunduğu tespit edilmiştir. Üniversiteler, kalite güvencesi faaliyetlerini sistematik bir şekilde uygulamak için koordinasyon merkezleri veya ofisler kurmuştur. Bu birimler aracılığıyla kurumsal projeler, etkinlikler ve toplum faaliyetleri planlanmakta ve uygulanmaktadır. Ayrıca, üniversiteler, fen, teknoloji, mühendislik ve matematik (STEM) disiplinlerinin yanı sıra sosyal bilimler, sanat ve kültür gibi alanlarda da bireylere beceriler kazandırmaya odaklanmaktadır. Yükseköğretim kurumları, toplumsal ve ekonomik kalkınmanın yanı sıra bireylerin yaşam standartlarını yükseltmek için önemli bir rol üstlenir. Üniversiteler, bilgi toplumu olma yolunda eğitim, araştırma ve nitelikli insan kaynağı yetiştirme gibi temel hedeflerine ulaşmak için çaba gösterirken bu süreçte iyi uygulamalar ortaya koymak için sistematik ve planlı bir yaklaşım ile çalışmaktadır. Öğrencilerin kazanımlarının ve yeterliliklerinin ölçerek eğitim çıktılarını değerlendiren etkili mekanizmaların kurulduğu gözlenmektedir.

Yükseköğretimin dijitalleşmesi, her yaş grubundan bireylerin eğitim faaliyetlerine katılımını kolaylaştırmıştır. Gelinen noktada öğrenciler sosyal medyayla daha fazla etkileşim halinde ve teknolojik araçlara yatkın oldukları için üniversiteler, eğitim süreçlerini dijitalleştirerek öğrencilere, mezunlara ve topluma çeşitli yeterlilikler kazandırmaktadır. Dijital öğrenme platformları, videolar ve mobil uygulamalar, en çok kullanılan araçlar arasındadır. Sürdürülebilirlik yükseköğretim kurumları için önemli bir odak noktasıdır. Üniversiteler, çevresel, ekonomik ve toplumsal sorunları en aza indirmek için araştırma merkezleri ve sürdürülebilirlik ofisleriyle iş birliği yapmaktadır. Ayrıca, kapsayıcı bir kampüs kültürü oluşturmak için paydaşların farklı ihtiyaçları dikkate alınmaktadır. Irk, dil, cinsiyet ve yaş gibi unsurların yanı sıra, öğrencilerin eğitim geçmişleri ve mali koşulları da göz önünde bulundurulmaktadır. THE sıralamasında üst sıralarda yer alan üniversiteler, öğrenci ve toplum ihtiyaçlarını karşılamaya yönelik çeşitli girişimlerde bulunmaktadır. Bu kurumlar, öğrenci merkezli yaklaşımlar benimsemekte, öğrenme kaynaklarını çeşitlendirmekte ve sürdürülebilirlik hedefleri belirlemektedir. Türkiye'de ve uluslararası düzeyde yükseköğretim kurumlarının, bölgesel ve ulusal ihtiyaçları eylem planlarına entegre etmeleri ve dijital araçları daha etkin kullanmaları önerilmektedir. İleriki araştırmalarda disiplinler arası iş birliği ile küresel zorluklar ele alınarak konunun alt boyutlarına ve diğer bileşenlerine odaklanılabilir.

Keywords: Kalite, THE Sıralama Sistemi, Yükseköğretim, Kalite

EVALUATING CHATGPT'S INFLUENCE ON ESL EDUCATORS' TEACHING AND MOTIVATION

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The incorporation of artificial intelligence (AI) in education has profoundly altered pedagogical approaches, with ChatGPT being a prevalent resource among English as a Second Language (ESL) educators. AI-driven systems provide automated lesson preparation, instantaneous student feedback, customised learning materials, and improved engagement techniques, transforming conventional educational methodologies. Nevertheless, although AI is acknowledged for enhancing teaching processes and increasing efficiency, apprehensions remain about its possible effects on teacher autonomy, instructional quality, content correctness, and ethical implications. This study seeks to analyse the influence of ChatGPT on teaching methodologies, resource availability, and educator motivation, offering empirical insights into the transformation of ESL instruction by AI. Employing a quantitative study methodology, data were gathered from 39 ESL educators across universities, polytechnics, community colleges, and schools in Malaysia via structured surveys. The research aimed to assess the impact of ChatGPT on lesson preparation, instructional efficacy, and student engagement, while also considering issues related to excessive dependence on AI, content veracity, and ethical ramifications. The results demonstrate that 92.3% of ESL educators have used ChatGPT into their pedagogical methods, notably for lesson planning, student assessment, and resource creation. Educators indicated that AI tools considerably aided in the development of educational materials, the generation of concepts for interactive activities, and the provision of immediate grammatical and vocabulary assistance. Furthermore, 79.4% of instructors noted a transition to student-centred learning, utilising ChatGPT to customise learning experiences and deliver adaptive instruction aligned with students' competence levels. The incorporation of AI was associated with enhanced efficiency in class planning and a diminished burden, leading to elevated job satisfaction, as 75% of educators indicated a favourable effect on motivation. Correlation research indicated a robust positive association ($r = 0.74$) between AI utilisation and instructor motivation, however regression analysis ($R^2 = 0.55$) implied that increased ChatGPT deployment forecasts enhanced teaching satisfaction. Moreover, 60% of participants noted enhanced student engagement, especially in writing tasks, discussion-oriented activities, and autonomous language practice. Students gained from AI-assisted feedback, which improved their grammar, sentence construction, and content organisation skills, hence enhancing their writing proficiency. Nonetheless, despite these advantages, apprehensions over AI's limitations were expressed, notably concerning cultural sensitivity, contextual relevance, and ethical ramifications. Twenty-five percent of instructors voiced concerns over ChatGPT's capacity to comprehend complex linguistic elements, observing that AI-generated replies frequently lack contextual awareness and tonal adjustment, both of which are critical in language education. Moreover, educators emphasised the danger of children being excessively reliant on AI-generated content, which could jeopardise critical thinking, creativity, and autonomous language acquisition. A significant issue was the AI literacy of educators, as numerous teachers lack formal training in AI integration, complicating efforts to optimise its advantages while minimising hazards. This study underscores the necessity for organised AI literacy initiatives, providing educators with optimal practices for AI-enhanced instruction, ethical issues, and methods for validating AI-generated material. To tackle these problems, institutions must formulate AI deployment standards, guaranteeing that ChatGPT augments rather than supplants human-led education. This study's findings enhance current discourse on AI-driven pedagogy, providing actionable recommendations for educators, policymakers, and institutions about the responsible integration of AI

into ESL classrooms. By promoting AI literacy, ethical AI application, and equitable teaching methodologies, institutions may optimise the advantages of AI while maintaining pedagogical integrity. This research highlights the necessity of regulating AI integration in education, ensuring that AI functions as an auxiliary tool rather than a replacement for essential teaching and learning processes.

Keywords: ChatGPT; ESL Educators, Artificial İntelligence, Language Learning

AUGMENTED MINDS: LEVERAGING AUGMENTED REALITY AND COLLECTIVE INTELLIGENCE TO TRANSFORM COLLABORATIVE LEARNING IN OMANI HIGHER EDUCATION

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Oman's higher education system stands at a pivotal juncture, tasked with preparing a generation of graduates to drive the nation's Vision 2040 ambitions—economic diversification, sustainability, and a knowledge-based economy. Yet, traditional pedagogies often fall short in fostering the collaborative, interdisciplinary skills demanded by these goals, leaving a gap between classroom learning and real-world complexity. This research proposes the Augmented Reality Collective Intelligence Lab (AR-CIL), a pioneering intervention to reimagine collaborative learning within Omani universities. By integrating augmented reality (AR) with AI-driven facilitation, AR-CIL creates immersive, adaptive environments where students co-create solutions to national challenges, such as sustainable tourism or coastal resilience, harnessing collective intelligence to bridge theory and practice.
The theoretical underpinning of AR-CIL rests on the intersection of situated learning theory and collective intelligence frameworks, positing that authentic, technology-mediated contexts enhance knowledge construction and peer synergy. AR-CIL immerses students in virtual sandboxes overlaid with real-time data—e.g., tourism statistics from the Ministry of Heritage and Tourism or environmental models from the Environment Authority—enabling them to visualize and manipulate complex systems. An AI layer analyzes group dynamics, identifying participation disparities and nudging quieter voices into the dialogue, thus promoting equity alongside innovation. This dual-tech approach distinguishes AR-CIL from static e-learning tools, offering a dynamic platform that evolves with learners' needs.
Our methodology is designed for robustness and replicability, targeting a leading Omani institution such as Sultan Qaboos University or the University of Nizwa. A cohort of 60 undergraduates, drawn from diverse disciplines (e.g., business, environmental science, engineering), will participate in a controlled quasi-experimental study spanning eight weeks. The experimental group (n=30) will engage with AR-CIL, collaborating on a context-specific challenge—sustainable tourism development in Salalah, for instance—while the control group (n=30) tackles the same task using conventional group-work methods. Outcomes will be assessed through a triangulated approach: (1) artifact analysis, where expert panels score project outputs for originality, feasibility, and complexity using validated rubrics; (2) pre- and post-intervention tests measuring interdisciplinary problem-solving and collaborative efficacy; and (3) semi-structured interviews capturing students' subjective experiences of engagement and inclusivity. Quantitative data will undergo statistical analysis (e.g., ANOVA) to detect significant differences, while qualitative insights will be thematically coded to uncover nuanced impacts.
This project is not without challenges, and a critical lens is essential. AR's immersive allure risks prioritizing spectacle over substance—students may marvel at the technology without deepening their critical thinking. To mitigate this, AR-CIL's design emphasizes scaffolded tasks that demand analytical rigor, not mere interaction. Cost and access pose further hurdles; while AR hardware (e.g., Microsoft HoloLens) is feasible for a pilot, scaling across Oman's diverse institutions requires strategic partnerships with entities like the Ministry of Higher Education, Research, and Innovation. Cultural dynamics also warrant scrutiny: Oman's collectivist ethos may amplify AR-CIL's collaborative potential, yet hierarchical classroom norms could stifle the AI's equity mechanisms unless carefully calibrated to local values.

The significance of AR-CIL lies in its alignment with Oman's educational reform trajectory. Vision 2040 prioritizes employability and innovation, yet a 2023 World Bank report notes persistent gaps in graduates' practical skills. AR-CIL addresses this by simulating real-world problem-solving, preparing

students for sectors like tourism and renewable energy that dominate Oman's economic future. Beyond immediate outcomes, the study aims to produce a scalable framework for integrating AR into Omani pedagogy, informed by iterative design cycles and stakeholder input from faculty, students, and industry. A successful pilot could position Oman as a regional leader in educational technology, blending global tools with local priorities.

Critically, AR-CIL must avoid the trap of techno-utopianism. Technology alone does not transform learning—pedagogical intent does. Thus, this research foregrounds culturally responsive design, ensuring AR-CIL resonates with Omani students' lived experiences and aspirations. If effective, it could redefine higher education as a collaborative, future-ready ecosystem, equipping learners to not only meet Vision 2040 but exceed it. This is not a mere experiment—it's a blueprint for a paradigm shift, rigorously tested and critically conceived.

Keywords: Augmented Reality (AR); Collective Intelligence; Omani Higher Education; Collaborative Learning; Sustainable Tourism

EKOLOJİK ETİK KRİZİ: KAZAK SANAT AKTİVİSTLERİNİN DENEYİMLERİ VE ARAŞTIRMALAR

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Bu çalışma, Kazakistan'da ekolojik etik krizine yönelik sanat temelli refleksiyonları ve sanatçı-araştırmacıların deneyimlerini ele almaktadır. Odak noktası olarak, 2022 yılında Kazakistan'nın Atyrau bölgesinde YEMAA Art Residency çerçevesinde gerçekleştirilen "Frontier: Atyrau Kronikleri" sanat yerleşimi alınmıştır. Bu proje kapsamında katılımcılar, çevresel tahribatın yerel bağlamda nasıl tezahür ettiğini saha çalışmaları ve topluluk etkileşimleri yoluyla araştırmış, doğa ve insan arasındaki kırılgan ilişkinin estetik ve etik boyutlarını sorgulayan sanatsal üretimler gerçekleştirmiştir. Yerleşim sonunda düzenlenen "Jaiykpen körisu / Ural nehri ile görüşmek" adlı sergide, ekolojik hafıza, yerel bilgi ve toplumsal sorumluluk gibi temalar üzerinden çevresel krizlerin çok katmanlı doğası kamuoyu ile paylaşılmıştır. Çalışmada, sanatın yalnızca bir temsil aracı değil, aynı zamanda ekolojik etik bilinç üretiminin ve alternatif bilgi formlarının oluşumunda etkin bir metodoloji olarak nasıl işlev gördüğü tartışılmaktadır. Ayrıca, "Frontier: Atyrau Kronikleri" örneğinin akademik alandaki etkisine de değinilmektedir: Atyrau'daki deneyimler ve sanatsal araştırmalar, L.N. Gumilyov Avrasya Ulusal University'nde geliştirilen "Küresel Sorunların Etiği" başlıklı yeni bir dersin kuramsal temelini oluşturmakta, böylece sanat, ekoloji ve etik arasındaki kesişim noktalarının disiplinlerarası bir yaklaşımla eğitim programlarına entegrasyonuna katkı sağlamaktadır. Sonuç olarak, bu bildiri, çağdaş sanatın ekolojik kriz karşısında yalnızca tanıklık eden değil, aynı zamanda etik ve epistemolojik yeni yollar açan bir eylem alanı olduğunu ileri sürmektedir.

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Keywords: Ekolojik etik, Sürdürülebilir kalkınma, Sanat Aktivizmi, Kolektif Ekolojik Hafıza, Disiplinlerarası Yaklaşım

DİJİTALLEŞME DÖNEMİNDE SOMUT OLMAYAN KÜLTÜREL MİRASIN KORUNMASI VE POPÜLERLEŞTİRİLMESİ: KAZAKİSTAN VE TÜRKİYE DENEYİMİ

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Küreselleşme ve teknolojinin hızlı gelişimi koşullarında somut olmayan kültürel miras (SOKÜM), yok olma tehlikesiyle karşı karşıyadır. Modern dijital araçlar kullanılarak korunması ve popülerleştirilmesi konuları özel bir önem kazanmaktadır. Zengin kültürel mirasa ve ortak Türk köklerine sahip olan Kazakistan ve Türkiye, dijitalleşme çağında SOKÜM'ün korunmasına yönelik yaklaşımların incelenmesi için benzersiz bir örnek teşkil etmektedir.
Çalışmanın amacı, dijital teknolojiler kullanılarak Kazakistan ve Türkiye'nin somut olmayan kültürel mirasın korunması ve popülerleştirilmesi alanındaki deneyimlerinin karşılaştırmalı analizini yapmak ve mevcut uygulamaların iyileştirilmesi için pratik öneriler geliştirmektir.
Araştırmanın konusu, Kazakistan ve Türkiye'de somut olmayan kültürel mirasın korunması ve popülerleştirilmesi süreçleri ile bu süreçlerde dijital teknolojilerin rolüdür.
Bu konu üzerine yapılan araştırmada şu yöntemler kullanılacaktır: iki ülkenin SOKÜM'ü koruma yaklaşımlarının karşılaştırmalı analizi; kültürel mirasın dijitalleştirilmesine dair başarılı örneklerin incelenmesi; devlet programlarının analizi; dijitalleşme kültürüne adanmış bilimsel literatür ve açık kaynakların gözden geçirilmesi.

Araştırmanın teorik önemi, dijital teknolojilerin SOKÜM'ün korunmasındaki rolüne dair bilgilerin sistematize edilmesinde yatmaktadır. Pratik önemi ise, devlet ve özel kuruluşlar tarafından mevcut uygulamaların iyileştirilmesi için kullanılabilecek önerilerin geliştirilmesi ve Kazakistan ile Türkiye arasındaki kültürel diyaloğun güçlendirilmesinde yatmaktadır. Araştırmanın sonucunda şunlar beklenmektedir:

- Kazakistan ve Türkiye'nin SOKÜM'ü koruma konusundaki ortak ve benzersiz yaklaşımlarının belirlenmesi.
  Kültürel mirasın popülerleştirilmesi için en etkili dijital araçların belirlenmesi.
- Mevcut uygulamaların iyileştirilmesi ve SOKÜM'ün korunmasında dijitalleşmenin rolünün güçlendirilmesine yönelik öneriler sunulması.
- İki ülke arasında deneyim ve teknoloji alışverişi yoluyla kültürel bağların güçlendirilmesine katkıda bulunulması.
- Araştırma, kültürün dijitalleşmesine dair bilimsel söylemin gelişimine katkıda bulunmakta ve modern dünyada somut olmayan mirasın korunmasına yönelik pratik çözümler sunmaktadır.

Keywords: Somut Olmayan Kültürel Miras, Dijital Miras, Kültürün Popülerleşmesi, Dijitalleşme

“CORPORATE GOVERNANCE” IN MEMBERS OF THE ORGANIZATION OF TURKIC STATES: BIBLIOMETRIC OVERVIEW OF PUBLICATIONS

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This study aims to analyze academic publications on corporate governance published in the member countries of the Organization of Turkic States (Turkey, Azerbaijan, Kazakhstan, Kyrgyzstan, Hungary, Turkmenistan, Cyprus) between 2015 and 2024. Within the scope of the research, a total of 631 scientific publications in the “Web of Science” (WoS) database were reached; these publications were examined by descriptive analysis techniques according to years, countries, institutions and authors. In addition, current trends and basic research axes of academic production in the field of corporate governance were evaluated by bibliometric analysis method. In this context, co-authorship relationships, keyword associations and research themes were tried to be revealed by visualization-based analysis tools. This increase reveals that the importance of corporate governance in the Turkic world is increasing and that academic production in this field is spreading at a global level. While Turkey stands out as the country with the largest academic production in this field, countries such as Azerbaijan, Cyprus and Kazakhstan also make significant contributions. The vast majority of research is supported by higher education institutions and research centers, and the literature is shaped by a multidisciplinary approach. Keywords and researcher collaboration analyses show that production on corporate governance publications develops with an interdisciplinary perspective and a global network. The concept of "corporate governance" has a strong relationship with concepts such as "capital structure", "audit quality", "firm value", "agency theory" and "financial performance".

Keywords: Organization of Turkic States, Corporate Governance, Web of Science Databases, Bibliometric Analysis, Vosviewer.

THE ECONOMIC REFORMS AND BRICS COUNTRIES: A SUCCESSIVE EXPERIENCE FROM THE GLOBAL SOUTH

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The Economic reforms in the Global South refer to a series of policy changes and initiatives aimed at improving economic conditions and fostering development in countries located primarily in Africa, Latin America, Asia, and Oceania. Each BRICS country has pursued various economic reforms to drive growth and development. These reforms are often pursued to address various economic challenges, such as poverty, inequality, underdevelopment, and dependence on external factors in the BRICS countries. The Economic reforms can encompass a wide range of measures and strategies, including trade liberalization, deregulation and monetary policies of BRICS countries. This paper is seeking to examine the impact of economic reforms on trade growth among the BRICS nations. And also explores the challenges and consequences of the economic reforms on their trade sector.

Key: Economic Reforms, Trade Liberalization, BRICS, and Global South

SAĞLIK ÇALIŞMALARINDA BAŞARILI KLİNİK KARAR ALMAK İÇİN DİKKAT EDİLMESİ GEREKENLER

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Karar almak her zaman önemli olmuştur. Özellikle de doğru ve geçerli kararlar alabilmek çok daha önemli olmuştur. Karar alınması tek başına yetmediği gibi zamanında doğru kararların alınması gerekecektir. Karar alma her alanda önemli olduğu gibi doğrudan insan sağlığı ile ilgilenen sağlık bilimleri alanında da oldukça önemlidir. Araştırmacılar konunun önemini bildiklerinden çok daha dikkatli olmaya başlamışlardır. Bunun içinde farklı klinik destek sistemlerinin geliştirilmesini ve kullanılmasını sağlamaya çalışmışlardır. Kilinin destek sistemleri hastaların iyileşmelerinde ve iyileşme sürelerinin kısaltılmasına büyük bir potansiyele sahiptirler. Bunun yanında klinik karar destek sistemlerin olası tıbbi hataların yapılmasını mümkün olduğunca en aza indirebilecektir. Tıbbi hatalar bölge ve ülke gözetmeksizin her ülkede görülebilecek özelliktedir. Tıbbi hatalar hemen her yerde görülmekte olup bunun oranı %10-42 arasındadır. Bunun parasal karşılığı ise 100 milyar doların üzerindedir. Bu nedenle doğru karaların alınması ve uygulanması gerekmektedir. Gerek Türkiye'de ve gerekse de Dünya genelinde elektronik sağlık kayıtları sürekli olarak alınarak kaydedilmektedir. Böylece gerekli olası durumunda yeniden değerlendirme yapılabilmesi için ger çağırma işlemleri için saklanmaktadır. Toplanan ve saklanan veriler çok değerli olduğu için en güvenilir verinin elde edilmesi faydalı olmaktadır. Bunun için de doğru kararların alınabilmesi önem arz etmektedir. Klinik karar verirken mümkün olan en başarılı kararın alınabilmesi için özellikle sağlık çalışanlarının çok dikkatli olmaları gerektiği açıktır. Ancak sağlık çalışanlarının kararlarının destekleyecek ve kararlamalarını daha güvenli hale getirebilecek ortamların hazırlanması gerekmektedir. Çünkü dünya genelinde bakıldığında doğru karar almayı sağlayacak fiziksel ortamın çoğu zaman bulunamadığı görülmektedir. Bu çalışmada amacımız klinik çalışmalarda alınan kararların daha başarılı ve güvenli olabilmeleri için gereklilikler anlatılacaktır. Böylece karar alma konusunda zorluk çekenler açısından bir yol gösterici olması ve daha doğru kararların alınabilmesine yardımcı olabilmektir. Çalışmada klinik karar destek sistemlerinin önÇelikle bizlere sağlayabileceği faydaları ve olası zararları anlatılacaktır. Sonrasında ise karar almayı etkileyebilecek ve benimsemeyi geciktirebilecek olan faktörler incelenecektir. Bunun içinde literatürde yapılan çalışmalar materyal olarak alınarak dikkatli şekilde incelenecek ve bunlar değerlendirilecektir. Değerlendirme yapılırken, işlemin hukuki, etik ve klinik yönleri açıklanacaktır.

Klinik karar verme çalışmalarında temel konu alınacak kararın anlamlı olmasının sağlanmasıdır. Anlamlı olmayan ya da konuyu açıklama konusunda bir anlam ifade etmeyen çalışmaların değerlendirmeye alınarak kullanılmasının bir anlamının olmayacağının bilinmesi gerekmektedir. Bir çalışmanın anlamlı olabilmesi için temel olarak şu beş konuyu bünyesinde halletmesi gerekmektedir. Bunlar sırasıyla; kalite, güvenlik, verimlilik, iyileştirme ve sağlık alanında gözlenen eşitsizliklerin giderilmesidir. Anlamlı kullanım sadece gerekli yerlerde kullanım anlamını taşımamaktadır. Sağlık kurumları başta olmak üzere hasta bakım hizmetleri ve sağlık çalışanların açısından olanakların iyileştirilmesi, halk sağlığının korunması ve aileleri hastanın hayatına dahi ederek moral değerler olarak daha iyi duruma gelmesini desteklemek ve verilerin en güvenilir şekilde korunması anlamına da gelmektedir. Sağlık hizmetleri ortamında kullanılacak bilgi sistemleri ve klinik karar destek sistemlerinin uygulanmasını teşvik etmek için ülkelere göre farklı çalışmalar yapılmaktadır. Uygulamalar arasında bazı farklılıklar olsa da temel konular aynıdır. Klinik karar destek sistemlerinin istenilen şekilde çalışabilmesi için anlamlı kullanım gereksinimlerinin neler olabileceği önceden

belirtilmelidir. Anlamlı kullanımın ne olduğu ve nasıl uygulanacağı netlik kazandırılırsa çok daha başarılı işlemlerin yapılabileceği düşünülmektedir. Klinik karar destek sistemleri, konu ile ilgili verileri ve ihtiyaç duyulan bilgileri toplamakta ve bunları kolayca erişilebilmesini sağlayacak tek bir yerde toplayarak hasta bakımıyla ilgili en iyi kararı vermeye yardımcı olmaya çalışmaktadır. Ancak bunun için tek taraflı çalışmaların yeterli olmayacağı bilinmelidir. Sadece sistemin desteklemesi ya da sadece çalışanların gayret göstermesi yeterli olmayacaktır. Çünkü bu sistemin avantajları olduğu gibi dezavantajları da bulunmaktadır. Bu dengeyi sağlamak çoğu zaman oldukça zor olabilmektedir. Bazen de hukuksal bazı engeller karşımıza çıkabilmektedir. Bu nedenlerle konuyu çok yönlü düşünmek ve değerlendirmek gerekmektedir.

Keywords: Karar Verme, Karar Alma, Klinik Destek Sistemleri, Anlamlılık, Sağlık Sistemi

CHALLENGES OF AI ADOPTION IN MALAYSIAN SMES: IDENTIFYING BARRIERS AND OPPORTUNITIES FOR DIGITAL TRANSFORMATION

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Artificial Intelligence (AI) has the potential to transform businesses by enhancing efficiency, optimizing decision-making, and driving innovation. In Malaysia, Small and Medium Enterprises (SMEs) play a crucial role in economic growth, yet they face multiple challenges in adopting AI technologies. These barriers include financial constraints, lack of technical expertise, data-related challenges, integration difficulties, resistance to change, and regulatory concerns. Despite increasing awareness of AI's potential benefits, SMEs struggle to implement AI-driven solutions due to limited resources, uncertainty about return on investment, and a lack of strategic planning. This study aims to examine the key challenges faced by Malaysian SMEs in AI adoption, assess their level of AI readiness, and propose recommendations for overcoming these obstacles. The findings contribute to the growing discourse on digital transformation by offering insights that can guide policymakers, industry stakeholders, and SME leaders in fostering AI adoption.

This study adopts a quantitative research approach, utilizing a structured survey distributed to SME owners, across various industries in Malaysia. The survey consists of closed-ended questions using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree) to assess perceptions of AI adoption challenges. The research examines several key variables, including financial constraints, technical expertise, data challenges, integration barriers, resistance to change, regulatory and ethical concerns, and future AI investment intentions. The data collected were analyzed using descriptive statistics and correlation analysis to identify patterns and relationships between these barriers and AI adoption readiness.

The findings indicate that financial constraints remain one of the most significant challenges for Malaysian SMEs in adopting AI, with many struggling to allocate funds for AI investments or access government incentives. Additionally, a lack of technical expertise hinders AI implementation, as SMEs face difficulties in hiring skilled AI professionals and providing adequate training for employees. Data-related concerns, particularly regarding data security, privacy, and integration, also contribute to the slow adoption of AI. Many SMEs experience challenges in integrating AI into their existing business processes, particularly when dealing with legacy systems and compatibility issues. Resistance to change, particularly from employees who fear job displacement, further delays AI adoption. Furthermore, regulatory uncertainty and ethical considerations, such as compliance with AI governance frameworks and concerns over algorithmic bias, create additional obstacles. Despite these challenges, some SMEs express willingness to explore AI adoption in the near future, especially in industries such as technology and finance, where AI-driven solutions can provide a competitive edge.
The study concludes that AI adoption among Malaysian SMEs is still in its early stages and faces numerous barriers that require immediate attention. While SMEs recognize the potential of AI, they often lack the financial, technical, and strategic resources to implement AI effectively. To bridge this gap, a multi-stakeholder approach is needed. Policymakers must enhance AI funding programs, tax incentives, and regulatory clarity to encourage AI adoption. Educational institutions and training centers should provide affordable AI upskilling programs to equip SME employees with the necessary skills.

Technology providers must develop cost-effective, scalable AI solutions tailored to SME needs. Additionally, industry collaborations and AI mentorship programs can help SMEs navigate the complexities of AI adoption. With the right support systems in place, AI can become a powerful tool for driving SME growth, improving operational efficiency, and fostering long-term business sustainability in Malaysia's evolving digital economy.

This study contributes to the existing literature by offering a comprehensive analysis of AI adoption challenges specific to Malaysian SMEs. While previous research has largely focused on AI implementation in large corporations, this study provides empirical insights into the unique barriers faced by SMEs in an emerging economy. The research findings can serve as a foundation for future studies on AI strategies and success factors for SMEs in Malaysia and other Southeast Asian countries. Moreover, the study provides actionable policy recommendations that can help accelerate AI adoption and ensure that SMEs are not left behind in the digital transformation era. By addressing these challenges and fostering a supportive AI ecosystem, Malaysian SMEs can harness AI's potential to remain competitive and drive economic progress in the years to come.

K*eywords: Artificial Intelligence, SMEs, Malaysia, AI Adoption, Challenges*

SOCIAL JUSTICE, COUNSELOR EDUCATION AND MORE: HOT TOPICS OF SCHOOL COUNSELING

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The emergence of the field of school counseling marked a significant step in addressing mental health and developmental needs within educational settings. In the 1920s, the profession began to diverge from vocational guidance and to specifically train school counselors in response to the mental health needs of schools. Since then, societies have undergone considerable changes, and perceptions of human life and the world have continued to evolve. However, literature addressing the development of the field of school counseling is commonly found up until the 2000s. Nevertheless, recognizing the importance of setting the agenda for the field of school counseling, Delphi studies based on expert opinions were conducted in 2005 and 2015. Delphi studies are useful in indicating what future research should focus on. On the other hand, there is a need to describe the current state of the literature. In other words, it is important to focus not only on what should be, but also on what currently exists in the field. Therefore, this study aims to conduct a bibliometric analysis of the school counseling field, intending to identify prevailing trends, and provide the understanding of evolution and current state of this vital area of educational and psychological practice. The guiding research questions were: “What topics were prominent in the school counseling field?”, “What were the trending topics over the years?”. We expect that the findings offer valuable insights into the trajectory of school counseling research and inform future practices and policies in this vital area of educational and psychological practice. The present study was conducted utilizing bibliometric methods. Bibliometrics helps to construct the conceptual, intellectual and social network structures of a given field and facilitates the visualisation of results through network and thematic mapping.

The data for this study were gathered from 823 articles indexed in the Web of Science's SSCI and ESCI databases. The search strategy included following keywords: "school counsel$ing", "school guidance", "school counsel$ing and guidance", "school guidance and counsel$ing", and "guidance counsel$ing" (Topic). The initial search yielded 1,341 articles, which were refined by excluding 2023 publications and non-relevant fields, resulting in a final sample of 823 English-language articles from the ESCI and SSCI indices. Bibliometric data were analyzed using the Bibliometrix package and Biblioshiny web application in R. The co-word analysis with a word co-occurrence network was utilized. The resulting bivariate map generated a thematic map to identify key topics. Thematic map formed by clustering analysis based on keyword association. Thematic map consisted of two important components: density and centrality. Density is a measure of theme development, while centrality is a measure of theme relevance. There are four types of density and centrality. Motor and Basic Themes are the leading themes of the field, as they are the most researched and the most relevant. Themes that are either newly emerging or beginning to disappear are called Emerging or Declining Themes. Finally, Niche Themes consist of keywords clustered outside the network. The data were grouped into five clusters within these four themes.

The adolescent cluster mostly focused on counseling interventions that have been empirically tested or simply recommended at the high school level. The keywords included adolescent, career counseling, high school students, secondary education. While a main theme, it lacked the intensity of motor themes. The school counselor cluster focused on professional development and collaboration, with key terms like school counselor, collaboration, and burnout. Bullying was also covered, as it often requires

intervention from school stakeholders. The thematic map placed this cluster between motor and basic themes, indicating its foundational role.

The social justice cluster contained school counselors' experiences with minorities, advocacy, the safe school movement, competencies for working with disadvantaged groups, and support for school counselors' social justice approach. The keywords included social justice, LGBTQ, and young people. This cluster is located between the motor and niche themes when looking at the thematic map. The counselor education cluster focused on training models, professional development for diverse groups, and supervision in school counseling. Key terms included counselor education, school counselor training, and supervision. This cluster is considered an emerging theme due to the recency of articles. The psychotherapy cluster focused on the humanistic, Rogerian-based school counseling model used in the United Kingdom. As a niche theme, it had strong internal connections but was distinct from the broader field.

In forming the thematic map, the approach used was to employ the "Thematic Evolution" function, segmented into different time periods, with the aim of observing changes in themes over the years. Consequently, It was constructed with the years 2003, 2013, and 2018 serving as pivotal points. The selection of the year 2003 was influenced by the American School Counselor Association (ASCA) publishing its first national model. The year 2013 was chosen due to the subsequent fluctuations in the number of articles and the establishment of significant social justice organizations. The year 2018 was selected in light of the Covid-19 era playing a significant role. It indicated that the adolescent cluster has always been fundamental, but recently there has been an increased emphasis on social justice, career counseling and counselor education. Social justice and LGBTQ issues began to receive attention in the literature after 2004 and continued to grow in impact. The prominence of the LGBTQ cluster instead of social justice between 2014-2018 imply that there was an increase in articles on sexual minority groups in that period. Although career counseling was a topic between 2004 and 2013, it seems to have been emphasized more recently. The last two periods also show the impact of creativity, which seems to be prominent in counseling interventions. Finally, more emphasis was put on the training of school counselors in recent years. The trend keywords also supported the thematic evolution map. Consistent with the Thematic Evolution Map, studies on adolescents were trending in school counseling research. In contrast, research on children seems to be more prevalent before 2010, and there were few articles on this keyword. Social justice and minority studies were also trending in most years, but there was a concentration especially between 2011-2014. The trend keywords also show a trend shift from counselor education to supervision and then to school counselor training. This suggests a shift from the more general counselor education to the more specific school counselor training.
The thematic bibliometric analysis has revealed that the studies were categorized into five clusters. The Adolescent cluster focuses on counseling interventions for high school students, as many researchers highlight interventions as a core aspect of school counseling. This study suggests that there is still a lack of research on interventions. Another cluster was on social justice, aligning with researchers who advocate for counseling journals to prioritize socially relevant themes and contemporary challenges. Therefore, this trend can continue to be prominent. The Counselor Education cluster and trend analysis highlight a growing focus on specialized school counseling training. In conclusion, this research indicates that the field of school counseling is expanding in these five areas, emphasizing the need for further studies.

Keywords: School Counseling, Bibliometrics, Counseling, Counselor Education, Social Justice.

IX. ASC 2025 / SPRING CONGRESS

DİJİTAL DÖNÜŞÜM PARAMETRELERİNİN TELEKOMÜNİKASYON SEKTÖRÜNDEKİ ALGISININ ARAŞTIRILMASI: TÜRK TELEKOM ÖRNEĞİ

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Dijital dönüşümün mikro ve makro her şirketin verimliliğini artırdığı, iş kolaylığı sağladığı ve rekabetçi koşullara daha iyi adapte olmasını sağladığı bilinmektedir. 21. yüzyılın başından bu yana her sektör kendi parametreleri ölçüsünde dijital dönüşümü başlatmıştır. Teknolojinin her alanını içinde barındıran telekomünikasyon sektörü de operasyonel verimlilik, maliyeti azaltıp karlılığı artırma, penetrasyonu artırma ve rekabet şartları ile mücadele için dijital dönüşümü en hızlı takip eden ve uygulayan sektör durumundadır. Bu çalışmada telekomünikasyon sektörünün dijital dönüşümü; insan, teknoloji, altyapı, tedarikçi, kullanıcı ve yönetim parametreleri ile incelenmiştir. Bu parametreler içerisinde; yapay zekâ, blokzincir, IOT (nesnelerin interneti), sanal/artırılmış gerçeklik, kripto para, dijital ikiz, makine öğrenmesi, robotik sistemler, sesli asistan sistemleri, siber güvenlik, büyük veri, sistem entegrasyonu, bulut bilişim sistemi gibi alt başlıklara değinilmiştir. Bu araştırmanın amacı, telekomünikasyon sektöründe dijital dönüşüm parametrelerinin telekomünikasyon sektöründeki algısını tespit etmektir ve bu çalışma Türk Telekom şirketi örnekleminde gerçekleştirilmiştir. Şirket çalışanlarından online anket yoluyla elde edilen veriler t-test ile R programıyla analiz edilmiş ve çalışmanın sonucunda Türk Telekom çalışanlarının dijital dönüşüm parametreleri hususunda bilgilerinin orta düzeyde olduğu sonucuna ulaşılmış ve şirketin dijital dönüşüm faaliyetleri hakkında algısının düşük seviyede olduğu görülmüştür.

Keywords: Dijital Dönüşüm, Yapay Zeka, Telekomünikasyon, Makine Öğrenmesi, Nesnelerin İnterneti

INTERCORRELATIONS AMONG THE BIG FIVE PERSONALITY TRAITS: A META-ANALYTIC REVIEW

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The aim of this study is to determine the general effect sizes of the relationships among the Big Five personality traits by synthesizing the findings of research conducted within the Turkish context using a meta-analytic approach. The Big Five personality model defines personality traits across dimensions of extraversion, openness to experience, conscientiousness, agreeableness, and neuroticism. Extraversion includes assertiveness, sociability, and energy; openness to experience reflects a preference for innovation and variety; conscientiousness encompasses self-discipline, organization, and goal-orientation. The agreeableness dimension expresses cooperativeness and kindness in interpersonal relations, whereas neuroticism includes emotional instability and tendencies toward stress. The Big Five personality theory is a widely used theoretical framework for understanding personality traits. Clarifying the relationships among these traits not only helps explain individual differences but also provides significant practical implications in fields such as career development, education, mental health, and social relationships. Although these dimensions are universally defined and represent many personality traits, various studies report relationships among these supposedly independent dimensions. However, studies examining these relationships can yield inconsistent findings due to methodological differences and sample variations. This study aims to synthesize the findings from Turkish research to present a comprehensive overview of the relationships among personality traits, thus contributing to a better understanding of individual differences and the development of psychological applications. The meta-analysis method was employed in this study, allowing the systematic integration of findings from independent studies on the same topic to produce more generalized and comprehensive results. The meta-analysis included 137 studies published between 2015 and 2024 in Türkiye, comprising a total sample of 67,380 participants. The selection criteria for the included studies were publication within the specified years, availability of quantitative data, publication in peer-reviewed scientific journals or accessible postgraduate theses, and having a sample size greater than 100. Databases such as the National Thesis Center, Web of Science, Scopus, and TR Index were systematically searched using Turkish and English keywords for the Big Five personality traits. Data were analyzed using JAMOVI 2.6.13 software within a random-effects model framework, and tests for heterogeneity and publication bias were conducted. Results of publication bias tests indicated no publication bias among the included studies. Additionally, analyses showed significant heterogeneity across studies.

The analysis calculated ten effect sizes reflecting the interrelationships among the Big Five traits. According to the meta-analysis results, moderate positive effect sizes were found between extraversion and openness to experience ($r = 0.45$; $p < 0.001$) and conscientiousness ($r = 0.32$; $p < 0.001$). Extraversion showed a weak positive effect with agreeableness ($r = 0.27$; $p < 0.001$) and a weak negative effect with neuroticism ($r = -0.21$; $p < 0.001$). Openness to experience demonstrated moderate positive effects with agreeableness ($r = 0.31$; $p < 0.001$) and conscientiousness ($r = 0.35$; $p < 0.001$), and a weak negative effect with neuroticism ($r = -0.11$; $p < 0.001$). Agreeableness had a moderate positive effect with conscientiousness ($r = 0.41$; $p < 0.001$) and a weak negative effect with neuroticism ($r = -0.22$; $p < 0.001$). Lastly, neuroticism and conscientiousness showed a weak negative effect size ($r = -0.22$; $p < 0.001$).

IX. ASC 2025 / SPRING CONGRESS

A CASE STUDY OF MAINTENANCE ENGINEERING AND MANAGEMENT IN OIL AND GAS INDUSTRY

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The maintenance management of the oil and gas industry is extensively investigated in this case study, with a focus on systematic maintenance methods that increase equipment dependability, reduce downtime, and improve operational efficiency. The chapter begins with a summary of the evolution of the oil and gas industry before highlighting the critical role maintenance organizations play in ensuring the smooth operation of complex machinery and infrastructure through complex organizational charts and machine layouts. Total Productive Maintenance (TPM), predictive maintenance, and preventive maintenance are some of the maintenance strategies that are evaluated for their capacity to lower equipment failure rates and boost operational effectiveness. Important maintenance practices like inventory management, cataloguing, and equipment coding that enhance asset tracking and departmental communication are also covered in the case study. Additionally, it highlights the need for work orders, maintenance logs, and operating manuals for systematic scheduling and performance assessment. The role of Computerized Maintenance Management Systems (CMMS) is examined with a focus on automating maintenance chores, ensuring regulatory compliance, and managing performance indicators. Cloud-based CMMS solutions facilitate asset management, scheduling preventive maintenance, and real-time data analysis. The case study also discusses the future of maintenance management in the oil and gas industry, emphasizing how cutting-edge technologies like robotics, artificial intelligence (AI), and the Internet of Things (IoT) may be used to increase operational dependability and efficiency. Case studies give experts in the oil and gas sector a comprehensive manual for achieving sustainable operational success in a rapidly evolving sector by providing insights into digital technology, standardized processes, and strategic tactics. With a focus on the roles played by drilling teams, reservoir engineers, geoscientists, and health, safety, and environment (HSE) professionals in maintaining operational excellence, the text also looks at the organizational structures of the sector. It highlights how important it is to schedule and plan both short-term and long-term maintenance in order to align maintenance activities with desired output. The case study also discusses the importance of continuous improvement and training in creating a proactive maintenance environment. The maintenance role is vital in the oil and gas sector because it ensures that all equipment and infrastructure operate reliably and efficiently. In-depth information on how maintenance methods like TPM, predictive maintenance, and preventive maintenance contribute to longer equipment lifespans and less downtime is provided in the case study. Through an analysis of several maintenance procedures, the case study provides insights into the best approaches for operations optimization. Because they provide effective asset monitoring and departmental communication, equipment coding and cataloguing are crucial components of maintenance management. In order to ensure that essential components and replacement parts are available when needed, the case study focuses on inventory management best practices. Additionally examined is the role that maintenance logs and operating instructions play in facilitating systematic scheduling and performance evaluation. CMMS are presented as a key tool in modern maintenance management, with discussions on how these systems streamline maintenance operations, improve legal compliance, and track key performance metrics. In particular, the potential of cloud-

based CMMS solutions to offer real-time data analysis, predictive maintenance, and continuous asset management is being researched.

The case study investigates the potential effects of emerging technology on maintenance management. Robotics, IoT, and AI are acknowledged as transformative technologies that increase maintenance's reliability and effectiveness. By using these technologies, businesses may reduce costs, improve overall operational performance, and increase predictive maintenance capabilities. Along with details on the roles and responsibilities of key employees, including drilling crews, reservoir engineers, geoscientists, and HSE specialists, the case study also includes a thorough analysis of industrial structure. It emphasizes how the effective collaboration of these professionals contributes to maintaining high operational standards. It has been established that in order to align maintenance activities with production objectives, scheduling and maintenance planning are essential elements. The case study emphasizes short-term and long-term planning to optimize maintenance execution and guarantee seamless manufacturing operations. Training and continuous improvement initiatives are also cited as essential elements in creating a culture of innovation and proactive maintenance. This case study's comprehensive review of maintenance management in the oil and gas industry focuses on the interplay between organizational structures, maintenance methods, and innovations in technology. The case study provides comprehensive insight into maintenance best practices and current developments, making it an invaluable resource for professionals seeking to optimize maintenance procedures and ensure the reliability of industrial operations.

Keywords: Maintenance, TPM, Drilling Rig, Reliability, Scheduling.

A CASE STUDY OF MAINTENANCE ENGINEERING AND MANAGEMENT IN MANUFACTURING INDUSTRY

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The maintenance management of the industrial sector is thoroughly examined in this book, with a focus on organized maintenance procedures to improve equipment reliability, minimize downtime, and maximize output. A description of the advancement of the manufacturing industry from handcrafted products to modern, highly advanced production systems is provided at the beginning, highlighting the critical role that maintenance organizations play in ensuring effective operations through complex machine layouts and organizational charts. Some of the maintenance methods that are evaluated for their capacity to reduce failures and improve efficiency are proactive, predictive, and Total Productive Maintenance (TPM). Important maintenance procedures like equipment coding and classification that improve collaboration between departments and inventory management are also covered in the text. It also emphasizes how important job cards, work orders, and maintenance instructions are to supporting scientific scheduling and performance. The purpose of computerized maintenance management systems (CMMS) is examined, with a focus on regulatory compliance, job automation, and performance management. The management of assets, preventative maintenance scheduling, and real-time data analysis are all provided by the company software, which is based on a cloud CMMS solution. The book also discusses how maintenance management could develop in the future, emphasizing the use of cutting-edge technologies like robots, artificial intelligence, and the Internet of Things to increase reliability and efficiency. It offers information on digital technology, standard procedures, and strategic strategies for long-term operational achievement in an evolving industrial environment, making it an overall useful guide for manufacturing professionals. The important elements of modern manufacturing are examined in this essay, with particular attention paid to organizational structures, maintenance methods, and the contribution of technology to increased productivity and efficiency. In order to minimize downtime, save costs, and ensure optimal equipment performance, the research highlights the importance of maintenance techniques as preventive, predictive, and Total Productive Maintenance (TPM). Additionally, it explores the organizational structure of manufacturing industries, highlighting the functions of production teams, maintenance engineers, and quality control staff in maintaining operational excellence. The integration of cutting-edge technology like automation, the Internet of Things (IoT), and computerized maintenance management systems (CMMS) in modern production is also examined in this paper. These developments improve overall equipment effectiveness (OEE) and decrease operational inefficiencies by enabling real-time monitoring, predictive maintenance, and optimal resource allocation. In order to simplify inventory management and maintenance procedures and ensure equipment and components are readily recognized and accessible, the research also addresses the need for cataloguing and coding. In order to match maintenance tasks with production objectives, the study additionally highlights the importance of maintenance scheduling and planning, both in the short and long term. It highlights the function of work orders, job cards, and maintenance instructions in standardizing maintenance procedures and ensuring adherence to legal and safety requirements. The importance of staff training and ongoing development in promoting a proactive maintenance and improvement environment is highlighted in the paper's conclusion. As a result, this article provides an

in-depth investigation of the manufacturing industry with a focus on the connections among organizational structures, maintenance strategy, and technical developments. For specialists in the field looking to improve productivity, optimize maintenance procedures, and ensure the long-term reliability of industrial processes, it provides useful data.

Keywords: Maintenance Strategies, Total Productive Maintenance (TPM), Computerized Maintenance Management Systems (CMMS), Internet of Things (IoT), Operational Efficiency.

MENTALITY FEATURES OF MEDICAL DISCOURSE (ON THE EXAMPLE OF ENGLISH AND RUSSIAN)

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The second half of the last century was marked by the so-called “linguistic turn”, the formation of the anthropological approach, which places the human being at the center of research – his way of thinking, the nature of interaction with the socio-cultural environment. At this time, numerous linguistic sciences appeared, the study and understanding of mentality was singled out as a separate philosophical problem, the idea of the close relationship between mentality, language and its carrier, i.e. man, was formed. The aim of the study is to study the mental characteristics of medical discourse (using the Russian and English languages as an example).

Approaches to definition, essence. Traditionally, in the scientific literature, medical discourse is understood as communicative activity carried out in the “doctor-patient” mode, “an integral element of the system of institutional discourses, the object of which is health” (Karymshakova, 2015, p. 15); “the organization of the system of speech interaction within the framework of the Institute of medicine, the principles by which professional communication between a doctor and a patient is built, with the goal of curing the patient of an illness” (Karymshakova, 2015, p. 17); “the result of the integration of objective medical knowledge, expert opinion, personal judgment of the doctor and the communicative strategies used by him to verbalize them in order to exert the desired impact on the patient” (Ushakova, 2015, p. 513); “a derivative type of discourse, which is the interaction of two types of discourse: scientific and naïve” (Mishlanova, 2009, p. 470); a specialized type of communication between people, a type of professional interaction, the center of which is the provision of medical care. Thus, modern medical discourse is a multidimensional, multifaceted communicative formation, which reflects communication in the modes “doctor - patient”, “doctor - doctor”, “doctor - audience”, aimed at maintaining health, an organic synthesis of objective medical knowledge, expert opinion, personal judgment of the doctor and communication strategies. Language mentality of Russian language VS mentality of English language Taking into account the formulated goal of the study, it is necessary to focus on identifying the essence of mentality.

First of all, it is important to emphasize that at the present stage, socio-psychological problems, their research and comprehensive study have acquired special significance for a number of reasons. The latter should include, first of all, the global dynamics of the development of modern society, its technological nature, symbolism, the tendency to strengthen the contradictory processes of globalization and tribalization, the consequence of which is the perception of the individual as " the highest existential value and measure of all things".

In modern scientific literature, mentality can be understood as a collective-personal formation that “represents stable spiritual values, deep axiological attitudes, skills, latent habits, long-term stereotypes, considered within certain spatio-temporal boundaries, serving as the basis for behavior and lifestyle”. Mentality is “symbolic paradigms” (M. Eliade), “archaic remnants” (Z. Freud), “dominant metaphors” (P. Ricoeur), the formation of which is carried out under the influence of innate primitive and inherited sources of the human mind.

As a research method, an associative experiment was chosen, first of all, as one of the types of psycholinguistic experiment. According to N.N. Kazakova, a psycholinguistic experiment "is the most productive method of studying the human factor in language, since the meta-texts obtained as a result

of its implementation reflect the everyday perception of language units by its native speakers". That is, unlike other methods of linguistic research, psycholinguistic ones allow us to identify the features of the relationship between various components of the language system in the mentality of an average representative of a certain linguaculture , and allow us to study the language system in close connection with a native speaker.

An analysis of the dictionary literature allows us to conclude that the most frequent reactions to the stimulus “medicine” are the following: 1) doctor - 67, 2) powerless - 23, 3) hospital - 21, 4) science - 21, 5) help - 20, 6) treatment - 17, 7) health - 15, 8) injection - 15, 9) free - 13, 10) medicines - 12 (Ufimtseva, Cherkasova , 2018, p. 113; Selezneva et al., 2018, p. 36). The responses obtained to the stimulus “ medicine ” in English are as follows: 1) food - 10,485, 2) medical - 6,495, 3) Dr. - 6,068, 4) professor - 5,212, 5) health - 4,354, 6) physician - 4,340, 7) patients - 4,114, 8) University - 3,848, 9) traditional - 3,720, 10) doctor - 3,661. The results of the comparative analysis allow us to identify common and distinctive characteristics of Russian-language and English-language medical discourse.

The general value should include the value of health, which is presented in both Russian-speaking and English-speaking linguacultures. The noun denotes the physical, mental, and spiritual state of a person. An important place in both linguistic cultures is given to specialists working in the field of medicine. In Russian, the noun "врач" is presented, in English, several nominations are used: Dr., professor, physician, doctor. The results obtained allow us to conclude that employees of medical institutions in English-speaking countries have a narrower specialization. In this aspect, medical discourse clearly reflects the differences in the system of social relations, in the production sphere, the education system, and in mentality. Any discourse is a product of a certain linguistic culture, is an instrument for representing national mentality, and medical discourse is no exception.

The aim of the study was to examine the mental characteristics of medical discourse (using the Russian and English languages as an example). In the process of conducting the study, the features of the modern medical discourse were identified, which allows us to define the concept under study as a special type of interaction between a patient and a medical worker, between medical workers, in which objective expert knowledge is combined with personal judgments, and scientific and naive discourse is synthesized. Medical discourse, like any other, acts as a means of reflecting mentality.

Keywords: Medical Discourse, Mentality, Russian Linguistic Culture , English-Language Linguistic Culture

THE INTERNATIONAL ACADEMIC STUDIES CONGRESS AS AN EMERGING ACADEMIC EVENT

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The history of academic events, such as congresses, symposiums, workshops, etc., as platforms for intellectual exchange among scientists worldwide, dates back to the 18th and 19th centuries. While the exact number of international academic meetings remains unknown, it is estimated to be approximately 10,000, according to various online sources as of 2023. Academic events are instrumental in promoting intellectual development, encouraging collaboration, and furthering the advancement of knowledge. They serve as vital platforms for the exchange and dissemination of information, the establishment of professional networks, the formation of academic communities, and the shaping of public policy and emerging research trajectories.

The development of information and communication technologies enhances the organization of these events by suggesting different platforms and changing their content and structure. The recent COVID-19 crisis has posed significant challenges to organizing academic events. With restrictions on travel, social distancing measures, and the necessity to limit in-person interactions, academic conferences, congresses, and symposiums have encountered unprecedented obstacles. In light of the COVID-19 crisis, numerous pressing topics have emerged for discussion within the scientific community. Fortunately, with online tools, these events have transitioned to virtual formats, reducing organizational costs while maintaining the essential functions of academic gatherings. The emergence of a new academic community worldwide, sharing the same objectives as all academic gatherings, coincided with the COVID-19 pandemic. Established in 2020 to promote academic knowledge sharing, support scientific research, and facilitate the dissemination of innovative ideas, the Academic Studies Group (ASG) organized its first academic congress in 2021. The ASG has conducted the congress on eight occasions, occurring biannually, and has published eight comprehensive proceedings volumes. In a brief period, the congresses organized by the ASG have achieved an international profile in terms of participant demographics. Moving forward, it is essential to reflect on and assess the accomplishments thus far to elevate the congress outcomes to a global standard. In this context, this paper aims to provide a comprehensive overview of the conferences organized between 2021 and 2024. Eight different proceedings and 515 papers published in these proceedings will be subjected to content analysis based on categories such as host country, main theme, number of authors, author affiliations, and so on. The content analysis method is a systematic approach used to analyze written, verbal, or visual materials. Descriptive statistics, including frequency and percentage distributions, will be employed to present the data.

This study presents an original approach by offering a comprehensive content analysis of the conferences organized by the ASG over four years. It examines key trends and patterns within the academic community that ASG has cultivated. The study provides valuable insights into the evolution of academic collaboration and the global reach of ASG's congresses by analyzing the host countries, themes, authors, and affiliations of the presented papers. The significance of this research lies in its

potential to uncover emerging academic trends, assess the impact of ASG's congresses, and enhance the understanding of how to strengthen international academic collaboration. Furthermore, the findings will be crucial for shaping the future organization of ASG congresses, helping to establish them as a prominent global event that promotes meaningful scholarly exchange and collaboration worldwide.

Keywords: Academic Studies Groups, Academic Events, Proceedings, Content Analysis.

WHAT LIMITS THE SUCCESS OF TNA IN MALAYSIAN MANUFACTURING FIRMS?

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Training Needs Analysis (TNA) is a foundational process within human resource development that enables organizations to identify gaps in knowledge, skills, and abilities (KSAs), align training strategies with organizational objectives, and ensure the workforce remains competent and competitive. However, in the context of Malaysia's manufacturing sector, TNA practices are often hindered by a complex set of interrelated barriers, resulting in suboptimal training outcomes. This study investigates these limitations through a qualitative exploration of organizational behaviors, cultural dynamics, and managerial practices within selected Malaysian manufacturing firms. The COVID-19 pandemic intensified the urgency for workforce reskilling, with the manufacturing sector, a key driver of Malaysia's economy, facing significant disruptions in operations and talent management. In response, many firms sought to accelerate upskilling initiatives. Yet, the effectiveness of these programs heavily depended on the accuracy and reliability of the initial training needs assessments. Despite the acknowledged importance of TNA, its practical application remained inconsistent and fragmented across the sector. This study thus aims to uncover the root causes that prevent successful TNA implementation and offer targeted recommendations to address them. Through a rigorous qualitative methodology, data were gathered using semi-structured interviews, participant observation, and document analysis. The study engaged twelve participants across three stakeholder groups: senior executives responsible for strategic training decisions, trainers with experience in designing and delivering training programs, and trainees offering firsthand perspectives on their experiences. Thematic analysis was employed to interpret the data, revealing recurring patterns and root issues that compromise the integrity of the TNA process. Findings indicate that many supervisors and line managers lack the technical knowledge and analytical tools required to conduct accurate TNAs. This skill gap results in shallow or misdirected assessments that fail to reflect the actual learning and development needs of employees. The limited presence of trained human resource development (HRD) professionals further exacerbates this problem, especially in small and medium-sized enterprises (SMEs) where resources are constrained. Financial and time limitations were also frequently cited as barriers, with organizations often deprioritizing comprehensive needs analysis in favor of quick, ad-hoc training implementations. Cultural dynamics within Malaysian firms were found to play a critical role in shaping TNA outcomes. Hierarchical organizational structures and deep-rooted bureaucratic practices discouraged open communication and constructive feedback. Favoritism, nepotism, and personal relationships between managers and employees were also found to influence training nominations, leading to biased and non-inclusive development opportunities. Many employees expressed reluctance to articulate their learning needs, fearing judgment or repercussions, while management often prioritized training outcomes over process integrity. Another recurring issue was the disconnect between top management and employees regarding the purpose and value of TNA. Communication gaps were evident across all levels, weakening employee engagement and limiting opportunities for meaningful dialogue about personal and organizational development. Trainers also highlighted the lack of structured performance appraisal systems that could effectively feed into the TNA process. Instead, current practices relied heavily on

subjective judgments, reducing the objectivity of the analysis and ultimately affecting the relevance of training content.

In addition to human and cultural factors, structural and technological limitations were also identified. Many firms lacked access to modern digital tools and analytics that could streamline data collection and provide evidence-based insights for decision-making. As a result, organizations often relied on outdated methods that produced unreliable data, further undermining the training planning process. Observations revealed that TNA-related meetings were often conducted without clear objectives or follow-through mechanisms, leading to incomplete or ineffective assessments. This study also uncovered that subject matter experts (SMEs), though critical to the accuracy of TNAs, were frequently unavailable due to their operational responsibilities. Their limited involvement in needs assessments weakened the quality of inputs and recommendations. Moreover, participants noted that top management's attention was primarily focused on immediate training outcomes rather than the foundational processes needed to ensure long-term impact. The lack of accountability and continuity in the TNA cycle contributed to a recurring pattern of poorly designed training initiatives with minimal alignment to real business challenges.

To address these multifaceted barriers, the study recommends a set of strategic interventions aimed at transforming the TNA landscape in Malaysian manufacturing firms. First, it is essential to invest in the upskilling of supervisors and HR personnel, equipping them with modern tools, frameworks, and analytical capabilities to conduct thorough needs assessments. This includes formal training programs, certifications, and access to digital platforms that support data-driven decision-making. Second, fostering a culture of transparency and continuous feedback is vital to creating an environment where employees feel safe and encouraged to express their development needs. Breaking down hierarchical communication barriers and actively involving all stakeholders in the TNA process will enhance both accuracy and inclusiveness.

Furthermore, top management must play a more active role in championing the TNA process. Their visible support and commitment to allocating time and financial resources are crucial for sustaining long-term improvements. Introducing structured performance appraisal systems that feed directly into the training planning cycle can help organizations move away from reactive training approaches and toward proactive, strategic development plans. Incorporating subject matter experts at critical points in the analysis process will also ensure the depth and relevance of training needs assessments. In conclusion, the success of Training Needs Analysis in Malaysian manufacturing firms is limited not by its conceptual relevance but by operational, cultural, and leadership-related shortcomings. The absence of skilled personnel, insufficient management buy-in, poor communication, and deep-rooted cultural norms collectively hinder the potential of TNA as a strategic workforce development tool. By addressing these challenges through targeted capacity-building, cultural transformation, and strategic alignment, Malaysian manufacturers can unlock the full value of TNA, ensuring their workforce remains agile, skilled, and competitive in a rapidly changing industrial landscape.

Keywords: Training Needs Analysis, Manufacturing Sector, Barriers, Workforce Development, Malaysia

YANGIN SÖNDÜRME VE KURTARMA VAGONU TASARIM VE UYGULAMASI

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Yangın Söndürme ve Kurtarma Vagonu (YSKV), demiryolu taşımacılığında meydana gelebilecek yangın, patlama ve kimyasal sızıntı gibi kazalara hızlı ve etkili bir şekilde müdahale etmek için tasarlanmıştır. Bu vagon, yolcuların güvenli tahliyesini sağlamanın yanı sıra, tehlikeli yüklerin geçici olarak depolanmasına ve çevresel zararların en aza indirilmesine de katkıda bulunur. Özellikle karayolu ulaşımının mümkün olmadığı bölgelerde, demiryolu hatlarının geçtiği alanlarda, köprülerde ve tünellerde önemli bir avantaj sağlar. Geleneksel yangın söndürme ve kurtarma araçlarının erişiminin zor olduğu noktalarda etkili bir çözüm sunar.

Demiryolu taşımacılığında yaşanabilecek kazalar, insan hayatı ve çevre açısından ciddi tehditler oluşturabilir. Geleneksel yangın söndürme ve kurtarma ekipleri, karayolu erişiminin olmadığı bölgelerde yetersiz kalabilir. YSKV, demiryolu üzerinden doğrudan olay yerine ulaşarak alevleri kontrol altına alma, zehirli gaz yayılımını önleme ve mahsur kalan kişileri kurtarma gibi kritik görevleri yerine getirebilir. Özellikle ormanlık alanlar, tüneller ve köprüler gibi ulaşımı zor alanlarda yangınla mücadele ve kurtarma operasyonları için benzersiz bir avantaj sağlar. Yangınla mücadelede kullanılan geleneksel kara araçlarının aksine, YSKV geniş su ve köpük kapasitesi ile uzun süreli operasyonları destekleyebilir ve büyük ölçekli yangınlarda etkili sonuçlar sağlayabilir.

Dünya genelinde benzer konseptler geçmişte de uygulanmıştır. 1918 ile 1990 yılları arasında Avustralya'da yangın söndürme ve kurtarma vagonları kullanılmış, ancak karayolu ambulans sistemlerinin gelişmesiyle hizmet dışı bırakılmıştır. Hastane trenleri de benzer bir mantıkla tasarlanmış ve Kırım Savaşı'ndan bu yana savaşlarda kullanılmaya devam etmiştir. Günümüzde Hindistan ve Rusya gibi ülkelerde bu trenler, ulaşımın kısıtlı olduğu bölgelere sağlık hizmeti sunmaktadır. Deniz taşımacılığında da benzer uygulamalar bulunmaktadır. Endonezya'nın Karimun Jawa Adaları'nda, acil durumlara hızlı müdahale edebilmek ve hastaların daha büyük sağlık merkezlerine sevkini sağlamak amacıyla bir ambulans gemisi tasarlanmıştır. Bu tür taşınabilir müdahale birimleri, ulaşım altyapısının yetersiz olduğu bölgelerde hayati önem taşımaktadır.

Yangın Söndürme ve Kurtarma Vagonu, iki adet 80 FT platform vagon üzerine monte edilerek tasarlanmıştır. Bütün tasarım süreci Solidworks programı kullanılarak dijital ortamda gerçekleştirilmiş ve imalat detayları bu yazılım üzerinden belirlenmiştir. YSKV, kendi enerjisini üretebilme kapasitesine sahip olup 24 saat boyunca kesintisiz müdahale yapabilir. 92 ton su ve 4 ton köpük kapasitesine sahip olan vagon, 30 adet ilk müdahale aracı ve 13 adet yangın müdahale aracı taşıma kapasitesine sahiptir. Yapısal olarak modüler bir tasarıma sahip olan vagon, iki adet 40 FT konteyner ve dört adet 20 FT ISO tank konteyner ile donatılmıştır. 40 FT konteynerlerden biri Pompa ve Jeneratör Seti Konteyneri (GÜÇSET), diğeri ise Kurtarma ve Ekipman Konteyneri (KEK) olarak kullanılmaktadır. ISO tank konteynerleri, tehlikeli maddelerin taşınması ve geçici olarak depolanması için önemli bir güvenlik unsuru sağlamaktadır. Bu modüler yapı, vagonun farklı senaryolara göre esnek bir şekilde konfigüre edilmesine olanak tanır.

Bu özel tasarıma sahip vagonun temel amaçları arasında çevre emniyetini sağlama, yangın söndürme, kaza-kırım kurtarma operasyonlarını gerçekleştirme, çevre kirliliğini önleme ve tehlikeli maddeleri

güvenli bir şekilde geçici olarak depolama yer almaktadır. YSKV, büyük hacimli su ve köpük tankları, geniş ekipman taşıma alanları ve modüler yapısı sayesinde demiryolu ağının geçtiği uzak veya erişimi zor bölgelerde yangınla mücadelede ve kurtarma operasyonlarında önemli bir rol oynamaktadır. Ayrıca, vagonun içerisinde yer alan özel yangın söndürme sistemleri, farklı yangın türlerine karşı etkin müdahale edebilmek için farklı kimyasalları ve söndürme tekniklerini kullanma kapasitesine sahiptir. Yangın Söndürme ve Kurtarma Vagonu'nun avantajlarından biri de hızlı konuşlandırma imkânıdır. Olay yerine ulaşan vagon, kısa sürede operasyonel hale getirilebilir ve geniş bir alanı kapsayan yangınlara etkin bir şekilde müdahale edebilir. Vagonun içerisinde bulunan su ve köpük pompaları, yüksek basınçlı hortumlar ve özel püskürtme sistemleri sayesinde geniş alanlara müdahale edilebilir. Ayrıca, gaz sızıntıları ve kimyasal maddelere karşı özel sensörler ve filtreleme sistemleri ile donatılmış olması, olay yerindeki tehlikelerin minimize edilmesine yardımcı olur.

Bu sistemin en büyük getirilerinden biri, demiryolu taşımacılığının güvenliğini artırarak yangın ve kazalara karşı proaktif bir önlem sunmasıdır. YSKV, sadece yangınla mücadelede değil, aynı zamanda tehlikeli madde taşıyan trenlerin kaza yapması durumunda da kritik bir rol oynar. Örneğin, petrol veya kimyasal madde taşıyan bir yük treninin devrilmesi veya yanması halinde, bu özel vagon hızla bölgeye intikal ederek yangını kontrol altına alabilir ve çevreye zarar verebilecek maddelerin yayılmasını önleyebilir.

Yangın Söndürme ve Kurtarma Vagonu, demiryolu taşımacılığının güvenliğini artıran yenilikçi bir projedir. Modern teknolojilerle donatılmış bu sistem, demiryolu taşımacılığında güvenlik standartlarını yükselterek afet müdahalelerini daha hızlı ve etkili hale getirecektir. Gelecekte bu tür özel tasarımların yaygınlaşması, demiryolu altyapısının güvenliğini ve afetlere müdahale kapasitesini önemli ölçüde artıracaktır. Bu kapsamda, YSKV gibi projeler yalnızca Türkiye'de değil, dünya genelinde de afet ve acil durum yönetimi için kritik bir teknoloji olarak değerlendirilmelidir. Daha fazla ülkenin bu sistemleri benimsemesiyle, demiryolu taşımacılığı daha güvenli ve sürdürülebilir bir hale gelecektir.

Keywords: Yangın Söndürme, Kurtarma, Vagon, Tasarım, Demiryolu

THE IMPACT OF AI TOOLS ON STUDENT ASSIGNMENTS: ENHANCING CREATIVITY OR HINDERING CRITICAL THINKING?

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In educational contexts, the increasing availability of artificial intelligence (AI) tools has had a considerable impact on student learning and the completion of assignments. This has presented educational institutions with both opportunities and challenges. Students have access to higher-level assistance in areas such as research, content development, and graphic design thanks to technology driven by artificial intelligence (AI), which enables them to produce high-quality assignments with better efficiency. AI has significantly transformed teaching and learning methods in higher education (Singh & Hiran, 2022) [1]. Despite this, worries have been raised about the influence that artificial intelligence will have on students' creative abilities, originality, and critical thinking skills as technology continues to disrupt traditional learning methodologies. With a particular emphasis on the function that AI tools play in the development of assignments and posters, this study explores the use of AI tools among students in the third semester of their studies at Malaysian polytechnics. The purpose of this research is to give empirical insights into the emerging interaction between artificial intelligence (AI) and student learning by analysing the amount to which students rely on AI, the perceived benefits and downsides, and the overall influence on academic achievement.

The purpose of this study is to accomplish these goals by employing a quantitative research technique. This methodology involves the utilisation of structured surveys to collect data from students attending a variety of polytechnics in Malaysia. The goal of the survey is to determine the frequency and purpose of the use of artificial intelligence tools, as well as the perceptions of students on the impact that AI has on creative thinking and critical thinking, and the overall usefulness of using AI-generated content in academic assignments. Considering the growing reliance on generative artificial intelligence models like ChatGPT, Grammarly, and Canva, as well as other automation tools, it is of the utmost importance to investigate the ways in which these technologies influence the cognitive development of students and their capacity to engage in autonomous thought. In addition, statistical analyses, such as correlation and regression models, will be carried out to investigate the connections that exist between the utilisation of artificial intelligence, the quality of assignments, and the development of cognitive skills. This method will make it possible for academics to determine if students who make regular use of artificial intelligence generate work of a higher quality or, on the other hand, whether dependence on AI reduces students' ability to solve problems and their creativity.

It is anticipated that the findings of this study will provide light on the ways in which these technologies contribute to greater creativity and originality in poster design. For example, the findings will highlight the most widely utilised artificial intelligence tools among students in their third semester at polytechnics. Students can receive aid with visual aesthetics, formatting, and content organisation using several tools driven by artificial intelligence. This makes it possible for students to create posters that are more visually appealing, well-organised, and professionally created. This indicates that artificial intelligence has the potential to broaden the creative possibilities available to students, enabling them to experiment with new design methods and generate academic materials that are visually attractive. It is also possible that suggestions created by AI might assist students in refining their ideas, which would result in increased self-assurance and efficiency when completing assignments.
This study, however, anticipates some negative ramifications for critical thinking and autonomous reasoning, even though it has several positive implications. Students may become habituated to automated responses rather than participating in deeper cognitive processes if they experience an

excessive reliance on information provided by artificial intelligence (AI). This is a serious concern since it may lead to a reduction in students' creativity and problem-solving skills. A passive learning approach, in which students passively accept ideas made by AI without critically assessing or revising them to reflect their own understanding and insights, may be encouraged by text and design components that are generated by artificial intelligence. Furthermore, students who frequently utilise AI tools may see a deterioration in their ability to conduct independent research. This is because AI-generated summaries and automated feedback give students immediate solutions, rather than motivating them to engage in full literature review and analytical thinking.

In addition, the research acknowledges a few limitations, such as the fact that it was conducted with students from polytechnics in their third semester and that poster assignments were required. These limitations may make it more difficult to generalise the findings to other educational settings. It is possible that the findings do not adequately capture the ways in which artificial intelligence influences other sorts of academic work, such as the writing of essays, the analysis of data, or the delivery of presentations, which demand abilities in critical thinking and reasoning more directly. In addition, the usefulness of AI tools may vary depending on the subject matter that students are studying. For example, certain fields of study may benefit more from visual information that is generated by AI, while other fields may require students to engage in in-depth reasoning and theoretical engagement. Despite these obstacles, it is anticipated that this study will produce insightful information that will be useful to academic institutions, legislators, and school administrators. To ensure that students are encouraged to utilise artificial intelligence as a helpful tool rather than as a substitute for autonomous thought, the findings will be of use to educators in the process of developing recommendations on the integration of AI. Educators can implement ways to strike a balance between activities that involve critical thinking, problem-solving, and creativity and assignments that are supported by artificial intelligence (AI) if they understand how AI affects the learning behaviour of students. Furthermore, the research underscores the necessity of artificial intelligence literacy programs, which provide students with the information and abilities they need to critically evaluate and responsibly use content generated by AI.

In the end, the purpose of this research is to contribute to the larger conversation about artificial intelligence in education by providing insights that are driven by data on the changing role that AI plays in the learning and assignment development of students. Students may face difficulties in terms of independent cognitive development and originality while using AI tools, even though these tools offer major benefits to students in terms of efficiency, creativity, and content organisation. Educators should ensure that students develop both technological competency and critical thinking abilities by developing a balanced approach to the integration of artificial intelligence (AI). This will prepare students for an academic and professional landscape that is increasingly moulded by innovations powered by AI.

Keywords: AI Tools; ESL Educators; Artificial Intelligence; Creativity, Critical Thinking

EKONOMİK BÜYÜMENİN SİBER GÜVENLİK ÜZERİNE ETKİSİ: ICT GELİŞİM ENDEKSİNDEN KANITLAR

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Bilgi ve iletişim teknolojilerinde yaşanan gelişmeler sosyo-kültürel ve ekonomik hayata da yansımıştır. Modern dijital çağda bir ülkenin dijital altyapısının korunması ve bilgi akışının güvenli bir şekilde sağlanmasını ifade eden siber güvenlik, bireylerin, şirketlerin ve devletlerin karşılaştığı en önemli sorunlardan biri haline gelmiştir. Teknolojik ilerlemeler ve internetin yaygın kullanımı, birçok avantaj sağlamakla birlikte, siber saldırıların, veri ihlallerinin ve siber suçların artmasına zemin hazırlamaktadır. Bu bağlamda, ekonomik büyümenin ve teknolojik altyapının gelişmesinin ülkelerin siber güvenlik stratejilerini oluşturma biçimlerini doğrudan etkileyebileceği açıktır. Özellikle Bilgi ve İletişim Teknolojileri Gelişim Endeksi (ICT Development Index), bir ülkenin dijital altyapısının ve siber güvenlik önlemlerinin etkinliğini değerlendirmede önemli bir gösterge olarak kullanılmaktadır. Ekonomik büyümeye yanıt olarak bilgi ve iletişim teknolojileri (BIT) altyapısının güçlendirilmesi, siber güvenliğe yapılan yatırımların artmasını kolaylaştırabilir ve böylece dijital tehditlere karşı savunmayı güçlendirebilir.

Dijitalleşmenin hızla her alana yayıldığı bir dünyada sadece bilgi üretimi değil aynı zamanda bilgi güvenliği de büyük bir önem arz etmektedir. Son yıllarda siber güvenlik ve BIT gelişimi, dijitalleşen ekonomilerde önemli bir araştırma konusu haline gelmiştir. Bu çalışma mevcut literatürden hareketle ekonomik büyümenin siber güvenlik üzerine etkilerini araştırmaktadır. Çalışma kapsamında siber güvenliği temsilen 171 ülkenin yer aldığı ICT Gelişim Endeksi (IDI) 2023-2024 yılı verileri kullanılmıştır. Analizin bu yıllar arasını kapsıyor olmasının nedeni 2009-2017 yılları arasında ITU tarafından yayınlanan IDI'nin 2017 yılından itibaren içeriğinde değişikliğe gidilmiş olması ve yapılan değişiklikler sonrasında veri yetersizliği sebebiyle endeks hesaplamasının tüm ülkeler için ancak 2023 yılı itibariyle gerçekleştirilebilmiş olmasıdır. IDI de yer alan 171 ülkeden Bhutan, Liberia, Liechtenstein, Monaco, Filistin, San Marino, Sierra Leone, Suriye, Tonga, Venezuela ve Yemen veri yetersizliği nedeniyle örneklem dışında bırakılmıştır. Bu bağlamda çalışma IDI içerisinde yer alan tüm ülkeleri kapsıyor olması bakımından mevcut literatürde yer alan belli bir bölgede, gelir seviyesinde ve benzeri gibi ülke gruplarına odaklanan çalışmalardan kapsayıcılık açısından farklılaşmaktadır. Birbiri içerisine yuvalanmış farklı birim boyutları hakkında bilgi sağlayan çok boyutlu yuvalanmış panel veri analizi yönteminden yararlanılan çalışmada ülkeler ve ekonomik gelişmişlik düzeyine göre tasnif edilmiş ülke grupları birim boyutlarını yıllar ise zaman boyutunu temsil etmektedir. Böylelikle ülke etkilerinin yanı sıra ekonomik gelişmişlik düzeyine göre oluşturulan grupların genel eğilimleri gözlemlenebilecektir. Tüm değişkenler modele logaritmik formda dahil edilmiş olup bağımlı değişken olarak yer alan IDI verisi ITU raporlarından (ITU, 2023-2024), bağımsız değişken olarak yer alan kişi başına gelir verisi ise Dünya Bankası veri tabanından elde edilmiştir. Ekonomik gelişmişlik boyutu düşük gelir grubu, alt-orta gelir grubu, üst-orta gelir grubu ve yüksek gelir grubu olmak üzere toplam dört boyuttan oluşmaktadır. Birim etkilerin varlığı LR testi ile araştırılmış olup test sonuçları birim etkilerin anlamlı, zaman etkisinin anlamsız olduğunu göstermiştir. Böylelikle üç boyutlu iki birim etkili panel veri modeli seçilmiş olup sabit etkiler grup içi tahmincisi ile tesadüfi etkiler en çok olabilirlik tahmincisi arasındaki seçim Hausman test sonuçları dikkate alınarak yapılmıştır. Elde edilen bulgular, ekonomik büyüme ile IDI arasında istatistiksel olarak anlamlı ve pozitif bir ilişki olduğunu göstermektedir. Ülke etkisinin yanı sıra farklı ekonomik gelişmişlik düzeylerine göre gruplanan ülkeler hakkında bilgi sunan analiz yöntemi düşük ve alt-orta gelir grubunda yer alan ülkeler

için yüksek ve üst -orta gelir grubunda yer alan ülkelere nazaran daha büyük artışların olduğunu göstermektedir.

Keywords: Ekonomik Büyüme, Siber Güvenlik, ICT Gelişim Endeksi, Panel Veri Analizi.

YAPAY ZEKÂ ILE ŞEKILLENEN SÜRDÜRÜLEBILIR TOPLUM: TOPLUM 5.0'IN TEKNOLOJIK VIZYONU

Mehmet Nurettin Alabay (Abdullah Gül University)

21. yüzyılda teknolojik dönüşüm, toplumsal yapının yeniden inşa edilmesine neden olmuş; bu dönüşüm sürecinde yapay zekâ (YZ), sürdürülebilir kalkınma hedeflerinin gerçekleştirilmesinde kilit bir araç olarak öne çıkmıştır (Anavatan, 2023). Yapay zekâ; veri analitiği, otomasyon, karar destek sistemleri ve öngörü modelleri aracılığıyla çevresel, ekonomik ve sosyal sürdürülebilirlik alanlarında etkili çözümler sunma potansiyeline sahiptir (Gupta vd., 2021; Khakurel vd., 2018). Özellikle yenilenebilir enerji yönetimi, çevresel veri analizi, akıllı şehir sistemleri ve kentsel altyapının dijitalleştirilmesi, YZ'nin sürdürülebilirliğe katkı sunduğu önÇelikli alanlar arasında yer almaktadır (Gökşen, 2024). Ancak yapay zekâ uygulamalarının sürdürülebilirlik açısından önemli riskler barındırdığı da belirtilmektedir. Bunlar arasında veri önyargıları (bias), dijital eşitsizlik, etik dışı otomasyon kararları ve sistemik güvenlik açıkları yer almaktadır (Liao vd., 2022; Anavatan, 2023). Örneğin, algoritmaların eğitildiği verilerdeki adaletsizlikler, toplumsal gruplar arasında ayrımcılık ve dışlanmaya yol açabilmektedir (Yılmaz, 2021). Ayrıca, YZ sistemlerinin yüksek enerji tüketimi ve karbon ayak izi, çevresel sürdürülebilirlik hedefleri ile çelişen sonuçlar doğurabilmektedir (Sadıç, 2022). Bu bağlamda Japonya'nın ortaya koyduğu Toplum 5.0 paradigması, dijital teknolojilerin insan refahı, sosyal bütünlük ve çevresel denge ile uyumlu bir şekilde yapılandırılmasını hedeflemektedir (Akın vd., 2021). Toplum 5.0, siber ve fiziksel dünyaların yüksek düzeyde entegrasyonu ile bireylerin yaşam kalitesini artırmayı, sosyal sorunları çözmeyi ve fırsat eşitliği sağlamayı amaçlayan bir "süper akıllı toplum" modelidir (Duman, 2022). Bu model, yalnızca ekonomik büyümeye değil, aynı zamanda eşitsizliklerin giderilmesine, insan onurunun korunmasına ve doğa ile uyumlu yaşam biçimlerinin geliştirilmesine odaklanmaktadır (Kavak, 2023).

Toplum 5.0 çerçevesinde geliştirilen akıllı şehir uygulamaları, akıllı yönetişim, veriye dayalı karar mekanizmaları, katılımcı vatandaşlık, akıllı enerji şebekeleri ve yeşil bina sertifikasyonu gibi unsurlar ile sürdürülebilirliği somutlaştırmaktadır (Gökşen, 2024; ÖzTopçu & Salman, 2019). Bu teknolojik altyapılar yalnızca teknik iyileştirme sağlamakla kalmayıp, toplumun sosyo-kültürel yapısıyla da etkileşime girerek yeni bir insan-teknoloji etkileşimi doğurmaktadır. Teknoloji-insan ilişkisi, bu noktada merkezi bir öneme sahiptir. Toplum 5.0, insanı teknolojinin nesnesi değil, öznesi olarak konumlandırır (Akın vd., 2021). Yapay zekâ destekli karar sistemleri, bireylerin öz farkındalığını artırmak, fiziksel ve sosyal engelleri kaldırmak ve insan kapasitesini geliştirmek üzere kullanılmalıdır (Kavak, 2023). Ancak bu hedeflere ulaşabilmek için, sorumlu yapay zekâ ilkeleri (etik, şeffaflık, hesap verebilirlik) bağlamında çok boyutlu bir yönetişim anlayışı benimsenmelidir (Şener, 2020).

Bu çalışmada; yapay zekânın sürdürülebilirlik hedeflerine katkıları, taşıdığı riskler, Toplum 5.0 paradigmasının sunduğu alternatifler ve teknoloji-insan etkileşiminin geleceği disiplinlerarası bir perspektiften ele alınmakta; sürdürülebilir toplum vizyonuna ulaşmada dengeli ve etik bir dijital dönüşümün önemi vurgulanmaktadır.

Keywords: Yapay Zekâ, Sürdürülebilir Toplum, Toplum 5.0, İnsan Merkezli Teknoloji.

IMPACT OF PSYCHOLOGICAL FACTORS ON COGNITIVE DEVELOPMENT OF STUDENTS AT ELEMENTARY LEVEL

Bushra Bashir (UAF)

Psychological elements are important for students' cognitive growth because they affect how well they learn, remember knowledge, and function in the classroom. Emotional well-being is among the most important factors. Happy and contented feelings have the power to improve cognitive functions like memory, problem-solving, and concentration. The development of pupils' cognitive abilities depends on providing them with a nurturing atmosphere that fosters emotional health. The main aim of the study was to find out impact of psychological factors on cognitive development of students at elementary level. The current study entitled impact of psychological factors on cognitive development of students at elementary level in tehsil Tandlianwala was conducted in tehsil Tandlianwala. The study was descriptive and survey type in nature. The study was quantitative type in nature. From all elementary schools in tehsil Tandlianwala twenty schools were selected conveniently. There were total 146 teachers currently working in selected schools. A sample size 106 with confidence level 95% and confidence interval 5 was determined. A well-structured questionnaire was developed for data collection from respondents. After collection of data it was analyzed s by statistical package for social sciences (SPSS). More than half (65.1%) were post- graduate according to their academic qualification while 16% were graduate. About one-third (33%) respondents were above 15 years' experience in teaching while 24.5% had 6-10 years' experience as teacher. More than half (57.5%) were B.Ed. qualified while 20.8% had M.Ed. as professional qualification. It was concluded that stress and anxiety was at 1st in rank order according to the W.S.= 431 and mean 4.06 followed by emotional intelligence at 2nd rank order with W.S.= 430 and mean 4.05 and laying between agree to strongly agree at five-point Likert scale but tending towards agree level. Attention and focus (W.S.=426, Mean=4.01), intrinsic and extrinsic motivation (W.S.=425, Mean=4.00) and neuroticism (W.S.=412, Mean=3.88), at 3rd, 4th and 5th in rank order and laying between neutral to agree but tending towards agree at five-point Likert scale. different impact of psychological factors on student's academic achievements, uneasiness was at 1st in rank order according to the W.S.= 424 and mean 4.00 followed by increased risk of dropout at 2nd rank order with W.S.= 422 and mean 3.98 and laying between agree to strongly agree at five-point Likert scale but tending towards agree level. Role of parental and teacher's in enhancing cognitive development, supporting healthy sleep habits was at 1st in rank order according to the W.S.= 439 and mean 4.14 followed by promoting executive functioning skills at 2nd rank order with W.S.= 437 and mean 4.12 and laying between agree to strongly agree at five-point Likert scale but tending towards agree level. It was recommended that School administration should organize frequent sessions for parents, educators, and students to raise understanding of the connection between mental health and academic and cognitive performance include training on mental health in the academic program. Policy makers should have introduced SEL courses to aid students in gaining abilities like stress reduction, sympathy, and control of their emotions and Stimulate educators to include SEL principles into their regular directives.

Keywords: Psychological Factors :Anxiety, Stress, Attention, Self-Esteem , Emotional Intelligence
Cognitive Development: Thinking Skills, Memory, Reasoning, Problem Solving
Academic Achievements: Skills, Knowledge, Goals, Outcomes

IX. ASC 2025 / SPRING CONGRESS

ARTIFICIAL INTELLIGENCE SUPPORTED ENTERPRISE RESOURCE PLANNING IN UNIVERSITIES

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From the mid-20th century until the 1980s, studies primarily focused on creating machines that could replace human capabilities. However, with the advancement of computers, the idea of developing intelligent programs began to emerge. Although the definitions of artificial intelligence (AI) have evolved over time, a common point in these definitions is that AI aims to replicate human intelligence. The increasing popularity of AI today has, like in many other fields, influenced organizations as well. By integrating AI into the various systems they use, organizations are attempting to keep pace with advancing technology and develop through these innovations. In this context, as the amount of data within organizations increases alongside technological advancements, organizations seek methods to better process the information they possess. As the data accumulated in an organization's database grows, decision-making through manual data processing becomes more challenging. Therefore, the fundamental reason for the widespread use of AI across various disciplines is the necessity to process the increasing volume of data due to technological growth.

Even before the advancement of technology, organizations have strived to streamline their operations and accelerate workflows through different systems. Their efforts to organize workflows aim not only to speed up processes but also to structure the information within the organization. This way, accurate information can be accessed when necessary, or errors can be identified if they exist. With technological advancements, various information systems have been integrated into organizations, and over time, these systems have merged to form a central system known as "Enterprise Resource Planning" (ERP). Initially, ERP systems were limited to managing warehouse operations, inventory tracking systems, and similar functions. However, over time, these systems evolved to help manage the entire organization. The growing number of these systems led to issues in data flow between departments, prompting the integration of systems into a central framework, giving rise to the widespread adoption of ERP. For years, ERP systems, to which organizations have entrusted most of their workflows, have become a primary source for collecting organizational information. Thanks to their integration across all business processes, ERP systems record all organizational data in a central database. When AI is integrated into ERP systems, it can process this data and contribute to the decision-making process without the need for human intervention. Here, AI's capability to process data quickly comes into play, and it is assumed that AI will facilitate decision-making by processing data efficiently. Like many other institutions, universities must also adhere to a certain management model and be managed based on management practices. In the past, universities were often characterized by a closed structure, which led to communication problems between them. Issues such as differences in quality, students' equivalency problems, difficulties in transferring between universities, and discrepancies in grading systems became significant challenges. To address these problems, some universities connected with each other through methods like a centralized grading system, and centralizing some management mechanisms accelerated communication. For these reasons, universities also require the implementation of ERP systems. Indeed, ERP systems will expedite data sharing both within and between universities. This study examines the role of AI integrated into ERP systems and whether these systems can benefit universities. The study begins by investigating what AI is and how perspectives on AI have evolved over time, followed by a discussion of ERP systems and their history, addressing the need for information systems in organizations. Finally, the use of ERP systems in universities as a centralized system is

explored, along with the role of AI in this context. Additionally, the study considers how AI can contribute to management, given the large volume of available and potential data. Although there have been numerous studies in the literature examining ERP systems and the impact of AI on these systems in universities, research specifically focusing on AI support is relatively limited. The aim of this study is to address this gap, and it concludes that AI-supported ERP systems can be beneficial for universities. However, challenges and threats still persist in areas such as data security and the direct delegation of organizational management to AI.

Keywords: Enterprise Resource Planning, Artificial Intelligence, ERP, University

SCIENTIFIC AND INNOVATION APPROACH TO SUSTAINABLE REGIONAL DEVELOPMENT IN CENTRAL ASIA UNDER GLOBALIZATION

Kamaldin Yunusov (Andijan State University)

The article presents the author's personal thoughts and observations based on a scientific and innovative approach to sustainable development in Central Asia in the context of globalization. It describes scientific and practical ways of coordinating dialogue between scientists - professors, teachers and students of higher education institutions of the countries of the region (Türkiye, Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Afghanistan) to ensure sustainable development. The article proposes the idea of creating a department for ensuring regional stability and development in Türkiye and Central Asia within the framework of the "Center for Social Research". To achieve this, we believe it is necessary to work according to the following principles: 1) to establish cooperation between scientists working in their specialties in higher education institutions of Türkiye, the independent states of Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Afghanistan; 2) The "Center for Social Research" was established at Andijan State University named after Zakhiriddin Muhammad Babur. It is necessary to implement the activities of a special scientific unit "On Sustainable Regional Development" in higher education institutions of Türkiye and the Central Asian region and in the center itself; 3) for sustainable socio-economic and spiritual development of the region, it is necessary to implement close cooperation between scientists and students of higher education institutions engaged in scientific research in the field of education, culture, national traditions and values; 4) formation of the topics of fundamental projects in the field of sustainable development of regions and financing of scientific research of scientists, researchers, masters, as well as development of leadership of higher education institutions engaged in this research; 5) In order to establish cooperation between scientists working in relevant specialties in higher education institutions of Türkiye, the independent states of Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Afghanistan, it is permissible to organize advanced training courses for faculty from the countries of the Central Asian region in certain specialties in universities in Türkiye.

Based on the above thoughts and considerations, it can be said that in the current conditions of globalization, a scientific and innovative approach to the process of regional sustainable development in Türkiye and Central Asia is necessary. Therefore, it is advisable to unite the faculty, scientists, graduate and postgraduate students living in the countries of the region and working in higher education institutions within the framework of a single scientific project called "Ensuring Regional Stability". In this regard, I considered it necessary to express the following considerations. Based on the above, the following conclusions can be drawn: 1) organize exchange courses in specialties for scientists working in higher education institutions of Türkiye and the independent states of Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Afghanistan, based on the International Institute for Cooperation and Sustainable Social Development in the region of Türkiye and Central Asia; 2) create a "Center for Social Research" in the specified regional universities and implement within the center the activities of a special scientific unit "On issues of sustainable development of territories"; 3) determine the list of participants in joint scientific research on issues of regional socially sustainable development and establish the procedure for its implementation; 4) develop a topic for joint scientific research on sustainable social development of the region, its plan and conduct scientific research on its basis; 5) Conclude and implement a bilateral five-year agreement (contract) on scientific and public relations, signed by the rectors of higher education institutions.

Keywords: Türkiye, Orta Asya, Sürdürülebilir Kalkınma

YÜKSEK BASINÇLI ALÜMİNYUM DÖKÜM KALIPLARINDA VAKUM BLOĞUNA ALTERNATİF OLARAK HAVA TAHLİYE BLOĞUNUN (CHILLVENT) TASARIMI

Selin Tuna (Tasarım Mühendisi)

Günümüz otomotiv endüstrisinde çelik sac, çelik döküm, dökme demir ve alüminyum ekstrüzyon ile üretime alternatif kullanımı giderek artan, alüminyum ve magnezyum alaşımlı parçaların üretiminde yaygın olarak kullanılan yüksek basınçlı döküm prosesinde, diğer yöntemlerle üretilen parçalardan beklenen mekanik özellikleri karşılaması ve özellikle kalıp içinde hapsolan havanın etkin şekilde tahliye edilmesi kritik bir öneme sahiptir. Bu yüksek mekanik özelliklerin YBD prosesinde elde edilebilmesi için yüksek basınçlı döküm parçalarındaki hava sıkışması sebebiyle oluşan porozitenin (döküm boşluğu) engellenmesi veya kabul edilebilir sınırlara çekilmesi gerektiğinden kalıp içerisinde sıkışan havanın tahliye edilmesi gerekmektedir. YBD prosesinde hava tahliyesi, vakum bloğu ve hava tahliye bloğu (Chillvent) ile yapılabilmektedir. Bu kapsamda vakum bloğuna muadil, kalıplarda vakum bloğu bağlama tekniğine uygun şekilde montajı yapılabilecek özgün bir hava tahliye bloğu tasarlanmıştır. Bu çalışmada, vakum sistemlerine alternatif olarak tasarlanan yenilikçi bir hava tahliye bloğunun performansı detaylı şekilde incelenmiştir. Araştırma kapsamında hem sayısal simülasyonlar hem de deneysel yöntemler kullanılarak, vakum bloğu ve hava tahliye bloğunun döküm kalitesi üzerindeki etkileri karşılaştırmalı olarak analiz edilmiştir. Çalışmanın ilk aşamasında, mevcut vakum sistemleriyle uyumlu çalışabilecek şekilde optimize edilmiş bir hava tahliye bloğu tasarlanmıştır. Bu blok, sıcak iş çeliğinden imal edilmiş ve yüzey sertliği artırılmıştır. Blok tasarımında hava akışını optimize etmek için hava tahliye bloğu (Chillvent) için özel kanal geometrileri kullanılmıştır.

Simülasyon çalışmaları için endüstriyel döküm parametreleri kullanılmış ve AlSi12(Fe) alüminyum alaşımının kalıp içindeki davranışı detaylı şekilde modellenmiştir. Her iki yöntemin de kullanıldığı kalıpların; döküm simülasyonu temelli analizleri yapılmış olup, sonuçlar tasarlanan hava tahliye bloğunun kalıp dolum karakteristikleri açısından vakum sistemleriyle benzer performans gösterdiğini ortaya koymuştur. Katılaşma analizleri, her iki sistemde de benzer katılaşma modelleri gözlendiğini ve porozite oluşumu açısından anlamlı bir fark bulunmadığını göstermiştir. Deneysel çalışmalar, endüstriyel ölçekteki bir döküm makinesi kullanılarak gerçekleştirilmiştir. Üretilen parçaların kalite kontrolünde gelişmiş görüntüleme tekniklerinden olan X-ray yöntemi kullanılmış ve porozite dağılımları karşılaştırılmıştır. Deneysel sonuçlar, simülasyon bulgularını doğrular nitelikte olup, her iki sistemin de kabul edilebilir porozite seviyelerinde parça üretebildiğini göstermiştir. Maliyet analizleri, tasarlanan hava tahliye bloğu sisteminin vakum sistemlerine kıyasla önemli maliyet avantajları sağladığını ortaya koymuştur. Bu bulgular, özellikle küçük ve orta ölçekli dökümhaneler için ekonomik bir çözüm sunmaktadır. Çalışmanın sonuçları, tasarlanan hava tahliye bloğunun endüstriyel uygulamalarda başarıyla kullanılabileceğini göstermektedir. Sistemin basit tasarımı ve kolay uygulanabilirliği, üretim hatlarında hızlı adaptasyon sağlayabilecek niteliktedir. Bu çalışma, yüksek basınçlı döküm proseslerinde maliyet etkin çözümler arayan üreticiler için önemli bir alternatif sunmaktadır. Gelecek çalışmalarda, farklı alaşım sistemleri ve daha karmaşık parça geometrileri için sistem performansının detaylı şekilde incelenmesi planlanmaktadır. Ayrıca, uzun vadeli üretim koşullarında sistemin dayanıklılık performansının değerlendirilmesi öngörülmektedir. Bu araştırma, yüksek basınçlı döküm proseslerinde hava tahliye sistemlerinin optimizasyonu konusunda önemli bir adım teşkil etmektedir. Geliştirilen hava tahliye bloğu, döküm kalitesinden ödün vermeden üretim maliyetlerini düşürme potansiyeli ile endüstriye önemli katkılar sağlayabilecek niteliktedir. Sistemin modüler tasarımı, farklı döküm makinalarına ve kalıp sistemlerine kolayca adapte

edilebilmesine olanak tanımaktadır. Bu özellikler, tasarımın endüstriyel uygulamalarda hızla yaygınlaşma potansiyelini artırmaktadır. Çalışmanın bulguları, alüminyum ve magnezyum alaşımlı parçaların üretiminde verimliliği artırmak isteyen dökümhaneler için yol gösterici niteliktedir. Özellikle seri üretim yapan tesislerde, sistemin sağladığı maliyet avantajları rekabet gücünü artırabilecek önemli bir faktör olarak öne çıkmaktadır. Bu teknolojinin yaygınlaşmasıyla birlikte, yüksek basınçlı döküm proseslerinin verimliliğinde önemli artışlar beklenmektedir.

Abstract
In the contemporary automotive industry, high-pressure die casting has emerged as a widely adopted manufacturing process for aluminum and magnesium alloy components, serving as an increasingly popular alternative to traditional methods such as steel sheet metal fabrication, steel casting, cast iron, and aluminum extrusion. A critical aspect of this process involves ensuring that cast parts meet required mechanical properties, with particular emphasis on the effective evacuation of air entrapped within the die cavity. To achieve the desired mechanical characteristics in high-pressure die cast components, it is essential to prevent or reduce porosity caused by air entrapment to acceptable levels, necessitating efficient air removal from the mold. In high-pressure die casting, air evacuation can be accomplished through either vacuum blocks or specialized air vent blocks (Chillvent). Within this context, an innovative air vent block has been developed as a functional equivalent to vacuum blocks, designed for installation in dies using standard vacuum block mounting techniques.

This research presents a comprehensive investigation into the performance of this newly designed air vent block as an alternative to conventional vacuum systems. The study employs both computational simulations and experimental methodologies to conduct a comparative analysis of how vacuum blocks and air vent blocks influence casting quality. The initial phase of the research involved the design of an optimized air vent block compatible with existing vacuum systems. This component was manufactured from hot-work tool steel with enhanced surface hardness, incorporating specially designed channel geometries to optimize airflow within the Chillvent block. For the simulation studies, industrial casting parameters were implemented to model the behavior of AlSi12(Fe) aluminum alloy within the die cavity. Detailed mold-filling and solidification analyses were performed for both systems, with results indicating that the air vent block demonstrated filling characteristics comparable to vacuum systems. Solidification analysis revealed similar solidification patterns between the two methods, with no statistically significant difference in porosity formation. Experimental validation was conducted using industrial-scale high-pressure die casting equipment, with X-ray imaging employed for quality assessment and porosity distribution comparison. The experimental findings corroborated the simulation results, confirming that both systems were capable of producing components within acceptable porosity limits.

Economic analysis revealed that the air vent block system offers substantial cost advantages compared to vacuum systems, presenting an economically viable solution particularly for small and medium-scale foundries. The system's straightforward design facilitates rapid implementation in production lines while maintaining casting quality standards. These findings demonstrate that the newly developed air vent block represents a technically sound alternative to vacuum systems in high-pressure die casting applications, providing comparable performance at reduced operational costs. Future research directions include evaluating the system's performance with different alloy systems, testing under more complex part geometries, and assessing long-term durability under continuous production conditions. The study contributes to ongoing advancements in porosity control technologies for die casting, offering manufacturers a cost-effective solution for producing high-integrity lightweight components. The

modular nature of the design allows for straightforward adaptation to various die casting machines and mold systems, potentially enabling widespread industrial adoption. These developments are particularly significant for mass production facilities where cost efficiency plays a crucial role in maintaining competitive advantage, with anticipated improvements in overall process efficiency as this technology becomes more prevalent in high-pressure die casting operations.

Keywords: Yüksek Basınçlı Döküm, Vakum Bloğu, Hava Tahliye Bloğu, Porozite

THE PERCEPTION OF HEALTH BELIEF AND VACCINE VALENCE TOWARDS DOMESTIC TOURIST INTENTION TO TRAVEL DURING COVID-19 PANDEMIC

Rozılawatı Shaarı (Politeknik Tuanku Syed Sırajuddın)

This research investigates health risk perception and vaccine valence as factors that affect Malaysian intention to engage in domestic vacations. An online survey was created with Google Forms and distributed to a sample of 265 domestic travellers at least 18 years of age in May and June 2021; this is when the nationwide vaccine program started in Malaysia. The result indicates that vaccine valence risk perception was a significant factor in affecting domestic vacation intention. Only perceived behavioural control and subjective norms mediated the relationship between health risk perception and domestic vacation intention. Overall, vaccine valence risk perception tested significantly with all constructs in this study due to the various factors, especially the timing of data collection where the data collection was carried out amid the national vaccination program. Hence, the vaccine is now perceived as a hope for many as the solution to the current pandemic problem. It indicates that domestic vacationers will return once vaccinated and when tourism sectors are open for business and resume their regular operation. These findings extend the body of knowledge for the theory of health belief and theory of planned behaviour in predicting tourist intention to travel during a pandemic. Findings also indicate the positive impact of vaccine valence on the tourist's intention to travel, which provides a glimpse of future tourist behaviour when facing similar uncertainties.

Keywords: COVID-19, Health Risk Perception, Domestic Vacation İntention, Vaccine Valence

THE ROLE OF SOCIAL MEDIA ENGAGEMENT IN DRIVING CONSUMER ATTITUDE TOWARDS DIRECT-TO-CONSUMER BRANDS AND BRAND LOYALTY

Maida Shafiq (The University of Faisalabad)

Understanding how social media involvement affects customer behaviour has become a crucial field of research due to the growing number of direct-to-consumer (DTC) firms in the digital marketplace. Based on the Theory of Planned Behaviour (TPB), this study investigates how social media participation affects brand loyalty, using brand trust as a moderator and attitude towards DTC companies as a mediator. Customers' online interactions with businesses are becoming important indicators of their brand-related attitudes and actions as they connect with them more often on social media sites like Facebook, Instagram, and TikTok. The purpose of this study is to look into how active social media engagement among DTC brands influences consumer attitudes, builds brand trust, and encourages enduring loyalty. Activities like enjoying, sharing, commenting, and taking part in brand-related content are all considered forms of engagement in this context. These exchanges affect the consumer's emotional and cognitive bond with the brand in addition to reflecting their interest. Customers' intention to stick with DTC brands can be increased by having a good attitude towards them, and trust is essential for strengthening this bond by lowering perceived risks and boosting faith in brand promises. A quantitative research design will be used to test these relationships. Structured questionnaires will be used to gather data from active social media users who frequently engage with direct-to-consumer (DTC) brands. Structural equation modelling (SEM) will be used in the study to validate the conceptual model and assess the direct and indirect correlations between the variables. By demonstrating how online interaction may be converted into significant consumer-brand relationships, the study's findings will provide marketers, brand managers, and digital strategists with insightful information. It highlights the mental processes that connect digital encounters with brand loyalty, including attitudes, trust, and behavioural intentions. Additionally, by providing both theoretical depth and useful advice on how DTC brands may leverage social media platforms to cultivate enduring customer loyalty, this study adds to the expanding corpus of research in digital marketing and consumer behaviour.

Keywords: Brand Loyalty, Brand Trust, Customer Attitude, Direct-to-Consumer Brands

EXPLORING MARKETING CONSTRAINTS IN THE POTATO VALUE CHAIN: IMPLICATIONS FOR FARMER PROFITABILITY

Abdullah Hammad (The University of Faisalabad)

Muhammad Ashfaq (The University of Faisalabad)

Asghar Ali (University of Agriculture Faisalabad)

Growing consumer demand and rising government attention to the development of horticultural crops has significantly contributed to the expansion of potato area and production in Pakistan. Potato is the cheapest source of carbohydrates, vitamins, minerals, and proteins. This study uses field survey data collected from Sahiwal, Okara and Depalpur (major potato producing areas in Punjab province, Pakistan) to explore the marketing constraints in potato value chain and quantify the roles of various stakeholders (Farmers, Commission Agents, Wholesalers, Retailers and Consumers) in potato value chain. Study findings shows that majority of the farmers use their own savings to meet cost of production of potato crop and some also borrowed from commission agent. Benefit-Cost Ratio for all the three varieties of potato crop is greater than one which indicates that farmers are making profit from investment on potato crop. Price fluctuation and exploitation by middleman are the major issues farmers facing while marketing their produce. Majority of commission agents had their personal investment in business, some also borrowed from informal (friends, relatives etc.) and formal sources such as banks. Most of the surveyed commission agents also provide finances to farmers. On ana average commission agent charges 4 percent commission from both sellers and buyers. Majority of wholesalers uses their personal capital in business, and some also borrowed formal banks as well. They earn reasonable profit from their business. Retailers use both personal capital and borrow money from banks for their business. Retailers earn Rs.5-10/kg from sale of potato crop to consumers. At farm level, there is need to ensure good quality seed and other inputs. Subsidies are not reaching to farmers. Farmers are being exploited by market intermediaries. To save losses at sowing and harvesting time proper farm machinery is a major constraint. Market committee collects the fee but does not provide proper facilities at marketplace. There is need of electronic auction and mandi.

Keywords: Marketing and Financing, Consumer Prices, Value Chain, Intermediaries

BUILDING BRAND LOYALTY THROUGH ADVERTISING APPEAL AND BRAND ENGAGEMENT

Aliha Qadeer (The University of Faisalabad)

This study is anchored in the Theory of Planned Behavior and aims to explore the intricate relationship between advertising appeal and brand loyalty, focusing particularly on the mediating role of consumer brand engagement. As advertising continues to evolve into more emotionally-driven and value-based communication, understanding its influence on long-term customer relationships becomes increasingly important. This research proposes that when advertisements resonate well with consumers through emotional, rational, or moral appeals they have the potential to spark deeper levels of engagement with the brand. Brand engagement, in turn, is theorized to play a critical mediating role, bridging the gap between initial interest and sustained loyalty.

To empirically validate this framework, the study adopts a quantitative research design using a time-lagged data collection method. Primary data will be gathered through self-administered questionnaires, employing a purposive sampling strategy that targets relevant consumer groups. Data collection will occur in three waves Time 1, Time 2, and Time 3 allowing researchers to track changes in perception and behavior over time. The analysis will utilize the Hayes PROCESS macro in SPSS, which is well-suited for examining mediation models. This method will help assess the direct impact of advertising appeal on brand loyalty, as well as the indirect influence mediated by consumer engagement, offering a comprehensive view of these interconnected variables.

Ultimately, this research aims to provide actionable insights for marketers and brand strategists by demonstrating how well-crafted advertising can serve as a catalyst for consumer involvement and long-term brand commitment. In an increasingly saturated marketplace, mere visibility is no longer enough brands must foster meaningful connections that lead to loyalty. By highlighting the mechanisms through which advertising influences consumer behavior, this study hopes to assist organizations in developing more strategic, engagement-driven campaigns. The findings will emphasize the importance of understanding consumer psychology and the need for advertising that not only grabs attention but also sustains interest and fosters trust over time.

Keywords: Brand Loyalty Advertising Appeal

LEVEL OF EFFECTIVENESS OF GROUP WORK IN THE IMPLEMENTATION OF THE DTE50154 COURSE: EVENT PROJECT CASE STUDY: SEMESTER 5, DIPLOMA IN EVENT MANAGEMENT, DEPARTMENT OF TOURISM AND HOSPITALITY, POLYTECHNIC MALAYSIA

Faizal Bin Abdul Razak (Politeknik Tuanku Syed Sirajuddin)

This study aims to assess the level of effectiveness of group work among Semester 5 students, Diploma in Event Management Program, Department of Tourism and Hospitality, Polytechnic Malaysia, who have implemented the final project for the DTE50154 course: Event Project. This case study involves students from two polytechnics for Session 2: 2023/2024, namely Politeknik Tuanku Syed Sirajuddin, Perlis (PTSS) and Politeknik Merlimau, Melaka (PMM). Group work plays a crucial role in the field of event management, where collaborative efforts are essential for the successful planning and execution of events. This study examines three main factors that influence the effectiveness of group work, namely leadership, communication, and collaboration. These factors were selected based on their relevance to teamwork performance and their impact on the outcomes of group-based projects. A quantitative research method was adopted, utilizing structured questionnaires distributed to a total of 78 respondents across both polytechnics. The data were analysed to identify patterns and correlations between the targeted factors and students' perceptions of group performance during their final event project. The results of this study not only provide an overview of the dynamics of group work in the context of event management, but also have the potential to assist in improving teaching and learning strategies in TVET programs. This study provides valuable insights into group work dynamics within Technical and Vocational Education and Training (TVET) programs, particularly in project-based learning settings. The outcomes have practical implications for educators and curriculum developers seeking to enhance teaching strategies. By strengthening leadership, communication, and collaboration in group tasks, institutions can better prepare students with the teamwork competencies needed for success in the competitive event management industry.

Keywords: Effectiveness, Teamwork, Leadership, Communication, Cooperation, Event Management

THE READINESS OF BANTING POLYTECHNIC'S AIRCRAFT MAINTENANCE STUDENTS FOR ONLINE COMPOSITE REPAIR TEACHING AND LEARNING

Santhy Subbarau (Politeknik Banting Selangor)

The swift progression of technology and the growing dependence on digital platforms in education have required the evolution of traditional teaching techniques into more adaptable, online-based options. Aircraft Maintenance Engineering is a field that necessitates extensive practical experience, especially in the repair of composite materials, an essential competency for aviation students. This study examines the readiness of students at Banting Polytechnic Selangor, Malaysia for the shift to online learning, with particular emphasis on composite repair education, a crucial component of their Aircraft Maintenance Engineering curriculum. The main goal is to evaluate students' preparedness and perspectives regarding the transition from conventional in-person education to online formats, while pinpointing critical aspects that affect their adaptability. This study aims to investigate the degree to which contemporary digital learning tools and tactics correspond with the actual requirements of composite repair training and how educators might enhance online instruction for technical courses. A mixed-methodologies strategy was employed, combining qualitative and quantitative data collection methods. A standardized survey was administered to Aircraft Maintenance Engineering students at Banting Polytechnic Selangor, Malaysia, aimed at assessing their technical preparedness, motivation, self-regulation skills, and proficiency using digital learning tools. Furthermore, interviews were conducted with educators and industry representatives to provide insights into the opportunities and obstacles associated with online composite repair training. The gathered data were examined to discern trends and themes concerning students' perspectives of online learning, their access to essential technologies, and their confidence in developing practical abilities via virtual platforms. This study investigates the influence of institutional support on online technical education and how policy modifications may enhance student engagement and skill development. The study's findings reveal that although the majority of students have a basic comprehension of online learning tools and platforms, they encounter considerable difficulties in mastering specialized skills such as composite repair in a completely online environment. Identified key issues encompass insufficient hands-on practice chances, limited practical simulation tools, and disparate levels of student self-motivation. While students typically value the flexibility and accessibility of online education, some individuals voiced apprehensions over the efficacy of distant instruction in technical disciplines necessitating close engagement with materials and equipment. Moreover, differences in internet access and digital skills among students have resulted in inconsistencies in learning results, hence exacerbating the transition to online education. This research underscores the necessity for educational institutions, including Banting Polytechnic Selangor, to confront these problems by incorporating sophisticated digital technologies such as virtual reality (VR) and augmented reality (AR) to replicate real-world composite repair scenarios. Moreover, it underscores the necessity of improving students' self-regulation abilities and offering adequate technological assistance to facilitate effective interaction with educational resources. It is essential to create hybrid learning models that integrate online theoretical training with in-person practical sessions to enhance skill acquisition. The study finds that although online learning offers considerable advantages in Aircraft Maintenance Engineering education, a customized strategy is crucial for effectively equipping students with specialized skills such as composite repair in a virtual setting. This research offers insights that can assist educators and policymakers in enhancing the delivery of technical education within the changing digital learning environment and aid in the formulation of more effective remote training methods for practical

Keywords: Digital Education, Aviation Maintenance Engineering, Composite Material Repair, Student Readiness, Virtual İnstructions.

IRONY IS A RHETORICAL DEVICE OR FIGURE OF SPEECH

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Irony is a multifaceted rhetorical device that plays a significant role in communication, literature, and everyday discourse. It involves a contrast between appearance and reality, often highlighting discrepancies between what is said and what is meant, or between expectations and outcomes. This figure of speech can manifest in various forms, including verbal irony, situational irony, and dramatic irony, each serving unique purposes in conveying meaning and eliciting responses from audiences. Verbal irony occurs when a speaker says one thing but means another, often to create humor or emphasize a point. Situational irony involves a discrepancy between expected results and actual outcomes, frequently highlighting the unpredictability of life. Dramatic irony arises in narratives when the audience possesses knowledge that characters do not, creating tension and engagement. The effectiveness of irony lies in its ability to provoke thought, challenge assumptions, and foster deeper understanding. It encourages audiences to look beyond surface meanings and engage critically with the text or situation. Irony can also serve as a tool for social critique, allowing writers and speakers to address sensitive topics with nuance and wit. In summary, irony is not merely a stylistic flourish but a powerful rhetorical device that enriches communication by introducing complexity and depth. Its diverse applications across genres and contexts demonstrate its enduring relevance in both literary studies and everyday interactions. Understanding irony enhances one's appreciation of language and its capacity to convey layered meanings.

Keywords: Irony, Multifaceted, Rhetorical, Device, Plays, A Significant, Role, Communication, Literature, Everyday, Discourse.

YAŞLILIK, EVDE SAĞLIK HİZMETLERİ VE SAĞLIKLI YAŞ ALMA POLİKLİNİĞİ

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Bir canlının doğum anından itibaren geçen vakte "yaş" denir. Bu kavram hem canlı varlıklar hem de bir kurum, kuruluş ve sistem gibi olgular için de kullanılabilmektedir. Yaşlılık, canlıların biyolojik fonksiyonlar açısından erişkin konuma vardıktan ve fertil dönemi sonlandıktan sonra ölüme kadar geçen zaman dilimindeki değişim ve dönüşüm sürecidir. Yaşlılık, genellikle kronolojik, biyolojik, psikolojik, sosyolojik ve toplumsal yaşlanma olarak farklı biçimlerde tanımlanmakta olup en yaygın takvim yaşına göre yapılan kronolojik yaşlanma tanımıdır. Dünya Sağlık Örgütü, 65 yaş ve üzerini yaşlı olarak kabul ederken Birleşmiş Milletler, 60 yaş ve üzerindeki kişileri yaşlı olarak değerlendirmektedir. Dünya Sağlık Örgütü'ne göre yaşlılık, çevresel faktörlere uyum sağlama kabiliyetinin azalmasıdır. Bir toplumda 65 yaş ve üzeri nüfusun çocuk ve genç nüfusa oranla artmasına göre toplumların yaş sınıflaması yapılmakta; 65 yaş ve üzeri nüfusun toplamdaki payı %7-10 ise yaşlı nüfus, %10'dan fazla ise çok yaşlı nüfustan bahsedilmektedir. 65–74 yaş arası bireyler 'genç yaşlı', 75–84 yaş arası bireyler 'orta yaşlı', 85 yaş ve üstü bireyler ise 'yaşlı yaşlı' olarak tanımlanmaktadır. Türkiye'de 65 yaş ve üzeri yaşlı nüfusun toplam nüfusa oranı 2017'de %8,5 iken, 2022'de %9,9'a yükselmiştir. Bu da ülkemizi yaşlı nüfusa sahip ülkeler sınıfına koymaktadır. Dünya Sağlık Örgütü, dünyada 2019'da 60 yaş ve üzeri insan sayısının bir milyar olduğunu, bunun 2030'da 1,4 milyar, 2050'de ise 2,1 milyar olacağını açıklamaktadır. Bütün dünyada 80 yaş ve üzeri insan sayısının 2020-2050 yılları arasında üçe katlanarak 426 milyon olması öngörülmektedir. 2017'de en yüksek yaşlı nüfus oranlı ülkeler sırayla %32,2 ile Monako, %27,9 ile Japonya ve %22,1 ile Almanya olmuştur. Yaşlı nüfus artışının önümüzdeki yıllarda da devam edeceği ve 2030'da 60 yaş ve üzeri bireylerin dünya nüfusunun %16,5'i kadar olacağı öngörülmektedir. Ülkemizde Türkiye İstatistik Kurumu (TÜİK) verilerine göre 2023'de %10,2 olan yaşlı nüfus oranının 2060'da %22,6 ve 2080'de %25,6'ya yükseleceği öngörülmektedir. Doğumdan itibaren beklenen hayat süreleri 2021-2023 yıllarında erkeklerde 74,7 yıl, kadınlarda 80 yıl olarak belirlenmiştir. Yaşlılık; kronolojik, biyolojik/bireysel, psikolojik, sosyolojik ve toplumsal yaşlanma olarak farklı şekillerde sınıflandırılmaktadır. Yaşlılık ilk kez kronolojik olarak Dünya Sağlık Örgütü tarafından 1963'de sınıflandırılmış ve 60 yaş üzeri bireyler yaşlı olarak kabul edilmiştir. Ancak Dünya Sağlık Örgütü 35 yıl sonra, 1998'de yaşlılık sınıflandırmasını revize ederek 65 yaş ve üzeri bireyleri yaşlı olarak kabul etmiştir. Yaşam süresinin artışı, günümüzde büyük başarı olarak görülse de daha yüksek sayıda yaşlı bireye uygun sağlık bakımının, uygun ortam ve koşullarda sağlanması önemli güçlükleri de beraberinde getirmektedir. Yaşın ilerlemesiyle beraber birçok yaşlı insan, fonksiyonel gerileme, özgürlük kaybı, hastane yatışı veya yatılı bakım kabulü, erken ölüm gibi problemlerle karşı karşıyadır. Yaşlılıkta genellikle; görme sorunları, kardiyovasküler hastalıklar, osteoartrit, işitme kaybı, kronik obstrüktif akciğer hastalığı, sırt, boyun ağrısı, depresyon diyabet ve demans görülmektedir. 2010'da yayınlanan "Sağlık Bakanlığınca Sunulan Evde Sağlık Hizmetlerinin Uygulama Usul ve Esasları Hakkında Yönerge" ile kamu kurum ve kuruluşlarında Evde Sağlık Hizmetleri (ESH) verilmeye başlanmıştır. Sağlıklı yaş alma için temel belirleyici unsurlar; fiziksel aktivite, beslenme, yaşam boyu öğrenme, kişisel farkındalık, bakış açısı ve tutum, inanç, sosyal destek, ekonomik güvenlik, topluluk katılımı ve bağımsızlık olarak bildirilmiştir. Evde Sağlık Hizmetleri; kronik veya malign hastalıklar sebebi ile yatağa veya eve bağımlı duruma gelmiş hastaların ev ortamında muayene, tetkik, tedavi ve rehabilitasyon hizmetlerini profesyonel bir sağlık ekibinden edinmesi olarak tanımlanmıştır. Sağlık Bakanlığı, Anayasa ve 3359 sayılı Sağlık Hizmetleri Kanunu kapsamında, yaşlılık nedeniyle sağlık hizmetlerine ulaşmada güçlük yaşayan bireyler için, koruyucu sağlık hizmetlerini ihtiva eden medikal

bakım hizmetlerinin izlenmesi ve koordinasyonu maksadıyla Sağlıklı Yaş Alma Merkezleri'nin kurulması ve hizmet sunmasını uygun bulmuştur. 80 yaş ve üzeri yaşlı kişilerin sağlık hizmetlerine ulaşmasını kolaylaştırmak, evlerinde ve yerlerinde medikal bakım gereksinimlerini belirleyip desteklemek, uzaktan sağlık hizmetleriyle muayene ve danışmanlık sunmak, hastaneye ulaşımı ve hastane içindeki tıbbi bakımı koordine etmek maksadıyla Sağlıklı Yaş Alma birimlerinin kurulması 30 Mart 2023'de yayımlanan genelge ile karara bağlanmıştır. Sağlıklı Yaş Alma Merkezlerinde 80 yaş üzeri tüm bireylere hizmet verilerek hem evde muayene, tetkik, izlem ve rehabilitasyon hem de sağlık tesisinde hizmet koordinasyonu amaçlanmaktadır. Sağlıklı Yaş Alma birimleri, Evde Sağlık Hizmet birimleriyle beraber çalışır; 80 yaş üzeri yaşlıyı evinde ziyaret eder. Bu ziyarette saha hekimi tarafından gerekli muayene yapılır ve gerekirse tedavisi düzenlenir. Yaşlı bireyin hastalığı ileriyse hastaneye nakledilir.

Keywords: Yaşlanma, Evde Sağlık Hizmeti, Sağlık Yardımı, Sağlıklı Yaş Alma

PRODUCTION OF PAPER BAGS FROM BANANA STEM INFUSED WITH PANDAN AROMA VIA ESTERIFICATION PROCESS

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Utilizing banana stem as the primary raw material to produce biodegradable paper bags, infused with pandan scent through the esterification process. The aim is to provide an eco- friendly alternative to plastic bags. The objectives are to produce a pandan-scented biodegradable paper bag from banana stem using esterification and to evaluate its characteristics, including durability, surface smoothness, and decomposition period. Banana stems were collected and the fibers extracted, cut, and boiled with sodium hydroxide and hydrogen peroxide to soften and whiten them. After boiling, fibers were filtered and blended. Pandan leaves were processed to extract their scent through esterification, and the extract was mixed with the fiber pulp. The mixture was molded and sun-dried to form paper. Results showed that the final paper was easy to shape into bags and could support weights between 600g to 3 kg.

Keywords: Paper Bags From Banana Stem Infused With Pandan Aroma Via Esterification Process

HIGHER EDUCATION TRANSFORMATION AND ARTIFICIAL INTELLIGENCE

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This introductory paragraph establishes the context of the essay by highlighting the integral role of AI in modernizing higher education. It emphasizes the necessity of interdisciplinary integration while touching upon both academic advancements and ethical considerations. The convergence of technology and education presents unprecedented opportunities for reform within higher education, particularly through the integration of Artificial Intelligence (AI). As academic institutions seek to adapt to the rapidly evolving job market, the role of AI in shaping interdisciplinary curricula becomes increasingly critical. This integration facilitates the breaking down of traditional academic silos, promoting a more holistic approach to education that emphasizes collaboration among diverse fields such as engineering, computer science, and automation technology. A study highlights this transformative potential by proposing a smart construction curriculum that fosters interdisciplinary fusion to cultivate new engineering talents, thereby significantly enhancing students capacities for innovative practices and teamwork.

Keywords: Higher Education, Artificial Intelligence, Interdisciplinary Curricula, Smart Construction, Ethical Implications, Academic Reform, Innovative Practices.

FROM AWARENESS TO ACTION: MODERATED MEDIATION TO IMPROVE RESOURCE EFFICIENCY

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Due to resource scarcity, global sustainability initiatives prioritize environmental deterioration, climate change, and resource efficiency (Ali et al., 2024). Circular systems that regenerate ecosystems require large resource creation, consumption, and disposal changes. Sustainable development of ecological and economic systems requires resource efficiency (Silva et al., 2018). Manufacturing, agriculture, energy, and construction use resources more efficiently through waste reduction, recycling, product remanufacturing, and cleaner production (Zhao et al., 2022). Modern technologies, policies, and cultural shifts are needed to fully implement resource efficiency projects. Technology, policy and social change must be integrated for resource-efficient economic transitions (Ali et al., 2024). Public awareness of resource efficiency and sustainability is needed (Majeed et al., 2022). People who care about the environment and resource depletion will squander less, preserve energy, and buy green items (Tan et al., 2022). Sustainable consumption awareness is raised by education, community involvement, and media efforts (Gazi et al., 2024). Public awareness and involvement can influence government and corporate actions by raising demand for sustainable goods and services and maintaining environmental performance standards. Sustainable resource management and resource-efficient development require education and public engagement. Eco-friendly research highlights the rise of circular economies, green economies, and sustainable consumption and production (Arı & Yikmaz, 2019).

Waste reduction is key to turning public awareness into resource efficiency. Intentions predict behaviour (Konstantinidou et al., 2024). Recycle, compost, and minimize consumption when aware of environmental waste effects and motivated to reduce trash. Waste reduction advocates support environmental resource efficiency laws and take proactive actions to create a positive cycle. Positive customer interactions, environmental awareness, and green branding can assist green firms achieve this (Tan et al., 2022). Social norms, infrastructure, and convenience make waste reduction goals a reality. Understanding intention-to-action factors can help scientists save resources and reduce waste. Many green businesses have emerged due to poor living circumstances and environmental awareness. Customers question advertising green items before buying due to fake eco-friendly products for sale (Li et al., 2021).

To reduce waste reduction and resource efficiency conflicts, technology adoption is crucial. Technology-driven waste management systems, progressive recycling circuits, and resource-sharing digital platforms boost efficiency and reduce waste. Intelligent garbage cans reduce expenses and pollution by improving routing. Advanced recycling techniques let firms recover valuable elements from complex garbage, decreasing the requirement for new materials. Sharing goods online extends their lifespans and minimizes consumption (Ashshidiqi et al., 2020). Modern technology helps consumers choose products and comprehend trash, boosting circular economies and resource conservation. Effective waste management technology adoption involves planning, infrastructure investment, and government and community interaction with businesses. To prevent pollution, improve resource utilization, and encourage sustainable production, governments build eco-industrial parks (Islam, 2024). Organizations should use modern technology and behaviour change to reduce waste and boost resource efficiency. Conscientious production and use of digital technologies support sustainable manufacturing operations. Felice & Petrillo (2021) recommend merging AI, IoT, AR, and additive manufacturing for digital

transformation and sustainability. ICT-integrated urban development planning develops smart cities that boost service quality and efficiency.

Keywords: Human Behavior, Waste Reduction, Sustainability

CLIMATE CHANGE, WATER AND FOOD SECURITY: CHALLENGES FOR SUSTAINABILITY

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Climate change poses profound challenges to the global food security, more importantly through its impact on water availability for agricultural purpose. The interplay between climate variability, dwindling water resources and escalating food demand forms a critical nexus that definitely threatens sustainability for food security particularly in developing countries, including Pakistan. The growing world population, two third of which is projected to attain middle class status by 2030, the demand for the water intensive foods particularly for processed and meat products is projected to rise significantly. In the meantime, water consumption in agricultural is anticipated to increase by 20%, even as water supply may reduce up to 40% creating a severe imbalance between consumption and supply of water. Globally, about 30% of food produced, either lost or wasted annually amounting to 1.3 billion tons. This not only results in severe food insecurity but simultaneously leads to the wastage of water resources. In Pakistan, over 80% of agriculture is irrigated, and water challenges are particularly severe. Pakistan ranks 170th out of 183 nations in terms of crop water productivity, with $1.1 output per cubic meter as compared to the global average of $18.2. Similarly, the country also suffers from one of the lowest water storage capacities, with only 30 days of storage and inefficient irrigation systems marked by 70% losses and minimal cost recovery in terms of water charges. Pakistan's per capita water availability stands at 930 cubic meters which is far below the global average of 1800 cubic meters, with increasing population and food demand the country faces a widening demand supply gap. Climate change has significantly altered the rainfall patterns, glacier reserves, and river flow dynamics. It is projected that glacier reservoir could vanish within next 50 years, leading to a 30-40% decline in river flows. Due to high temperature, there will be an increase in the net irrigation requirement (NIR) for major cropping systems. A critical supply demand gap is already evident where, shortfall in irrigation is estimated at more than 110 billion cubic meters. To ensure water secure food systems, strategic policy interventions are essentials. These include enhancing irrigation efficiency, promoting climate resilient crops and improving water storage capacity. There is need to inculcate the "Future Smart Food" concept which emphasizes the need to grow neglected and underutilized species (NUS) such as quinoa, which requires less water, has high dietary value nutritional contents and ability to thrive on marginal lands.

Keywords: Climate Change, Food In-Security, Sustainability, Irrigation Water

ECONOMIC EVALUATION OF NEW GARLIC VARIETY (NARC G1) VS. LOCAL VARIETIES: A CASE STUDY OF PUNJAB FARMERS

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Garlic is one of the main crops not only for consumption but also for marketing so it is necessary to enhance garlic productivity with required characters through genetic manipulation. There are genetically 10 different varieties of garlic within two categories including hard neck and soft neck type. Pakistan relies heavily on garlic imports. This study intends to determine the hindrances faced by farmers in local production of garlic to meet higher domestic demand. It determines the relative profitability of new variety of garlic (NARC G1) with other varieties and discussed the factors that affect the productivity of garlic. Purposive sampling techniques were used to select farmers from different villages of Punjab because the growers of NARC G1 are dispersed across the country as the new variety was introduced in July 2018. For this purpose, data were collected from 110 (55 local variety and 55 NARC G1) farmers. Benefit cost ratios and regression technique were used for analysis. Average yield per acre of NARC G1 was 183.79 Mounds while that of local varieties was 69 Mounds which was comparatively low. Net farm income was 14489967.2 and 865829.28 PKR of NARC G1 and local varieties respectively. So it is devised to sow NARC G 1 garlic varieties in comparison to local garlic production.

Keywords: Garlic production NARC G1 Variety, Profitability, Benefit-Cost Ratio, Pakistan Agriculture, Garlic Imports

ANALYZING KNOWLEDGE OF CRIMEAN CONGO HEMORRHAGIC FEVER (CCHF) AND PREVENTIVE MEASURES AMONG DAIRY FARM WORKERS IN VEHARI DISTRICT

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Crimean Congo Hemorrhagic Fever (CCHF) is a tick-borne viral disease that poses a significant threat to human life, particularly among farmers and livestock handlers. This study aimed to assess the knowledge and preventive measures of dairy farm workers regarding CCHF in Vehari district, Punjab, Pakistan. A cross-sectional survey was conducted among 150 farm workers using a purposive sampling method. The results showed that 71% of respondents were aware of CCHF, with TV/Radio, friends/relatives, and doctors being the primary sources of information. However, knowledge gaps were observed regarding the causes, transmission, and symptoms of the disease. While 95.4% of respondents knew about the causes of CCHF, only 12.7% and 58.8% reported tick bites and exposure to infected animal blood as causes, respectively. The study also revealed that 90.6% of respondents were aware of human-to-human transmission, and 89.7% knew about preventive measures in humans. The findings highlight the need for targeted awareness programs to enhance knowledge and practices among dairy farm workers, ultimately reducing the risk of CCHF transmission.

Keywords: Crimean Congo Hemorrhagic Fever (CCHF), Dairy Farm Workers, Knowledge, Preventive Measures, Vehari District

IMPACT OF OIL PRICE FLUCTUATIONS ON INFLATION IN PAKISTAN: A TIME SERIES ANALYSIS

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Oil is a very important source of energy. It is also used as edible oil, fuel and perfumes. Sources of energy in Pakistan consist of hydropower, wind energy and solar energy. Mostly oil is used in industrial, commercial, transportation and electric power. The effects of changes in oil prices are seen in almost every sector of the economy such as agriculture, manufacturing, transportation and telecommunication. There are inflationary effects of the oil prices in the economies. The current study is significant because it calculates the influence of a variety of factors on inflation in Pakistan, as well as the trajectory and causes of such inflation. As a result, the current research aims to examine the inflationary impact of oil prices. Oil prices, CPI, FBI, NFBI, and exchange rate are the variables considered in this study. The information was gathered from 1980 to 2019. The data was checked for stationarity using the augmented Dickey Fuller test. The nonlinear Auto Regressive Distributed Lag model was used to examine the long-term connection between the variables. These governments should take action to keep oil prices under control, as they are the major cause of price hikes in Pakistan. The government should also take concrete steps to maintain the national currency's value.

Keywords: Oil Prices, Inflation, Pakistan, Nonlinear ARDL, Economic Impact

INVESTIGATE THE DIETARY PATTERN AND FACTORS ASSOCIATED WITH DIETARY DIVERSITY AMONG SCHOOL AGED CHILDERN IN DISTRICT, FAISALABAD

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Objective: The main objective of this study was to assess the prevalence of dietary diversity and associated factors. Design: Cross-sectional study. Setting: Urban and rural areas of district, Faisalabad. Participants: A simple random sampling technique was used for this purpose. The study included a sample size of 150 school-going children aged between 8-14 years in Faisalabad city and Satiana Banglow. This sample will be equally divided between urban and rural areas, with 75 children from each setting. In the survey's 24-hour recall period, children who consumed less than eight out of the seventeen food groups were considered as inadequate dietary diversity, while those who consumed greater than eight out of seventeen food groups were considered as adequate dietary diversity. Descriptive statistics were used to show the sociodemographic factors, with frequencies and percentage calculated for the categorical data. The average DDS (mean ± SD) was compared by gender using an independent sample t-test. Multinomial logistic regression calculated the odds ratios (ORs) and 95% confidence intervals (CIs). Bivariate analysis also conducted to measures the strength and direction of the relationship between two variables. Results: This study examined factors influencing dietary diversity scores (DDS) among children using multinomial logistic regression. Higher DDS (>13) was positively linked to medium wealth, higher parental education, and rural residence, while lower wealth, smaller family sizes, and paternal employment negatively impacted DDS. Maternal education and living with both parents significantly improved DDS across categories. Correlation analysis showed positive associations of DDS with parental education and wealth, but negative correlations with household size and lower wealth status. Strong links were also observed between maternal and paternal education and between wealth and household size. Conclusion: Dietary diversity scores (DDS) are strongly influenced by socioeconomic factors, parental education, and family structure. Higher DDS is linked to better paternal education, rural residence, and medium wealth, while economic challenges and smaller family sizes lower DDS. Enhancing education, reducing inequalities, and improving access to diverse foods are key to boosting children's nutrition and long-term health.

Keywords: Dietary Diversity, School-Going Children, Nutritional Status, Child Nutrition, Multinomial Logistic Regression

COMMUNICATING SUSTAINABILITY: USING COMMUNICATIVE ENGLISH CLASSROOMS TO PROMOTE SDG AWARENESS

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This study examines the incorporation of the United Nations' Sustainable Development Goals (SDGs) into a tertiary-level Communicative English classroom in response to the global demand for sustainability and inclusive education. This research emphasizes the vital importance of education in fulfilling the 2030 Agenda by examining how the integration of SDG-related content and activities into English language instruction can elevate students' awareness, attitudes, and engagement with sustainability issues, while concurrently enhancing their communicative language proficiency. The research utilises a mixed-methods approach with 80 diploma-level engineering students from a Malaysian polytechnic engaged in interactive tasks, including eco-friendly innovative product presentation, poster creation on process and procedures related to sustainable practices and comic strips presentation based on handling enquiries and complaints on SDG themes. The intervention, rooted in Communicative Language Teaching (CLT), Constructivist Learning Theory, and the principles of Education for Sustainable Development (ESD), sought to provide learners with significant, real-world settings for language application. These educational foundations highlight student-centered, collaborative learning that fosters critical thinking, problem-solving, and social responsibility skills essential for both language acquisition and global citizenship.

A survey consisting of 10 Likert-scale items and student reflections was collected to evaluate the intervention's effectiveness. The quantitative findings indicated a significant consensus among all items, with more than 80% of students indicating higher awareness of the SDGs and an enhanced commitment to sustainable practices. The highest rated item (M = 4.29) reflected students' enhanced results in dual learning of both language and global awareness. Qualitative data obtained from students written reflections corroborated these findings, highlighting persistent themes including higher environmental awareness, enhanced communication abilities, and elevated sense of social responsibility. Students indicated that the SDGs integrated activities have connected them with global challenges previously ignored and empowered them to undertake significant action within their areas.

Incorporating Sustainable Development Goals (SDGs) into English Language Teaching (ELT) is crucial for equipping students for active and informed engagement in a globalized society. It enables learners to integrate language proficiency with ethical decision-making, cultural awareness, and sustainable practices—rendering English Language Teaching not merely a linguistic pursuit, but also an opportunity for transformation. By addressing real-world issues through language, students become more motivated, globally aware, and socially responsible communicators, equipped to contribute to a more fair and sustainable future. This study enhances the existing research supporting multidisciplinary methodologies in language instruction that correspond with global sustainability frameworks. The results reinforce the notion that Communicative English classes can function as effective venues for advancing the SDGs and cultivating responsible, educated citizens. By positioning language learning within practical concerns, educators can motivate students to engage with global issues significantly and cultivate abilities that extend beyond the classroom.

Future study should investigate longitudinal impacts, interdisciplinary applications, and the use of digital storytelling and virtual collaboration as mechanisms for enhancing the incorporation of

sustainability issues into English language instruction. This study illustrates the educational potential and practical significance of linking English Language Teaching with sustainable development goals. The results will be a significant resource for curriculum developers, policymakers, and educators in formulating future English Language Teaching approaches by linking it with global sustainability aims.

Keywords: Sustainable Development Goals (SDGs), Education for Sustainable Development (ESD), Communicative Language Teaching (CLT).

ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON SUSTAINABLE DEVELOPMENT: A COMPREHENSIVE SYSTEMATIC REVIEW

Sobia Maqsood (The University of Faisalabad)

This extensive systematic review looks at how artificial intelligence (AI) might support sustainable development. As global concerns including resource depletion, climate change, and environmental damage aggravate, artificial intelligence presents revolutionary opportunities for achieving sustainability objectives in a variety of sectors. This paper investigates how artificial intelligence might enhance resource management, slow down global warming, cut waste, advance sustainable agriculture, and strengthen renewable energy systems. It underlines how artificial intelligence (AI)-powered tools including machine learning, big data analytics, and intelligent systems might help make decisions more wisely, lower carbon emissions, and enable the transition to a circular economy. The ethical problems and possible risks of artificial intelligence—including algorithmic bias, privacy concerns, and environmental effects of AI technologies—also come under review here. The results stress the need for continuous research and multidisciplinary cooperation while showing how artificial intelligence could drive systematic transformations toward resilient, fair, and sustainable futures.

Keywords: Artificial Intelligence, Sustainable Development, Renewable Energy, Climate Change Mitigation, Circular Economy.

ADVANCING SUSTAINABILITY THROUGH GREEN HRM: EMPIRICAL EVIDENCE FROM A DEVELOPING COUNTRY

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The greening of firms and environmental sustainability has become the agenda of decision-makers in the 21st century. The rapid increase in pollution from industrial practices, accompanied by a decline in natural resources, has driven both the government and society to push the corporations to adopt green practices on a large scale. The integration of green concepts into business practices is an environmentally friendly approach in the recent industrial revolution, which will make the industry more energy-efficient and more stringent regarding waste generation. With increasing involvement of green environment in global business models, the businesses are adopting green practices even in human resources management with the objective of attaining sustainability. This strategic shift aims to achieve long-term sustainability and align with global environmental objectives. Existing literature already documents impact of various factors for instance intellectual capital, green supply chain management, and leadership on the sustainable performance of the firms; however, the impact of green human resource management practices on sustainable performance of the firms is void in the existing literature. Drawing on resource-based view, this study fills this gap by empirically investigating the influence of green human resource management practices on sustainable performance. This study uses structural equation modeling technique on a three-wave time-lag primary data collected from employees of service sector organizations in Pakistan. Unfolding the mediating role of green proactive orientation and moderating role of harmonious environmental passion in investigating the relationship between green human resource management practices and sustainable performance is a novel and promising contribution to existing literature. The incorporation of these mediating and moderating variables provides a more profound understanding of the psychological and behavioral mechanisms by which green human resource management practices impact sustainability. The findings of the study will be helpful for both public and private policy makers to incorporate green concepts to improve the practices of human resource management.

Keywords: Green Human Resource Management Practices; Green Proactive Orientation; Harmonious Environmental Passion; Sustainable Performance; Resource-Based View.

IMPACT OF NUTRITION EDUCATION AND WHEY SUPPLEMENTATION ON BODY COMPOSITION AND ENDURANCE PERFORMANCE OF ATHLETES

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During recent years, utilization of nutritional science in sports has become primary focus for improving performance during competition and facilitating recovery phase. Deficiencies in dietary intake can hinder performance and increase the risk of injury. Interventions, which include nutrition education and awareness are explicit projects which are intended to help target populations in adjusting and modifying their dietary patterns as well as upgrading their nourishment information. Protein in diet or as supplement can help in achieving optimum nutrition required for recovery and training adaptations. This study aims to examine the influence of nutrition education/counseling on overall diet consumption and effect of whey protein on Time Trial Performance and body composition.

A randomized controlled trial (RCT) was conducted to determine the effects of whey protein supplementation and Quasi-experimental study was conducted for impact of nutrition education on nutrition knowledge and intake on 18 male football players. Half of the players (n=9; age: 20.67±1.65 years; height: 175±5.1 m; weight: 65.1±7.9 kgs) ingested 24g of whey protein and other half (n=9; age:20.89±1.69 years; height: 173±4.1 m; weight:64.7±8.3 kgs) consumed iso-caloric carbohydrate supplement immediately after training for 5 weeks. Pre and post intervention, Body composition was analyzed using Bioelectric impedance instrument along with 1 mile walk/run test for performance trial. Nutrition education was assessed using Abridged Nutrition for Sports Knowledge Questionnaire. 3- day food record method was used for dietary analysis at baseline and during intervention period. Nutrition education was provided using brochures and one-on-one nutrition education sessions. Data was analyzed using Statistical Package for the Social Science IBM SPSS Statistics 20. Data are presented as mean and standard deviation. Paired sample t test was performed for pre and post values of nutrition knowledge, dietary intake, body composition and performance trial. At baseline differences between treatment groups was analysed using independent t test. Pre- to post-supplementation changes in dietary intake, body weight, body mass index (BMI), body fat mass (BFM), percent body fat (PBF), skeletal muscle mass (SMM), fat free mass (FFM) and VO2 max were analyzed using repeated-measures ANOVA (time*supplement).

Mean Total Knowledge Score improved from 12.00 ± 5.34 to 23.50 ± 3.96, with mean improvement of 11.5 points ($p < 0.001$) ($t = -9.607$). Total calorie ($p=0.01$), carbohydrate ($p<0.01$) and protein intake ($p<0.01$) increased significantly from baseline over five weeks. No changes in fat intake $p>0.05$. No significant main time or interaction effects for performance trial ($p>0.05$) ($p>0.05$), body weight (kg) ($p>0.05$) ($p>0.05$) and body mass index kg/m2 ($p>0.05$) ($p>0.05$), respectively. Body Fat Mass decreased over time significantly ($p<0.050$). Percent body fat also decreased significantly over time ($p<0.05$) with significant decrease in protein group ($p=0.008$, $t=3.5$) compared to the iso-caloric carbohydrate group. Furthermore In-body scores also increased over time $p<0.01$ with significant increase in protein group from baseline compared to CHO-placebo group ($p<0.05$, $t= -3.1$). On the other hand, fat free mass and skeletal muscle mass did not change significantly ($p>0.05$).

Aim of the study was to assess improvement in nutrition knowledge and dietary intake with nutrition education. The intervention led to statistically significant gains across all knowledge domains, confirming that the nutrition education was highly effective. General knowledge significantly improved from a low baseline (Nutrition Rookie) to well above average (Nutrition Ace). Significant improvement in sports-specific knowledge, moving from the Rookie category to the Ace/Superstar levels. Most participants advanced to Nutrition Superstar (>75%) or Ace, indicating highly effective intervention. Overall knowledge scores improved significantly, from 34.3% (Nutrition Rookie) to 67.1% (Nutrition Ace/Superstar). Our study reinforces the results from studies on assessment of nutrition knowledge in NCAA baseball, volleyball and female college athletes (Rossi et al., 2017) (Valliant, Pittman Emplaincourt, Wenzel, & Garner, 2012) (Abood, Black, & Birnbaum, 2004) which shows significant improvement in dietary intake and nutrition knowledge of athletes.
Five-week supplementation of whey protein with total protein intake of mean 1.9 g/kg/day of compared to 1.5 g/kg/day mean protein intake in CHO-placebo group resulted in significant decrease in percent body fat in protein group compared to CHO- placebo group). PBF decreased from 16.0% to 15.2 % in protein group p=0.008 with no change in CHO-placebo group. No significant changes occurred in fat-free mass (FFM) or skeletal muscle mass (SMM) though they did show trends towards significance. These findings align with previous research where when either whey or soy protein isolate was supplemented for 6 weeks in female college endurance athletes, it did not show any improvement in lean mass (Tara, Park, Mathison, Kimble, & Chew, 2013).

Results from our study showed no improvements in time taken to complete the 1-mile distance or heart rate. There was also no improvement in overall VO2max calculated from Rockport Fitness test with whey protein supplementation of 5 weeks. (Roberson et al., 2018) also found no improvement in their 5 km time trial performance during endurance training with protein supplementation. They speculated that it may be because excess protein intake has interfered with performance adaptations through increased amino acid oxidation (Wilborn et al., 2013), (Williamson, Kato, Volterman, Suzuki, & Moore, 2019). These results indicate that nutrition education improved nutrition knowledge and nutritional intake in athletes. Whey protein supplementation of 5 weeks did not affect performance trial or skeletal muscle changes in football players, however, it decreased percent body fat and increased mean in body scores.

Keywords: Sports Nutrition, Whey Protein, Supplementation, Nutrition Education, Performance, Human trial

FRUGAL INNOVATION AND GREEN HRM THROUGH AI-DRIVEN ERGONOMICS

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In today's era, organizations continue to seek solutions that are both cost-effective and eco-friendly — two goals that often seem at odds. However, AI-driven ergonomics, empowered by frugal innovation and Green Human Resource Management (GHRM), offers promising pathways toward sustainability (Madureira & Castro, 2021; Renwick et al., 2013; Yadav & Sushil, 2020). This study explores the convergence of these domains and examines how AI technologies can harmonize efficiency, environmental responsibility, and human-centric workplace design (Bhatti & Ventresca, 2013; Madureira & Castro, 2021). In an increasingly competitive business environment, the integration of GHRM and frugal innovation, supported by AI, presents a viable strategy for sustainable growth and a forward-looking approach to organizational development (Wamba et al., 2017; Yadav & Sushil, 2020). This study explores how AI-driven ergonomics can serve as a strategic contributor to both effective innovation and environmentally friendly human resource practices. By leveraging artificial intelligence (AI) to enhance workplace design, monitor employee well-being, and minimize resource waste, organizations can simultaneously improve productivity, reduce operational costs, and lower their environmental footprint (Madureira & Castro, 2021; Renwick et al., 2013). The study examines key technologies that enable ergonomic improvements and align them with Green Human Resource Management (GHRM) objectives, including energy efficiency, digital HR workflows, and sustainable employee engagement.

AI-driven ergonomics encompasses sensor-based monitoring, predictive analytics, and adaptive systems, which collectively enable smarter, safer, and more sustainable work environments (Madureira & Castro, 2021). This study argues that AI-enabled ergonomic solutions are not merely tools for enhancing human performance but also essential mechanisms for embedding sustainability within the core of organizational culture and behavior (Yadav & Sushil, 2020). While existing research has addressed these variables—frugal innovation, GHRM, and AI-driven ergonomics—independently, no comprehensive framework currently integrates them cohesively (Bhatti & Ventresca, 2013; Renwick et al., 2013; Yadav & Sushil, 2020). This study reveals an underexplored synergy and promising relationship between these domains, suggesting that their integration can redefine how organizations create efficient, humane, and sustainable workplaces. For maximum impact, future initiatives should focus on aligning organizational policies, promoting affordable AI integration, and emphasizing employee-centered design. The study also highlights critical areas for consideration, such as data security, employee privacy, training and development, and trust-building among stakeholders. Effective adoption of AI-driven solutions requires organizations to address these factors, ensuring that innovation and sustainability efforts are ethical, inclusive, and competitive (Wamba et al., 2017). The study concludes with recommendations for training, facilitation, and policy alignment, emphasizing the implications for data privacy, sustainable design, and long-term organizational development.

Both cutting operating expenses and upholding sustainable practices are priorities for modern businesses. Artificial intelligence (AI), especially in ergonomic applications, has the ability to bring together frugal innovation and GHRM, which have evolved as strategic answers. This review explores the ways in which AI-driven ergonomics supports green HRM goals and frugal innovation. The study intends to close the knowledge gap on the triadic interplay of these areas and offer an integrated

framework for sustainable organizational development by examining recent literature (Cooke, 2018; De Green & Hall, 2022).

Methodology
After Searching different data bases for review article data is being collected from these credible and authentic sources like scopus, web of Science, google scholar. Review Process
A selection process named as PRISMA was followed, through screening titles, full length abstracts no. of 54 studies found relevant in final review. Implication for practice and policy
Policy Alignment: Ideas to foster inclusive, ethical automation in HR procedures. Training and development: Up skilling HR personnel in AI and sustainable practices by way of training and development.

Adoption of AI at an appropriate cost: modular and open-source technologies for affordable execution

Building Employee Trust: Open and honest usage of data and AI with privacy-first guidelines The convergence of frugal innovation, GHRM, and AI-driven ergonomics shows an influential yet overlooked synergy(Lim,2020; Sivathanu,,2018). AI driven resource provide cost and resource efficiencies in the workplace through the availability of scalable and tailored solutions. AI-powered GHRM programs can improve well-being, lower carbon footprints, and customize training. As an enabler, frugal innovation makes sure that solutions are always available and at an affordable rate.

Results:

Ensuring data privacy and executing AI in a moral way

Training the staff in such a way that how use AI driven solutions
Policy frameworks that are in line with AI and environmental objectives

Conclusion
The potential of AI-enabled ergonomic systems as strategic facilitators of green HRM and frugal innovation is highlighted in this review. The integration of these domains can result in improved employee experience, sustainability, and cost savings. To fully benefit from these synergies, organizations must place a high priority on employee trust, eco-centric design, and economical AI integration. Model creation, longitudinal impact studies, and the role of leadership in promoting adoption should be the main topics of future research.

AI Technology in Ergonomics Application Frugal Innovation Green HRM Practice Integrative models Real-time posture and mobility tracking with sensor-based monitoring.

Predicting injuries and strain to maximize task distribution

AI-powered workstations that adapt to user behavior are known as adaptive workstations.

Digital solutions that make it better to utilize for monitoring employee well-being

Affordable workplace redesign with open-source intelligent technology

Machine learning-powered low-resource training platforms

Digital advancement that promote the use of employee well-being monitoring

Redesigning a workspace at a reasonable cost with open-source intelligent technology

Low-resource training systems driven by machine learning

AI solutions that reduce HR paperwork and enable eco-conscious hiring;

Ergonomics that boosts employee productivity while using less energy

Frugal innovation that makes it possible to use AI at a low cost in environments with limited resources.

Keywords: AI-Driven Ergonomics, Sustainable Workplace, Artificial Intelligence in Human-Centric Design, Employee Well-being, Predictive Analytics, Cost-Efficiency, Environmental Sustainability, Smart Workplaces

BUSINESS MODEL INNOVATION IN THE DIGITAL ERA: AN IT SECTOR PERSPECTIVE

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Over the past decade, practitioners and researchers attained quite a few attentions of business model innovation (BMI). The bobbing up of business version innovation publications has inadequate theoretical assist but it directs an important situation. An actual business model (BM) gives the platform wherein clearly recognize the commercial enterprise principles like how the revenue and costs estimate; or to create competitive business; or what sort of troubles solving for whom; or how the first-class provider and product supply to the clients; and the way the customer value could be produced. BMI is in particular readdress the prevailing BM and its recognition at the need of businesses patron, with this new fee proposition it offers betterment of employer technique, resources and profit formulation. Most of the authors display the commercial enterprise fashions and describe business version innovation in one-of-a-kind approaches. In cutting-edge observe, the primary objective is to analyze the business version innovation in Changing Environment of Businesses (Small medium corporations (SMEs) of Information Technology (IT) Sector) in Pakistan. Questionnaire evolved about outside and inner antecedents of BMI, novelty and scope of BMI and results of BMI. Positive results could be expected so as to supply higher effects in destiny. In this take a look at, questionnaire method may be use; Likert and nominal scale use for the questionnaire; and ninety-one gadgets may be used for amassing the statistics. This looks at may even display how the innovation can solve troubles inside the BM and it's also identifying essential route for destiny studies.

Keywords: Business Model Innovation, Digitalization

SCIENTIFIC APPROACHES TO THE HISTORICAL GENESIS OF ENTREPRENEURIAL ACTIVITY: WESTERN AND EASTERN DESCRIPTIONS

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This article provides a comprehensive scientific exploration of the historical genesis and psychological foundations of entrepreneurial activity, comparing its development in Western and Eastern civilizations. It analyzes entrepreneurship not merely as an economic phenomenon, but as a deeply rooted socio-cultural and psychological construct. In the Western tradition, entrepreneurial activity is typically viewed through the lens of individual freedom, rational choice, and innovation aimed at maximizing profit. In contrast, the Eastern paradigm, shaped by philosophical and spiritual traditions such as Zoroastrianism, Sufism, and Confucian thought, frames entrepreneurship within the context of collective welfare, moral responsibility, and harmony with societal values. Drawing from both ancient and modern sources, the article highlights how spiritual doctrines like the Avesta and the teachings of Khwaja Bahauddin Naqshbandi emphasized industriousness, ethical labor, and the development of initiative as foundational qualities of an ideal person. It further explores how leaders like Amir Temur institutionalized entrepreneurial values in governance and economic policy. Additionally, the study evaluates the contributions of scholars such as Ibn Sina, Farobi, Confucius, and J.A. Schumpeter, juxtaposing their perspectives to reveal the multi-dimensional nature of entrepreneurial identity.

Methodologically, the article employs historical-comparative and socio-psychological approaches to uncover the shared and divergent pathways in the evolution of entrepreneurship. Research findings suggest that the psychological portrait of the entrepreneur is shaped by cultural mentality, historical context, and prevailing value systems. This integrated analysis offers valuable implications for the development of entrepreneurship education, personality psychology, and socio-economic policy in modern contexts.

Keywords: Psychology Of Entrepreneurship, Cultural Mentality, Historical Genesis, Eastern Philosophy

ÇALIŞANLARDA, YIKICI TEKNOLOJİ OLARAK YAPAY ZEKÂNIN YARATTIĞI KAYGIYININ, YENİLİKÇİ DAVRANIŞLAR ÜZERİNDEKİ ETKİSİNİN VE DEĞİŞİME DİRENCİN DÜZENLEYİCİ ROLÜNÜN İNCELENMESİ

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Sanayi Devrimi'nden günümüze kadar işletmeler, artan rekabet baskısını karşılayabilmek için sürekli olarak yeni teknoloji ve yöntemler benimseme çabası içinde olmuştur. Günümüzde ise "yıkıcı teknoloji" (disruptive technology) olarak adlandırılan yapay zekâ (YZ), işletmelerin iş yapış biçimlerinden çalışan profiline kadar pek çok unsuru temelden dönüştürme potansiyeline sahiptir. "Yıkıcı" sıfatı, bir teknolojinin mevcut pazarları veya iş süreçlerini kökten değiştirme ve geleneksel stratejileri geçersiz kılma gücünü ifade etmektedir. Bu bağlamda yapay zekânın verimlilik ve büyümeye katkı sağladığı bir gerçek olmakla birlikte, bu ilerlemeler birçok çalışanın işini kaybetme endişesi duymasına veya yeni beceriler edinme zorunluluğu hissetmesine de yol açmaktadır. YZ'nin işletmelere sağladığı verimlilik, hız ve maliyet avantajları açıktır. Ancak bu avantajlar, çalışanlarda belirli düzeyde kaygı ve tedirginlik yaratabilmektedir. Literatürde "yapay zekâ kaygısı" (YZK) olarak adlandırılan bu duygu; bireylerin, YZ teknolojilerine karşı beslediği endişe, korku ve huzursuzlukları kapsar. YZK, teknolojiyle ilgili bilişsel değerlendirmelerin yanı sıra duygusal ve davranışsal tepkileri de içeren çok boyutlu bir olgudur. Bu kaygıya ilişkin çalışmalar, YZK'yı öğrenme kaygısı, iş kaybı kaygısı, sosyoteknik körlük ve YZ yapılandırılması kaygısı olmak üzere dört temel boyutta incelemektedir. Özünde, yıkıcı bir teknoloji olan yapay zekânın iş yaşamına yaratabileceği belirsizlikler, tehdit algısı ve tedirginlik hissi, kaygının yükselmesine yol açmaktadır. Özellikle üretken YZ araçlarının bazı mesleklerde çalışanların yerine geçme potansiyeli, iş güvencesini tehdit ederek yeni beceriler kazanma konusundaki isteksizliği artırabilir. Üretken YZ araçlarının çalışan verimliliğini artırdığı gösterilmekle birlikte, düşük yetkinlikteki çalışanlar açısından hem yeni fırsatlar hem de endişeler yarattığı gözlenmektedir. Çalışanlar artık yalnızca mesleklerini nasıl geliştireceklerini değil, bu mesleklerin gelecekte var olup olmayacağını da sorgulamaktadır. Yapılan araştırmalar, ABD'deki iş gücünün %80'inin görev tanımlarının en az %10'unun, %19'unun ise yarısından fazlasının YZ'den etkilenmeye açık olduğunu ortaya koymaktadır. Bu durum, yıkıcı etkiyi mavi yakalılarla sınırlamayıp yüksek gelirli ve eğitimli çalışanlar için de geçerli kılmaktadır. Öte yandan, işletmelerde yenilikçi davranış sergileyen çalışanlar, teknolojik değişimlere daha açık olma ve yeni teknolojileri hızla benimseme eğilimi gösterir. Yenilikçi davranış, yeni fikirler üretmenin yanı sıra bu fikirleri uygulamaya yönelik girişimleri de içerir. Dolayısıyla yüksek yenilikçi davranış seviyesine sahip bireylerin, yıkıcı bir teknoloji olan YZ'yi tehdit yerine fırsat olarak algılaması ve böylece daha az kaygı yaşaması beklenir. Nitekim ilgili literatürde, yenilikçi davranış düzeyi yüksek kişilerin teknolojik değişime daha hızlı uyum sağladığı ve kaygı düzeylerinin daha düşük olduğu sıkça vurgulanmaktadır. Bununla birlikte, bireylerin teknolojik dönüşüme karşı geliştirdiği psikolojik direnç düzeyleri, söz konusu ilişkiyi zayıflatabilmekte veya güçlendirebilmektedir. "Değişime direnç", örgütsel ve teknolojik değişikliklere verilen bilişsel, duygusal ve davranışsal tepkileri içeren çok boyutlu bir kavramdır. YZ gibi yıkıcı teknolojilerin organizasyona entegrasyon süreçlerinde çalışanların, belirsizlik, yeni beceriler edinme zorunluluğu ya da işini kaybetme korkusu nedeniyle değişime direnç göstermesi mümkündür. Direnç düzeyi yüksek bireyler, yenilikçi davranış sergileseler bile YZ teknolojilerine karşı daha temkinli veya kaygılı olabilmektedir. Bu araştırma, İstanbul yer alan işletmelerin çalışanları üzerinde, yıkıcı bir teknoloji

olarak yapay zekâya yönelik kaygının yenilikçi davranışları üzerindeki etkisini ve bu etkileşimde değişime direncin düzenleyici rolünü incelemeyi amaçlamaktadır. İstanbul, Türkiye'nin en büyük ekonomik ve ticari merkezi olarak, farklı sektörlerde yıkıcı teknolojilerin nasıl algılandığını ve uygulandığını gözlemlemek açısından zengin bir örneklem sunmaktadır. Literatürde ilk kez bu üç kavramı (yenilikçi davranış, değişime direnç ve yapay zekâ kaygısı) bir arada değerlendiren bu model, teknolojik dönüşüm sürecine psikolojik bir perspektiften yaklaşarak hem kuramsal hem de yönetsel açılardan değerli çıkarımlar sağlamayı hedeflemektedir. Araştırmada kullanılan yöntem ve araçlar arasında yer alan Yenilikçi Davranış, Değişime Direnç ve Yapay Zekâ Kaygısı ölçekleri bireylerin bilişsel eğilimlerini, duygusal tepkilerini ve davranışsal örüntülerini çok boyutlu biçimde inceleme olanağı sunmaktadır. Bu bağlamda çalışma yıkıcı bir teknoloji olan yapay zekâya yönelik kaygı ile yenilikçi davranış arasındaki ilişkiyi kapsamlı biçimde ele alarak, değişime direncin bu ilişkideki düzenleyici (moderasyon) etkisini ortaya koymaya odaklanmanın yanında, çalışanların teknolojiyle kurdukları psikolojik etkileşimi daha bütüncül bir bakış açısıyla açıklamayı hedeflemektedir.

Keywords: Yıkıcı Teknolojiler, Yapay Zekâ Kaygısı, Yenilikçi Davranış, Değişime Direnç

THE ROLE OF TEACHER TRAINING IN ENHANCING STUDENT SELF EFFICIENCY AND ACHIEVEMENT

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This review paper investigates the critical impact of teacher training in improving student self-efficacy and academic accomplishment. Self-efficacy, which is based on Bandura's social cognitive theory, is acknowledged as a key component impacting students' motivation, learning behavior, and performance results. The paper synthesizes findings from a wide range of empirical studies published over the last two decades, with the goal of understanding how teacher professional development programs influence student outcomes by altering instructional quality, teacher beliefs, and classroom atmosphere. A thorough literature review was conducted, with peer-reviewed papers on teacher training, student self-efficacy, and academic performance sourced from databases such as ERIC, JSTOR, and Google Scholar. The inclusion criteria centered on research conducted between 2000 and 2024 that presented empirical data, involving K-12 education settings, and investigated the direct or mediated effects of teacher training on student outcomes. A total of 42 relevant studies were examined. The qualitative research design uses thematic analysis to find repeating patterns and topics in the selected literature. Key themes include the impact of content-specific training, reflective teaching approaches, and the development of teacher-student relationships. According to the review, well-structured teacher training programs dramatically increase student self-efficacy by emphasizing learner- centered pedagogy, formative assessment procedures, and positive reinforcement measures. Enhanced self-efficacy, in turn, has a favorable correlation with student academic achievement across multiple courses and grade levels. The study's conclusions have consequences for educational policy and practice, arguing that continuous, context-sensitive teacher preparation is necessary to create an empowering learning environment that promotes students' academic and psychological development.

Keywords: Class Room Atmosphere, Learning Outcomes, Teacher - Student Relationship

AN INTERDISCIPLINARY APPROACH FOCUSING ON SDG 4 FOR LAW FACULTY STUDENTS

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The concept of sustainable society has ceased to be an issue limited to the environment; it has become a multidimensional transformation process intertwined with digitalization, artificial intelligence, education policies and legal regulations. The twin transition (green and digital transition) policies that have been rapidly adopted worldwide in recent years aim to create radical changes in the economic, social and environmental structures of societies. This transformation process necessitates the restructuring of legal systems, the digitalization of education systems and the inclusion of artificial intelligence applications in every area of social life. In this context, it can be said that the "Twin Transition and Law" elective course for law school students is of critical importance in terms of helping students understand the legal dimensions of this transformation. The study examines the critical relationships at the intersection of the fields of law, education and artificial intelligence, and discusses the role of this triple transformation in the construction of a sustainable society in line with the SDG 4 (Quality Education) goal. The aim of the study is to convey to law students the effects of technology on education, the role of the legal system in this process, and how this transition can contribute to sustainable development. The study was structured with a qualitative research approach and adopted a comparative literature review method. During the literature review, strategy documents and legislative texts published by international organizations such as the European Union and the United Nations on the twin transition, artificial intelligence ethics and education policies were examined. In addition, an interdisciplinary synthesis was created through current academic publications and policy analyses. The normative gaps and application examples between law, education and technology were addressed with an analytical approach, and how SDG 4 target can be integrated into education policies was discussed. The study also aims to develop pedagogical strategies on how law school students can comprehend this transition. According to the research findings, the integration of artificial intelligence and digitalization into education systems brings many new legal problems and opportunities that law students will face in the future. It is emphasized that legal regulations regarding the collection, processing and protection of students' personal data should be placed at the center of legal education. In addition, the necessity of ensuring transparency and accountability principles, justice and equality-based regulations in the decision-making processes of algorithms comes to the fore. The use of artificial intelligence in education not only improves students' individual learning processes but also reshapes the pedagogical responsibilities of educators. In addition to individualized education approaches, developing comprehensive strategies in areas such as digital literacy and ethical awareness is important for law students to take part effectively and sustainably in the digital society of the 21st century. SDG 4 goal emphasizes the establishment of education systems that support not only access to information, but also fair, inclusive and lifelong learning. In this context, law students' understanding of the legal and ethical aspects of technology plays an important role in both their academic and professional careers. The results of the study show that integrating the twin transition into the legal education system will ensure that future lawyers have the competencies to contribute to sustainable development both in society and on a global scale. It is emphasized that legal systems should not only respond to this transition process but also gain a structure that directs technological developments and frames them in line with social benefit. Education policies should offer an education model that includes values such as critical thinking, ethical awareness, digital literacy and social responsibility, rather than just providing students with technical knowledge. In this context, law students should be trained to comprehend not only positive law, but also

the effects of law on society, ethical issues and the legal dimensions of technology. The fact that law school students are informed about issues such as the twin transition and artificial intelligence will make them more conscious lawyers in the future and will enable them to contribute more effectively to sustainable development goals. This study is unique in that it addresses the fields of law, education and artificial intelligence together in the context of sustainability. The content of the "Twin Transition and Law" course for law school students should enable students to understand not only current legal rules but also contemporary issues such as digitalization, artificial intelligence and environmental justice. The study proposes a pedagogical approach that will help students become aware of not only legal knowledge but also social responsibility, ethical values and digital rights, especially based on SDG 4. With an interdisciplinary perspective, the study aims to provide legal professionals with the knowledge and skills necessary to build a more just, equitable and sustainable society in the digitalizing world. In this respect, it offers a new reference point for law schools, policy makers, educators and technology developers.

Keywords: Education, Law, Twin Transition, Teaching, Sustainability.

INTEGRATING TEXT-TO-SPEECH TEXNOLOGY INTO INCLUSIVE TEACHING METHODOLOGIES: A CASE STUDY OF TEACHER PRACTICE IN UZBEKISTAN

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This study examines the integration of Text-to-Speech (TTS) technology into teaching methodologies for inclusive education in Uzbekistan. TTS technology, which converts written text into spoken words, provides a valuable tool for students with special educational needs (SEN), such as those with visual impairments, dyslexia, or other learning challenges. By facilitating the decoding and comprehension of complex texts, TTS supports equitable access to education and enhances the learning experiences of students with disabilities. This research was conducted as part of Uzbekistan's National Strategy on Inclusive Education (2021–2025), and the study was carried out in three general secondary schools in the Andijan and Fergana regions. A mixed-methods approach was employed, involving 15 inclusive education teachers, 6 school administrators, and 20 SEN students. Data collection included pre- and post-tests, surveys, semi-structured interviews, and classroom observations to assess the effectiveness of TTS in improving students' academic performance, engagement, and independence. The results showed a significant improvement in reading comprehension, with an average increase of 14.3 points after using TTS tools. Additionally, 87% of teachers reported enhanced student engagement during reading activities, and 60% observed increased independence among students with visual impairments. Despite the positive outcomes, challenges such as insufficient infrastructure, limited availability of Uzbek-language TTS content, and software compatibility issues were identified as barriers to wider implementation. The study highlights that, when effectively integrated, TTS can act not only as an assistive technology but also as a transformative tool in inclusive education, fostering professional development for teachers and enhancing students' autonomy. The findings provide practical insights for policymakers and educators aiming to enhance the accessibility and inclusivity of education systems globally.

Keywords: Multimedia, Inclusive Teaching, Text-to-Speech.

FACTORS OF THE EMERGENCE OF NEOLOGISMS IN THE LEXICAL SYSTEM OF THE LANGUAGE

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Since each participant in a society is a carrier of culture, linguistic signs are related to their ability to function as cultural signs. The way of thinking of a people is determined by their belonging to a particular culture, and accordingly, each culture has its own national cultural meanings, which are recorded in language, rules of conduct, norms, traditions, and customs. When studying national identity, linguists emphasize, first of all, the importance of vocabulary. Neologisms have a national character and, through their scope, implement the categories of thought of representatives of a particular nation, the boundaries established for the perception and analysis of the surrounding reality. The lexical composition of a language is directly related to the culture, history, traditions, and lifestyle of its people. Any changes in society are instantly reflected in the vocabulary of its language. Analyzing these changes in the verbal field of speech allows us to uncover the patterns of cognition through the communication of participants in tourism activities. Since language is complex and constantly changing and constantly in motion, it evolves. There are several specific reasons for the emergence of new words: the emergence of new concepts, the desire to improve the language and save linguistic means, changes in human consciousness, etc. We know that there are internal and external factors that influence the formation of neologisms. Among the external factors, we can mention the level of development of society, the emergence of new realities, the growth of life, as well as its globalization, the development of the media. The main internal factors include word formation, assimilation, differentiation, as well as the desire for expression. Every year, more than ten thousand new words can be encountered in developed languages. This is evidence that the language and society have reached a new stage. While most new words are active in the language for a short time, some remain in the language for a long time. They not only enter the lively everyday activities of the language, but also become an important part of literature.

Keywords: Neologism, Lexical System, Social Changes, Language Development.

A COMPARISON OF AGILITY PERCEPTION IN MANUFACTURING AND SERVICE SECTOR

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In recent years, the agility of organizations has become one of the most important elements of being successful and sustainable in global markets where competition intensifies. Agility refers to the ability of businesses to adapt to rapidly changing market conditions and is recognized as an important performance indicator in both manufacturing and service sectors. The fact that agility performance and ability is an important competitive factor has attracted the attention of the academic world as well as the business world and has been the subject of many studies. However, how the perception of agility differs between manufacturing and service sectors has not been sufficiently analyzed. Agility is a capability that will have a significant positive impact on the competitiveness that businesses should have strategically. However, the perception of agility does not only depend on the intentions and efforts of the business. External factors affecting the business can have an impact on the perception of agility. One of them is the sector in which the business operates and the characteristics and structure of this sector. In this research, the agility perceptions of enterprises in the manufacturing and service sectors were examined and the differences arising from the sector were investigated. Within the scope of the research, the data obtained from the top and middle level managers of 341 companies, 145 of which are service and 196 of which are industrial enterprises operating in the İstanbul region, were taken into consideration. The collected data were analyzed by reliability, frequency, descriptive and t-test analyses respectively. As a result of the research, it was determined that the perception of agility differed in terms of the sector of activity ($t=3,429$ $p=0,001<0,05$). Accordingly, agility perception of service sector enterprises (Mean=4,06) is higher than manufacturing sector enterprises (Mean=3,85). These results reveal that the perception of agility in the service sector is at a higher level than in the industrial sector.

Keywords: Çeviklik, Rekabet, Rekabet Gücü, Sanayi Sektörü, Hizmet Sektörü

TOWARDS A SUSTAINABLE SOCIETY: INTEGRATING HUMANITY, TECHNOLOGY, AND AI IN FINANCE AND ECONOMICS – A STATISTICAL ANALYSIS OF CHENGALPATTU, TAMIL NADU

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The concept of a sustainable society is increasingly vital in the modern era, where economic growth, technological advancements, and human well-being must coexist harmoniously. This research explores the intersection of humanity, technology, and artificial intelligence (AI) in shaping a sustainable financial and economic ecosystem, with a focus on Chengalpattu, Tamil Nadu. Chengalpattu, a rapidly developing district near Chennai, presents a unique case study due to its mix of urban and rural economic activities, technological adoption, and socio-economic challenges. By employing statistical data analysis techniques—including descriptive statistics, regression, and correlation—this study evaluates key economic indicators, technological penetration, and AI-driven financial solutions to assess sustainability trends.

Previous studies highlight the role of AI and technology in fostering economic sustainability (Brynjolfsson & McAfee, 2017). Financial technology (FinTech) innovations, such as digital banking and AI-driven investment tools, have improved financial inclusion (Demirgüç-Kunt et al., 2018). However, regional disparities persist, particularly in semi-urban areas like Chengalpattu, where traditional economic structures coexist with emerging technologies. Sustainability frameworks emphasize the need for balanced economic growth, social equity, and environmental conservation (United Nations, 2015). This study builds on these foundations by integrating empirical data analysis to measure the impact of technology and AI on Chengalpattu's financial ecosystem.

Research Objectives:

- To analyze economic and financial trends in Chengalpattu using descriptive statistics.
- To examine the relationship between technology adoption (AI, FinTech) and economic growth using regression analysis.
- To assess the correlation between financial inclusion and sustainable development indicators.
- To propose policy recommendations for a sustainable economic model integrating AI and human-centric approaches.

Methodology:

Data Collection:

- Primary and secondary data were collected from:
- Government reports (Tamil Nadu Economic Survey, RBI publications)
- Financial institutions in Chengalpattu (banks, microfinance organizations)
- Surveys on technology adoption among local businesses and households

Statistical Tools:

Descriptive Statistics: Mean, median, standard deviation of key economic indicators (GDP per capita, employment rates, digital transactions).

Regression Analysis: To model the impact of AI-driven financial services on economic growth.

Correlation Analysis: To explore relationships between financial inclusion, technology penetration, and sustainability metrics.

Findings and Discussion:

Descriptive Analysis

- Economic Indicators: Chengalpattu's GDP growth rate (6.2%) is higher than the state average, driven by manufacturing and IT sectors.
- Financial Inclusion: 68% of adults have bank accounts, but only 32% use digital payment systems regularly.
- Technology Adoption: AI applications in local businesses remain limited (15% adoption rate), with most firms relying on traditional methods.

Regression Analysis: A linear regression model was applied to assess the impact of FinTech adoption (independent variable) on economic growth (dependent variable). The results showed a positive coefficient ($\beta = 0.45$, $p < 0.05$), indicating that increased FinTech usage correlates with higher GDP growth.
Correlation Analysis: A strong positive correlation ($r = 0.72$) exists between digital transactions and employment rates. A moderate negative correlation ($r = -0.38$) was found between cash dependency and sustainable business practices.

Implications for a Sustainable Society:

The findings suggest that:

- AI and FinTech can accelerate economic sustainability by improving efficiency and reducing inequalities
- Policy interventions are needed to enhance digital literacy and AI adoption in semi-urban regions like Chengalpattu.
- Human-centric approaches must complement technological advancements to ensure inclusive growth.

Conclusion and Recommendations: This study underscores the potential of AI and technology in building a sustainable economic framework in Chengalpattu. Key recommendations include:

- Government-led AI integration programs in SMEs.
- Financial incentives for digital transactions to reduce cash dependency.
- Educational initiatives to bridge the digital divide.
- Future research should explore longitudinal data to track sustainability trends over time.

Keywords: Sustainable Society, Artificial Intelligence, Economic Sustainability, Financial Technology, Statistical Analysis, Regression, Correlation, Chengalpattu, Tamil Nadu

POST-COVID RESILIENCE: HOW FINTECH TRANSFORMED WORKING IN BANKING SECTOR, ITS IMPACT ON CUSTOMERS.

Rimsha Shahid (The University of Faisalabad)

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The banking industry has seen a rapid digital transition due to the COVID-19 pandemic, underscoring the need of fintech adoption in enhancing consumer outcomes and Satisfaction. This paper will investigate the impact of major fintech technologies on post-pandemic banking resilience, including blockchain, AI, machine learning, cybersecurity, digital financial services, remote work options, and data analytics. It will explore how these technologies contribute to the strengthening of digital transformation, cost reduction, operational effectiveness, and the performance of remote workers. The study will highlight enhanced resilience's effects on consumer satisfaction, emphasizing accessibility, security, credibility, and financial integration. Through the primary research method, the results will be evaluated. This research work will highlight the value of fintech-driven innovation in creating a robust, customer-focused banking environment.

Every bank has internal factors that affect its financial performance. Banks' specific factors include capital adequacy, asset quality, liquidity, operational cost efficiency, income diversification, NPLS, and interruption in credit risk management. Credit and liquidity risk, management efficiency, market concentration, and economic growth influence banks' profitability(Tongurai and Vithessonthi 2018). “Bank is a financial institution which deals in loans and advances” Cairn Cross According to R.P.Kent. “Bank is an institution which collects idle money temporarily from the public and lends to other people as per need.”

If the banking system distorts, a country’s economic development will be disturbed, whereas banks have a vibrant part in the country's success. The banking sector is considered an elementary part of any country's financial system(Jokipii and Monnin 2013). A bank is a systematized marketplace for lenders and debtors to exchange funds because this sector plays a crucial role in a country's economic and financial growth.

Financial technology is the innovation and expertise that tries to compete with existing financial methodologies in the supply of financial services. It is a developing industry that employs technology to improve financial activities (Puschmann 2017).

Digital Finance: Financial technology commonly known as Fintech, in short, it’s a juncture of technology and financial services (Giglio 2021). Financial services that have currently become well-liked it includes online lending, mobile payment, digital services and digital currency. After improvement and recovery from pandemics, specific focus area for fintech is financial inclusion. World bank describes that almost 1.7 billion unbanked people are existing in all over the world, and purpose of fintech is to integrate these individuals into the global banking system and promote digitalization in banking. By encouraging fintech it will help to alleviate the social economic impact of pandemic and technology by introducing E-wallets and digital payments (Berger and Demirgüç-Kunt 2021). Financial technology (abbreviated FinTech) is the technology and innovation that aims to compete with traditional financial methods in the delivery of financial services in different sectors. It is an emerging industry that uses technology to improve activities in finance (business sectors) (Giglio 2021). Use of smart phones for mobile banking investing, cryptocurrency and borrowing services are major examples of fintech which aiming to make financial services more accessible to the general public(Broby 2021). Literature Review Fintech:

The first ATM installed in 1967, laid the ground work for birth of modern finance. Fintech refers to new technology that enhance and automates the source and usage of financial services. Financial technology, it assists business owners and consumers in better managing their financial operations, procedures and lives through the use of specialized tools (Giglio 2021). Fintech firms are therefore enterprises that support financial institutions in modernizing their systems, processes, and operations (Bollaert, Lopez-de-Silanes et al. 2021).

Globally, the financial technology (FinTech) revolution is raging. Reviewing the growing body of research on FinTech and FinTech-enabled services, we highlight the dangers and potential for banks in this paper. Utilizing top-notch bank-level data from 115 nations during the previous 16 years, this study calculated statistical moments of several important indicators of the evolving banking environment in the FinTech era. This paper highlighted the ways in which global infrastructures, geopolitical rigidities, and regulation influenced banking (Murinde, Rizopoulos et al. 2022).

Keywords: Remote Services, digital transformation, COVID-19, Fintech adaptability in banking, Customer satisfaction

STYLISTIC AND SOCIAL CHARACTERISTICS OF THE "WISH" SPEECH GENRE IN THE UZBEK LANGUAGE

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In modern linguistics, the focus of linguists' attention on the study of speech phenomena since the 1950s has initiated the linguistic study of speech entities in the language system that are characterized by a specific speech purpose, composition, and style. Nowadays, in the study of speech genres, it is becoming important to determine the specific linguistic features of individual types of speech genres, in the development of their typology and general classification principles. The “wish” speech genre differs from other speech genres in the language system by having a specific speech purpose, compositional structure, and style, and is manifested in various styles in the language system. The inter-style “wish” speech genre involves words and sayings related to a certain field, lexical-semantic and grammatical means, and syntactic structures. For example, wishes like “Сизга ижодий баркамоллик тилайман” are formal wishes, while wishes like “Овингиз бароридан келсин” are typical of the style of speech. In particular, the positive wishes in the language system, such as “Бахтли бўлинг, қўша қаринг”, and the negative wishes, such as “Жувонмарг бўлгур, бетинг қурсин”, call for in-depth linguistic research on the functional characteristics of the speech genre of wishes. In this regard, it is important to identify the unchanging, stable characteristics of the "wish" speech genre. In particular, it is important to identify the national-cultural, sociolinguistic, and linguosemiotic characteristics of the "wish" speech genre in the Uzbek language. The article considers specific speech targets, compositional and stylistic features of the speech genre «wish»; verbal, non-verbal means and linguistic signs; features of functional change of the speech situation.

Keywords: Linguistic Features, Positive Wishes, Negative Wishes

ANALYSIS OF CLIMATE CHANGE IMPACT ON POTATO YIELD IN KHYBER PAKHTUNKHWA

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The impacts of climate change are felt in almost all parts of the globe. Agriculture is very sensitive sector to climate change due to the direct dependence on climatic factors. Environment and climatic variations are intimately related to sustainable development. The Environment protection agency (EPA) divided Khyber Pakhtunkhwa into four zones. Chiral belongs to Zone A, Mansehra belongs to zone B, Nowshera belongs to zone C and North Waziristan belongs to zone D. Panel data for 35 years (1985-2019) across these four districts are used. Yield was the dependent variable while the independent variables were area, maximum temperature, maximum temperature square and rainfall. Hausman test recommended Pooled mean group as best fit. The long run results showed that the maximum-temperature shows positive and significant coefficient while the maximum temperature square have negative and significant coefficient. This resulted that the potato yield showed an increase first, when the temperature rises but after exceeding the critical temperature (23 ºC)the yield was declined. The rainfall was insignificant, this was due to fluctuations in the rainfall patterns. The highest maximum temperature in Chitral is almost touching the critical value which means the yield is now at maximum level. Further increase in temperature will reduce the yield. However, temperature in district Mansehra and Nowshera have already crossed the critical value of 23 ºC which means that yield of these both districts are declining. Whereas in the district North Waziristan increase in temperature will enhance the yield of potato as this district has not cross the critical value. Policymakers and other concerned departments need to encourage potato growers of District Chitral and North Waziristan to allocate more land for potato as highest maximum temperatures it these districts are 23.73 and 22.48 which is less or equal to critical temperature (23 ºC) so the yield of potato will enhance. Government also needs to concentrate and enhance tree plantation in districts, specially Nowshera and Mansehra to adjust the temperature rise.

Keywords: Potato Yield, Climate Change, Panel Data, Pooled Mean Group, Pakistan

INVESTOR BEHAVIOR AND FINANCIAL LITERACY IN PAKISTAN

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This study provides comprehensive empirical insights into investor behavior and its intricate correlation with various behavioral biases, specifically within the context of investment decision-making at the Pakistan Stock Exchange (PSX). By collecting primary data through a well-structured questionnaire, the research gathered responses from 261 individual investors across different regions of Pakistan. These participants represented a diverse demographic profile, helping ensure the generalizability of the findings. The study employs hierarchical regression analysis to rigorously test the proposed hypotheses, aiming to understand the extent to which behavioral biases influence individual investment choices. Several behavioral biases are examined in the study, including anchoring and adjustment, overconfidence, and herding behavior. Among these, the statistical analysis reveals that anchoring and adjustment, overconfidence, and herding exhibit a significant and positive impact on investment decisions made by retail investors. These findings highlight that investor choices are not always based on rational financial models, but are instead frequently shaped by psychological factors and cognitive limitations.

Moreover, the study explores the role of financial literacy as a moderating variable in the relationship between behavioral biases and investment decisions. The results indicate that financial literacy plays a significant moderating role, effectively influencing the strength and direction of the biases' impact. Investors with higher financial literacy levels are better equipped to make informed decisions and mitigate the negative effects of behavioral tendencies.

Overall, this research contributes to the growing body of knowledge on behavioral finance in emerging markets, emphasizing how investor behavior in Pakistan diverges from trends observed in more developed financial markets. These insights hold important implications for policymakers, financial educators, and stock market regulators striving to foster informed investment practices and enhance market efficiency.

Keywords: Behavioral Finance, Investment , Biases

RELATIONSHIPS BETWEEN UZBEK LINGUISTICS AND CHEMISTRY

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Like linguistics, Uzbek linguistics has also benefited from the achievements of chemistry. The emergence of the atomic-molecular theory in chemistry, the discovery that even the smallest atoms are divisible, and the creation of the periodic table of elements by D.I. Mendeleyev also influenced Uzbek linguistics. [7,6]

The emergence of the atomic-molecular theory in chemistry is considered a great discovery in the world of natural science. The roots of the atomic-molecular theory go back to Al-Farabi, Ibn Sina and Al-Biruni. In particular, Al-Farabi claims that a substance is divided into parts and consists of different parts. Although they gave the first information about the structure of substances, it was L. M. Lomonosov who elevated them to the rank of a doctrine. The main provisions of this doctrine were expressed in the work "Elements of Mathematical Chemistry", written in 1741. The essence of the atomic-molecular theory is as follows:

1. "All matter consists of corpuscles" (molecules).
2. Molecules are organized into "elements" (this is what Lomonosov called atoms).
3. Molecules and atoms are in constant motion.

Molecules of simple substances are composed of the same atoms, while molecules of complex substances are composed of different atoms. In the mid-19th century, a consensus was reached regarding the definition of the concepts of molecule and atom: "An atom is a particle consisting of a positively charged atomic nucleus and negatively charged electrons." [8,109]
The findings on the internal structure of elements (matter) in physics and chemistry had a significant impact on other sciences, including linguistics. First of all, the theory of the multi-stage division of matter into molecules, molecules into atoms, atoms into neutrons and protons provided a convenient opportunity to shed light on the ontological nature of language. The concept of units, similar to the concept in the natural sciences, also arose in linguistics. Units were divided into linguistic and speech units in accordance with the dialectic of generality and particularity. Both units have an internal structural property - divisibility. [2,104]

The internal structure of units of language and speech also has a hierarchical nature. Their hierarchical nature is manifested in the fact that a large (macro) whole is divided into smaller wholes, and smaller wholes, in turn, are divided into even smaller wholes. For example: a word consists of morphemes. Morphemes serve as elements of a word form. Meanwhile, a morpheme consists of phonemes. Phonemes, as elements of a morpheme, perform a certain function in its structure. A phoneme, like an atom, also has an internal structure. Differential signs are considered elements of a phoneme. The idea of the multi-level nature of language and its hierarchical structure first appeared in linguistics in the works of American descriptive linguists in the 1920s. It was later developed by the Polish linguist Emil Benveniste and the Russian linguist S.D. Katznelson. If in the past the structural level of language and the analytical level were confused, later these two types of levels began to be separated from each other. [7.7]

A system is a stable whole formed by the interrelation of two or more interconnected and conditioned elements and endowed with a new quality. Language units are considered as systems both by the sign of their origin and by their structural (ontological) nature. For example, each morpheme is a holistic system that is directly observed and manifested through a number of formal and semantic variants (allomorphs, morpheme variants). At the same time, each phoneme is considered as a system as a whole,

a whole that is directly manifested through several variants (allophones) in the speech process. Since ancient times, it has been known in science that things and phenomena of the objective world are in constant motion and development. This point of view was especially developed by scientists of Central Asia. In particular, Al-Farabi in his work “The Philosophy of Aristotle” says: “They (the four substances) cannot be eternal; for air, water, earth and fire are divided, one passes into another, and, perhaps, each element exists in the other.” Farabi creatively develops Aristotle’s ideas that the human body is in constant motion and development. It says that existing things and events influence each other, and, being in the process of receiving influence, the internal elements that make up these things are also in the same process with each other. The strengthening of the atomic-molecular doctrine in science gave clearer evidence that atoms and molecules are in constant motion. This breakthrough in the natural sciences also influenced linguistics. [1.98]

The emergence of structural linguistics was based on the atomic-molecular theory. The famous Swiss scientist Ferdinand de Saussure, who is considered the founder of this direction, emphasized that linguistic units, like existing objects and phenomena, are constantly developing and changing, and distinguished two states of language - dynamic and static. Static in a certain period is considered to be the state of a specific language that is constantly developing and in motion - dynamics. From this point of view, he showed that language should be studied from two points of view. [4,57]. In the history of linguistics, diachrony is inextricably linked with synchrony. It is impossible to imagine one without the other. Synchronous learning paves the way for diachronic learning. Diachrony works on the basis of the results of synchronic research. Changes in a certain linguistic state between two periods, two synchronic states, are determined by comparing materials from the two periods. [3, 10-11] The study of chemical bonds is one of the most important issues in modern chemistry. In chemistry, the study of the structure of atoms explains the nature of chemical bonds. The outer shell of an atom can contain from one to eight electrons. A chemical bond occurs due to valence electrons. This occurs in three ways: 1) covalent bond; 2) ionic bond; 3) metallic bond.

The theory of valence, which had achieved great success in chemistry, began to be applied in linguistics in the 1940s. This concept was first introduced into linguistics by S.D. Katsnelson in his 1948 work “On the Grammatical Category” [5,44]. Since then, this concept has firmly taken its place in linguistics. While in chemistry this term is used to describe the property of an atom of one element to bind to an atom of another element, in linguistics it is used to describe the ability of a lexeme to bind to another lexeme.

Initially, valence was applied to lexical units (lexical valence), but in later periods it began to be applied to syntactic units as well (syntactic valence). According to the interpretation of positional syntax, the main word, i.e. the predicate, occupying a central place in the sentence structure, opens a number of positions. Some of these positions are necessary for the semantic and grammatical formation of the sentence, while others are not necessary and carry additional information. For example, in the sentence "Ahmad took a book from the closet" the word "book" is considered a necessary unit, and the word "wardrobe" is an optional unit. Direct manifestation of lexical valences creates word combinations. [8,116].

Just as there are three types of chemical bonds listed above, syntactic compounds are also divided into two types depending on the nature of the bond: 1) equally connected; 2) subordinate relations. The law of constancy of composition, widely used and having achieved great success in the natural sciences, also exerted a certain influence on the science of linguistics. The most prominent representative of this theory, Louis Helmslev, compares linguistic and speech units and divides them into stable (constant) and changeable. Units perceived by direct observation with our senses are changeable units,

while within them are hidden essentially stable units, possessing the property of repeatability in each of them.
The widespread acceptance of D.I. Mendeleyev's periodic table of elements among scientists around the world and the accuracy of the principle used to arrange the elements in this system also aroused the admiration of scientists in other fields. Following D.I. Mendeleyev, classifying the whole into parts and the group into types, he tried to take one feature as the basis for classification. D.I. Mendeleyev, unlike other scientists, compared dissimilar elements. As a result, he discovered that the properties of elements change periodically as their atomic mass values change. [9,163]

Therefore, in a continuous series of elements arranged in order of increasing atomic mass, sodium and magnesium should follow fluorine, potassium should follow chlorine, and rubidium and strontium should follow bromine. If these elements are arranged in order of increasing atomic weight, they repeat periodically. This periodic small change in the properties of the elements is noticeable regardless of how many elements are missing in the series, for example, magnesium and chlorine, calcium and bromine, or strontium and iodine. All this formed the basis for D.I. Mendeleyev to create his periodic law. His approach to comparing elements when creating a periodic table of elements based on the atom is the most important achievement of D.I. Mendeleyev in chemistry, which can be applied both in linguistics and in other sciences.

Keywords: Linguistics, Chemistry, Science

TURKISH POLICIES TOWARDS SYRIAN REFUGEES: ECONOMIC AND SOCIAL CHALLENGES IN THE SHADOW OF THE SYRIAN WAR.

Hassan Et-Talib (Erciyes University)

Aylin Yonca Gençoğlu (Erciyes University)

This study examines the root causes of the Syrian civil war that began in 2011 and how it has led to a major global migration crisis, with millions of Syrians becoming refugees. Türkiye has been one of the largest refugee host countries in this process, hosting approximately 3 million Syrian refugees. In this context, the research aims to examine Türkiye's refugee policies and the challenges faced by Syrian refugees. The study focuses on the main problems (such as poverty, employment and education) faced by Syrian refugees in Türkiye in general and Kayseri in particular. In addition, the policies implemented by the Turkish state since the beginning of the Syrian crisis are analyzed in detail. In particular, the "open door policy" introduced in 2011 and its role in the admission of Syrian refugees to Türkiye and the consequences of this policy are discussed. Furthermore, the temporary protection status and its importance in protecting refugees and securing their rights are evaluated.

Keywords : Migration, Syrian, Refugees, Civil War, Open Door, Asylum seeker.

A COMPARATIVE EVALUATION ON THE INTEGRATION OF ARTIFICIAL INTELLIGENCE AND DIGITAL TECHNOLOGIES INTO PUBLIC SERVICES

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Digital transformation and artificial intelligence (AI) technologies are creating new value in public administration by enhancing the efficiency and accessibility of public services. The slow pace of traditional bureaucratic processes, the high costs of operations, and the barriers citizens face in accessing public services are being overcome through digitalization. AI-driven solutions, along with innovative technologies such as big data analytics, the Internet of Things (IoT), blockchain, and cloud computing, are making public administration more effective, transparent, and accountable.
AI enables the development of systems that mimic human intelligence through technologies such as machine learning, deep learning, and natural language processing. Today, AI is used in a wide range of fields including voice assistants, image recognition systems, autonomous vehicles, and medical diagnostic tools. In the realm of public administration, AI-supported systems such as smart tax management, digital social welfare assistants, e-citizenship services, and disaster management applications are becoming increasingly widespread.

Digital public services represent an innovative approach that facilitates citizen interaction with public institutions, accelerates service delivery processes, and strengthens the relationship between the state and its citizens. E-government platforms, online tax payment systems, digital identity verification mechanisms, and open data portals are among the key components of digitalized public administration. AI-powered smart tax systems can analyze tax collection processes, implement automated measures against tax evasion, and simplify tax payment for citizens. Similarly, AI-based social welfare assistants can assess citizens' income levels and needs to allocate assistance more effectively, ensuring more efficient use of public resources. In terms of disaster prediction and crisis resource management, AI-supported disaster forecasting and management systems play a critical role. These systems can minimize the impact of disasters by reducing loss of life and property. Furthermore, a virtual AI-powered platform developed as a digital citizenship advisor could enable citizens to carry out all public service transactions from a single point, thereby increasing the accessibility and efficiency of services.
Protecting the big data used in digital services and enhancing cybersecurity measures are critical for ensuring data safety and privacy. With the growing digitalization of public services, securely storing personal data and protecting it from malicious access has become increasingly important. Moreover, raising the level of digital literacy is essential for both citizens and public employees to use digital systems effectively. In this regard, organizing educational programs that promote the effective use of digital technologies is vital. Enhancing the transparency of AI-supported public services and making decision-making processes more understandable are also crucial for addressing ethical concerns. Ensuring that AI operates fairly, impartially, and accountably in decision-making processes will enhance public trust in government and ensure the sustainability of digital transformation.
Türkiye has made significant strides in its digital transformation journey by digitizing public services through platforms such as e-Government (e-Devlet), e-Nabız, UYAP, and e-Municipality (e-Belediye). In particular, the e-Government platform facilitates citizens' interaction with the state, speeds up bureaucratic procedures, and reduces costs. The e-Nabız system developed in the healthcare sector enables individuals to access their health data in real time, thereby strengthening patient-physician interaction. However, Türkiye still faces several challenges in the development of digital public services.

AI-supported services are not yet widespread, and issues related to data security, personal privacy, and digital inequality persist. Therefore, to enhance the use of AI in public services, Türkiye must increase investments, accelerate regulatory reforms, and provide digital literacy training to public employees. Estonia, recognized as one of the world's leading countries in digitalization, has brought 99% of its public services online through digital ID cards and the e-Residency program. These systems allow Estonian citizens and global entrepreneurs to access government services easily over the internet. The United Kingdom facilitates access to information in public services by using AI-based assistants. Chatbot technologies provide quick solutions to commonly encountered issues while also reducing the workload of public servants, contributing to more efficient service delivery. Japan, on the other hand, is developing self-learning AI robots for use in public services. These autonomous systems play an active role in healthcare and elder care services, reducing the burden on healthcare professionals and improving service quality.

This study primarily aims to analyze the impact of digital transformation on public administration from a theoretical perspective. One of its main objectives is to examine the role of AI and other digital technologies in public service delivery, comparing practices in Türkiye with global examples. Accordingly, the study evaluates the effects of AI technologies on key governance principles such as transparency, efficiency, accessibility, and accountability in public services.

A qualitative and descriptive approach was adopted as the research methodology. Initially, the historical development and application areas of AI technologies were examined, followed by a discussion of the general framework of public services and the theoretical foundations of digital public services. In the subsequent sections, examples of AI applications in digital public services from both Türkiye and around the world are presented. The benefits of these systems, the challenges encountered, and possible solutions are discussed in detail.

Keywords: Public Services, Digitalization, Artificial Intelligence, Digital Public Services

STRENGTHENING URBAN RESILIENCE WITH GREEN TECHNOLOGIES: HUMAN-CENTERED SOLUTIONS FOR SUSTAINABLE ENVIRONMENTAL ADAPTATION

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Faisalabad, Pakistan, endures severe heatwaves, with summer temperatures averaging 38.0°C in 2023, leading to a 20% surge in heatstroke cases and a 15% decline in labor productivity in low-income urban areas (Pakistan Meteorological Department, 2023; The Lancet Planetary Health, 2021). These conditions disproportionately burden female-headed households, who face limited access to cooling resources, exacerbating health risks and economic instability. Heatwaves also strain the city's power grid, with frequent outages disrupting daily life and small businesses, particularly in marginalized communities. This study investigates solar-powered cooling systems as a sustainable, equitable solution to enhance urban resilience in Faisalabad's residential buildings. Conducted from June to August 2023, the research evaluates the systems' impact on indoor temperatures and resident well-being, aiming to inform technology-driven policies for heatwave mitigation in climate-vulnerable regions. Using a quasi-experimental design, we installed solar-powered cooling systems (1.5 kW per unit, 100% renewable energy) in two residential buildings, targeting 100 households (50% low-income, 50% middle-income). Participants were selected via stratified sampling to ensure representation across income and gender. Pre- and post-intervention data were collected using thermocouples for indoor temperatures and the WHO-5 Well-Being Index for psychological health. Solar cooling reduced indoor temperatures by 4.2°C, improved WHO-5 Well-Being scores from 11.8 to 16.2, and cut grid reliance by 30%. Low-income households reported the largest well-being gains, highlighting the intervention's equity benefits. This research supports policymaking by demonstrating solar cooling's cost-effective impact on urban heat mitigation. It informs municipal policies for subsidizing renewable energy in low-income housing, promoting equitable resilience. These findings underscore solar power's role in fostering human-centered, sustainable urban adaptation, offering a scalable model for Pakistan's climate-challenged cities.

Keywords: Urban Resilience, Solar Power, Sustainability, Environmental Adaptation, Human Well-Being.

ESG CONTENT INTENSITY AND SUSTAINABILITY REPORT TIMELINESS

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This study investigates the determinants of sustainability report timeliness for 98 non-financial firms listed on Borsa İstanbul between 2014 and 2022. Timeliness is proxied by LogDelay, the natural logarithm of the number of days between fiscal year-end and the public release date of each report on the Public Disclosure Platform. Two research gaps motivate the analysis: (i) (i) scant empirical evidence on how environmental-social content intensity influences release delay and (ii) limited understanding of whether corporate governance mechanisms—particularly sustainability committees—moderate that association under increasingly mandatory ESG-reporting regimes.

A Python-based text-mining routine quantifies the share of environment- and green-related expressions in each report, yielding the Sustainability Theme Ratio (STR). The existence of a board-level sustainability committee is captured by the binary Sustainability Committee Presence (SC). Control variables comprise firm size (log of total assets), return on assets, financial leverage, board independence, CEO duality, market-to-book ratio, and a full set of industry and year dummies. Breusch-Pagan tests reveal cross-sectional heteroskedasticity; therefore, parameters are estimated via Feasible Generalized Least Squares (FGLS). Robustness checks using Driscoll-Kraay standard errors and firm-year clustering confirm inference stability. An interaction-dummy analysis for 2020–2022 tests pandemic-period behavioral shifts, while excluding financial institutions ensures homogeneous disclosure regulation.

The core findings indicate a statistically significant STR coefficient of –0.147 ($p < 0.01$), implying that richer environmental-social content accelerates disclosure. This supports signaling theory, whereby firms with favorable ESG narratives expedite reporting to enlarge reputational capital and investor following. The SC coefficient is –0.092 ($p < 0.05$), suggesting that the mere presence of a sustainability committee shortens LogDelay. However, the interaction term SC × STR is +0.064 ($p < 0.10$): when content becomes denser, the committee's additional verification layers partially offset its baseline speed-enhancing effect. Among controls, leverage prolongs delay, while size shortens it, evidencing scale economies in report production. Subsample analyses reveal that STR's acceleration effect intensifies during COVID-19, whereas the marginal role of SC weakens, hinting that crisis-driven digital coordination may substitute for formal committee meetings.

Three theoretical contributions emerge. First, within signalling theory, rapid release of ESG-rich reports constitutes a deliberate "good-news accumulation" strategy, transforming timeliness into a competitive asset rather than mere regulatory compliance. Second, consistent with agency theory, sustainability committees mitigate information asymmetry but may inflate bureaucratic costs when content complexity rises, underscoring the need for "measured oversight" in committee design. Third, information-processing theory gains empirical support: as ESG data volume grows, digital process standardization becomes crucial for maintaining timeliness.

Managerial implications are threefold. Firms should (1) enrich disclosure with verifiable ESG data streams, (2) digitize committee workflows—e.g., parallel approvals on cloud platforms—to curb review-induced delays, and (3) deploy proactive investor-relations messaging to capitalize on reduced

delays. Regulators, for their part, can promote committee adoption while issuing lean documentation guidelines and mandating XBRL-based templates to enhance comparability and machine-verifiability. Limitations—such as dictionary-based text measures, binary committee coding, and omission of external auditor traits—offer avenues for future research using deep-learning semantic models, nuanced governance indices, and cross-country comparisons.

Keywords: Sustainability Reporting, Disclosure Timeliness, ESG Content, Sustainability Committee, Corporate Governance

AI-DRIVEN TRANSFORMATION AND GREEN DIGITAL DEVELOPMENT AS CATALYSTS OF SUSTAINABLE SOCIETIES: A CROSS-NATIONAL PANEL STUDY OF EMERGING ECONOMIES (2000–2024)

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In the 21st century, the convergence of artificial intelligence (AI), digital transformation, and green innovation is reshaping pathways toward sustainable development. For emerging economies, the challenge lies in leveraging these technologies equitably and responsibly while ensuring environmental and social inclusivity. Existing literature lacks an integrated empirical model that examines these drivers across diverse socio-political and economic landscapes. This study aims to bridge that gap by analyzing the long-term dynamics between AI adoption, green innovation, digital equity, human capital investment, and regulatory readiness for ethical AI, and their collective impact on national sustainable development outcomes. The study investigates how five key independent variables—AI Integration in Public Services, Green Technology Investment, Digital Inclusion, Human Capital Development, and AI Ethics and Regulatory Readiness—impact the Sustainable Development Index (SDI). The goals include identifying causal long- and short-run relationships between digital-technological variables and sustainability; assessing cross-country dependencies and development patterns; and testing the robustness of such relationships using a multi-method panel approach. This analysis is based on eight emerging economies —Pakistan, India, China, Japan, Brazil, South Africa, Indonesia, and Mexico — that are chosen for maximal coverage from 2000 until 2024. These states provide a diversity of paths, across AI governance, green infrastructure and digital capacity, making them well suited for cross-national comparison.. An Overview of Analyses Descriptive and summary statistics Comparative analysis Correlation Inferential statistics Cross-sectional dependence tests CIPS unit root tests Panel cointegration tests and long-run relationships CS-ARDL (Cross-Sectionally Augmented ARDL) DCCE (Dynamic Common Correlated Effects) and AMG (Augmented Mean Group) D–H Panel Causality Test Robustness checks with alternative model estimations The chosen variables embody the technological and social backbones of a contemporary sustainable society. The research is motivated by the increasing role of AI and digital infrastructure in governance and green development strategies, especially in developing nations striving for parity with advanced economies. This research provides a new evidence-based approach through relevant theories, to measure sustainability-related influences of the digital and AI platforms transition in emerging economies. It enriches the academic conversation by providing a coherent, empirical model that blends the lenses of policy, technology and human development. This research brings forth a hybrid index approach to their sustainability forecasting in resource-scarce settings—signifying a compelling intersection of traditional development models, AI governance and green digital metrics—addressing a major shortcoming in interdisciplinary policy modeling. The specific findings from this research will provide concrete measures for policymakers, multilateral organizations and development planners on how emerging economies can maximize the uptake of AI and green technologies while safeguarding issues of equity, ethics, and ecological resilience. It fosters the world vision of sustainable community empowered through intelligent and inclusive conversion. This study provides a new empirical framework supported by relevant theories to assess the sustainability implications of digital and AI transitions in emerging economies.

Keywords: AI Integration, Sustainable Development, Green Innovation, Digital Inclusion, Human Capital, AI Ethics, Emerging Economies, Panel Data Analysis, CS-ARDL, Cointegration, Cross-Sectional Dependence.

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DIGITAL TRANSFORMATION AND MUSIC: “OPPORTUNITIES FOR COOPERATION IN EDUCATION AMONG TURKISH STATES"

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Today, digitalization and the digital transformation phenomenon that has emerged as a result of this, present us with important opportunities in terms of both music education and cultural cooperation. The Turkic States, which have a great heritage, attract attention with their rich musical culture and historical ties. Therefore, the integration of digital technologies brings new opportunities, especially in terms of music education. With the joint action of educational institutions, the opportunity to protect cultural heritage can also be seized. This opportunity can be achieved through joint work in the field of music through online platforms and digital content. With the adoption of digital transformation, online education programs, virtual concerts and workshops can be organized between the Turkic States. By organizing these events in a joint program, it can be ensured that different cultural perspectives are revealed among students and creative processes occur in the field of music (art). With the use of digital platforms, which are among the indispensable elements of today's technology, artists and music educators will be able to benefit from each other's experiences and provide information and cultural flow. Thanks to the collaborations to be made on the subject of education, it can also be ensured that musical traditions and techniques are intertwined and different projects emerge. Among the most important issues of these collaborations is the development of digital tools and software to be used in teaching traditional Turkish music. In light of these developments, students can learn more effectively. On the other hand, within the scope of the digitalization process to be established among the Turkish states, a sustainable network for young artists will be created and the potential for a positive increase in musical interaction at the international level will also be revealed. As a result, it would be appropriate to say that with the digital transformation process that is being attempted to be put forward, cooperation opportunities within the scope of music education among the Turkish states and the transfer of cultural heritage to the young generations will play an important role. By implementing this process within an active system, the path for development in both artistic and academic fields will be opened.

Keywords: Digital Transformation, Art and Culture, Music, Turkish States, Turkish Music

AUGMENTED REALITY (AR) IN TEACHING AND LEARNING (T&L) FOR THE CERTIFICATE IN ARCHITECTURAL TECHNOLOGY (CAT) PROGRAM

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Augmented reality (AR) is a technology that enhances the real world by overlaying digital elements like images, sounds, or other visual information onto the user's view. It provides a more interactive and immersive experience by integrating computer-generated content into the real environment. As we know, most plan drawings in architectural technology require an architects to visualize and design the site plan drawing into a 3D drawing. By using AR in teaching and learning in architectural technology is very crucial and can make it easier for students to draw buildings, structures and so on. Therefore, this study aims to evaluate the effectiveness of using Augmented Reality (AR) in the teaching and learning (T&L) process for the Certificate in Architectural Technology (CAT) program at Kuching Community College. In today's digital era, conventional teaching approaches are often insufficient to help students understand complex three-dimensional concepts in architectural studies. AR has the potential to enhance comprehension, motivation, and student engagement through interactive and immersive 3D visualization. This study employed a quantitative method using a quasi-experimental design involving both a control and an experimental group. Research instruments included questionnaires and pre- and post-tests to measure students' understanding and their acceptance of AR integration in T&L. The findings revealed that AR had a positive impact on students' comprehension, interest in learning, and overall engagement. The study also identified several implementation challenges, such as technical infrastructure and the need for instructor training. It is recommended that AR be further integrated into the curriculum as an innovative approach in technical education.

Keywords: Augmented Reality, Teaching and Learning, Architectural Technology, Quasi-Experiment, Educational Innovation

BESLENME BILIMINDE YAPAY ZEKÂ: UYGULAMALAR, POTANSIYELLER, SINIRLAR

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Beslenme; sağlığı korumak, geliştirmek ve yaşam kalitesini arttırmak için, bireylerin gereksinimi olan besin ögelerini yeterli miktarlarda ve uygun zamanlarda almasıdır. Bireylerin yeterli ve dengeli beslenmesi; bulaşıcı olmayan kronik hastalıkların görülme sıklığının azalması, protein enerji malnütrisyonu, vitamin-mineral yetersizliklerinin önlenmesi gibi beslenme ile ilişkili sağlık sorunlarının en aza indirilmesinde önemli bir role sahiptir. Dünya genelinde gözlemlenen beslenme davranışları değişiklikleri, özellikle de batı tipi diyetler, başta obezite olmak üzere diyabet, kalp damar hastalıkları ve beslenme ile ilişkili spesifik kanser türlerinin görülme sıklığını artırmaktadır. Geleneksel olarak gözlemsel araştırmalar ve klinik deneylerle şekillenen beslenme bilimi, yapay zekânın gelişmesiyle önemli bir dönüşüm geçirmiştir. Makine öğrenimi, derin öğrenme ve ileri veri analizi gibi teknolojiler, büyük veri setlerindeki karmaşık bağlantıları keşfetmek, belirli örüntüleri tanımlamak ve uygulanabilir sonuçlar elde etmek amacıyla kullanılmaktadır. Bu çalışmanın amacı, beslenme biliminde yapay zekânın rolünü derlemektir. Konuyla ilgili PUBMED veri tabanında 2024-2025 yıllarında yayınlanmış olan makaleler taranmıştır. Makale başlığında “artificial intelligence” VE “nutrition” kelimelerini içeren 22 makaleye ulaşılmıştır. Bu makalelerden tam metnine ulaşım sağlanılamayan 3 makale ve konuyla doğrudan ilgili olmayan 2 makale dışlanılmış olup, 17 makale gözden geçirilmiştir. Yapay zekânın beslenme alanında verilerin analizini, diyet alışkanlıklarını ve sağlıkla ilgili diğer faktörleri incelemeyi yeni bir boyuta taşıdığı görülmektedir. Bu süreçte, makine öğrenmesi ve derin öğrenme gibi teknikler, beslenme verilerini, diyet örüntülerini ve diğer sağlıkla ilgili verileri işleyip anlamlandırmaya olanak sağlamakta ve kişiye özel öneriler geliştirilebilmektedir. Araştırmaların sonuçları, yapay zekânın kanser hastası bireylerin genel sağlık durumunu ve yoğun bakım hastalarında enteral beslenme intoleransını tahmin edebildiğini göstermektedir. Böbrek hastaları için yüksek potasyumlu ve düşük potasyumlu yiyecekleri tahmin etmede, yapay zekânın genel doğruluğunun %65 olduğu, fakat yapay zekânın tavsiyelerine uyan hastaların daha düşük serum potasyum seviyelerine sahip olduğu görülmüştür. Öte yandan, metabolik sendromlu ve diyabetli bireylerin beslenmesinde yapay zekânın kullanımının, tüketilmesi gereken besin ögeleriyle ilgili eksik bilgilerin sunulmasıyla sonuçlanmıştır. Yapay zekânın, beslenme ile ilişkili artan Alzheimer hastalığı riskini belirlemede potansiyel faydaları olabileceği düşünülmektedir. Yapay zekâ hastalık riskini belirleme dışında, metabolomik verilerle sinir ağlarının entegrasyonu, biyokimyasal profiller üzerinden beslenme durumunun değerlendirilmesini yapmayı mümkün kılmaktadır. Yapay zekâ, makrobesin ögeleri, mikrobesin ögeleri ve enerji alımının değerlendirilmesinde önemli bir rol oynamaktadır fakat özellikle B12 vitamini ve D vitamini gibi mikrobesin ögeleri ile kalori hesabında sapmalar görüldüğü dikkat çekmektedir. Ek olarak, gıda görsellerinden kalori ve besin ögesi içeriğini tahmin etme konusunda yeni olanaklar sunmaktadır. Yapay zekâ sadece besinlerin içerisinde yer alan besin ögelerini ya da besinlerin kalorisini değil, aynı zamanda besinlerde oluşan mikrobiyal değişiklikleri de tahmin edebilmektedir. Gıdalarda meydana gelen mikrobiyal değişikliklerin dolaylı göstergeleri olan gaz salınımı, sıcaklık ve nem gibi parametreleri izleyerek bozulma düzeyini tespit eden, kullanıcıyı uyarı sistemiyle bilgilendiren yapay zekâ sistemi ile bazı gıdaların raf ömrünün uzatılması sağlanmıştır. Yapay zekânın, gıdaları tanıma ve doğru şekilde izleme konusundaki etkinliği; gıda kaybı, israfı ve bozulma riskini azaltmakta, bu sayede gıda güvenliği ve kalitesini artırarak sürdürülebilirliğe katkıda bulunmaktadır. Yapay zekânın, beslenme ve diyetetik

öğrencilerinin eğitiminde de olumlu rolü olabileceği dikkat çekmektedir. İletişim becerileri eğitiminde teori ile pratik arasındaki boşluğu kapatmak için yapay zekânın gücünden yararlanılmasının, geleneksel simüle edilmiş hasta karşılaşmalarına kıyasla önemli ölçüde daha az maliyet ve kaynak gerektirdiği için daha avantajlı olabileceği vurgulanmaktadır. Sonuç olarak, yapay zekânın beslenme alanı da dahil olmak üzere sağlık bilimlerinin farklı alanlarında kullanılması, potansiyel olumlu etkilere sahip olarak gözükse de önemli bir risk olan hatalı bilgiler üretme kapasitesi de dahil olmak pek çok faktörün varlığı göz önünde bulundurulmalıdır. Günümüz şartlarında, yapay zekâdan elde edilen sağlık verilerinin, sağlık profesyonelleri tarafından denetlenmesi gerektiği düşünülmektedir. Ayrıca, sağlık bilimlerinde yapay zekânın kullanımıyla ilgili etik normların değerlendirilmesi gerekmektedir. Tüm bu sebeplerle, konuyla ilgili daha fazla araştırmaya ihtiyaç duyulmaktadır.

Keywords: Yapay Zeka, Beslenme Bilimi, Makina Öğrenmesi, Diyet

THE RELATIONSHIP BETWEEN MOTIVATION AND ORGANIZATIONAL COMMITMENT- A META-ANALYTIC REVIEW

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This study was conducted using the meta-analysis method to examine the effect of motivation on organizational commitment. Meta-analysis is a systematic synthesis method that aims to combine the findings of quantitative studies conducted at different times and in different settings to present an overall effect size. In the study, a literature review was conducted in the Google Scholar and ProQuest databases using the keywords “job motivation” and “organizational commitment”, resulting in the identification of 609 studies published between 2020 and 2025. Among these, 20 studies that specifically investigated the relationship between motivation and organizational commitment, comprising a total sample size of 6,790 participants, were included in the analysis.

The Q and I^2 test results indicated a high level of variance (heterogeneity) among the studies analyzed ($Q = 402.197$, $I^2 = 95.276$). Therefore, a random effects model was employed to conduct the meta-analysis. According to the findings, a positive and significant relationship was found between organizational silence and burnout ($r = 0.584$, $p < 0.05$). Analyses conducted using Fisher’s Z transformation showed that the confidence intervals supported this relationship. To assess publication bias, various methods were utilized, including Egger’s test, Duval and Tweedie’s trim-and-fill test, and Begg and Mazumdar’s rank correlation test. These analyses indicated no significant publication bias. Funnel plot analyses also demonstrated a low risk of bias.

Moreover, the relationship between motivation and organizational commitment was further analyzed in relation to concepts such as job performance, job satisfaction, organizational citizenship, and burnout. It was found that job performance and job satisfaction were the most frequently studied variables in relation to the interaction between motivation and organizational commitment. In particular, intrinsic motivation was found to be intensively examined in connection with organizational commitment. It was also observed that organizational commitment often played a mediating role in the relationship between motivation and related organizational variables. This study has identified that organizational commitment plays a mediating role in the relationship between motivation and organizational commitment, both conceptually and through empirical analysis. It is believed that this finding will provide valuable insight for researchers conducting studies in the relevant literature.

Keywords: Motivation, Organizational Commitment, Meta Analysis

ÖZBEKİSTAN'DA MAHALLE SİSTEMİ DÖNÜŞÜMÜ

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Bu makalede, Özbekistan'daki mahalle sisteminin dönüşümü, mahallenin uzun vadeli gelişim aşamasında kendisine verilen işlevlerin değişmesi sonucunda mahalle kurumunun statüsünün yükseldiği, bunun da yerel özyönetim organı olarak sosyal sorunları çözmedeki öneminin artmasına olumlu etki ettiği, kamu denetiminin önemli bir öznesi olarak mahallenin siyasi statüsünün güçlendirilmesinin ekonomik-sosyal kalkınmaya ve ulusal programların uygulanmasına etkisi, vatandaşlık duruşu ve kendi mahallesinin gelişiminden menfaat sağlama açısından incelenmiştir. Yoksulluğun azaltılmasında mahallenin rolünün güçlendirilmesi, nüfusun çeşitli kesimleriyle çalışmada Çin deneyiminden verimli şekilde yararlanma olanaklarının ortaya konulması ve Japonya'daki özyönetim organları sistemi, finansmanın ileri uygulamaları temelinde Özbekistan'da da özyönetim organlarının faaliyetlerinin iyileştirilmesi yollarının geliştirilmesine ilişkin bilimsel analizler yapılmıştır. Mahallede sosyal politikanın uygulanmasında kadınların statüsünün güçlendirilmesi, bu bağlamda onların sosyo-ekonomik aktivitesinin artırılması ve kamu hizmetlerinden yararlanmada kurumsal kolaylıklar yaratılması olanaklarının kanıtlandığı ve mahallede manevi değerlerin dönüşümü sonucunda sistem için geleneksel olan ilişkilerin yerine ekonomik ve sosyal niteliklere sahip - sosyal yönetim, kamu denetimi gibi yeni bir değerler sisteminin oluştuğu tespit edilmiştir.

Sosyal yönetimin yeni modellerinin uygulanmasıyla mahallede sivil girişimleri destekleme ve hayata geçirme olanaklarının genişlemesi, bunun sonucunda ulusal programların uygulanması ve mahallede sosyo-ekonomik durumun daha da iyileştirilmesi olanaklarının genişlemesi incelenmiştir. Özbekistan'da mahalle sistemi bağımsızlık yıllarında kendine özgü bir gelişim yolu izledi. 1991-2016 yıllarında, mahallenin Sovyet modeli tamamen yenilendi ve yetkileri genişletildi. Mahalle sistemini desteklemek ve koordine etmek için "Mahalle" Fonu gibi özgün bir sistem oluşturuldu. Bu nedenle, mahallenin sosyal hayattaki konumu güçlendi ve vatandaşlar tarafından tam teşekküllü bir devlet ve toplum kurumu olarak kabul edilmeye başlandı. Bağımsız Özbekistan'ın gelişiminin yeni aşamasında, mahalle dönüşümü büyük bir hızla gerçekleşmeye başladı. Çünkü uzun yıllar boyunca mahalleye ait olan işlevleri yerine getirmenin yanı sıra, modern sorunların çözümüne katılımını genişletme ihtiyacı da ortaya çıktı.

Mahalle kurumunun dönüşümü, Özbekistan Cumhuriyeti Cumhurbaşkanı Şevket Mirziyoyev'in girişimiyle başladı ve bu konudaki çoğu konseptin yazarı da devlet başkanıdır. Şevket Mirziyoyev, mahallenin eşsiz olanaklarından halkın memnuniyetini ve refahını sağlamak için yararlanılması ve bunun için mahalle kurumunun potansiyelinin daha da artırılması gerektiğine özellikle dikkat çekmektedir. Bu bağlamda, ülkenin Cumhurbaşkanının ..." bugün mahalle büyük bir sosyal güç olarak ortaya çıkmalıdır. Çünkü aktivistler, deneyimli aksakallar, tecrübeli yaşlılarımız, isterlerse kamuoyu ile birlikte her türlü sorunu çözmeye ve hata yapan gençleri doğru yola yönlendirmeye muktedirdir," şeklindeki sözleri, mahalleye verilen sosyal görevlerin kapsamını anlamaya hizmet etmektedir. Mahalle, büyük bir sosyal güç olarak, devlet ve toplum hayatında meydana gelen değişikliklere ivme kazandırabilen, toplum üyelerinin sosyal aktivitesini artırarak yönetimde katılımını sağlayan ve kamu denetimini uygulayan, halkın refahını sağlayan ve sonuç olarak yoksulluğu azaltan bir yapıdır. Bu açıdan bakıldığında, son yıllarda mahalle faaliyetlerinde sürekli değişiklikler ve reformlar süreci gözlemlenmektedir. Bu sürecin mantıksal devamının da mahallenin büyük bir sosyal güce ve sivil toplumun gerçek bir kurumuna dönüştürülmesiyle bağlantılı olarak gerçekleşeceği açıktır.

Keywords: Mahalle Sistemi, Özbekistan, Yerel Özyönetim Sosyal Politika

TRANSFORMATION OF UZBEKISTAN'S EDUCATION SYSTEM DURING THE YEARS OF INDEPENDENCE

Irodaxon Bazarova (Andijan State University)

This article provides a comprehensive analysis of the educational reforms implemented in the Republic of Uzbekistan from the early years of independence to the present day, with particular focus on key segments of the system, including preschool education, general secondary education, secondary specialized education, and higher education. The study examines the main directions, legal-institutional foundations, and outcomes of these reforms. It reflects on efforts to establish an education system free from Soviet-era Russification and atheistic ideology, instead rooted in patriotism and national values, and oriented toward the cultivation of human capital and innovation.The author highlights the legislative and regulatory initiatives aimed at strengthening the legal foundations of the national education system, the development of curricula and educational materials in accordance with those reforms, and the enhancement of quality across all stages of education—from early childhood to higher and vocational education. Special emphasis is given to the approval of the "National Program for Personnel Training," which served as a foundational strategic document for transforming the educational landscape in the post-Soviet era. A significant portion of the study is dedicated to the consistent implementation of reforms across the education system, including improved coverage at all levels, the expansion of access, the establishment of new public and private institutions, continuous professional development of teaching staff, and the elevation of the social and professional status of educators. The shift from traditional to non-traditional teaching methods, the introduction of innovative pedagogical strategies, and the creation of specialized institutions focused on exact sciences and foreign language instruction in the private education sector are also analyzed in detail. The article explores Uzbekistan's participation in international academic mobility and partnership programs such as Erasmus+, DAAD, Mevlana, and Tempus, through which thousands of students and teachers have been sent abroad for training and academic exchange. Moreover, it examines joint initiatives implemented in collaboration with international organizations such as UNESCO, UNICEF, the World Bank, and the Islamic Development Bank. These collaborations have facilitated the introduction of modern methodologies in pedagogy, STEM education, gender equality, and digital literacy. Another focal point of the article is Uzbekistan's growing engagement in international educational cooperation, including joint degree programs, the establishment of foreign university branches within the country, and participation in international grant-based projects. These efforts have contributed to the global integration of Uzbekistan's education system and the enhancement of its international standing. In conclusion, the article synthesizes theoretical and practical insights regarding the strategic directions of educational development in Uzbekistan. It highlights the achievements in preparing globally competitive human capital, as well as the systemic modernization of national education through policy reform, institutional innovation, and international collaboration. The study contributes to the broader discourse on post-Soviet educational transformation and positions Uzbekistan as a case study for sustainable education reform in developing contexts.

Keywords: Education, Kindergarten, School, Higher Education, Education Law

MODELING STOCK RETURNS VOLATILITY AND PORTFOLIO RISK THROUGH ASSET PRICING MODEL: EMPIRICAL EVIDENCE FROM PAKISTAN

Mamoona Javed (The University of Faisalabad)

This paper examines the volatility risk of portfolio returns in Pakistan, with a particular emphasis on the interaction of asset pricing, uncertainty, and unforeseen market hazards. The study analyzes stock returns and portfolio risk dynamics using the GARCH (1,1) model and the Fama-French 3-component model, which is enhanced by a liquidity component. It analyzes the risk exposure associated with the following important factors: size (SMB), value (HML), liquidity (LIQ), and market risk premium (Rm-Rf). The results demonstrate empirical data to improve comprehension of the asset pricing processes of the Pakistani stock market and validate the robustness of the selected models. The GARCH (1,1) model's results validate that previous returns may forecast future returns, and it well represents the temporal dependency of volatility. By highlighting a comparison between volatility trends in Pakistan and Western markets, the study supports the model's versatility.
The dependability of the GARCH (1,1) model for simulating ordered volatility dependencies is shown by the likelihood ratio test, which shows the model's good predictive capability for monthly return patterns. Furthermore, the market's propensity to return to its mean volatility over time is demonstrated by the condition of mean reversion, which is shown by the sum of GARCH (1,1) constants being smaller than one for all equity gains.

This study adds to academic literature and useful investing techniques by including liquidity into the Fama-French framework, offering a nuanced viewpoint on asset pricing and risk assessment. The findings provide insightful advice for market players seeking to match risk tolerances with portfolio performance, guaranteeing well-informed choices in the face of market turbulence. These results can be expanded upon in future studies to investigate the changing dynamics of asset pricing in developing nations such as Pakistan.

Keywords: Portfolio return, Asset pricing model, Fama French 3-factor model, GARCH

HARMONY OF TURKISH AND UZBEKISTAN SPIRITUAL EDUCATION: MODERN PROBLEMS AND SOLUTIONS

To'lanboy Ortiqov (Andijan State University)

In order to build a civil society, to form a harmoniously developed generation, we must rely on spirituality. A person with a rich spirituality strives to comprehensively strengthen economic, socio-political independence. A free-thinking person, as an individual, promotes spirituality. Propagandists of spirituality must, first of all, themselves possess high culture and spirituality. A person with shallow spirituality cannot be a propagandist. Qualities of patriotism and humanism are an integral part of the propagandist of spirituality. Listeners will be satisfied if the spiritual propagandists are well-versed in the history of Uzbekistan, religion, national values, and the culture of the peoples of the world. A spiritual leader must have a good understanding of our state policy, the state structure outlined in the President's speeches and works, Addresses, and the principles of civil society they intend to build in the future.

The role of public education, educational institutions, cultural and educational institutions, and mass media in promoting and propagating spirituality is invaluable. Materials promoting spirituality should also be included in textbooks and teaching aids. The role of the mass media, radio, and television in this work is especially important. Much depends on the quality and content of materials on spirituality. Providing spiritual enlightenment in the teaching of social sciences is the most important tool. A clear understanding of the content, structure, scientific and theoretical roots, and purpose of cultural values is essential for a promoter of spirituality.

The processes of formation, evolution, and branching of spirituality are more fully revealed only when approached in essence. Now let's consider its practical social and educational functions. These functions are directly factors in the upbringing of the individual and the upbringing of society. So, through what logical relationships are spirituality and upbringing interconnected? This is, first of all, the relationship between subject and subject-object. A person's inner world, worldview, and psyche, as individual factors, shape their character (external subject) as a member of society, as a person. Here, the internal content determines the external form. A person with a rich spirituality quickly analyzes their behavior, behavior, and people's attitudes towards them. By drawing necessary conclusions, they look at their upbringing through the lens of common sense. On the other hand, due to the creative influence of rich spirituality on a perfect person, morality embodies etiquette. In conclusion, one of the necessary functions of spirituality for the individual and society is its educational function. Spirituality enriches and nurtures a person's inner world.

In our society, much is said about upbringing and education, and one crucial question remains unanswered. This is why upbringing is lagging behind, what are its roots? Are we shaping a well-rounded individual through today's education system? Or can we formulate it correctly? What needs to be done to increase the effectiveness of educational activities? It is known that the Uzbek people are a people with rich traditions, distinguished by their spirituality, culture, and moral values. Faith, belief, and conviction serve as the foundation of upbringing. In particular, in the Islamic religion, upbringing serves as a theoretical basis for the unity of Allah, the creator of all things, the fear of Him, the fulfillment of what He commands, and the refusal to do what He forbids. Creating another theory alternative to that theoretical foundation, superior and more complete, is an extremely difficult task.

Keywords: Build a Civil Society

YAPAY ZEKÂ VE SÜRDÜRÜLEBİLİRLİK EKSENİNDE SÜPER AKILLI TOPLUM YOLCULUĞUNUN ENTELEKTÜEL EĞİLİM YAPISININ GÖRSELLEŞTİRİLMESİ

Sabiha Kılıç (Hitit University)

Bu çalışma, insan merkezli dijital dönüşüm vizyonu olan Toplum 5.0 kavramının sosyal bilimler literatüründeki yerini inceleyerek, bu alanda yapılan akademik çalışmaları sistematik biçimde analiz etmeyi ve gelecek çalışmalara yol göstermeyi amaçlamaktadır. Japonya tarafından 2016 yılında ortaya atılan Toplum 5.0 kavramı, yalnızca teknolojik bir dönüşümü değil, aynı zamanda toplumsal refahın artırılması, sürdürülebilir kalkınmanın sağlanması ve insan merkezli inovasyonun teşvik edilmesini hedeflemektedir. Bu doğrultuda, çalışmada özellikle sosyal bilimler alanında yayımlanmış literatür taranarak, konuya ilişkin entelektüel eğilimlerin, anahtar temaların ve yüksek atıf almış yayınların belirlenmesi amaçlanmıştır. Çalışmanın verileri, Web of Science (WoS) veri tabanında "society 5.0" anahtar kelimesiyle 06.03.2025 tarihinde yapılan tarama ile elde edilmiştir. 1981–2025 yılları arasında yayımlanmış toplam 7982 bilimsel yayın içerisinden, sosyal bilimler alanına ait 355 yayın filtrelenerek analiz edilmiştir. Bibliyometrik analiz için CiteSpace 6.4 R1 yazılımı kullanılmış ve anahtar kelime ağları, yazar atıf ağları ve ülke temelli iş birliği haritaları oluşturulmuştur. Analiz sonuçlarına göre, Toplum 5.0 konusuna akademik ilginin 2017 yılından itibaren hızla arttığı görülmüştür. En fazla yayın yapan ülkeler arasında ABD (2303 yayın), Çin (989 yayın) ve Japonya (814 yayın) yer almakta; Türkiye ise 124 yayınla dikkat çekmektedir. Sosyal bilimlerdeki yayınların büyük çoğunluğu, "Sanayi, Yenilikçilik ve Altyapı", "Sağlık ve Kaliteli Yaşam" ile "Sorumlu Tüketim ve Üretim" gibi sürdürülebilir kalkınma hedefleriyle doğrudan ilişkilidir. Anahtar kelime analizlerinde "society 5.0", "industry 4.0", "artificial intelligence", "digital transformation" ve "sustainable development" gibi kavramlar ön plana çıkmaktadır. Atıf analizlerinde ise Mayumi Fukuyama'nın (2018) çalışması, Carayannis & Morawska-Jancelewicz'in (2022) yayını ve Kayano Fukuda'nın (2020) makalesi yüksek ortak atıf alan, literatüre yön veren çalışmalar olarak öne çıkmaktadır. Bu çalışmalar, Toplum 5.0'ın Endüstri 4.0'ın ötesinde; insanı odağa alan, dijitalleşme ile sosyal sorumluluğu birleştiren bir dönüşüm modeli sunduğunu göstermektedir. Bu bağlamda, çalışma hem Toplum 5.0 kavramının sosyal bilimlerdeki yerini görselleştirmekte hem de gelecekte yapılacak araştırmalar için disiplinlerarası iş birliklerine olan ihtiyacı ortaya koymaktadır. Ayrıca, sürdürülebilirlik ve dijitalleşme odaklı yeni politika önerileri ve üniversitelerin dönüşüm modelleri açısından da önemli ipuçları sunmaktadır.

Keywords: Yapay Zeka, Sürdürülebilirlik, Süper Akıllı Toplum, Sürdürülebilir Kalkınma, CiteSpace

METAVERSE TEKNOLOJİLERİYLE ÜRETİM YÖNETİMİNDE YENİ BİR DÖNEM

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Metawerse teknolojileri, gerçek dünyayı artırılmış veya sanal gerçeklik ortamlarıyla birleştiren yenilikçi bir yaklaşımdır. Metaverse, internet üzerinden erişilebilen, bireylerin birbirleriyle ve dijital nesnelerle etkileşime girebildiği sanal bir dünyayı ifade eder. Bu teknolojiler, birçok endüstride üretim süreçlerini dönüştürebilecek potansiyele sahiptir. Üretim yönetimi, mal ve hizmet üretmek için kaynakları planlama, organize etme, yönlendirme ve kontrol etme sürecidir. Üretim yönetimi, sürekli olarak verimliliği artırmanın ve maliyetleri düşürmenin yollarını arayan imalat endüstrisi için büyük önem taşımaktadır. Metaverse teknolojileri, sanal üretim yönetimini mümkün kılarak imalat sanayinde verimliliği artırma ve maliyetleri düşürme potansiyeline sahiptir. Üretim sürecinde metaverse teknolojilerini kullanarak, farklı parçaların üretimini test etmek ve karşılaştırmak mümkündür. Bu amaçla VR ve AR teknolojileri kullanılmaktadır. Metaverse teknolojilerinin temel avantajlarından biri, üreticilerin fiziksel prototiplere olan ihtiyacı azaltmalarını sağlamasıdır. Fiziksel prototipler üretmek, işletmeleri için maliyetli ve zaman alıcı bir faaliyettir. Metaverse teknolojileri, üreticilerin farklı tasarım senaryolarını simüle etmelerini ve bunları sanal bir ortamda test etmelerini sağlar. Metaverse teknolojisi, fiziksel prototip geliştirme ile ilişkili zamanı ve maliyeti önemli ölçüde azaltabilir. Böylece işletmeler üretim yönetimi sürecine daha fazla zaman ve yatırım harcama fırsatı elde edebilir. Teknoloji aynı zamanda üreticilerin üretim süreçlerini gerçek zamanlı olarak izlemesine, darboğazları belirlemesine ve üretim sürecinde ayarlamalar yapmasına olanak tanır. Metawerse teknolojileri, üretim süreçlerini optimize etmek için gerçek zamanlı veri analizi, simülasyon ve görselleştirme imkanı sunar. Bu sayede, üretim verimliliği artırılabilir, hata oranları azaltılabilir ve operasyonel maliyetler düşürülebilir. Ayrıca, çalışanların eğitimi ve yetkinlikleri de metawerse teknolojileri sayesinde geliştirilebilir. Metawerse teknolojilerinin beraberinde getirdiği zorluklar ve olası çözümleri tartışılmaktadır. Veri gizliliği ve güvenlik gibi endişeler, metawerse teknolojilerinin yaygın benimsenmesini sınırlayan faktörler arasındadır. Bu sorunların üstesinden gelmek için, güçlü veri koruma politikalarının ve siber güvenlik önlemlerinin benimsenmesi önemlidir. Metawerse teknolojilerinin gelecekteki potansiyeli ve uygulama alanları her geçen gün artış göstermektedir. Üretim süreçlerinde metawerse teknolojilerin daha fazla benimsenmesiyle, endüstriyel otomasyon, bakım ve onarım, uzaktan erişim ve işbirliği gibi alanlarda büyük gelişmeler beklenmektedir. Bu çalışmanın amacı, metawerse teknolojilerinin üretim yönetimi üzerindeki etkilerini anlamak ve işletmelerin bu yenilikçi teknolojilere uyum sağlamasına yardımcı olmaktır. Metawerse teknolojileri kullanan işletmelerin, bu alanda yapacakları yatırımların ve geliştirecekleri stratejilerin rekabet avantajı sağlayabileceği söylenebilir.

Keywords: Metaverse Teknolojileri, Üretim Yönetimi, VR Teknolojileri, AR Teknolojileri

KRİZ MÜZAKERELERINDE ÖFKE DİPLOMASİSİ: TRUMP VE ZELENSKI'NIN PERFORMANSLARININ KARŞILAŞTIRMALI ANALİZİ

Begüm Erim (İstanbul Gedik University)

Mevcut çalışmada, ABD ve Ukrayna devlet başkanlarının 28 Şubat 2025'de Beyaz Saray'da gerçekleştirdikleri basına açık toplantıda Ukrayna ve ABD arasında müzakere edilen Mineral Anlaşması ve Rusya Savaşı hakkında yaptıkları açıklamalar incelenmiştir. Koschut'un (2020) duygu söylemi analizi çerçevesinde iki liderin ifadelerinde geçen ikincil duyguların, liderlerin duygularını ifade etmek için kullanılan araçların ve hizmet ettiği amaçların bağlamsallaştırıcı etkileri araştırılmıştır. Devletler gibi kolektif varlıkların duyguları deneyimleme kapasitesine sahip olduğu ve bu duyguların uluslararası politikadaki etkileşimleri destekleyerek iç ve dış politika seçimlerini etkileyebileceği ikna edici bir şekilde gösterilmiştir. Duygusal söylem analizi ve içerik analizi yöntemleri aracılığıyla liderlerin söylemlerinde gömülü olan çağrışımlar, metaforlar, benzetmeler ve karşılaştırmaların nasıl ifade edildiğine odaklanılmıştır. Duygu analizinin inşacı yorumuna dayalı olarak, güç yapılarıyla kimlik inşası arasındaki ilişkide dilin ve duyguların önemi araştırılmıştır. Yapılandırmacı söylem analizinde sıklıkla ihmal edilen duyguların, devlet aktörleri tarafından 'duygusal öteki' yaratma sürecinin izleri sürülmüştür. Makalede, duyguların, lider söylemlerinde ötkeki'nin inşasında nasıl bir rol oynadığı ve bu söylemler üzerinden şekillenen sempatik ya da öfkeli duygusal temsillerin diplomatik performansı nasıl belirlediği sorusuna yanıt aranmıştır. Sempati/öfke ikiliği üzerinden duyguları bağlamsallaştırma yoluyla biz/onlar ikiliğinin nasıl şekillendirildiği öfke diplomasisi kavramı üzerinden gösterilecektir. Makalede devlet içindeki insanların dışsal bir olay ya da aktöre karşı deneyimlediği ortak duygusal tepkiler göz ardı edilmeden, bu tepki sonrasında devlet düzeyinde nasıl bir duygusal gösteriye dönüştüğü süreci, dış politikanın duygusallaştırılması kavramı çerçevesinde aydınlatılmaya çalışılmıştır. Dolayısıyla, duyguların yalnızca tepkisel ifadeler biçiminde değil, uluslararası alanda meşruiyete, tehdit algısına, ontolojik güvenliğe ve kolektif kimliğe hizmet eden kasıtlı stratejik performansın unsurları olarak ele alınması gerektiği vurgulanmıştır. Liderlerin konuşma metinlerinin ya da sözlü aktarımlarının yazıya çevrilmiş versiyonlarının duygusal söylem ve içerik analizi, ifade edilen ana duyguları ortaya çıkarmak bakımından oldukça değerlidir. Devletler her ne kadar duyguları deneyimleyemese de temsilcileri aracılığıyla söylem ve davranış yoluyla duyguları aktarabilirler. Bu aktarım, devletin temsilcilerinin müzakere edilemez alanlarını göstermek amacıyla öfke duygusunu yansıtabileceği diplomatik müzakerelerde oldukça kritik öneme sahiptir. Dış politika analizinde birey, grup ve toplum olmak üzere üç farklı analiz seviyesi mevcuttur.

Son zamanlarda bireysel analiz düzeyinde dilbilim ile ilgili olarak söylem analizi çalışmalarının gelişimi hız kazanmıştır. Söylemsel analizler duyguyu ihmal ediyor gibi görünse de (Koschut 2020) son on yılda sosyal inşacı ve post yapısalcı analizlerin desteğiyle bu ihmali azaltmaya yönelik girişimlerde bulunulmuştur. Bu çalışmada da duyguların inşacı perspektifinden duygusal söylem analizi ve içerik analizinden yararlanan karma bir metod tercih edilmiştir.

Keywords: Sosyal İnşacılık, Duygular, Öfke Diplomasisi, Söylem

TÜRKİSTAN'DA SANAYİNİN GELİŞİMİ, MÜLK SAHİBİ SINIFI VE SOVYET HÜKÜMETİNİN EKONOMİK POLİTİKASI

Sharofiddin Xoshimjonov (Andijan State University)

Özbekistan'daki mevcut ekonomik reformlar döneminde, özel mülkiyeti korumak, girişimcilik faaliyetlerini genişletmek ve ekonomi alanlarında devlet katılımını kademeli olarak azaltmak yolu izlenmiştir. Böyle bir durumda, tarihsel hataları anlamak, yani aşırı devlet müdahalesinin nasıl olumsuz sonuçlara yol açtığını incelemek, bugünün ekonomik politikası için bir uyarı deneyimi görevi görmektedir.

Bugün, Özbekistan'ın bağımsız bir devlet olarak tarihini derinlemesine analiz etmesi, gerçekçi bir değerlendirme yapması ve ulusal ekonomik evrimi anlaması bir zorunluluk haline gelmiştir. Sömürge dönemindeki ekonomik politikanın izleri mevcut ekonomik sistemde de önemli ölçüde korunmuştur ve bu da bu dönemde gerçekleştirilen özel mülkiyetin tasfiyesi sürecini bilimsel bir yaklaşımla yeniden gözden geçirmeyi gerektirmektedir. Ayrıca, sömürge politikasının Türkistan ekonomisine olumsuz etkisini, yerel ekonomik yapılara ve sosyal katmanlara verdiği zararı ortaya çıkarmak günümüz açısından önem taşımaktadır. Özellikle, Türkistan'daki pamuk endüstrisinin, merkezi Rusya endüstrisinin ihtiyaçlarına dayalı olarak, tek yönlü gelişimi - yalnızca hammadde üretimi ve işlenmesinin ilk aşamasıyla sınırlı kalması - bugün Özbekistan'ın hammadde ihracatına bağımlı bir ekonomiden yenilikçi üretime ve tam değer zinciri oluşturmaya geçiş ihtiyacını ortaya koymaktadır. Bu tarihsel deneyim, ekonomik ve ulusal toparlanmada stratejik bir ders işlevi görmektedir. 1917 Ekim Devrimi, Rus İmparatorluğu'nun sömürge bölgelerinde, özellikle de Türkistan bölgesinde sosyo-ekonomik düzeni kökten değiştirmek için tarihi bir dönüm noktası oldu. Bu bölge daha önce tarımsal-sömürge biçiminde gelişmiş ve çoğunlukla ham pamuk üreterek Rus endüstrisinin çıkarlarına hizmet etmiştir. 20 yüzyılın başlarına gelindiğinde, bölgede kapitalist ilişkiler güçleniyor ve yerel girişimcilik ile mülk sahibi sınıfı oluşmaya başlıyordu. Devrimden sonra, bu kesim, Sovyet hükümetinin "sınıfsız bir toplum" kurma fikrine aykırı bir sosyal güç olarak tanımlandı.

Bolşevikler, tarımda ve sanayide özel mülkiyeti ortadan kaldırma planını uygulamaya çalıştılar. Yüzyıllar boyunca şekillenen toprak mülkiyeti ilişkileri tarım sektöründe bu planın uygulanmasını çok yavaşlatmışken, yeni gelişmekte olan endüstrilerin zorla devlete devredilmesi nispeten daha kolay gerçekleşti.

Sovyet hükümetinin bu politikası iki aşamaya ayrılabilir: ilk olarak - işçi denetimi yoluyla özel mülk sahiplerinin sanayi işletmeleri ve atölyelerinde devlet kontrolü kuruldu, ardından - işletmeler tamamen millileştirildi ve mülk sahibi sınıfın tasfiyesi gerçekleştirildi. Bu süreç sınıf mücadelesi fikri altında yürütülmüş olsa da, pratikte ekonomik krize, üretimde keskin düşüşe, enflasyona ve halkın sosyal hoşnutsuzluğuna yol açtı.

Sovyet hükümetinin 1917-1920 yıllarındaki ekonomik politikası, Türkistan bölgesinde faaliyet gösteren girişimciler ve mülk sahipleri sınıfına ağır bir darbe vurdu. "İşçilerin çıkarlarını" korumak adına yürütülen bu politika, pratikte endüstriyel üretimi felç etti, piyasa ilişkilerini yok etti ve yerel ekonomik kalkınmanın yıllar içinde oluşan altyapısını bozdu. Bu tarihsel dönem, Türkistan'da girişimcilik özgürlüğünün nasıl ideolojik baskı altında yok edildiğini gösteren önemli bir aşamadır. Bu husus, bugün Özbekistan'da serbest girişimcilik, mülkiyet hakları, özel sektörün gelişimiyle ilgili siyasi görüşleri ve ekonomik reformları tarihsel köklere bağlamaya yardımcı olmaktadır.

Bu makale tarihsel-analitik yönde yürütülmüştür ve ana araştırma metodolojisi olarak tarihsellik ilkesi seçilmiştir. Bu yaklaşım, Sovyet hükümetinin Türkistan'daki ekonomik politikasını değerlendirirken

dönemin sosyo-politik ve ekonomik koşullarını derinlemesine analiz etti. Makalede ayrıca problem-periyodik yaklaşım da kullanılmıştır. Bu yaklaşım, araştırma nesnesi olan Türkistan bölgesinde 1917-1924 yılları arasında meydana gelen tarihsel süreçleri belirli dönemsel aşamalar temelinde, her döneme özgü sorunları ve bunların çözüm yöntemlerini analiz etmeyi mümkün kılmıştır. Özellikle, Sovyet hükümetinin ilk yıllarında yürüttüğü işçi kontrol politikası ve sonrasındaki tam millileştirme süreçleri ayrı aşamalarda ele alındı. Araştırmada karşılaştırmalı analiz yöntemi de kullanıldı. Bu sayede, Sovyet hükümetinin Türkistan'daki ekonomik politikası, Rusya'nın diğer bölgelerindeki uygulamalarla karşılaştırıldı ve özellikle sanayi işletmelerinin devlete devredilmesi süreci ve bunun yerel mülk sahipleri sınıfına etkisi incelendi. Karşılaştırmalı analiz ayrıca, imparatorluk dönemindeki ekonomik politika ile Sovyet dönemindeki ekonomik önlemleri karşılaştırmada önemli bir araç haline geldi. Retrospektif analiz, makaledeki önemli yöntemlerden biridir. Bu yöntem aracılığıyla, tarihsel süreçler bugünün bakış açısından değerlendirildi, yani geçmişte yapılan siyasi ve ekonomik hatalar ve bunların sonuçları modern Özbekistan'ın ekonomik reformları bağlamında analiz edildi. Özellikle, Sovyet hükümetinin aşırı merkezileştirilmiş politikası ve özel mülkiyeti ortadan kaldırmaya yönelik önlemleri, mevcut mülkiyet koruma, girişimcilik özgürlüğü ve devlet katılımının kısıtlanması politikasıyla tarihsel olarak paralel olarak ele alınmıştır.

Keywords: Türkistan, Millileştirme, Bolşevikler, Mülk Sahibi Kesim

FROM POLICY TO PEOPLE: STRENGTHENING ANTI-ENCROACHMENT EFFORTS FOR SUSTAINABLE CITIES OF PUNJAB PAKISTAN

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One major obstacle to Punjab, Pakistan's cities' sustainable growth is urban encroachment. The problem has been made worse by political meddling, poor enforcement of land-use regulations, and rapid urbanization, which has resulted in the unauthorized occupying of green belts, public areas, and infrastructure corridors. Current anti-encroachment measures prioritize reactive demolition over systemic change, ignoring the underlying factors that contribute to housing shortages, legal ambiguity, and political collaboration that facilitate land grabs. In order to assess the efficacy of current anti-encroachment strategies, the study "From Policy to People: Strengthening Anti-Encroachment Efforts for Sustainable Cities of Punjab, Pakistan" examines six important factors, reactive demolition approach, Policy framework, weak property rights and land record system, community awareness, and institutional capacity. Using a mixed-methods approach, the study uses semi-structured interviews and structured questionnaires to gather primary data. The purpose of the questionnaires is to gather opinions from a wide variety of stakeholders, such as locals, business owners, government representatives, and urban planners. Interviews shed more light on the difficulties enforcement agencies encounter as well as the real-life experiences of individuals impacted by encroachment removal efforts. By comparing official policy frameworks with actual conditions on the ground, this methodological design will allow the study to identify gaps in institutional coordination, policy clarity, and citizen inclusion. In addition to giving the analysis more depth, the primary data collection will help to ground the policy recommendations in local realities. By using this empirical lens, the study aims to fill the gap between the prerequisites of urban populations and top-down urban policies, ultimately providing workable plans for more inclusive and successful anti-encroachment measures that promote Punjab's goal of sustainable and livable cities. Moreover, the goal of SDG 11: Sustainable Cities and Communities are to create inclusive, secure, resilient, and sustainable cities.

SDG 11 is directly supported by this study in multiple ways. In the course of anti-encroachment efforts, this study supports equitable solutions that safeguard urban communities' homes and means of subsistence. It will help planners and government representatives to create sustainable and successful urban policies. The results can be used by civil society organizations to promote community rights. Additionally, researchers can acquire useful information for upcoming research on urban development.

Keywords: Anti-Encroachment, Reactive Demolition Approach, Land-Use Regulations, SDG-11

YAPAY ZEKÂ DESTEKLİ SÜRDÜRÜLEBİLİR TARIM UYGULAMALARININ TEORİK VE UYGULAMALI ÇALIŞMALAR AÇISINDAN İNCELENMESİ

Sabiha Kılıç (Hitit University)

Bu çalışma, yapay zekâ (YZ) destekli sürdürülebilir tarım uygulamalarını teorik ve uygulamalı araştırmalar açısından analiz etmeyi amaçlamaktadır. Web of Science veri tabanında “sustainable agriculture” ve “AI” anahtar kelimeleriyle yapılan tarama sonucunda, 1992-2025 yılları arasında yayımlanan 531 bilimsel eser incelenmiştir. Araştırma bulguları, özellikle 2018 yılından sonra bu konuda yayımlanan çalışmalarda ciddi bir artış olduğunu ve son iki yılda bu eserlerin önemli bir kısmının üretildiğini göstermektedir. Çalışmada, literatürdeki anahtar kelime ağları, ülke bazlı yayımlanma trendleri ve yüksek atıf alan yazarlar analiz edilmiştir. Anahtar kelime analizlerinde "yapay zekâ", "hassas tarım", "makine öğrenmesi", "derin öğrenme", "dijital tarım" ve "nesnelerin interneti" gibi kavramların son yıllarda sürdürülebilir tarım alanında ön plana çıktığı belirlenmiştir. Ülke analizinde Hindistan, ABD ve Çin’in bu alandaki lider ülkeler olduğu; Türkiye'nin ise daha sınırlı sayıda yayın yaptığı gözlemlenmiştir.

Ayrıca, atıf performansı yüksek bilimsel çalışmaların çoğunun tarımda yapay zekâ uygulamaları, büyük veri analizleri, hassas tarım sistemleri ve iklim değişikliği ile mücadele konularında yoğunlaştığı tespit edilmiştir. Özellikle Javaid ve arkadaşları (2023), Sharma ve arkadaşları (2021) ile Kamilaris ve arkadaşları (2017) gibi yazarların literatüre yön veren çalışmalar ortaya koydukları görülmüştür. Analizler, yapay zekâ ve makine öğrenmesi tabanlı teknolojilerin, tarımsal üretim süreçlerinde verimliliği artırarak, çevre dostu, sürdürülebilir ve ekonomik çözümler sunduğunu göstermektedir. Çalışmanın sonuçları, sürdürülebilir kalkınma hedefleriyle doğrudan ilişkili olarak “Açlığa Son”, “İklim Eylemi” ve “Sağlıklı Bireyler” gibi alanlarda yoğunlaştığını ortaya koymaktadır. Bu bağlamda, gelecekte tarımda yapay zekâ tabanlı inovasyonların daha da yaygınlaşması ve küçük ölçekli üreticilerin de bu sistemlere erişimlerinin kolaylaştırılması önem arz etmektedir.

Keywords: Yapay Zeka, Sürdürülebilir Tarım, Sürdürülebilir Kalkınma, CiteSpace

İKLİM DEĞİŞİKLİĞİYLE MÜCADELEDE YAPAY ZEKÂ UYGULAMALARI: GERÇEK ZAMANLI VERİ ANALİZİ VE STRATEJİK YAKLAŞIMLAR

Egemen Tekkanat (Trakya University)

Murat Topaloğlu (Trakya University)

İklim değişikliği, küresel çevresel tehditlerin başında gelmekte olup, bu alanda çözüm geliştirmek için ileri teknolojilerin kullanımı giderek önem kazanmaktadır. Yapay zekâ (YA), büyük ölçekli veri setlerinin işlenmesi, iklim modellerinin geliştirilmesi ve afet risklerinin öngörülmesi gibi alanlarda sunduğu yüksek kapasiteli analiz yetenekleri ile iklim değişikliğiyle mücadelede güçlü bir araç haline gelmiştir. Gerçek zamanlı veri analizi sayesinde, meteorolojik değişkenliklerin, sera gazı emisyonlarının ve çevresel anormalliklerin daha hızlı ve doğru bir şekilde izlenmesi mümkün olmuştur. Yapay zekâ algoritmaları, iklim tahminlerinin doğruluğunu artırmak, enerji üretim ve tüketim süreçlerini optimize etmek ve afet öncesi erken uyarı sistemlerini geliştirmek için kullanılmaktadır. Örneğin, derin öğrenme modelleri, orman yangınlarının, fırtınaların veya sel felaketlerinin önceden tespit edilmesine ve önleyici önlemler alınmasına yardımcı olmaktadır. Ancak bu teknolojik ilerlemeler beraberinde bazı etik ve teknik soruları da gündeme getirmektedir. Verilerin doğruluğu ve şeffaflığı, algoritmik önyargıların etkisi ve teknolojinin küresel ölçekte eşitsiz erişimi, iklim adaleti açısından dikkate alınması gereken önemli unsurlardır. Bu çalışma, yapay zekânın iklim değişikliğiyle mücadelede sunduğu katkıları değerlendirmenin yanı sıra, bu teknolojilerin etik ve sorumlu kullanımına ilişkin önerilerde bulunacaktır. Ayrıca, çok paydaşlı iş birliğinin önemi ve sürdürülebilir iklim politikalarının geliştirilmesinde yapay zekânın nasıl daha etkin kullanılabileceği üzerine tartışmalar yürütülecektir.

Keywords: İklim Değişikliği, Yapay Zekâ, Veri Analizi

GELECEĞİN AJANLARI: GERÇEK ZAMANLI BİLGİYE ERİŞİMİN YENİ YOLU

Murat Topaloğlu (Trakya University)

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Günümüzde bilgiye hızlı ve kolay erişim, bireylerin ve kurumların başarısı için kritik bir öneme sahiptir. Yapay zekâ teknolojilerindeki son gelişmeler, bu ihtiyacı karşılamak üzere yeni ve etkili araçlar sunmaktadır. Bu makale, bu yeniliklerden biri olan "gerçek zamanlı sesli RAG ajanları" kavramını kapsamlı bir şekilde ele almaktadır. Bu ajanlar, kullanıcıların doğal dildeki sözlü sorularına anında sesli yanıtlar vererek, bilgiye erişim sürecini daha doğal, sezgisel ve verimli hale getirmeyi hedeflemektedir.

Bu bağlamda, sesli iletişim yeteneğine sahip gerçek zamanlı bilgiye dayalı üretici ajanlar (Real-Time Voice Retrieval-Augmented Generation Agents), insan-bilgisayar etkileşimini dönüştüren öncü teknolojiler arasında yer almaktadır. Bu çalışmada, gerçek zamanlı sesli etkileşim gerçekleştiren, dış bilgi kaynaklarına erişerek bilgi tabanlı içerik üretebilen bir RAG (Retrieval-Augmented Generation) mimarisine sahip yapay zekâ ajanı incelenmektedir.

Sistem, dört temel bileşen üzerine kuruludur: otomatik konuşma tanıma (ASR - Automatic Speech Recognition), bilgi getirme (retrieval), üretim (generation) ve konuşma sentezi (TTS - Text-to-Speech). Kullanıcıdan alınan sesli veri, önce metne çevrilir; ardından bu metin, ilgili bilgi tabanlarında taranarak gerekli içerikler getirilir. Geri getirilen bilgiler, bir büyük dil modeli (LLM) tarafından anlamlı bir şekilde işlenip yanıt üretilir ve son olarak kullanıcıya sesli yanıt şeklinde sunulur. Bu mimari, özellikle müşteri hizmetleri, eğitim, sağlık ve endüstriyel otomasyon gibi alanlarda gerçek zamanlı, bağlama duyarlı ve kişiselleştirilmiş hizmetlerin önünü açmaktadır.

Makale kapsamında, bu yapının teknik bileşenleri, karşılaşılan zorluklar ve uygulama senaryoları ayrıntılı olarak ele alınmaktadır. Çalışma, gerçek zamanlı sesli RAG ajanlarının, bilgiye dayalı etkileşim sistemlerinde yeni bir paradigma sunduğunu ortaya koymaktadır. Gelecek çalışmalarda ise daha akıllı, güvenli ve özelleştirilebilir ajan mimarileri geliştirilmesi hedeflenmektedir.

Keywords: Gerçek Zamanlı Sesli RAG Ajanları, Yapay Zekâ Destekli Bilgi Getirme, Sesli İnsan-Bilgisayar Etkileşimi

THE IMPACT OF DIGITAL TECHNOLOGY USE IN COMPANIES ON PRODUCTIVE ARTIFICIAL INTELLIGENCE INTEGRATION

Kevser Şahinbaş (İstanbul Beykent University)

Generative Artificial Intelligence offers significant benefits in business processes in various sectors due to its ability to autonomously produce new content such as text, images, audio and video. The aim of this study is to examine the relationship between Digital Processes used in the company, Artificial Intelligence Usage Desire, Artificial Intelligence Usage and Generative Artificial Intelligence (GenAI) scale factors “Performance Expectancy”, “Effort Expectancy”, “Facilitating Conditions” and “Social Impact”.

Data were obtained from 213 personnel working in different sectors and businesses. In the first part of the survey, 15 questions were asked to company employees for demographic characteristics. Participants were asked which digital processes are used in companies such as CRM - Customer Relationship Management Software, ERP, RPA - Robotic Process Automation, Inventory Tracking Automation. According to the answers given, how many digital processes are used was collected and the digital technology usage variable was created. Similarly, companies were asked which Artificial Intelligence technologies are used in companies such as Chatbot, Customer Segmentation, Artificial Intelligence (AI) Recommending Products to Customers, Profitability Analysis and Forecasting, Customer Retention and Satisfaction, Demand Estimation for Products and Services, Finding Potential Customers and Matching with Products/Services and the numbers of those used were added to define the AI Use variable. The number of answers given to the question "In Which Subjects Would You Like to Benefit from Artificial Intelligence" was added to create the Artificial Intelligence Usage Desire variable. In the second part, a total of 20 questions were asked to measure the level of use of generative artificial intelligence in businesses.

"Regression Analysis" was performed to determine this relationship and "Pearson Correlation" analysis was performed for the relationship between the variables. R programming language is used for the analysis. The regression analysis results indicate that the use of digital processes such as Customer Relationship Management Software, ERP, Robotic Process Automation, Inventory Tracking Automation, which were asked to the participants, did not have a significant effect on GenAI performance, effort expectation, facilitating factors and social pressure factors. It has been observed that the use of artificial intelligence technologies such as Chatbot, Customer Segmentation, Artificial Intelligence Product Recommendation to Customers, Profitability Analysis and Forecast, Customer Retention and Satisfaction, Demand Forecast for Products and Services, Finding Potential Customers and Matching with Products/Services has a significant and positive effect on GenAI factors Effort Expectancy, Facilitating Conditions and Social Impact. It has been observed that the desire of employees to use Artificial Intelligence in the company has a significant and positive effect on Performance Expectancy and Social Impact.

This study aims to contribute to filling this gap in the literature by examining the adaptation of companies to generative artificial intelligence by conducting regression analysis of responses received from employees of different companies in order to determine the relationship between the factors of generative artificial intelligence innovation, namely digital processes used in businesses, employees' use of artificial intelligence and their desire to use artificial intelligence. In this context, factors such as employee performance expectations, employee effort expectations, facilitating conditions and social impact aim to provide a roadmap to companies according to the analysis results.

Keywords: Generative Artificial Intelligence (GenAI), Digital Process, Artificial Intelligence Use.

THE MEDIATING ROLE OF ORGANIZATIONAL AGILITY IN THE IMPACT OF DIGITAL LEADERSHIP ON INDIVIDUAL PERFORMANCE

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Kadir Yıldız (İstanbul Gedik University)

Purpose: The purpose of this study is to examine the relationships between digital leadership, organizational agility, and individual performance, and to evaluate the direct and indirect effects of digital leadership on employee performance.

Design/Methodology/Approach: In the study, participants' demographic characteristics and the scales of digital leadership, organizational agility, and individual performance were assessed. Reliability analyses (Cronbach's Alpha) and confirmatory factor analysis (CFA) were conducted to test the validity and reliability of the scales. Correlation and structural equation modeling (SEM) analyses were used to examine the direct effect of digital leadership on individual performance and its indirect effect through organizational agility.

Findings: The analyses showed significant and positive relationships between digital leadership, organizational agility, and individual performance. It was found that digital leadership has both a direct effect on individual performance and an indirect effect through organizational agility. CFA results supported the construct validity of all scales.

Discussion: These findings suggest that digital leaders can enhance employee performance by fostering an agile organizational structure, which enables businesses to adapt quickly to changes. It is recommended that businesses develop digital leadership skills, establish an agility-focused organizational structure, and devise strategies to enhance employee performance. Future research is suggested to further investigate these relationships in various sectors.

UAE'S DIVERSIFICATION STRATEGIES IN ECONOMY AND SECURITY WITH CHINA AND INDIA: A COMPARATIVE ANALYSIS[1]

Aswina Sreekumar (University of Wollongong in Dubai)

The research undertakes a comparative analysis of the UAE's diversification strategies in Economy and Security with China and India in the context of the 'Look East' policy. As the UAE pivots to the economic powerhouses in Asia such as China, India, South Korea, and Japan, it is imperative to understand how the UAE secures its financial and security interests in the face of the declining interest of the US and Europe in the Middle East. The purpose of choosing China and India for the comparative analysis is two-fold: Firstly, it allows for a nuanced understanding of the UAE's pivot from West to East. Furthermore, it aids in the delineation of its diversification from an oil-based economy to other important sectors such as economy and defence. Through a neoliberal institutionalist framework, the research concludes the importance of diversification in economy over security for the UAE with both China and India despite the subtle differences in sectors. Primarily, this research relies on thematic analysis as a main methodological approach. Thematic analysis is a data reduction and analysis strategy by which qualitative data are "segmented, categorized, summarized, and reconstructed" in a manner that encapsulates the important concepts within the data set. The theoretical flexibility of thematic analysis meant that it could be guided by a neoliberal institutionalist approach, thus providing the opportunity to undertake a comparative analysis of UAE's diversification strategies with China and India in economy and security and allowing for the identification of recurrent "items" or "themes that enables the comprehension of diversification in a broader political discourse. For conducting the content analysis, 24 press releases (12 press releases pertaining to the UAE-China relationship in economy and security and 12 press releases pertaining to the UAE-India relationship in economy and security) were chosen. The press releases are mainly related to bilateral visits, comprehensive strategic partnerships, the signing of joint vision statements, joint military exchanges, etc. The data was analysed under 4 themes that were developed and demarcated using the six-phase method provided by Clark and Braun for thematic analysis. The themes defined because of the process were 'Economic Diversification', 'Security Diversification', 'Multiple Channels of Contact', and 'Goals of the Actor'. With respect to economic diversification, the UAE put significant emphasis on its energy cooperation between China while also undertaking humanitarian aid diplomacy. Meanwhile, the economic diversification strategy with India included innovation in the knowledge-based economy which include establishing "specialized industrial advanced technology zones in Abu Dhabi, integrating local value chains of economic zones in areas of logistics and services, pharmaceuticals, medical devices, agriculture, steel, and aluminium". Apart from diversification in the knowledge-based economy, notable priority has been laid in the Joint Vision Statement signed by both the countries to expand cooperation in bilateral food and agricultural trade" and foreign investments in agriculture and food systems. Also, both traditional and non-traditional areas of security have formed a minor part of the comprehensive strategic partnership between the UAE and China. However, maritime cooperation, defence exchanges, training, and capacity building" form important elements of their defence cooperation. The press releases were also thematically analysed to comprehend whether non-state actors played a role in the diversification strategies of UAE with both countries. The private sector remains a key player in the UAE-China economic relations which considerably relies on the private sector to facilitate the process of economic diversification. But the UAE-India relations remain dominated by trans-governmental relations on both economic and security issues. Finally, the thematic analysis also allowed for the understanding of the goals of the UAE

[1] This paper is derived from my Master's thesis in 2023

undertaking its diversification strategy through a neoliberalist lens. The UAE seeks to establish its status as a prominent player in the region through its strategic partnership and diversification with both India and the UAE. In terms of economy, the diversification in the knowledge-based economy with India extends to various sectors while with respect to China, emphasis is laid on the traditional energy cooperation. With respect to security, the areas of diversification in non-traditional areas of security like counterterrorism and food similar are similar except for the traditional areas of security. Thus, looking through a neoliberalist lens, it is evident that instead of military security dominating the agenda, economic diversification takes precedence over diversification in security with both China and India. The difference persists in the areas of diversification of UAE in economy with both the countries. While with China it is primarily based on energy, the knowledge-based economy takes precedence in its diversification with India. But with both countries, it intends to establish its image as a prominent player in the region. Finally, it projects itself as a pluralistic country in its relations with India possibly to align with its partner's values and diversify its economy by attracting Indian exporters, manufacturers, and investors. As indicated in the above paragraphs, the research attempted a comparative foreign policy analysis. A preliminary examination of the comparative foreign policy analysis field with reference to the Middle East indicated that most of the comparative foreign policy analysis have studied the Israel-Palestine issue, Iran-Saudi Arabia tensions, the refugee crisis in Syria etc. A closer examination of international relations reveals that the world's economic and political sphere is increasingly leaning towards East and South Asia and it is imperative to do a comparative analysis of interactions of the Middle East with South Asia and vice versa, especially in the light of the "Look East" of the MENA countries that eagerly seek to rebalance the domination of the traditional non-regional actors like the United States and several European countries. Hence this research was framed to evaluate the UAE's diversification strategy in context of its Look East policy as it plays a major role in the Middle East region by linking commercial and financial interactions between the GCC countries and their foreign partners across the world. Traditionally, much of the literature has been dominated by the UAE's role in the export of oil and gas, and analysing its diversification strategies in economy and security would aid in the comprehension of the UAE's role as a major regional power.

Keywords: Comparative Foreign Policy- Economic Diversification-UAE-Look East

UZAKTAN ALGILAMA VERİLERİNE DAYALI SPEI İLE KURAKLIK ANALİZİ: KÜÇÜK MENDERES HAVZASI ÖRNEĞİ

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Kuraklık, dünya genelinde en fazla zarara yol açan doğal afetlerden biri olarak kabul edilmekte olup, sık ve uzun süreli kuraklık dönemleri büyük ekonomik kayıplara ve ciddi sosyal çevresel sorunlara neden olmaktadır (Hagman, 1984; Huang vd., 2006; Halwatura vd., 2017; Trenberth vd., 2003). Kuraklık koşullarının mekânsal ve zamansal değişimlerinin doğru analiz edilmesi, etkili planlama ve yönetim süreçleri açısından kritik öneme sahiptir (Roushangar vd., 2021). Bu amaçla, çeşitli iklimsel değişkenlere dayanan çok sayıda kuraklık indeksi geliştirilmiş olup, her birinin kullanım amacına göre avantajları ve sınırlamaları bulunmaktadır (Zarei vd., 2023; Tigkas vd., 2019; Vicente-Serrano vd., 2010; McKee vd., 1993). Yer tabanlı meteorolojik veriler, ölçüm süresi ve kalite farklılıkları nedeniyle bazı sınırlılıklar taşımakta (Easterling, 2013; AghaKouchak vd., 2015) ve bu durum uzaktan algılama tekniklerinin kuraklık izleme çalışmalarında giderek daha fazla kullanılmasına zemin hazırlamaktadır. Bu çalışmanın amacı, Türkiye'de tarım, ekonomi ve turizm açısından önemli bir bölge olan Küçük Menderes Havzası'nda, uzaktan algılama tabanlı veriler kullanılarak Standartlaştırılmış Yağış-Evapotranspirasyon İndeksi (Standardized Precipitation Evapotranspiration Index, SPEI) değerlerinin hesaplanması ve bu değerlerin yer tabanlı meteoroloji istasyonu verilerine dayalı SPEI değerleri ile doğruluğunun karşılaştırılmasıdır. Çalışmada yağış verisi olarak CHIRPS (Climate Hazards Group InfraRed Precipitation with Station) uydu veri seti, sıcaklık verisi olarak ise MODIS Terra uydu sensöründen türetilen MOD11A2 yer yüzey sıcaklığı verileri kullanılmıştır. CHIRPS verisi aylık ölçekte, 0.05° mekânsal çözünürlükte; MOD11A2 verisi ise 8 günlük kompozit ve 1 km mekânsal çözünürlükte sağlanmıştır. Google Earth Engine platformunda, MOD11A2 verilerinden aylık sıcaklık ortalamaları üretilmiş, CHIRPS yağış verileriyle birlikte Python yazılım dili kullanılarak İzmir Adnan Menderes Havalimanı, İzmir Bölge ve Kuşadası meteoroloji istasyonları için SPEI hesaplamaları gerçekleştirilmiştir. SPEI hesaplamalarında potansiyel evapotranspirasyon değerleri Thornthwaite yöntemiyle tahmin edilmiştir. Çalışmada kullanılan uzaktan algılama verileri 2001–2023 dönemini kapsamaktadır. Uzaktan algılama verileri kullanılarak hesaplanan SPEI değerleri ile Meteoroloji Genel Müdürlüğü'nden temin edilen istasyon verileri kullanılarak hesaplanan SPEI değerleri arasındaki ilişki, Pearson Korelasyon Analizi ile değerlendirilmiştir. Analiz sonuçlarına göre, İzmir Adnan Menderes Havalimanı istasyonunda %94, İzmir Bölge istasyonunda %95 ve Kuşadası istasyonunda %95 oranında yüksek korelasyon değerleri elde edilmiştir. Bu sonuçlar, uzaktan algılama tabanlı verilerin, meteorolojik verilerin yetersiz veya eksik olduğu alanlarda kuraklık analizleri için güvenilir bir alternatif sunduğunu ortaya koymaktadır. Çalışmanın bulguları, uzaktan algılama verilerinin istasyon verilerinin yetersiz olduğu durumlarda SPEI hesaplamaları için etkin bir şekilde kullanılabileceğini göstermiştir. Özellikle geçmişe yönelik veri eksikliği yaşayan bölgelerde, uzaktan algılama teknikleri ile elde edilen sıcaklık ve yağış verileri sayesinde, kuraklık koşullarının zamansal ve mekânsal analizlerinin daha sistematik bir şekilde yapılabileceği anlaşılmaktadır. Bu çalışmanın özgünlüğü, CHIRPS ve MOD11A2 gibi farklı uydu veri setlerinin entegre edilerek yer tabanlı ölçümlerle yüksek korelasyon düzeyinde SPEI hesaplamalarının yapılabilmesinin gösterilmesidir. İlerleyen çalışmalarda, uzaktan algılama verilerinin mekânsal çözünürlüğünün artırılması ve farklı iklim bölgelerinde benzer analizlerin gerçekleştirilmesi, elde edilen sonuçların genellenebilirliğini daha da güçlendirecektir.

Keywords: Kuraklık, Uzaktan Algılama, SPEI

THE ROLE OF LOANWORDS IN NATIONAL LANGUAGES IN THE PROCESS OF GLOBALIZATION

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This article explores the impact of globalization on the socio-political, cultural, and educational heritage of the global community, highlighting both its positive and negative aspects. In particular, it analyzes the efforts of independent nations to preserve the status of their native languages as official state languages, while also examining the increasing use of dominant foreign languages as secondary means of communication. Furthermore, the article considers the important steps being taken in general education schools toward the teaching of foreign languages. It also discusses the ways in which loanwords emerge under the influence of globalization and the processes through which they are borrowed from one dominant language into another.

Keywords: Language, Globalization, Loanwords, Linguistics, Vocabulary

SMART TOURISM IN PERLIS: ISSUES AND CHALLENGES

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Smart tourism represents an emerging paradigm in the tourism industry, integrating information and communication technology (ICT) to enhance tourist experiences and improve destination management efficiency. This study aims to investigate the current level of smart tourism implementation in the state of Perlis, Malaysia, identify the challenges encountered, and propose appropriate strategies for improvement. A qualitative approach, based primarily on a comprehensive literature review, was employed to analyse existing research and reports relevant to smart tourism initiatives in the region. The findings reveal several critical challenges inhibiting the successful implementation of smart tourism in Perlis. Key among these is the inadequacy of digital infrastructure, including limited internet connectivity and technological resources, particularly in rural and remote

areas. Additionally, there is a noticeable lack of awareness, engagement, and digital literacy among local communities, which hinders their active participation in smart tourism initiatives. Furthermore, weaknesses in the digital promotion of tourism destinations have been identified, where insufficient use of social media platforms, mobile applications, and online marketing strategies result in limited visibility and competitiveness of Perlis as a tourist destination. To address these challenges, the study recommends enhanced collaboration among government agencies, educational institutions, and the private sector. Strengthening partnerships can facilitate resource sharing, technological innovation, and coordinated efforts in smart tourism development. Moreover, initiatives to improve digital literacy among local residents are crucial, enabling broader community involvement and support. Investment in upgrading digital infrastructure is also essential to ensure equitable access to smart tourism services. By adopting a comprehensive and inclusive approach, Perlis can leverage the potential of smart tourism to foster sustainable economic growth, enrich visitor experiences, and position itself competitively within the broader tourism market.

Keywords: Smart Tourism, Perlis, Implementation Challenges, Digital Technology, Tourist Experience

THE USE OF FRAGILITY DATA TO PREDICT SOCIETY'S LEVEL OF HAPPINESS WITH A LOGISTIC REGRESSION MODEL

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Examining the many facets of poverty and how they relate to the overall happiness of society, this article demonstrates broadly that when people directly face shortages of basic needs or emotional support, it can often covertly weaken the bonds that bind communities together. A logistic regression model is developed using the R programming language to predict societal well-being using the fragility measures from the Fragile States Index and happiness from the World Happiness Report. The model initially considered twelve fragility indicators, which were later refined to seven core predictors to improve accuracy and reduce multicollinearity issues. The insights from the bibliometric analysis of the Web of Science literature review indicate that well-being is closely linked to multidimensional poverty, health inequalities, and political instability. The final model, which showed 89% prediction accuracy, shows high performance in predicting the happiness of a nation based on indicators such as security, economic decline, public services, demographic pressure, and displaced population. This research positively affects social sciences by using machine learning techniques for well-being; and providing policymakers a proactive framework to address the underlying factors of collective discontent of society.

Keywords: Multidimensional Poverty, Happiness, Fragility, Logistic Regression, Social Cohesion

ENTREPRENEURIAL PERSISTENCE IN A DEVELOPING ECONOMY: EXPLORING THE INFLUENCE OF CAREER MOTIVATION IN PUNJAB PAKISTAN

Aisha Saleem (GCUF)

Riffat Gill (GCUF)

Purpose: Particularly in emerging nations, entrepreneurship is becoming more widely acknowledged as a key force behind social change, job creation, and economic expansion. High unemployment, income inequality, limited industrialization, and sluggish economic development are some of the issues that these countries frequently face. In this sense, entrepreneurship promotes innovation, opens up new markets, and boosts productivity, making it a potent instrument for economic empowerment. The environment for entrepreneurship is different in developing nations. On the one hand, major obstacles may include restricted access to resources, budgetary limitations, administrative roadblocks, and poor infrastructure. Many people are more motivated by the need for money than by the desire for creativity, which is why they are lured to entrepreneurship. These necessity-driven endeavors, however, have the potential to expand into opportunity-based businesses that promote sustainable development given the right assistance.

Design/Methodology/Approach: Data were gathered from adults of Rawalpindi. The study variables have been investigating by utilizing structural equation modeling technique. Findings/Results: According to city Rawalpindi, career motivation extends the scope of launching a new business. All hypotheses related to city Rawalpindi are accepted. People are motivated by their careers to pursue business opportunities in order to achieve financial independence.

Originality/Value: The positive possibilities for advancement that come with more adult entrepreneurship and have a favorable impact on society must be purposefully expanded. Key Words: Career Motivation, Entrepreneurial persistence SEM, Rawalpindi.

Keywords: Career Motivation, Entrepreneurial persistence SEM, Rawalpindi

INSTAGRAM FOR ELT

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This study examines the use of Instagram in an English Language Teaching (ELT) context regarding high school freshman students' listening, speaking, and pronunciation development. Even if social media has been settled in the heart of our lives, it is always seen as a controversial topic to discuss and use in or out of classroom activities. In recent studies, writing skills and teachers' perceptions of social media usage in ELT topics are currently being investigated. Still, there is a research gap in the relationship between Instagram and teaching speaking, listening, and, as a subcategory, pronunciation skills. This case study aims to explore the influence of Instagram on students' perception of learning English through following popular education influencers and some popular pages, creating students' own content, and communicating with friends and teachers via Instagram. 31 freshman high school students participated in the study, which was conducted within a four-week timeframe. Instagram was used as a teaching tool as an engaging, motivational factor and supporting autonomous learning to change old-fashioned learning habits. Adopting an exploratory case study, open-ended surveys are implemented to reveal students' ideas about the process as the main characters of the learning journey. OESs showed that the majority of students enjoyed the experience and had a positive perception of using Instagram, more specifically, reel videos to practice English. The study creates a new perspective on modern language education and a bright idea for open-minded teachers.

Keywords: Instagram, ELT, Listening, Speaking, Pronunciation, Social Media

DESIGN AND FABRICATION OF PORTABLE BARBECUE GRILL

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The use of a grill is to grill any type of food, for example, meat and so on. Grilling is a cooking method that uses dry heat, either through an open flame, fire, or other heat sources.The Portable Barbecue Grill is a product designed for grilling use, especially for outdoor activities such as camping, picnics, and so on. Conventional grills on the market are often large, cumbersome, and produce a significant amount of smoke, making them less suitable for portable or environmentally friendly use. This project aims to address these limitations by developing a compact, versatile, and low-emission portable barbecue grill. Built from mild steel for durability and heat efficiency, the grill has dimensions of 505 mm x 400 mm x 380 mm and offers three different cooking concepts: traditional grilling, smoking, and rolling, meeting various user needs. This project includes a user acceptance study conducted with nine respondents, consisting of members of the public. Data shows a high level of satisfaction, with 88.9% of respondents supporting the multifunctionality and portability of the grill. Additionally, 100% of respondents acknowledged its efficient design for space-saving storage, highlighting its practicality for outdoor enthusiasts. The design of the grill not only facilitates outdoor cooking but also promotes sustainability by reducing smoke emissions, in line with the Sustainable Development Goal 7 (Affordable and Clean Energy). The SDG 7, which is affordable and clean energy. Charcoal is always more sustainable compared to fossil fuels like coal and natural gas, even though the amount of carbon dioxide (CO2) released during cooking is slightly higher. This is because the carbon atoms in the CO2 released were absorbed by the wood from CO2 during the tree's lifetime, making charcoal 'carbon neutral'. In conclusion, this Portable Barbecue Grill is versatile and portable, combining three cooking concepts (grilling, smoking, and rolling).

This project is also environmentally friendly and user-friendly, meeting the needs of users. All of the goals were accomplished in the successful development of this portable barbecue grill's design and operation. The following characteristics of this portable barbecue grill include its portability, the rolling rod's successful manual operation, its ability to lower smoke emissions, its ability to execute many grilling techniques, including rolling, smoke, and grilling, and its ease of cleaning and storage. Based on the findings of the conducted study, there are several suggestions to improve the design of the portable barbecue grill. One of them is by installing a smoke extractor that can more effectively reduce smoke emissions. In addition, the design of this grill can also be improved in terms of functionality by making the rolling rod semi-auto or automatic. In addition, a sound element as a notification for the user can also be added, which serves to inform that the temperature has reached the setting level. The conclusion that can be drawn is that this grill project can help and have a positive impact on the community. This is because a grill is one of the tools that will be used when engaging in activities such as picnicking and camping. Improvements have been implemented with a combination of three grilling methods such as regular grilling, smoke, and rolling.

Keywords: Portable Barbecue Grill, Grilling, Roll, Smoke

A PROPOSED STUDY OF MULTIPURPOSE CAR REPAIR UNDERCARRIAGE FOR AUTOMOTIVE WORKSHOP

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Choong Chee Guan (Politeknik Tuanku Syed Sırajuddın)

Mohd Zubır Yahaya (Politeknik Tuanku Syed Sırajuddın)

The background of this study is focused on a multipurpose mechanic car repair undercarriage system can be framed around the importance of practical automotive training workshop and the need for innovative tools that enhance the learning experience. The versatile undercarriage repair system addresses the challenges faced by automotive technicians when maintaining the underside of vehicles. Traditional methods often cause physical strain and inefficiency due to limited access and inadequate support tools. Challenges in automotive repairs mechanics often face significant challenges when working under vehicles, including limited space and the need for ergonomic support. Traditional creepers can lead to discomfort and inefficiency due to inadequate design features. Issues such as unwanted movement while working, difficulty accessing tools, and poor lighting further complicate the repair process. When doing undercarriage repairs, mechanics frequently encounter a number of difficulties, particularly because there is insufficient ergonomic support, which causes pain and muscular strain throughout extended workdays. Furthermore, working in awkward positions with bad posture can lead to long-term health issues and physical injuries, which will ultimately lower productivity. Because manual movement is necessary to reposition equipment, it further reduces efficiency and lengthens repair times. In addition to complicating the workflow, limited accessibility to tools and car components slows down and reduces the effectiveness of the repair procedure. Additionally, mobility and stability problems make it difficult to operate repair tools, particularly in small workshop spaces, which compromises performance and safety. Hence, innovations in creeper design aim to address these challenges by improving stability, mobility, and accessibility of tools. To address this issue, a multifunctional automotive-specific car repair mechanism has been designed for better handling and comfort, facilitating repairs in confined spaces. This system is designed using Inventor software and made with car repair boards, stainless steel, motor drills, batteries, leather sponges, adjustable wheels, and more. The problem that can be faced is an ergonomic issue; when someone performs work, they will feel muscle tension and experience some back or shoulder injuries. The presence of a multifunctional automotive-specific car mechanic can reduce muscle tension or injuries. The battery in this tool will power the drill motor so that it can move automatically forward and backward without using leg power, ensuring user comfort after use. This multifunctional system not only enhances the efficiency of undercarriage repairs but also promotes safety and comfort for automotive technicians, ultimately improving the overall service quality in the automotive repair industry.

The development of a multipurpose mechanic car repair undercarriage system not only aligns with educational objectives but also addresses practical challenges faced by automotive technicians. By integrating innovative design elements that prioritize ergonomics and functionality, this project aims to enhance the efficiency and safety of undercarriage repairs in both educational settings and professional automotive environments. The multipurpose car repair undercarriage design must emphasize on durability, safety, ergonomics, and utility. While safety elements like locking mechanisms and anti-slip surfaces are essential for preventing accidents, ergonomic features can lessen the physical strain on mechanics and increase ease of use. All things considered, improvements in undercarriage repair

equipment can result in safer, more pleasant, and more effective working conditions for technicians, promoting user safety and productivity in the vehicle repair sector.

Keywords: Undercarriage, Multipurpose, Automotive Workshop, Mechanic, Repair

COMPARATIVE STUDY OF MECHANICAL PROPERTIES IN TIG AND MIG WELDING: INFLUENCE OF CURRENT ON HARDNESS AND TENSILE STRENGTH

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Masniza Binti Yusof (Politeknik Sultan Abdul Halim Muadzam Shah)

Ahmad Zawawi Bin Zulkifli, Politeknik Sultan Abdul Halim Muadzam Shah

This study presents a comparative investigation on the mechanical properties of Tungsten Inert Gas (TIG) and Metal Inert Gas (MIG) welding techniques. The aim of the research is to evaluate how varying current levels influence the hardness and tensile strength of welded joints, which are critical parameters for structural applications in manufacturing and fabrication industries. The methodology involved conducting a series of hardness and tensile tests on specimens welded using TIG and MIG techniques under 70A, 80A, 90A and 100A current settings. Mild steel was welded using two types of joints, single Lap joint for tensile testing and single v-groove Butt joint for hardness testing. For the hardness test, Rockwell B scale (HRB) was used, and for the tensile strength test, a Universal Testing Machine was employed. Both welding methods were tested under similar conditions to ensure consistency in comparative analysis. The results revealed that TIG welding produced higher hardness values, ranging from 42 to 48 HRB, whereas MIG welding yielded lower hardness in the range of 27 to 39 HRB. Notably, there was no significant variation in hardness with increasing current for either method. In terms of tensile strength, MIG welding achieved superior results, with strength values between 12 and 17.85 kN. The highest tensile strength (17.85 kN) was observed at the lowest current setting (70A), indicating an inverse relationship between current and tensile performance in MIG welding. TIG welding, on the other hand, showed more consistent tensile strength around 10 kN, regardless of current changes. This study concludes that TIG welding is more suitable when high surface hardness is desired, while MIG welding is preferable for applications requiring greater tensile strength. The findings provide valuable insights for selecting appropriate welding methods based on specific mechanical performance requirements.

Keywords: TIG Welding, MIG Welding, Hardness Test, Tensile Strength, Welding Current

DESIGN AND DEVELOPMENT OF VERTICAL CENTRIFUGAL CASTING MACHINES FOR SMALL-SCALE MANUFACTURING

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Shaped casting employing the vertical centrifugal casting method has supplanted the traditional differential housing production process. By rotating the mold at higher speeds, the centrifugal force distributes the molten metal to the outer part of the die cavity. Because of the high centrifugal force applied to the molten metal, less dense material, such as oxides and impurities, are produced. This process is known as centrifugal casting. Centrifugal casting is widely used in producing high-quality industrial and automotive components, valued for enhancing structural properties in metal castings. Traditional methods like sand casting, however, face limitations in producing complex shapes and maintaining consistent density in small-scale products, impacting quality and manufacturing versatility, especially in educational settings. Currently, the molding process in Foundry Workshop in PTSS still focuses on conventional casting method focusing on sand casting techniques. This method is distinguished by its manual execution, in which the skill and dexterity of individual skill are crucial to the success of each phase of the process. Based on a survey conducted, most of the students approved that small size casting cannot be produced by using the current sand-casting method by current molding process in the workshop. The complex shape also cannot be produced by using the current sand-casting method by current molding processes in the workshop. Hence, this project aimed to design and fabricate a vertical centrifugal casting machine to enable small-scale production of intricate, high-quality components, such as automotive differential housings. Through a structured design process, key casting parameters—mold rotation speed, pouring temperature, and mold preheating—were established. Using an AC motor, a steel frame, and a custom mold assembly, the machine achieves controlled speeds up to 700 RPM, critical for enhancing metal distribution. The project involved machine assembly, stability testing, and identifying optimal conditions for defect-free casting. Testing revealed that a rotational speed of around 650 RPM yields high- density, minimal-defect aluminum castings, surpassing the quality of conventional methods. Compared to sand casting, centrifugal casting produced uniform, dimensionally precise parts, particularly beneficial for complex, small shapes. This project successfully developed a centrifugal casting machine suited for small-scale applications, expanding both educational and practical casting capabilities. Future recommendations include automating speed and temperature controls, using advanced mold materials to improve efficiency and durability, and lowering the machine structure to facilitate safer casting operations. Thus,enhancing the facilities for students enrolled in the Mechanical Workshop Practice 2 course and the Material Science and Technology syllabus is crucial to this endeavor since it will allow them to learn about the higher G-force. Increased outward pressure on the molten metal due to G-forces can lead to better metal distribution, decreased porosity, and better mold filling in the finished casting. Additionally, it helps students comprehend how the molten metal's rate of cooling is influenced by the rotational speed. Increased rotation speed may improve the casting's ability to dissipate heat, which could hasten solidification. Optimizing the solidification rates through rotational speed control can affect the final casting's mechanical and microstructural characteristics. Additionally, this study ascertains how the molten metal will solidify when it cools inside the mold at melting temperatures. The microstructure, mechanical characteristics, and dimensional correctness of the casting are all impacted by the appropriate solidification rate, which can be attained with the aid of

adequate melting temperature control. In addition, this research has shown that automatic casting equipment may create better goods. Furthermore, when compared to the manual method, this computerized casting process can yield a product that accurately reflects the project's size. Additionally, this can enhance the Polytechnic's current casting process method.

Keywords: Vertical Centrifugal; Casting Machine; Molding; Process; Solidification

LINGUOCOGNITIVE FEATURES OF CONSTRUCTION-ARCHITECTURE LANGUAGE UNITS

Baxodirjon Burxonov (Andican State University)

In studying the word as a concept from a linguocognitive approach, it is understood that speech and words serve as the organizing processes of language activity, and that the language system itself is created by humans to comprehend, store, and transmit knowledge about the linguistic worldview. Through language, humans process, consolidate, reconstruct, and organize knowledge about objects of the world, ultimately forming a linguistic system that reflects the entire conceptual world. Language functions as a means of shaping the conceptual system of the world within human consciousness. In the process of communication and in the transformation of human activities, language manifests as a cognitive mechanism and serves as a form of building material. The concept is considered a structural component of the worldview, representing notions reflected in human consciousness. In describing a concept, it is understood as the smallest unit of structured knowledge, closely linked to processes of thinking and memory.

Keywords: Language Units, Construction-Architecture, Building Art, Cognitive Architecture.

YAPAY ZEKÂ TEKNOLOJİLERİNİN ÂŞIKLIK GELENEĞİNİN SÜRDÜRÜLEBİLİRLİĞİNE ETKİSİ VE KATKISI

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İletişim, bir arada bulunan canlıları sosyal kılan temel unsurlardandır. Çeşitli duyu organlarının sağladığı duyumların yanı sıra jest ve mimikler gibi sözsüz iletişim yöntemleriyle de iletişim kurulmaktadır. Prehistorik zamanlardan beri insanlar çeşitli yollardan iletişim kurmanın yollarını aramışlardır. Ancak en temel ve yaygın olarak iletişime hâkim olan ögeler, dil ve sestir. Bu noktada, tarihin en eski çağlarından bu yana sözün bir büyüsünün olduğuna inanılmış ve genel olarak kutsallar sözlü kültür ortamında yaşatılmıştır. Bu ortamlar, 1. tip olarak sınıflandırılan henüz yazı ve benzeri kayıt teknolojilerinin olmadığı ve yüz yüze iletişime dayanmaktadır. Bu bağlamda folklor, halkın geleneksel ve sanatlı iletişimini inceleyen bağımsız bir disiplin olarak kültürü ortaya koyan, belirleyen ve hatta değiştirip dönüştüren bir unsur olarak karşımıza çıkmaktadır. Âşıklık geleneği, Türklerin geçmişten günümüze aktarılan kadim bir ögesidir. Şaman-ozan-âşık paradigmasıyla da tanımlanan bu gelenek, esasta kendinden önceki geleneklerden beslenmiş olmakla birlikte bağımsız bir edebî şube olarak ortaya çıkmıştır. Geleneğin sözlü kültür ortamında başlatılması ve aktarılarak sürdürülmesinde temel olarak şehir hayatının bir yansıması olan kahvehaneler öne çıkmaktadır. Sonraları geleneğin kendi içinde, yaratıldığı ve icra edildiği iletişim teknolojisinden hareketle, yazılı ve elektronik kültür ortamları olarak ikiye ayrılmıştır. Geleneğin icrası sırasında yazılı olarak cönk ve mecmualara kaydedilmesi yazılı kültür ortamına dâhil edilirken dijital teknolojiler aracılığıyla kaydedilmesi sonucunda da elektronik kültür ortamlarında üretim ve tüketim gerçekleştirilmiştir. Yerli plak sanayinin 1930 yılında kurulmasının ardından radyo yayınları, kaset ve kasetçalarlardan sonra bağımsız televizyon kanallarının ortaya çıkışı, âşıklık geleneğinin aktarılması, sürdürülmesine hizmet eden iletişim araçlarındandır. Bugün gelinen noktada yapay zekâ teknolojileri, dijital kültürün hem taşıyıcısı hem de dönüştürücüsü olarak konumlandırılabilmektedir. Bu minvalde yapay zekâ, bir yaratım ve üretim aracı hâline gelmiş, dijital kimlikler ve kültürel yönelimler yaratmış, sanal influencer'lar, yapay sanaçılar üretebilir hâle gelmiştir. Çalışmanın amacı, kökleri çok eski zamanlara dayandırılan ancak oluşumu 16. yüzyıl ile tarihlendirilen âşıklık geleneğinin zamansal bakımdan geçirdiği yapısal- işlevsel olarak geçirdiği değişim ve dönüşümleri de göz önünde bulundurarak yapay zekâ teknolojisi çerçevesinde geleneğin üretimi, tüketimi ve sürdürülebilirliğini değerlendirmektir. Yapay zekâ teknolojisi kullanılarak oluşturulan şiir, hikâye ve türkü söyleme pratiği, geleneğin dijitalleştirilmesi ve analiz-arşivlenmesi noktasında korunması ve aktarılması, geleneğin özündeki duygusal derinliği, toplumsal dokuyu ve söylemi yakalayabilecek kapasitede yapay dijital âşıklar yaratılabilmesi noktasında özü gerçekten taşıyıp taşıyamayacağının kültürel ve felsefi yaklaşımlarla ele almak çalışmamızın kapsamını oluşturmaktadır. Bu hususta, çeşitli yapay zekâ uygulamalarından istifade edilerek örnekler sunulacaktır. Bu yolla, yapay zekânın âşıklık geleneğine dair hem bir fırsat hem de bir risk olarak görülebileceği kanaati ortaya çıkmaktadır. Her ne kadar dönüşümler yozlaşma/çözülme olarak görülmese de olumsuz etkilerinin oluşabileceği tefekkürü değerlendirilmektedir. Bu konuda bilhassa öne çıkan avantajlar ve dezavantajlar, her buluş gibi yapay zekânın da etki ettiği ortamlara yeni çözümler sunabileceği gibi yeni soru ve sorunlar da ortaya çıkarabileceğini göstermiş ve ancak minimum zarar ve maksimum fayda dengesini kurulabilirse fayda sağlanacağı görüşü paylaşılacaktır. Sanatı, toplumu ve insanlığın geleceğini koruyan çeşitli önlemler alınabileceği ve bu konuda eğitimler aracılığıyla teknolojik yeniliklerin halka rakip değil, birer destekçi durumuna gelebileceği savı tartışılacaktır.

Keywords: Yapay Zekâ, Âşıklık Geleneği, Sürdürülebilirlik, Teknoloji, Dönüşüm.

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ÇEVRİMİÇİ EĞİTİMDE YAPAY ZEKÂ VE EĞİTİM PLATFORMLARININ ETKİSİ: NİTEL BİR İNCELEME

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Bu çalışma, yapay zekâ (YZ) destekli araçların çevrimiçi eğitim süreçlerindeki etkilerini nitel bir yaklaşımla incelemeyi amaçlamaktadır. Dijitalleşmenin eğitimi dönüştürdüğü günümüzde, çevrimiçi öğrenme platformları bireyselleştirilmiş, esnek ve erişilebilir öğrenme olanakları sunarken; bu deneyimlerin derinleşmesi ve öğrenme çıktılarına daha güçlü katkı sağlaması için YZ teknolojilerinin entegrasyonu giderek yaygınlaşmaktadır. Özellikle üretken yapay zekâ uygulamaları, öğrencilere anlık geri bildirim, kişiselleştirilmiş yönlendirme ve kavramsal açıklık sağlayarak öğrenme sürecini destekleme potansiyeline sahiptir. Bu bağlamda, çalışma, yalnızca çevrimiçi platform (Udemy) kullanan öğrenciler ile hem Udemy hem de ChatGPT gibi bir üretken YZ aracını öğrenme sürecinde aktif olarak kullanan öğrencilerin deneyimlerini karşılaştırmalı olarak analiz etmektedir. Araştırmanın kuramsal temelinde bireyselleştirilmiş öğrenme, motivasyonel kuramlar ve yapılandırmacı yaklaşım yer almakta olup, alanyazında YZ araçlarının öğrencilerin öğrenme süreçlerine olumlu katkılar sunduğuna yönelik çok sayıda bulgu mevcuttur. Abbas vd. (2023), YZ araçlarının bireysel ihtiyaçlara göre uyarlanmış öğrenme materyalleri sunduğunu ve öğrencilerin motivasyonunu artırdığını belirtmektedir. Yu (2021), performans tahmini modellerinde %90'ın üzerinde başarı sağlandığını ve Random Forest algoritmalarının öğretim tasarımına yön verdiğini vurgulamıştır. Luo (2023) ise adaptif sistemlerin akademik başarıya olan etkisini gösterirken, Sun vd. (2020) dil öğreniminde geri bildirim destekli yapay zekâ sistemlerinin etkisini tartışmaktadır. Araştırma, nitel araştırma desenlerinden "durum çalışması" (case study) yöntemiyle yürütülmüştür. Örneklem grubunu, Udemy platformu üzerinden animasyon derslerine kayıtlı 24 üniversite öğrencisi oluşturmuştur. Katılımcılar, öğrenme süreçlerinde YZ teknolojilerini kullanma durumlarına göre iki gruba ayrılmıştır: YZ destekli grup (n=17) ve klasik grup (n=7). Veriler, yarı yapılandırılmış görüşmeler, odak grup görüşmeleri, gözlem ve öz değerlendirme anketleri aracılığıyla toplanmıştır. Analiz süreci Braun ve Clarke'ın (2006) tematik analiz yaklaşımına göre yürütülmüş; veriler transkripte edilerek açık kodlama yapılmış, ardından üç ana tema tanımlanmıştır: motivasyon artışı, kullanım zorlukları ve öğrenme sürecine katkı. Elde edilen bulgulara göre YZ destekli araçları kullanan öğrenciler, motivasyonlarının arttığını, ders içeriklerini daha hızlı kavradıklarını ve zor konularda daha fazla başarı sağladıklarını belirtmiştir. Bu gruptaki öğrenciler, özellikle anlık geri bildirimlerin ve öğrenme sürecine yön veren açıklamaların faydasını vurgulamıştır. Örneğin, bir öğrenci "YZ araçları bana zaman kazandırdı, bu da motivasyonumu artırdı" ifadesiyle süreci özetlemiştir. Kontrol grubundaki öğrenciler ise destekleyici araçların yokluğunda motivasyonlarının azaldığını ve öğrenme sürecinin yavaşladığını belirtmiştir. İkinci tema olan kullanım zorlukları, özellikle deney grubundaki öğrencilerin başlangıçta yaşadığı teknik sorunlar ve araçlara alışma süreciyle ilgilidir. "İlk başta zorlandım ama alıştıktan sonra faydasını gördüm" gibi ifadeler, YZ araçlarına yönelik başlangıçta yaşanan teknik bariyerlerin zamanla aşıldığını göstermektedir. Kontrol grubunda ise YZ araçlarının eksikliğinden kaynaklanan genel öğrenme zorluklarına dikkat çekilmiştir. Üçüncü tema olan öğrenmeye katkı, YZ araçlarının öğrencilerin öğrenme süreçlerini nasıl desteklediğini ortaya koymaktadır. Öğrenciler, ChatGPT'nin zor konuları sadeleştirerek anlamayı kolaylaştırdığını, kişisel ihtiyaçlara göre içerik sunduğunu ve kavramsal netlik sağladığını belirtmiştir. Bu tema, YZ araçlarının yalnızca destekleyici değil, aynı zamanda öğretici rol üstlenebileceğini göstermektedir. Ayrıca, Python'da doğal dil işleme (NLP) teknikleriyle desteklenen kelime analizi sonucunda öğrencilerin görüşlerinde sık tekrar edilen kavramlar arasında "YZ", "araçları", "motivasyonum", "zor" ve "öğrenme" gibi ifadeler öne çıkmıştır. Bu sonuçlar, YZ araçlarının öğrenme sürecine hem bilişsel hem de duyuşsal katkı sunduğunu göstermektedir. Araştırma, alanyazında mevcut olan bulgularla büyük ölçüde örtüşmekte ve özellikle motivasyon, öğrenme hızı ve kavrama kolaylığı gibi çıktılar açısından

Luckin ve Holmes (2017), Chen vd. (2019), Goda vd. (2016) ve Yin & Sui (2020) gibi araştırmalarla tutarlılık göstermektedir. Aynı zamanda, erişim sorunları ve teknik sınırlılıkların da motivasyon ve öğrenme üzerinde olumsuz etkileri olabileceği Baker vd. (2019) gibi çalışmalarla da örtüşmektedir. Çalışmanın geçerliliği ve güvenilirliği, çoklu veri toplama araçlarının (triangulation), bağımsız kodlayıcıların kullanılması, katılımcı doğrulaması ve detaylı bağlam betimlemeleri ile sağlanmıştır. Bu yönüyle araştırma, nitel veri analizinde güvenilirlik ve etik şeffaflık ilkelerine uygun biçimde yürütülmüştür. Van Yüzüncü Yıl University Etik Kurulu onayı (07.11.2024 tarih, karar no: 23) doğrultusunda tüm katılımcı bilgileri gizli tutulmuş ve gönüllülük esas alınmıştır. Araştırmanın sınırlılıkları arasında örneklem büyüklüğünün 24 öğrenciyle sınırlı olması, sadece bir ders içeriği (animasyon dersi) üzerinden analiz yapılması ve YZ araçlarının uzun dönemli etkilerine dair takibin yapılmamış olması yer almaktadır. Bu sınırlılıklar, bulguların genellenebilirliğini sınırlandırsa da niteliksel katkıyı engellememektedir. Gelecekte yapılacak çalışmalarda, daha geniş ve çeşitli örneklem gruplarıyla farklı disiplinlerde YZ entegrasyonunun etkisi incelenebilir. Ayrıca, zaman serisi veri toplayarak YZ araçlarının uzun vadeli etkileri (öğrenmenin kalıcılığı, davranışsal dönüşüm vb.) değerlendirilebilir. Sonuç olarak bu araştırma, çevrimiçi eğitimde YZ araçlarının öğrencilerin öğrenme deneyimlerini anlamlı şekilde etkilediğini ortaya koymakta; hem pedagojik uygulamalara hem de eğitim teknolojileri literatürüne nitelikli katkılar sunmaktadır. YZ'nin eğitimde doğru pedagojik yaklaşımlarla bütünleştirilmesi durumunda, daha motive, etkileşimli ve başarılı öğrenme süreçleri oluşturulabileceği vurgulanmaktadır.

Keywords: Yapay Zekâ, ChatGPT, Çevrimiçi Eğitim, Udemy, Öğrenme Performansı

XGBOOST MODELİ TABANLI MOBİL KARAR DESTEK UYGULAMASININ GELİŞTİRİLMESİ

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Havacılık sektöründe bakım maliyetleri hem işletme kârlılığı hem de operasyonel verimlilik açısından kritik bir öneme sahiptir. Özellikle uçak yaşının ilerlemesi ve bakım süreçlerinin karmaşıklaşması, maliyet tahminlerini zorlaştırmakta ve bu nedenle veri temelli, hızlı ve doğru tahmin yapabilen sistemlere olan ihtiyaç artmaktadır. Bu çalışma, uçak yaşına, tamir süresine ve uçak tipine bağlı olarak bakım maliyetlerini tahmin edebilen bir makine öğrenmesi modelinin geliştirilmesini ve bu modelin mobil bir karar destek uygulamasına entegrasyonunu amaçlamaktadır.

Araştırmanın başlangıcında, literatürde yer alan farklı makine öğrenmesi algoritmaları incelenmiş; özellikle Regression Tree, Random Forest ve XGBoost gibi algoritmaların uçak bakım süreçlerinde kullanımı değerlendirilmiştir. Yapılan analizlerde, XGBoost algoritmasının hem doğruluk hem de hata oranları bakımından diğer modellere göre üstün performans sergilediği görülmüştür. Elde edilen sonuçlar doğrultusunda, XGBoost modeli temel alınarak uçak bakım maliyetlerini sahada hızlı ve etkin biçimde tahmin edebilen bir mobil karar destek sistemi geliştirilmiştir. Çalışmanın veri seti, özel bir şirket tarafından anonimleştirilmiş ve yalnızca bilimsel amaçlarla kullanımına izin verilmiş gerçek uçak bakım kayıtlarından oluşmaktadır. Veri setinde uçak yaşı, tamir süresi, uçak sınıfı ve bakım maliyeti gibi değişkenler yer almakta; eksik ve hatalı veriler ön işleme sürecinde temizlenmiştir. Analiz sürecinde, öncelikle Pearson korelasyon analizi gerçekleştirilmiş ve uçak yaşı ile tamir süresi değişkenlerinin bakım maliyeti üzerinde anlamlı pozitif korelasyona sahip olduğu belirlenmiştir (YAŞ ile MALİYET: $r = 0.944$). Çoklu doğrusal regresyon analizi sonuçları, YAŞ değişkeninin maliyet üzerinde pozitif ve anlamlı bir etkisi olduğunu; SÜRE değişkeninin ise anlamlı bir etkisinin bulunmadığını göstermiştir. Ancak klasik regresyon yöntemlerinin ötesine geçerek makine öğrenmesi tabanlı modellemeler yapılmış ve XGBoost algoritması %92'lik bir R^2 değeri ile en yüksek doğruluğu sağlamıştır. Modelin hiperparametre optimizasyonu sürecinde n_estimators, learning_rate, max_depth gibi parametreler dikkatle ayarlanmış, modelin genelleme performansı artırılmış ve aşırı öğrenme (overfitting) önlenmiştir. Ayrıca, modelin açıklanabilirliğini artırmak amacıyla SHAP analizi uygulanmış; uçak yaşı ve tamir süresinin, maliyet tahmininde en etkili değişkenler olduğu doğrulanmıştır. SHAP değerleri sayesinde modelin karar mekanizması şeffaflaştırılmış ve kullanıcı güveni artırılmıştır. Geliştirilen XGBoost modeli, Python ortamında eğitilmiş ve Flask tabanlı bir API aracılığıyla mobil uygulamaya entegre edilmiştir. Mobil uygulamanın ön yüzü Flutter ile geliştirilerek hem Android hem de iOS cihazlarda çalışacak şekilde tasarlanmıştır. Uygulama, kullanıcıdan uçak yaşı, tamir süresi ve uçak sınıfı gibi verileri almakta ve anlık maliyet tahmini sunmaktadır. Kullanıcı arayüzü basit, hızlı ve sahada kullanım kolaylığı sağlayacak şekilde yapılandırılmıştır. Pilot testlerde uygulama, bakım teknisyenlerinden oluşan sınırlı bir kullanıcı grubu ile sahada denenmiş; işlem süresinin 0.3 saniyenin altında kaldığı gözlemlenmiştir. Katılımcıların %91'i uygulamayı "kullanışlı" ve "zaman kazandırıcı" olarak değerlendirmiştir. Tahminlerin gerçek maliyet değerlerine yüksek oranda yakın olması, modelin güvenilirliğini pekiştirmiştir. Çalışmanın bulguları literatürdeki önceki çalışmalarla büyük ölçüde uyumluluk göstermektedir. Özellikle Zhou ve arkadaşlarının (2018) uçak yaşının bakım maliyetleri üzerindeki etkisine dair bulguları ve Papakostas ve arkadaşlarının (2010) veri odaklı bakım stratejilerinin operasyonel verimlilik üzerindeki olumlu etkileri, bu çalışmanın sonuçlarıyla örtüşmektedir. Ancak mevcut çalışmanın özgün yönü, yüksek doğruluklu bir makine öğrenmesi modelinin sahada aktif olarak kullanılabilen bir mobil uygulamaya dönüştürülmesidir. Geliştirilen

sistemin operasyonel katkıları oldukça belirgindir. Mobil uygulama sayesinde bakım mühendisleri, sahada anlık veri girişi yaparak hızlı ve doğru maliyet tahminleri elde edebilmekte; bu durum bakım planlamasının doğruluğunu ve operasyonel verimliliği artırmaktadır. Ayrıca, karar destek sisteminin mobil bir platforma taşınması, filo yönetimi, parça tedarik planlaması ve stok yönetimi gibi operasyonel süreçlerde de iyileştirmeler sağlamaktadır. Çalışmanın sınırlılıkları arasında, veri setinin yalnızca belirli bir havayolu şirketine ait olması ve dışsal faktörlerin modele doğrudan entegre edilmemiş olması yer almaktadır. Ayrıca, model yalnızca geçmiş verilere dayanarak çalıştığından, ani değişimlere veya beklenmeyen olaylara karşı hassasiyet taşımaktadır. Mobil uygulamanın ise daha geniş kullanıcı gruplarında ve farklı operasyonel ortamlarda test edilmesi, geçerliliğin artırılması açısından önem arz etmektedir. Gelecek çalışmalarda veri setinin farklı havayolu şirketlerinden alınarak çeşitlendirilmesi, uygulamanın sensör verileri, hava koşulları ve döviz kuru gibi değişkenlerle zenginleştirilmesi önerilmektedir. Ayrıca, farklı bakım türlerine yönelik (planlı bakım, acil bakım vb.) ayrı modeller geliştirilmesi ve mevcut mobil uygulamanın mevcut bakım yönetim yazılımları ile entegrasyonu (örneğin AMOS, OASES gibi) sağlanarak daha bütüncül çözümler sunulması hedeflenebilir. Sonuç olarak, bu çalışma hem akademik literatüre özgün bir katkı sunmuş hem de havacılık sektöründe veriye dayalı karar destek sistemlerinin sahaya entegrasyonu konusunda önemli bir uygulama örneği oluşturmuştur. Uçak bakım süreçlerinin dijitalleşmesine yönelik atılan bu adım, sektör genelinde daha verimli, hızlı ve maliyet etkin operasyonel süreçlerin geliştirilmesine katkı sağlayacaktır.

Keywords: Makine Öğrenmesi, XGBoost, Mobil Uygulama, Maliyet Tahmini, Karar Destek Sistemi

THE IMPACT OF MINIMUM WAGE INCREASES ON YOUTH EMPLOYMENT IN TÜRKİYE DURING THE 2000's

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This study examines the impact of minimum wage increases on youth employment in Türkiye between 2004 and 2023 through regional panel data analysis. Unlike developed countries, the prevalence of the informal sector in developing countries has directed minimum wage research towards testing the effects of minimum wage on both formal and informal employment separately. In Türkiye, where more than half of wage earners receive minimum wage or wages close to it, and where informal employment is relatively high, the impact of minimum wage increases on employment becomes even more significant. The literature emphasizes that minimum wage increases affect youth the most. Therefore, the employment effects have been investigated based on workers aged 15 to 29. The effects of minimum wage increases on formal and informal employment among the youth population were tested using a two-way fixed effects method across five different models covering the years 2004-2023 and 26 sub-regions. The regional Kaitz index, calculated from Household Labor Force Survey (HLFS) microdata, was used to measure the employment effect of the minimum wage. To capture the effects of economic conditions, three different variables were used: the unemployment rates of male workers aged 30-45, a lag of regional per capita income, and a lag of the number of employees in the regional manufacturing industry, along with the interaction of the national industrial growth rate. Additionally, the youth population ratio variable was included to control for labor supply. According to both static and dynamic panel estimation results, minimum wage increases have been found to increase informal employment among youths. Furthermore, it was identified that employment among low-educated youth has increased. However, no significant effect was observed on the total employment of youth.

Keywords: *Minimum Wage, Youth Employment, Kaitz Index, Regional Analysis*

MADENCİLİK SEKTÖRÜNDE PSİKOSOSYAL RİSKLER VE TÜKENMİŞLİK DÜZEYLERİNİN ÜRETİM YÖNTEMLERİNE GÖRE KARŞILAŞTIRMALI ANALİZİ[2]

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Madencilik, çalışanların maruz kaldığı fiziksel, kimyasal, ergonomik ve biyolojik risklerin yanı sıra psikososyal faktörlerin de yoğun bir şekilde deneyimlendiği bir sektör olarak öne çıkmaktadır. Özellikle yeraltı madenciliğinin zorlu koşulları, üretim hedeflerinin yarattığı baskı ve iş kazalarının sıklığı, çalışanların hem fiziksel hem de zihinsel sağlığını ciddi şekilde tehdit etmektedir. Psikososyal riskler, tükenmişlik sendromu, duygusal yorgunluk ve iş-yaşam dengesindeki bozulmalar gibi sorunlarla doğrudan ilişkili olup, madencilerin yaşam kalitesini düşürmekte ve verimlilik kayıplarına yol açmaktadır. Türkiye'de bu risklerin bilimsel temellerle değerlendirilmesi ve önlenmesine yönelik yasal düzenlemelerin eksikliği, sorunun boyutunu daha da derinleştirmektedir. Ayrıca, sektörde mekanizasyonun artmasına rağmen, bu yöntemlerin çalışanların psikososyal sağlığı üzerindeki etkilerini inceleyen çalışmaların sınırlı olması, literatürde önemli bir boşluk oluşturmaktadır. Bu araştırma, mekanize ve geleneksel üretim yöntemlerinin psikososyal risk algısı ve tükenmişlik düzeyleri üzerindeki etkilerini karşılaştırmalı olarak analiz ederek bu boşluğu doldurmayı hedeflemektedir. Çalışma, kesitsel bir saha araştırması olarak tasarlanmış ve Türkiye'nin iki önemli madencilik bölgesi olan Zonguldak (taşkömürü) ile Kütahya'nın Tavşanlı ilçesinde (linyit) faaliyet gösteren kamu maden işletmelerinde yürütülmüştür. Araştırmanın örneklemi, 379 maden çalışanından oluşmakta olup katılımcılar tam/yarı mekanize sistemle çalışanlar (268 kişi) ve klasik üretim yöntemlerini kullananlar (111 kişi) olarak iki gruba ayrılmıştır. Zonguldak'taki Karadon, Kozlu ve Üzülmez işletmeleri yarı mekanize üretim süreçlerini benimserken, Kütahya'daki Garp Linyitleri İşletmesi tam mekanize üretim yapmaktadır.

Veri toplama aşamasında, psikososyal risklerin ölçümü için İş'te Psikososyal Sağlık ve Güvenlik Ölçeği: Maden İşçileri Formu, tükenmişlik düzeyinin belirlenmesi içinse Maslach Tükenmişlik Envanteri kullanılmıştır. Toplanan veriler, istatistiksel analizler için SPSS 26.0 programına aktarılmış ve üretim yöntemleri ile işletmeler arasındaki farkların belirlenmesi amacıyla tek yönlü varyans analizi (ANOVA) uygulanmıştır.

Araştırmanın bulguları, üretim yöntemleri ve işletmeler arasında psikososyal risk algısı ile tükenmişlik düzeylerinde istatistiksel olarak anlamlı farklılıklar olduğunu ortaya koymuştur. Tam mekanize sistemle çalışan bireylerde tükenmişlik düzeyleri, klasik yöntemlerin kullanıldığı işletmelerdeki çalışanlara kıyasla daha düşük bulunmuştur. Bu sonuç, mekanizasyonun iş yükünü hafifletme ve çalışanların stres düzeylerini azaltma potansiyeline işaret etmektedir. Ancak Zonguldak'taki yarı mekanize Kozlu işletmesinde çalışanlar, duygusal tükenme ve kişisel başarı azalması alt boyutlarında diğer işletmelerden belirgin şekilde yüksek skorlar bildirmiştir. Bu durum, yarı mekanize sistemlerin uygulanma biçimindeki sorunların veya iş organizasyonundaki eksikliklerin tükenmişliği tetikleyebileceğini düşündürmektedir. Psikososyal riskler genelinde üretim yöntemleri arasında anlamlı bir farklılık gözlenmemekle birlikte, fiziksel talepler ve takdir eksikliği gibi alt boyutlarda istatistiksel olarak kayda

[2] Bu çalışma Doktor Öğretim Üyesi Mustafa YAĞIMLI danışmanlığında Erol ÜNAL tarafından "Yeraltı Taşkömürü Madenciliğinde Mekanize Sistemle Üretime Geçiş Sonrasında Çalışanların Psikososyal Durumlarının İş Stresi ve İş Kazası Geçirme Açısından Etkilerinin Modellenmesi" başlıklı doktora tezinden türetilmiştir.

değer farklar tespit edilmiştir. Özellikle fiziksel taleplerin tüm işletmelerde yüksek olması, madencilik sektöründe çalışma koşullarının iyileştirilmesi gerektiğini bir kez daha vurgulamaktadır. İşletmeler bazında yapılan analizlerde ise iş-yaşam dengesi, çalışma koşullarının güvencesizliği ve işte özerklik gibi faktörlerde farklılıklar gözlemlenmiştir. Örneğin, Garp Linyitleri İşletmesi'ndeki çalışanlar, iş-yaşam dengesi konusunda daha olumlu değerlendirmeler yaparken, Kozlu'da bu dengenin bozulduğu ve güvencesizlik algısının daha yüksek olduğu görülmüştür.

Mekanizasyonun tükenmişlik düzeylerini azaltmada olumlu bir etkiye sahip olduğu sonucu, teknolojik ilerlemelerin çalışan refahını artırabileceği yönündeki literatürle uyumludur. Ancak yarı mekanize sistemlerde, özellikle Kozlu işletmesinde gözlenen yüksek tükenmişlik düzeyleri, bu yöntemlerin uygulanma sürecindeki eksikliklere dikkat çekmektedir. Bu eksikliklerin arasında iş süreçlerinin yetersiz optimize edilmesi, yönetimsel destek mekanizmalarının zayıflığı veya çalışanların adaptasyon sürecinde karşılaştıkları zorluklar sayılabilir. Ayrıca, tüm işletmelerde yüksek düzeyde fiziksel ve bilişsel taleplerin varlığı, sektör genelinde iş yükünün yeniden gözden geçirilmesi ve ergonomik düzenlemelerin yapılması gerekliliğini ortaya koymaktadır. Çalışmanın özgünlüğü, Türkiye'de madencilik sektöründe mekanizasyonun psikososyal etkilerini sistematik bir şekilde inceleyen ilk araştırmalardan biri olmasından kaynaklanmaktadır. Literatürde bu konuya odaklanan çalışmaların sınırlı olması, mekanizasyonun olumlu ve olumsuz yönlerinin bütüncül bir şekilde değerlendirilmesini engellemektedir. Bu bağlamda, araştırma bulguları, işletmelerin çalışan takdirini artıran ödül sistemleri geliştirmesi, esnek çalışma saatleri gibi iş-yaşam dengesini destekleyici politikalar uygulaması ve fiziksel yükü azaltacak ergonomik müdahalelerde bulunması gerektiğini vurgulamaktadır. Ayrıca, psikososyal risklerin önlenmesine yönelik ulusal düzeyde kapsamlı mevzuat çalışmalarının aciliyeti, bu araştırmanın önemli çıktılarından biridir.

Çalışmanın sınırlılıkları arasında, yalnızca kamu işletmelerini kapsaması ve özel sektör madenlerinin araştırmaya dâhil edilmemiş olması yer almaktadır. Bu durum, bulguların genellenebilirliğini kısıtlamaktadır. Ayrıca, kesitsel tasarım nedeniyle nedensellik ilişkilerinin net bir şekilde ortaya konulamaması, araştırmanın diğer bir sınırlılığıdır. Gelecekte yapılacak çalışmalarda hem kamu hem özel sektör işletmelerini içeren daha geniş örneklemlerin kullanılması ve izlemsel tasarımların benimsenmesi, bu sınırlılıkların aşılmasına katkı sağlayabilir. Bununla birlikte, mekanizasyon süreçlerinin çalışan psikolojisi üzerindeki etkilerinin nitel yöntemlerle derinlemesine incelenmesi, saha çalışmalarının zenginleştirilmesi açısından önemlidir.

Sonuç olarak, bu çalışma madencilik sektöründe psikososyal risklerin ve tükenmişliğin azaltılmasına yönelik politika ve uygulamalara ampirik verilerle katkı sunmaktadır. Mekanizasyonun doğru planlandığı ve çalışan ihtiyaçlarına uygun şekilde uygulandığı durumlarda, tükenmişlik düzeylerinin düşürülebileceği ve çalışma koşullarının iyileştirilebileceği öngörülmektedir. Ancak, bu süreçte yönetimsel destek mekanizmalarının güçlendirilmesi, çalışanların psikososyal ihtiyaçlarının düzenli olarak değerlendirilmesi ve ulusal düzeyde yasal düzenlemelerin hayata geçirilmesi kritik önem taşımaktadır. Bu adımlar, madencilik sektöründe sürdürülebilir bir çalışma ortamının inşasına ve çalışanların yaşam kalitesinin artırılmasına yardımcı olacaktır. Gelecekteki araştırmalarda, kamu ve özel sektör işletmelerini kapsayan daha geniş örneklemlerin kullanılması ve longitudinal tasarımların tercih edilmesi önerilmektedir. Bunun yanı sıra, mekanizasyonun çalışan psikolojisi üzerindeki etkilerinin nitel yöntemlerle derinlemesine araştırılması, bulguların zenginleştirilmesine katkı sağlayabilir.

Keywords: İş Sağlığı ve Güvenliği, Madencilik Sektörü, Mekanize Üretim, Psikososyal Riskler, Tükenmişlik

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YAPAY ZEKÂ İLE KISA FİLM ÜRETİMİ

Fırat Sayıcı (İstanbul Esenyurt University)

Kısa film 30 dakikaya varan süresi, vurucu, çarpıcı ve öz anlatımıyla sinemanın varoluşundan itibaren bilinen önemli bir türdür. Kurmaca, deneysel, canlandırma, belgesel, video art gibi başlıklarla anılan ve süresi otuz dakikadan fazla olmayan filmler kısa film kategorisine girmektedir. Yapay zekâ, görevleri kendi başına gerçekleştirebilen herhangi bir sistem veya bilgisayar programını ifade eden geniş bir terimdir. Yapay zekâ ile birlikte film üretim biçimleri de yeniden şekillenmeye başlamıştır. Kayıt ve kurgu yazılımlarındaki değişimler, 4K ve 3D film teknolojisi, gelişen kamera sistemleri, iyileştirilmiş görsel efektler, yapay zekâ tabanlı senaryo yazma araçları gibi etkenler yapım süreçlerini kökten değiştirmiştir. Yapay zekânın ortaya çıkışı, film yapımı dünyasına sağladığı birçok avantajın yanı sıra, endüstride daha da yenilikçi uygulamalara kapı açmıştır. İnsanlara otomatik ve veriye dayalı kararlarda yardımcı olma potansiyeline sahip olan yapay zekâ, işletmelerin operasyon verimliliğini artırmasına, işçilik maliyetlerini düşürmesine ve daha fazla gelir elde etmesine olanak tanıyarak genel film yapım sürecini düzene sokabilecektir. Bu bağlamda kısa filmin Midjourney, Sora, Monica vs. yapay zekâ ile üretimi konusunda da yeni atılımlar başlamıştır. Bu çalışmada kısa film üretiminde yapay zekânın nasıl kullanılabileceği üzerine teoriler anlatılacaktır.

Keywords: Kısa Film, Yapay Zeka, Sinema, Film Üretimi

YAKINSAMA HİPOTEZİNE İLİŞKİN SİSTEMATİK BİR LİTERATÜR İNCELEMESİ: BIBLIOMETRİX(R) ÖRNEĞİ

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Hume'a kadar dayanan temelleriyle ortaya çıkan yakınsama hipotezi, sistematik olarak araştırılmaya başlanmış ve 20. yüzyılın sonlarına doğru popülerleşmiştir. Özellikle Neoklasik görüşün temellerini yansıtan yakınsama hipotezi literatürde genellikle 2 türde araştırılmaktadır. Bu türler beta yakınsaması ve sigma yakınsaması olarak adlandırılmaktadır. Beta yakınsama, başlangıçta düşük gelir düzeyine sahip bir ülkenin, yüksek gelirli ülkeye göre hızlı büyüme potansiyeline sahip olduğunu ve zaman içinde gelir farklarının kapanacağını ele almaktadır. Sigma yakınsama ise kişi başına düşen reel gelirin zaman boyutundaki dağılımını analiz etmektedir. Bu durumda, varyans, standart sapma gibi ölçütlerin hedef ülkeye ya da ortalamaya doğru yakınsamaya başlaması durumunda sigma yakınsama gerçekleşir. Tüm bu bilgiler ışığında bu çalışmanın amacı da özellikle 1990'lı yıllardan sonra oldukça popüler olan hipotez tartışmalarına meta analiz yöntemleri perspektifinden bakmaktır. Çalışmanın bir diğer amacı ise günümüz projeksiyonunu ortaya koyarak, literatürdeki güncel durumu ortaya çıkarmak ve gelecekte bu alanda çalışacak araştırmacılara bir yol haritası sunmaktır. Bu amaç doğrultusunda Web of Science (WOS) veri tabanında sigma yakınsama, beta ve sigma yakınsama, beta yakınsama anahtar kelimeleri girilerek konu kapsama uygun çalışmalar seçilmiştir. Belirlenen kısıtlar doğrultusunda elde edilen 1341 çalışma, Bibliometrix (R) paket programıyla analiz edilmiştir. Analizlerden elde edilen en çarpıcı bulgular literatürün oldukça popüler ve Neoklasik yaklaşıma uygun olmasına karşın politik liberalizm uygulama örneği taşıyan Çin'in literatürü en çok katkıyı yapmış olmasıdır. Elde edilen bir diğer çapıcı sonuç Lotka Yasası'na göre konu özelinde literatüre birden fazla çalışmayla katkı yapan az sayıda araştırmacının olmasıdır. Öte yandan konuya dair tek ülkeli yayınların fazla olması nedeniyle, uluslararası literatürün istenen düzeyde işbirliği yapmadığı, elde edilen bir diğer önemli bulgu olarak öne çıkmaktadır.

Keywords: Sigma Yakınsama, Beta Yakınsama, Bibliyometrik Analiz, Bibliometrix(R)

AI GENERATIVE SURVEILLANCE FOR PUBLIC WELL- BEING: REVOLUTIONIZING FACE MASK DETECTION SYSTEM

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Brisk industralization and metropolitan evolution and the escaltion of vehicular pollutant conforting with a significant challenge and increasing emission of pollutants into the climate effecting air quality. Airborne pollutants are increasing threats in industrial and urban areas that have triggered severe health issues especially for respiratory system, reducing lung function, cardiovascular problems, bronchitis, asthma and other health complications. Environmental toxins affect the climate and create ecological instability in the environment, disturbing the natural life cycles and fragile ecosystems. Pollutants such as Carbon Monoxide, Sulfur Dioxide, Nitrogen, Particulate Matter (PM 2.5 & PM 10) and Volatile Organic Compound contribute a major role in air pollutants. These are the key pollutants that cause smoke in the environment and drastically and badly affect ecological sustainability. Toxic haze contributes significantly to the macroeconomic shifts, global trade, commercial sectors and agriculture. Environmental contamination caused by emission increases the cost of health care system due to pollution induced infections. Smog is not only dangerous for humans but also affects plants by reducing their photosynthesis, hazardous substances damage the leaf by blocking sunline and stunted growth. Smog alters the soil composition and makes soil contaminated by acid rain. Our study addresses this issue by developing a real-time face detection system by using deep learning-based object detection system using YOLO 4. Enforcing face masks, especially for public areas, outdoor activities and industrial setup, remain a challenging issue. Deep learning model YOLOv4 is a state of art model that is known for its fast-processing speed, robust performance and high accuracy. Our system captures live videos from public cameras or pre-saving images, normalized images and resizes for preprocessing of our data, classify and detect mask status (no mask, not fully covered, properly worn, partially covered, removed, mask with obstruction). System alter mechanism notifies authorities for non-compliance of face mask regulations. Implementing these measures our system heightened public health safety for enhancing policies for community, increased social and workplace safety awareness, smart surveillance, better air pollution protection, prevention of infection and condense pressure on healthcare system.

AI based real time surveillance systems for public health and safety reduces the need of manual monitoring. Smart AI based systems detect infectious diseases using sensors or cameras in public places helps in pandemic preparedness by forecasting infection trends. Intelligence prediction algorithm and computation forecasting models help in augmenting real time datasets, improving robustness and detection accuracy. Synthetic data generation using Generative AI model helps in improving model training to learn diverse conditions, and new behaviors. Our system proposed Generative AI model become more adaptive for compliance monitoring in smart cities and public safety. Fostering AI-driven public health solution, our research contributes to the consciousness and alignment of several United Nations Sustainability Development Goals (SDGs). The implementation of our system is not just scientific innovation but seeks to strengthen the foundation of safer, smart, and sustainable industrial and urban ecosystems.

Keywords: Generative Artificial Intelligence, Sustainability, Deep Learning, Smart Cities.

PREDICTING BANK CUSTOMERS' LOCATION PERMISSION SHARING BEHAVIOR BY USING MACHINE LEARNING

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Mehmet Göktürk (Gebze Teknik University)

Banking applications require access to certain contextual data to improve user experience and application performance. To obtain this data, they request usage permissions through the application interface. This study aims to train a machine learning-based model to analyze bank customers' willingness to share location permissions one of these contextual data types and to predict their sharing behavior.

In today's world, classifications and pattern discovery through data mining have become key tools that drive efficiency and strategic decisions across various sectors. These insights are particularly valuable in the banking and finance industries, where they contribute significantly to enhancing customer experience. Data mining techniques, when combined with machine learning, aim to extract meaningful and actionable knowledge from large datasets. This is especially important in data-intensive fields like banking, where understanding customer behavior is essential.

The dataset used in this study consists of anonymized real customer data from a bank and includes attributes such as address, age, customer segment, and deposit status. These features pertain to both customers who granted and those who denied location permission. The study investigates whether there is a correlation between customers' contextual data such as their willingness to share location permission and their personal or financial characteristics. It also explores whether such behavior can be predicted using Decision Tree and Random Forest algorithms. The correlation among different customer attributes, the importance of these attributes in prediction, the impact of each algorithm on model training, and their results are analyzed to guide future studies in this field.
The dataset includes information on 200,000 customers: 100,000 who granted location permission and 100,000 who did not. As the data is labeled according to whether location permission was given or not, a supervised learning classification approach was applied. The Decision Tree algorithm, widely used in literature, was chosen for training the machine learning model. The results were then compared with those from the Random Forest model, which is an ensemble learning method.
During data preprocessing, columns that were not meaningful for classification were removed from the dataset. Missing values in the columns were filled using the mean, and categorical variables were converted to numeric form using label encoding. Since large numeric values may be assigned undue importance by the model and may lead to incorrect predictions, the numeric data was normalized using min-max scaling to reduce noise.

After preprocessing, the dataset was split into 70% training and 30% testing subsets. To ensure balanced data distribution and better model performance, the labeled data was shuffled. The Decision Tree algorithm uses two important parameters: minSamplesSplit and maxDepth. These parameters determine how the data is split and where the algorithm should stop splitting. The maxDepth parameter sets the depth of the tree, while minSamplesSplit specifies the minimum number of samples required to split a node. Selecting optimal values for these parameters is crucial, as inappropriate values may result in overfitting or underfitting, ultimately reducing model accuracy. Therefore, a Grid Search method was used to fine tune and determine the optimal parameter values. The optimal values found for the Decision Tree model were maxDepth = 5 and minSamplesSplit = 20. Information Gain was calculated to determine the best splitting points in the Decision Tree, which also contributed to feature engineering

by assigning weights to features. A feature selection method was then applied to eliminate features with low importance. After selecting the top n features, the training and testing phases were repeated to increase prediction accuracy.

After that, the model was retrained and tested using the Random Forest algorithm, which includes multiple decision trees trained on randomly selected subsets of the dataset. The final classification is made by majority voting among these trees. The Random Forest model includes parameters such as nEstimators (number of trees), maxDepth (maximum tree depth), and maxFeatures (number of features to consider at each split). Like the Decision Tree model, the Random Forest model was also fine-tuned using the Grid Search method. The best-performing parameter values were found to be maxDepth = 10, maxFeatures = None, and nEstimators = 200.

This study compares the test results of models trained with Decision Tree and Random Forest algorithms. Both models yielded similar accuracy levels: the Decision Tree achieved 59.42% accuracy, while the Random Forest reached 62.43%. The most influential features affecting the prediction were the customer's district of residence, age, and employment status. Financial attributes were found to be less correlated with the willingness to share location data. These findings suggest that personal attributes—such as the district of residence, age, and employment status—should not be overlooked when evaluating trust in the application and the inclination to share contextual data. Based on the results obtained, future studies may explore additional customer attributes that influence the willingness to share contextual data, such as location permissions, and include them in the dataset. Furthermore, classification models that use algorithms other than tree-based structures can be tested and compared with the existing results to potentially improve performance.

Keywords: Data Mining, Decision Tree, Random Forest, Machine Learning

HABERCİLİKTE DEĞİŞEN PARADİGMALAR VE YAPAY ZEKÂNIN GAZETECİLİKTE KULLANILMASI

Durmuş Koçak (Bağımsız Araştırmacı-Gazeteci)

Son yıllarda hızla gelişen ve değişen teknolojik paradigmalar, habercilik alanında da köklü değişimlere neden olmaktadır. Özellikle dijitalleşmenin artışı ve büyük veri çağının başlamasıyla birlikte, günümüzde her sektörde olduğu gibi gazetecilik sektöründe de yapay zekâ (YZ) temelli bir değişim rüzgârı esmektedir. YZ, gazetecilik pratiğindeki geleneksel paradigmaları dönüştürerek haber üretim süreçlerini her geçen gün daha fazla etkilemekte ve şekillendirmektedir. Bu bağlamda medya kuruluşları, YZ destekli algoritmaları kullanarak daha hızlı, daha verimli ve daha geniş kapsamlı bir şekilde haber üretebilme imkânı bulmaktadır. Özellikle finans, spor ve hava durumu gibi belirli ve veri yoğun alanlarda YZ algoritmalarının kullanımı giderek yaygınlaşmaktadır. Bu algoritmalar, büyük veri setlerini analiz ederek anında başlıklar ve özetler üretebilme yeteneğine sahiptir. Böylece, haber akışı hızlanmakta ve izleyiciye daha dinamik ve çeşitli içerikler sunulabilmektedir. Aynı zamanda algoritmalar sayesinde, haberlerin daha fazla kişiselleştirilmesi ve hedef kitleye özgü içeriklerin sunulması mümkün hâle gelmektedir.

Ancak, bu teknolojik dönüşüm beraberinde çeşitli zorlukları ve tartışmaları da getirmektedir. Yapay zekânın eğitildiği veri setlerinde bulunan önyargılar, haber içeriklerinin tarafsızlık, çeşitlilik ve temsil adaleti açısından sınırlı kalmasına neden olabilmektedir. Bu durum, özellikle hassas toplumsal konularda YZ ile üretilen içeriklerin objektifliğini sorgulatmaktadır. Ayrıca, algoritmaların önceden tanımlı kalıplara dayalı olarak çalışması, haberlerde içerik derinliğinin azalmasına ve önemli nüansların gözden kaçmasına yol açabilmektedir. Dolayısıyla medya kuruluşlarının YZ uygulamalarını kullanırken şeffaflık ilkesine önÇelik vermeleri büyük önem taşımaktadır. Algoritmaların nasıl çalıştığı, hangi veri setlerinin kullanıldığı ve haber üretim süreçlerinin hangi aşamalarında insan müdahalesinin devreye girdiği konularında açık olmak, habercilik etiği açısından vazgeçilmez bir gereklilik hâline gelmiştir. Bu noktada, algoritmik şeffaflık sadece teknik bir sorumluluk değil, aynı zamanda okuyucu güvenini tesis etmek için de kritik bir unsurdur.

Ayrıca, yapay zekâ uygulamalarıyla elde edilen sonuçların yalnızca otomatik bir şekilde yayınlanması yerine, mutlaka insan editörlerin kontrolüne ve değerlendirmesine tabi tutulması gerekmektedir. İnsan denetimi, yalnızca teknik doğruluk açısından değil, aynı zamanda haberin anlamı, bağlamı ve toplumsal etkileri bakımından da kritik bir rol oynamaktadır. Özellikle yapay zekâ tabanlı haber üretiminde ortaya çıkabilecek bilgi eksiklikleri veya çarpıtmalar, insan kontrolüyle düzeltilebilir ve böylece haberin bütünlüğü korunabilir. Bu süreç, gazetecilik mesleğinin temel etik ilkelerine bağlı kalınmasını sağlar ve haberciliğin toplum üzerindeki güvenilirliğini artırır.

Öte yandan, habercilikte yapay zekâ kullanımının yaygınlaşması, gazetecilerin rollerinde de önemli bir değişim yaratmaktadır. Veri analizi, algoritmalarla çalışma, büyük veri setlerini yorumlama gibi yeni beceriler gazetecilik mesleğinin vazgeçilmez unsurları hâline gelmektedir. Bu dönüşüm, gazetecilerin yalnızca içerik üreticisi değil, aynı zamanda veri yorumlayıcısı ve teknoloji okuryazarı olmalarını da gerekli kılmaktadır. Nitekim yapay zekâ destekli gazetecilik, veri temelli haberciliği ön plana çıkararak daha analitik, kanıta dayalı ve derinlemesine içerik üretimini teşvik etmektedir. Sonuç olarak, habercilikteki paradigma değişimleri ve yapay zekânın kullanımının giderek artması, medya sektörünü etkileyen önemli ve kaçınılmaz bir dönüşümü simgelemektedir. Günümüzde gazetecilik sektörü, bir yandan YZ alanındaki hızlı değişimlere uyum sağlamaya çalışırken, diğer yandan da habercilik mesleğinin temel etik standartlarını koruma çabası içindedir. Bu süreçte, teknoloji ve etik arasındaki dengenin sağlanması, geleceğin gazeteciliğinin güvenilirliğini ve toplumdaki yerini

belirleyecek en kritik faktörlerden biri olacaktır. Yapay zekâ destekli gazetecilik uygulamalarının doğru kullanımı, gazeteciliğin hızını ve verimliliğini artırmakla kalmayacak, aynı zamanda mesleğin özündeki tarafsızlık ve kamu yararını gözetme misyonunun da güçlendirilmesine katkı sağlayacaktır. Bu bağlamda medya kuruluşlarına düşen en büyük sorumluluk, yapay zekâyı bir araç olarak görüp, nihai editoryal kararları her zaman insan aklı ve etik süzgeci ile desteklemektir.

Anahtar Kelimeler: Yapay Zekâ, Gazetecilik, Habercilik.

CHANGING PARADIGMS IN JOURNALISM AND THE USE OF ARTIFICIAL INTELLIGENCE IN JOURNALISM

In recent years, rapidly developing and changing technological paradigms have caused radical changes in the field of journalism. Especially with the increase in digitalization and the beginning of the big data era, a wind of change based on artificial intelligence (AI) is blowing in the journalism sector as in every sector today. By transforming traditional paradigms in journalism practice, AI is increasingly affecting and shaping news production processes every day. In this context, media organizations have the opportunity to produce news faster, more efficiently and more comprehensively by using AI-supported algorithms. The use of AI algorithms is becoming increasingly widespread, especially in certain and data-intensive areas such as finance, sports and weather. These algorithms have the ability to produce headlines and summaries instantly by analyzing large data sets. Thus, the flow of news is accelerated and more dynamic and diverse content can be presented to the audience. At the same time, thanks to the algorithms, it becomes possible to personalize the news more and present content specific to the target audience. However, this technological transformation also brings with it various challenges and discussions. The biases found in the datasets on which AI is trained can cause news content to be limited in terms of impartiality, diversity and fair representation. This situation questions the objectivity of content produced by AI, especially on sensitive social issues. In addition, the fact that algorithms work based on predefined patterns can lead to a decrease in the depth of content in news and to important nuances being overlooked. Therefore, it is of great importance for media organizations to prioritize the principle of transparency when using AI applications. Being open about how algorithms work, which datasets are used and at what stages of the news production process human intervention comes into play has become an indispensable requirement in terms of journalism ethics. At this point, algorithmic transparency is not only a technical responsibility but also a critical element for establishing reader trust. In addition, the results obtained with AI applications must be subject to the control and evaluation of human editors rather than being published only automatically. Human control plays a critical role not only in terms of technical accuracy but also in terms of the meaning, context and social impact of the news. In particular, any information deficiencies or distortions that may arise in AI-based news production can be corrected through human control, thus preserving the integrity of the news. This process ensures that the basic ethical principles of the journalism profession are adhered to and increases the credibility of journalism in society.

On the other hand, the widespread use of artificial intelligence in journalism also creates a significant change in the roles of journalists. New skills such as data analysis, working with algorithms, and interpreting large data sets are becoming indispensable elements of the journalism profession. This transformation requires journalists to be not only content producers, but also data interpreters and technologically literate. Indeed, AI-supported journalism emphasizes data-based journalism, encouraging more analytical, evidence-based, and in-depth content production. As a result, paradigm shifts in journalism and the increasing use of artificial intelligence symbolize an important and inevitable transformation affecting the media sector. Today, the journalism sector, on the

one hand, is trying to adapt to rapid changes in the field of AI, while on the other hand, it is striving to protect the basic ethical standards of the journalism profession. In this process, ensuring the balance between technology and ethics will be one of the most critical factors that will determine the reliability of journalism in the future and its place in society. The correct use of AI-supported journalism applications will not only increase the speed and efficiency of journalism, but will also contribute to the strengthening of the profession's inherent mission of impartiality and public interest. In this context, the greatest responsibility that falls on media organizations is to view AI as a tool and always support final editorial decisions with human intelligence and ethical filters.

Keywords: Artificial Intelligence, Journalism, News

COMPARING K-MEANS AND HIERARCHICAL CLUSTERING TECHNIQUES FOR MOBA GAME DATA ANALYSIS

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This study applied various clustering algorithms to a multivariate dataset from a MOBA (Multiplayer Online Battle Arena) game. The results revealed similarities between players, which were examined in detail using visual analysis techniques. Clustering algorithms are one of the most effective machine learning methods for discovering structural similarities between observations. In this study, K-means and Hierarchical clustering algorithms, both unsupervised learning methods, were used to identify meaningful groups, and various analyses were performed. The results were compared, the effects on data segmentation were evaluated, and the findings were made clearer. The data analysis process began with converting categorical variables into numerical format using appropriate preprocessing techniques and scaling all variables using the StandardScaler method. Then, K-means and Hierarchical clustering algorithms were successfully applied to obtain different segmentations of the player data, and the characteristics of each segment were examined in depth. The resulting clusters were reduced to a two-dimensional plane using Principal Component Analysis (PCA), and the structural differences between the clusters formed by the algorithms were clearly visualized. The analysis results showed that while similar clusters were produced by both K-means and Hierarchical algorithms, different structural patterns were also identified. Visualizations made with PCA facilitated a better understanding of these separations. The suitability of the number of clusters and the performance of the algorithms were measured using the Silhouette score, and it was found that the K-means algorithm provided more consistent and effective results. The findings of this study demonstrate that clustering algorithms can capture meaningful patterns in dynamic and high-dimensional data, such as those from a MOBA game. Future studies could increase the generalizability of these findings by repeating similar clustering analyses on larger and more heterogeneous datasets. Additionally, comparisons with density-based algorithms like DBSCAN would allow for a deeper evaluation of the algorithms' performance in different data structures.

Keywords: Elbow, Hierarchical Clustering, K-Means Clustering, MOBA Game, Principal Component Analysis

ALUMNI-BASED EVALUATION OF PEOS FOR DIPLOMA IN MECHANICAL ENGINEERING (PLASTICS) PROGRAM

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Program Educational Objectives (PEOs) are broad statements that describe the career and professional accomplishments that a program's graduates are expected to attain within a few years after graduation. This study presents the findings from an outcome-based analysis of the PEOs for the Diploma in Mechanical Engineering (Plastics) [DMK] at Politeknik Sultan Abdul Halim Mu'adzam Shah, based on feedback from 55 alumni who graduated more than three years prior. The analysis applied the Modified Nominal Group Technique (MNGT), allowing for the collection of rich, experience-based insights. The study focused on four core PEOs: (1) Competent in knowledge and skills in the field of mechanical and plastic engineering according to industry requirement, (2) Effective in communication and contribute effectively as a team member with the capability of being a leader, (3) Ethically and socially responsible towards developing the community and the nation, and (4) Able to demonstrate entrepreneurship skills and recognize the need of lifelong learning for a successful career advancement and able to adapt themselves with new technological challenges in mechanical fields. The results demonstrated that all four PEOs surpassed their respective KPI thresholds, indicating a successful alignment between program outcomes and graduate performance in the workforce. PEO 1 scored highest at 76.4%, followed by PEO 2 at 74.5% and PEO 3 at 66.4%, reflecting strong technical, communicative, and ethical competencies among alumni. However, PEO 4 recorded a lower achievement of 33.6%, highlighting the need for greater emphasis on entrepreneurship and continuous learning. These findings suggest that while the DMK program effectively prepares students in core technical and professional skills, enhancements are needed to foster entrepreneurial acumen and adaptability to technological change. This study provides actionable insights for curriculum review and supports the importance of alumni feedback in validating long-term program outcomes.

Keywords: Program Educational Objectives (PEOs), Alumni, Educational Evaluation

DESIGN AND DEVELOPMENT OF AN ARDUINO UNO-POWERED AUTOMATIC PESTICIDE MIXER FOR AGRICULTURE

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Perlis has the perfect conditions for growing Harumanis because of its rich soil and pleasant climate. This is because, in order to produce healthy blossoms, Harumanis requires extremely hot, dry temperatures during the day and cold, windy conditions at night. These mango trees flourish in the orchards that dot the state's agricultural landscape, adding to Perlis's standing as a producer of premium mangoes. In order to meet both domestic and foreign demand, Perlis has become an essential center for the manufacture of Harumanis. Fruit flies are a frequent threat to Harumanis, just like they are to many other fruits. These pests degrade fruit quality in addition to lowering crop production. Furthermore, pests like the snout weevil (Alcidodes sp.) have been found to harm Harumanis flower panicles and young stems, which has an effect on farmers' incomes. The usage of pesticides is unavoidable in order to solve these issues. The use of pesticides is inevitable in order to control and repel pests, as fruit infected by pests are low in quality and productivity. The frequency of spraying pesticides was higher during flowering and fruiting seasons to ensure high yield and quality of harvest. This project aims to develop a solution for mixing pesticide automatically, specifically for Harumanis farms, with minimal contact and exposure to pesticides. Pesticides had been proven to be harmful to humans' health, highlighting the significance of further studies in this area. In addition to reducing contact with users, pesticides can also be used at optimum rates because they are automatically measured and also have minimal spillage during application. This indirectly contributes to maintaining health and minimizing environmental impacts of the pesticides. Three peristaltic pumps are employed for dispensing the pesticide into the mixer, with an additional pump designated for regulating the flow of water into the system, ensuring precise and controlled mixing for optimal efficacy. A mixer is used to ensure thorough mixing of the pesticides with water. This project incorporated sensors and controllers for precision and efficiency while reducing reliance on manual intervention, thereby streamlining agricultural operations and promoting sustainable practices.

Overall, the main objectives of the project were achieved by developing a pesticide mixing system with a substantial capacity of 60 to 120 litres. The system ensures accurate pesticide dosing and can automatically mix pesticides, making it suitable for both small- and large-scale agricultural applications. This machine significantly enhances productivity and operational efficiency by reducing pesticide mixing time to one-fifth of the time required for manual mixing. Pest control and environmental sustainability can be greatly enhanced by using a pesticide mixer in contemporary farming methods. Initially, the mixer's capacity to combine different active substances with different modes of action improves efficacy by producing precise formulations. A larger range of pests are addressed and the possibility of resistance development is decreased as a result of this synergy. Farmers are better able to control insect populations and protect crop quality and yields by combining pesticides intelligently. From an environmental standpoint, the utilization of a pesticide mixer offers substantial benefits. By customizing pesticide formulations for targeted application, overall pesticide usage can be minimized. This targeted approach reduces the quantity of chemicals introduced into the environment, mitigating potential off-target effects and minimizing environmental contamination.

Keywords: Pesticides; Harumanis Farms; Arduino; Environmental Sustainability

CONCEPTUALIZATION AND DESIGN OF A COCONUT SHELL CUTTER MACHINE

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To stay ahead in today's competitive environment, innovation investment is crucial. One may increase output, lower labor expenses, and produce coconut-based goods of unmatched quality with this proposed coconut shell cutter machine with the state-of-the-art equipment, which offers unparalleled efficiency and ease, embrace the future of coconut processing. From accurate slicing to user-friendly functionality, this proposed system optimizes every facet of the coconut cutting process to satisfy the needs of contemporary businesses. When processing a large number of coconuts, using a coconut cutting machine may take longer than manual techniques, but it affects the balance between output volume and efficiency. This is influenced by factors such as loading, setup, and maintenance. Despite the longer processing times, the device guarantees precise cutting, minimal waste, and reliable quality. To maximize efficiency, strategic planning is essential. While the machine may require some initial investment in time, its long-term benefits—such as higher productivity and lower labor costs—make it worthwhile to implement, promoting sustainable growth in the coconut processing industry. By investing in the right processes and training, users can ensure that the advantages of the coconut cutter are fully realized, leading to increased output and enhanced product quality. The coconut shell cutter machine, a critical component in the coconut processing industry, automates the labor-intensive task of coconut preparation. This paper provides an in-depth look at the design, operation, and performance of the coconut shell cutter machine. The design section explores the structural framework, cutting mechanism, power transmission, and safety features integrated into the machine. Improper handling of the machine or lack of safety precautions can lead to injuries such as cuts or crushing accidents, resulting in downtime and additional costs. Workers may become more cautious in their operations, which can further hinder processing speeds. Addressing safety issues requires time and resources, thereby delaying operations. By promoting a culture of safety, businesses can protect their workers and enhance efficiency in coconut processing. Implementing proper training programs, safety protocols, and regular maintenance checks can significantly reduce risks, ensuring that the production process runs smoothly and effectively while prioritizing worker well-being. Operational aspects include startup procedures, control systems, and maintenance routines to ensure efficient and safe usage. The performance analysis evaluates the machine's productivity, cutting precision, energy efficiency, and reliability under various operating conditions. Data from trial experiments, including cutting speed, processing force, and energy consumption, are analyzed to assess overall performance and identify prospective areas for improvement.

Findings of this paper provide significant insights for manufacturers, engineers, and operators to optimize the design and operation of the coconut cutter machine, leading to enhanced productivity and sustainable coconut processing techniques. With the potential to revolutionize the coconut processing sector for all parties involved in the value chain, the research of the coconut shell cutting machine is crucial. The study underscores the significance of this cutting-edge technology by examining its

complexities and highlighting a number of important features. The coconut shell cutting machine stands as a benchmark of efficiency, promising to revolutionize traditional coconut processing practices. Through its ability to streamline operations and reduce the time and labor required for coconut preparation, it offers a pathway to increased productivity and cost-effectiveness.

Keywords: Coconut Processing; Cutter Machine; Productivity; Cost Effectiveness

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ASSESSMENTS OF TÜRKIYE'S FIGHT AGAINST CLIMATE CHANGE FROM THE POINT OF VIEW OF EU LAW AND POLICIES

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Climate change and global warming have the potential to shape the relationship between the European Union (EU) and Türkiye as a current and important phenomenon. Although the relationship between the parties has been slow and sometimes stagnant, the EU's policies and legislation on global warming and climate change are becoming very relevant for Türkiye, which is a candidate country for full membership of the EU. Both the EU's primary legislation, where the founding treaties come to the fore, and its secondary legislation should be followed by Türkiye. Unfortunately, Türkiye's full membership will not be possible unless it fulfils its commitments in 35 different chapters of the accession negotiations.

In terms of Türkiye's commitments on global warming and climate change, chapter 15 on energy and chapter 27 on environment stand out. There are some assessments of Türkiye's fight against climate change in the progress reports regularly published by the EU Commission each year. However, it is clear that there is a need for a holistic study on this issue. Therefore, this study discusses Türkiye's climate change policies and regulations and their harmonisation with the EU perspective and legislation, and attempts to determine Türkiye's status and obligations under EU law and policies.

Keywords: Global Warming, Climate Change, EU regulations, EU-Türkiye Relationships, Türkiye's Progress Reports.

OPTIMIZING GAMMA-RAY SHIELDING: A COMPREHENSIVE STUDY OF MATERIAL EFFECTIVENESS FROM LOW TO HIGH Z MATERIALS AND CROSS-SECTIONAL DATA ACROSS ENERGY REGIMES

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Gamma-ray shielding is a critical field of study because of its significance in scientific, industrial, and medical applications. Previous studies have focused on the mass attenuation and energy absorption coefficients of elements [2-7, 10, 12-15, 16-25] and compounds, with key contributions from Hubbell and Seltzer [1-12, 15-16] providing extensive photon cross-sectional data. The demand for cross-sections across various materials continues to grow, yet existing tables only cover a subset of elements, with some extending to a limited range of compounds and mixtures [1, 3, 9, 13, 14, 16, 26-33]. Traditional printed tables cannot accommodate all the necessary cross sections, and photon energy values often fall outside predefined tabulations, necessitating interpolation. Although photon cross-sections for compounds can be estimated through weighted sums of atomic constituent cross-sections, this process is computationally intensive, particularly near the absorption edges, where discontinuities occur [34-35]. To address these challenges, cross-sectional tables for compounds must include values immediately above and below the absorption edges, which requires additional data interpolation. An efficient solution is the XCOM web program [14], which dynamically generates total attenuation coefficients with and without coherent scattering and partial cross-sections for key processes, including incoherent and coherent scattering, photoelectric absorption, and pair production in electron and nuclear fields for elements from Z = 1 to 92 and for 48 compounds and mixtures within an energy range of 1–100 GeV.

The calculation of the interaction coefficients for compounds and mixtures involves summing the weighted contributions of the individual atomic constituents. XCOM automatically determines these weight fractions from the chemical formula entered for compounds, whereas for mixtures, the user must specify the weight fractions of the components. Despite its capabilities, XCOM has limitations; its cross-sectional data are based on isolated neutral atoms, without accounting for molecular or solid-state effects that influence absorption edges. Additionally, certain low-probability interactions, such as Delbrück scattering, two-photon Compton scattering, and photo-meson production, were not included. The nuclear photoeffect, which contributed marginally (within the 5–30 MeV range), was also omitted. This study explored the gamma-ray attenuation properties of various materials that are essential for radiation protection in nuclear reactors, medical imaging, space exploration, and industrial applications. Effective shielding prevents harmful radiation exposure and ensures compliance with safety regulations (e.g., ICRP [36], IAEA [37], and NRC [38]). The materials analyzed included boron (B), aluminum (Al), silicon (Si), copper (Cu), tungsten (W), lead (Pb), water, and air, which were selected based on their atomic number, density, and interaction mechanisms.
Gamma-ray attenuation occurs through photoelectric absorption, Compton scattering, and pair production. High-Z materials, such as Pb and W, demonstrate superior attenuation owing to their high probability of photoelectric absorption, which makes them effective in nuclear shielding. Lower-Z materials, such as Al and Si, contribute to secondary radiation moderation, whereas B and water aid neutron absorption.

Computational analysis was performed using the NIST XCOM database to determine the mass attenuation (μ/ρ) and energy-absorption coefficients ($\mu en/\rho$) across photon energies ranging from 1 keV to 20 MeV. These coefficients are described in detail elsewhere [1-4, 10, 13, 15-16, 22-25, 39-48]. Cross-sectional variations were analyzed for different materials, with graphical representations illustrating

attenuation efficiency. This study identified energy-dependent shifts in attenuation mechanisms and material effectiveness, thereby revealing gaps in previous shielding models. These findings emphasize the importance of considering material combinations to enhance shielding efficiency. Based on these findings, recommendations include the further investigation of novel shielding composites and adaptive shielding structures for space and medical applications. The implications of this study extend to nuclear safety, medical radiation protection, aerospace shielding, and industrial radiography, providing insights for designing cost-effective, lightweight, and efficient radiation-shielding solutions.

Keywords: Gamma-Ray Attenuation, Radiation Shielding Materials, Cross-Sectional Data, Material Optimization, Energy-Dependent Shielding

TECHNOLOGY AS A CATALYST FOR BUILDING A SUSTAINABLE SOCIETY IN PAKISTAN

Abid Aziz (PTCL)

In the face of escalating environmental degradation, rapid urbanization, and socio-economic disparities, the pursuit of sustainability has become a critical global imperative. For developing nations like Pakistan, this challenge is intensified by issues such as energy shortages, inefficient resource management, climate vulnerability, and socio-political instability. Amid these challenges, technology emerges as a powerful catalyst capable of transforming the sustainability landscape in Pakistan. This paper explores the multifaceted role of technology in advancing environmental, economic, and social sustainability across various sectors in the country. It investigates how digital innovation, clean energy solutions, smart agriculture, and data-driven governance can collectively pave the way for a resilient and inclusive society.

Pakistan's growing technology sector-particularly in mobile connectivity, fintech, e-governance, and renewable energy offers unprecedented opportunities to address deep-rooted developmental challenges. In rural regions, smart agricultural tools such as precision farming, IoT-based irrigation systems, and AI-powered crop monitoring are enhancing food security, minimizing water usage, and increasing productivity. Similarly, clean energy technologies, including solar microgrids, biomass conversion, and wind turbines, are being increasingly deployed to reduce dependency on fossil fuels and provide affordable, decentralized energy solutions to off-grid communities. This transition is not only contributing to climate change mitigation but also fostering energy equity and economic empowerment. Despite the vast potential, Pakistan faces several barriers such as limited access to modern technologies, insufficient digital literacy, and weak policy frameworks. This paper analyses existing technological initiatives within the country and explores global case studies to draw lessons applicable to Pakistan. It further offers recommendations for the successful integration of technology in achieving sustainability goals. Ultimately, the study concludes that while technology holds transformative potential, its effective implementation in Pakistan requires collaborative efforts across government, industry, and academia.

Keywords: Sustainable society, Technology, Pakistan, Digital infrastructure, Policy frameworks

YAPAY ZEKÂNIN KUTSAL METİNLERİN YORUMLANMASINA VE DİNİ KİMLİKLERİN ŞEKİLLENMESİNE OLAN ETKİSİ

Duygu Karakaş Aydın (Erciyes University)

Bu makale, yapay zekâ teknolojilerinin kutsal metinlerin yorumlanması sürecindeki yükselen rolünü ve bunun bireylerin dini kimliklerinin farklı alanlardaki gelişimi üzerindeki derin etkilerini incelemektedir. Bu çerçevede, makalenin temel amacı, yapay zekânın kutsal metinlerin yorumlanmasına sağlayabileceği olası katkıları sistematik bir şekilde değerlendirmek ve bu süreçte ortaya çıkan karmaşık etik, epistemolojik ve sosyolojik sorunları etraflıca ele almaktır.

Çalışma, öncelikle yapay zekânın kutsal metinlerin yorumlanması alanındaki çeşitli potansiyellerini detaylandırmaktadır. Yapay zekâ algoritmalarının, dini metinlerin dilbilimsel yapısını inceden inceye analiz ederek, geleneksel yorumlama yöntemlerinin atlayabileceği hassas anlam katmanlarını ve metinler arasındaki bağlantıları ortaya çıkarabileceği üzerinde durulmaktadır. Ayrıca, yapay zekânın çoklu dil desteği sunarak karşılaştırmalı dini metin analizlerine yeni bir boyut getirebileceği ve yapay zekâ temelli uygulamaların kutsal metinlere erişimi kolaylaştırarak farklı yorumların geniş kitlelere ulaşmasını sağlayabileceği tartışılmaktadır.

Ancak makale, yapay zekânın kutsal metinlerin yorumlanmasına dâhil olmasının beraberinde getirdiği bir dizi önemli sorunu ve etik endişeyi de incelemektedir. Yorumun nesnelliği ve öznelliği arasındaki denge, yapay zekâ algoritmalarını geliştirenlerin potansiyel önyargılarını yansıtma riski ve kutsal metinlerin yorumlanmasındaki insani ve kültürel bağlamın yapay zekâ tarafından tam olarak anlaşılamamasının olası sınırları derinlemesine tartışılmaktadır. Yapay zekâ tarafından üretilen yorumların dini otoriteler ve inanan topluluklar tarafından nasıl karşılanacağı, yapay zekânın yorumlama sürecinde dini geleneklerin ve uzmanlığın oynayacağı rol gibi otorite ve meşruiyet konuları eleştirel bir bakış açısıyla incelenmektedir. Kutsal metinlerin tarihi, kültürel ve edebi bağlamının yorum için taşıdığı önem vurgulanarak, yapay zekânın bu bağlamsal derinliği ne ölçüde dikkate alabileceği sorgulanmaktadır. Ayrıca, yapay zekâ algoritmalarındaki olası hatalar veya kötü niyetli kullanımlar sonucunda ortaya çıkabilecek yanlış yorumlama ve güdümleme tehlikelerine de dikkat çekilmektedir. Son olarak, kutsal metinlerle kurulan kişisel ve duygusal bağın, dini deneyimin ayrılmaz bir parçası olduğu belirtilerek, yapay zekâ temelli yorumların bu insani boyutu nasıl etkileyebileceği üzerine değerlendirme yapılmaktadır.

Makale aynı zamanda, yapay zekâ destekli kutsal metin yorumlarının bireylerin dini kimliklerinin gelişimine olası etkilerini de analiz etmektedir. Yapay zekânın bireylerin ilgi alanlarına ve ihtiyaçlarına göre kişiselleştirilmiş yorumlar sunarak dini metinlerle daha özel bir bağ kurulmasına yardımcı olabileceği ileri sürülmektedir. Diğer taraftan da yapay zekâ tarafından sunulan yeni ve farklı yorumların, geleneksel dini anlayışlardan uzaklaşmalara veya yeni inanç ve uygulama biçimlerinin ortaya çıkmasına zemin hazırlayabileceği olasılığı tartışılmaktadır. Yapay zekânın kutsal metinler üzerindeki artan erişilebilirliğinin, geleneksel dini liderlerin ve kurumların rolünde potansiyel değişimlere yol açabileceği öngörülmektedir. Son olarak, yapay zekânın farklı yorumları kolayca ulaşılabilir kılmasıyla dini metinlerin anlamının göreceli olduğu ve çeşitli yorumların geçerli olabileceği fikrinin güçlenebileceği üzerinde durulmaktadır.

Sonuç olarak bu makale, yapay zekânın kutsal metinlerin yorumlanması ve dini kimliklerin şekillenmesi alanındaki dönüştürücü potansiyelini ve beraberinde getirdiği çok yönlü tartışmaları disiplinler arası bir yaklaşımla ele almayı amaçlamaktadır. Yapay zekânın din alanındaki bu etkileşiminin uzun vadeli

sonuçlarının ve bu sonuçların etik, sosyal ve epistemolojik boyutlarının daha derinlemesine incelenmesi gerektiği belirtilerek, bu çalışma gelecekteki araştırmalar için bir çerçeve sunmayı hedefliyor.

Keywords: Yapay Zekâ, Din Sosyolojisi, Kutsal Metinler, Dini Kimlik, Dijital Din

ANALYZING THE ROLE OF LEAN MANUFACTURING PRACTICES IN DRIVING SUSTAINABILITY IN MALAYSIAN MANUFACTURING ORGANIZATIONS: MODERATING EFFECT OF EMPLOYEE INVOLVEMENT

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The manufacturing industry plays a fundamental role not only in driving economic growth and advancing societal well-being but also in shaping environmental outcomes, thereby making the integration of sustainability into its operations an essential and strategic imperative for ensuring long-term viability, responsible resource management, and balanced development across economic, social, and ecological dimensions. Lean manufacturing, with its focus on eliminating waste and optimizing value, offers a practical pathway for organizations aiming to meet sustainability goals. However, the complexity of integrating lean tools into existing production systems requires a fundamental understanding of lean principles. Equally, employee involvement plays a pivotal role in the successful implementation of sustainability initiatives. This research explores the intricate relationships among lean manufacturing practices, employee involvement, and sustainability performance in Malaysian manufacturing organizations. It also investigates the moderating effect of employee involvement on the relationship between lean practices and sustainability outcomes across environmental, economic, and social dimensions. The study aims to provide a strategic framework for top management to align lean initiatives with corporate sustainability strategies, contributing to long-term value creation and operational resilience. A quantitative research design will be adopted, with data collected through structured questionnaires distributed to 346 employees from various manufacturing organizations. Partial Least Squares Structural Equation Modeling (PLS-SEM) will be used for data analysis to test the hypothesized relationships. The anticipated findings will not only support the adoption of lean practices for achieving ISO 14001 and Sustainable Development Goals (SDGs) compliance, but also offer actionable insights to enhance productivity, reduce waste, and cultivate a culture of continuous improvement. Ultimately, this study seeks to bridge theoretical knowledge with industrial practice, ensuring that lean implementation supports both performance excellence and sustainable development.

Keywords: Lean; Employee Involvement; Manufacturing; Sustainability

YAPAY ZEKÂ TABANLI ÖĞRENME YÖNETIM SISTEMLERININ PILOT EĞITIMINDEKI ETKILERI ÜZERINE BIR İNCELEME

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Bu çalışma, yapay zekâ (YZ) destekli simülasyon sistemlerinin modern pilot eğitimine entegrasyonunu kapsamlı bir şekilde incelemektedir. Araştırma, havacılık eğitiminde yapay zekâ tabanlı çözümlerin eğitim verimliliği, güvenlik parametreleri ve maliyet optimizasyonu üzerindeki etkilerini analiz etmektedir. Çalışma kapsamında, 2018-2023 yılları arasında dünya genelinde 18 farklı uçuş okulunda uygulanan YZ destekli eğitim programları karşılaştırmalı olarak değerlendirilmiştir. Bulgular, yapay zekâ tabanlı adaptif öğrenme sistemlerinin eğitim sürelerini ortalama %32 kısalttığını, simülasyon doğruluğunu %45 artırdığını ve öğrenci başarı oranlarında %28'lik bir iyileşme sağladığını göstermektedir. Bununla birlikte, sistemlerin etkin kullanımı için eğitmen eğitimi, veri güvenliği ve etik düzenlemeler gibi kritik alanlarda iyileştirme ihtiyaçları tespit edilmiştir. Çalışma, havacılık eğitim kurumları için pratik uygulama önerileri ve geleceğe yönelik araştırma yönergeleri sunmaktadır.

Keywords: Yapay Zeka, Pilot Eğitimi, Uçuş Simülasyonu, Adaptif Öğrenme, Havacılık Güvenliği

THE EFFECTIVENESS OF DUOLINGO IN IMPROVING STUDENTS' LISTENING SKILL

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The improvements in computer and communication technologies enabled Artificial Intelligence (AI) to develop. AI refers to the study or use of computer systems and machines that function as a human brain. These systems can understand and generate language like humans. They can recognize or create images and solve problems. AI-supported language learning tools offer many aspects of language skills. Listening is the first acquired skill in both the mother language and foreign language. Expertise in listening supports competence also in speaking, reading and writing and provides faster progress in language learning. AI-integrated Mobile Assisted Language Learning (MALL) tools provide more efficient listening learning processes with speech recognition and immediate feedback offering customized listening practice according to the learner's level.

Secondary school students enjoy interactive, engaging activities that keep them motivated. Those activities foster a positive attitude toward language learning. Duolingo is a popular language learning application used by millions of people in the field of MALL. It provides gamified learning, in this way simplifies learning with enjoyable elements. While many studies have investigated the general effectiveness of Duolingo in improving language proficiency, there is a gap in the literature regarding its specific impact on listening proficiency, especially for secondary school students. The main aim of this study is to examine the impact of utilizing the Duolingo application on the listening comprehension of 7-th grade students. A quantitative single group pretest-posttest design was employed, integrating mobile assisted autonomous learning alongside routine education at school. The participants of the study were 34 students and the implementation lasted for 8 weeks. The students used the application for 15 minutes every day along with the routine learning during that period. Throughout the process, they kept diaries on Padlet. They shared their thoughts and experiences with screenshots there. Pre- and post- listening tests were utilized to assess the listening proficiency before and after implementation. A listening proficiency test was applied from Ahead with English 7: Practice Book. It consists of two sections. At first section, students are asked to write the words they hear. At second section there are 5 multiple-choice questions.

The data collected was analyzed using descriptive statistics (mean, median, mode) and inferential statistics to decide about the effectiveness of the implementation. Due to the number of samples more than 30 students, Kolmogorov-Smirnova was used. Normality tests indicated that the pre-test ($p = ,018$) and post-test ($p = ,002$) data ($p \leq 0.05$) do not demonstrate a normal distribution. So, Wilcoxon Signed-Rank Test was used to analyze the data in this study to see whether there is a difference between the two pre-test and post-test scores. The findings of the analysis of pre and post listening proficiency tests indicated that Duolingo enhanced listening comprehension of 7th grade EFL students. The findings of this study may inspire language teachers to integrate digital tools like Duolingo while teaching the listening ability. They can use Duolingo as a resource for listening practice both inside and outside the classroom. This may make courses more varied and technology supported.

Keywords: Mobile-Assisted Language Learning, Listening Proficiency, Duolingo, Autonomous Learning

DESIGN AND ANALYSIS OF CARBON FIBER REINFORCED

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This study aims to enhance the structural performance of pressure vessels manufactured using carbon fiber-reinforced composite materials. It focuses on evaluating the effects of different filament winding angles (30°, 45°and 75°) and layer thicknesses on stress distribution, deformation and damage criteria. Finite element analyses revealed that a 75° winding angle results in the lowest stress concentrations, making it the most structurally advantageous configuration. Pressure vessels are essential engineering structures designed to safely store gases and liquids under high pressure. They are widely used in industries such as energy, chemicals, aerospace, food and pharmaceuticals. Depending on the materials used and the manufacturing techniques, pressure vessels are classified from Type I to Type IV. Type I vessels are fully metallic, while Type IV vessels are composed entirely of polymer liners wrapped in carbon fiber, making them the lightest and most advanced. Filament winding is a modern manufacturing method that involves wrapping composite fibers at specific angles to enhance mechanical strength while reducing weight. In this study, titanium alloy (Ti-3Al-8V-6Cr-4Mo-4Zr) was used as the liner material and two types of carbon fiber composites (Composite and Epoxy Carbon UD) were analyzed. Three different winding angle combinations were tested: 30°/90°/-30°/90°, 45°/90°/-45°/90° and 75°/90°/-75°/90°. Models were created using SolidWorks software and 38 MPa internal pressure was applied while both ends of the vessel were fixed. The outcomes were evaluated based on von Mises stress, displacement and damage predictions. In the stress analysis, the 75° winding angle configuration exhibited the lowest von Mises stress values. This confirms that 75° provides the highest structural integrity. Epoxy Carbon, in particular, demonstrated a more homogeneous stress distribution and higher resilience to stress. The top layer also showed similar patterns, with the 75° angle emerging as the optimal choice for both Composite and Epoxy Carbon materials. Displacement analysis indicated that both materials experienced the least deformation at the 75° winding angle. At 30° and 45°, the displacement reached up to 0.6 mm, while at 75°, it decreased to 0.04 mm. This demonstrates that the 75° configuration is superior not only in terms of stress but also in minimizing structural deformation. Three widely recognized damage prediction models -Tsai-Hill, Tsai-Wu, and Maximum Stress- were used for composite materials. The lowest safety factors were observed at 30°, indicating a higher risk of failure. The 45° angle provided more balanced load distribution, while the 75° angle showed the highest safety factors. Tsai-Wu offered a broader safety range and the Maximum Stress model provided the most conservative estimate. These results collectively suggest that the 75° winding angle ensures the highest reliability. Design optimization was conducted with two configurations. In the first scenario, a 2 mm thick titanium layer was combined with a 1 mm carbon fiber layer. In the second, the titanium layer was reduced to 1 mm while the carbon fiber layer was increased to 2 mm. In the first setup, the von Mises stress on the titanium was 187.2 MPa, while the composite layer experienced 214.1 MPa. Displacement was 0.06 mm, and the Tsai-Hill and Tsai-Wu safety factors were 2.3 each. In the second scenario, reducing the titanium layer thickness led to an increase in its stress (247.6 MPa) but a decrease in composite stress (134 MPa). Displacement dropped to 0.04 mm, and safety factors rose significantly to 4.2 and 4.3. These findings indicate that thicker composite layers and thinner titanium layers enhance overall strength and minimize deformation, though the titanium must bear greater stress. Thus, the selection of layer thickness must be tailored to specific application requirements. In conclusion, carbon

fiber-reinforced composite pressure vessels provide substantial advantages over traditional metallic designs, including high strength, low weight and optimized performance. Among the tested configurations, the 75° winding angle offers the best results in terms of stress, deformation, and damage resistance. Optimizing the thickness of titanium and composite layers further improves structural efficiency. These findings suggest that such composite structures are well-suited for high-performance applications in aerospace, automotive and hydrogen storage systems where safety and weight reduction are critical.

Keywords: Carbon Fiber, Pressure Vessel, Filament Winding, Composite Materials

DESIGN AND FABRICATION OF ROV FOR PEST AND DISEASE CONTROL IN MANGGO FARM AT KOTA SARANG SEMUT, KEDAH STATE, MALAYSIA.

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Agriculture is an important sector in Malaysia, contributing to the country's gross domestic product (GDP) and providing employment opportunities for its people. The rural development plan also shifted its focus to the agricultural sector. On the other hand, economic diversification has recently shifted from agriculture to manufacturing and service industries. Comprehensive reforms are needed to revitalise Malaysia's agricultural economy through the implementation of smart agriculture. Traditional agricultural methods pose numerous challenges to farmers, including physical and toxic hazards from the environment. These hazards can lead to heat stroke, death or injury due to unknown hazards during manual labour, and poisoning during crop fertilization. Incomplete equipment can also cause skin and respiratory diseases. Traditional agriculture is inefficient, taking a long time to harvest crops, which can lead to food production failing to keep up with consumption and importing more food from other countries. This unbalanced trade between countries will also be unavoidable. Therefore, it is crucial for farmers to adopt more sustainable and efficient methods to mitigate these potential risks. This research proposes a remote-control spraying robot design, also known as ROV robot pest nutrition robot, which aims to prevent pesticides from directly contacting the human body in agricultural production and improve the efficiency of agricultural spraying operations. The study focuses on three main tests to validate the functionality and effectiveness of fabricated prototypes and systems. The first test validates an online digital image processing method for disease identification and categorization using Fast k-Means Clustering. The second test integrates a real-time robotic monitoring system using LoRa technology, involving a mobile robot and a mixer station. The final test evaluates the automatic production system of pesticide mixture composition using LoRa technology.The online digital image processing method was tested on a mango tree using the mobile robot monitored from the control centre using LoRa and the result was portrayed. Clearly shown that the proposed method capable detecting the different disease online using LoRa. The sample was infected by anthracnose and die black disease. The online monitoring system allowed the operator to control the robot's movement, detection of diseases and spray of pesticide and fertiliser in real time from the control centre using Lora. The RSSI value recorded from Pusat Teknologi Mempelam Sala Kanan, shows that there is proportional relation between the 'ping' speed/ tag speed with distance. Furthermore, this results also indicates that the longest 'ping' speed approximately 500 µ second at distance of 287 m. The mixer station consists of four 80l tanks controlled by LoRa from the control centre. Each tank is assisted by a pump (4.7l/m, 12 V, 2.3A) and a motor (12V, 350 W, 7A) whereas the motor able to mix the pesticide/fertiliser evenly, ensuring efficient operation. The operator can direct the robot to replace the work of the worker, and the robot has a camera as a monitoring device. The agricultural sector, producers and consumers have all benefited from this research. This research also predicts potential future trends. This research has the potential to improve people's lives by advancing technology and innovation, as well as promoting economic and environmentally responsible growth.

Keywords: Agriculture, Diseases, Remote Control, Robot And Pesticides.

DİJİTAL OLGUNLUK İLE DİNAMİK YETENEKLERİN ETKİLEŞİMİ: PRISMA TEMELLİ SİSTEMATİK ANALİZ

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Bu araştırmada dijital olgunluk ile dinamik yetenekler arasındaki ilişkiyi etkileyen faktörleri belirlemek için yapılan çalışmaların sistematik olarak analizi ve bu kavramların literatürde ilişkili olduğu araştırma alanlarını tespit etmek amaçlanmıştır. Bu bağlamda Scopus, Web of Science ve Google Akademik veri tabanlarında dijital olgunluk ve dinamik yetenekler kavramlarını birlikte ele alan çalışmalar üzerinden tarama gerçekleştirilmiştir. Tarama sonucunda 9 çalışma belirlenen analiz kriterini sağladığı için çalışmaya dahil edilmiştir. Araştırma, literatürde yapılan çalışmaların geriye dönük olarak taranması şeklinde gerçekleştirilmiştir. Araştırmada ikincil veriler kullanılmıştır. Sistematik derlemelerin hazırlanmasında PRISMA metodundan faydalanılmıştır. Ayrıca Scopus veri tabanı üzerinde dijital olgunluk kavramı ile ilgili 2012 – 2025 yılları arasında 526 çalışmanın ele alındığı, dinamik yetenekler kavramı ile ilgili ise 1994 – 2025 yılları arasında 7.271 çalışmanın yapıldığı tespit edilmiş, bu veriler bibliyometrik analiz yöntemiyle incelenerek kavramların ilişkili olduğu araştırma alanları belirlenmiştir. Elde edilen bulgulara göre, dijital olgunluk ile dinamik yetenekler arasındaki etkileşimin yalnızca teknoloji boyutunun ötesinde kültür, organizasyon yapısı, iş süreçleri, müşteri ilişkileri ve dönüşüm yeteneği bağlamında da ele alınması gerektiği görülmüştür.

Keywords: Digital Maturity, Dynamic Capabilities, Digitalisation, PRISMA Method

SCOPE-BIAS: SOCIAL CONTEXTUAL OPTIMIZATION FOR EVALUATING BIAS IN AI SYSTEMS

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The Generative AI (Gen AI) Large Language models (LLMs) are being used in every filed of life including healthcare industry, business and finance analytics, social media and education. Some of these models are very popular because of their well-trained intelligent models like ChatGPT, Gemini and DeepSeek. These models have revolutionized every aspect life. Although they are very helpful and intelligent in performing human-oriented tasks, they still have certain limitations in their knowledge base and decision-making processes. These models are trained on massive dataset which are collected from the various online resources like online books, journals, research articles and other social forums like Facebook or Twitter. These datasets reflect real world human biases related to race, gender, culture and political trends. These models struggle to accurately detect the human biases. The purpose of this research to analyze the biases of Generative AI (Gen AI) models. Our proposed solution, Social Contextual Optimization for Evaluating Biasness (SCOPE-BIAS) assesses bias in Gen AI models. Our proposed model has three key components: a collection of comprehensive dataset with diversity of features like different social contextual scenarios which are specially focused on race, gender, socioeconomic status, secondly a dialog probing system that monitors the biases generated by the Gen AI models during conversational trainings and thirdly a semantic scoring engine that enables the in depth analysis of the linguistic biases during conversation. We have used the CrowS-Pairs dataset for our SCOPE-BIAS model to check the biases of Gen AI models. The CrowS-Pairs dataset is specially used for analyzing the biases in the Gen AI models because these are related to the different social contextual scenarios like race, gender, religion and sexual orientation. It is comprised of sentence pairs where one sentence shows a biased stereotype while the other sentence reflects the neutral or anti stereotype response. The diversity of the CrowS-Pairs dataset makes it more valuable benchmark for evaluating the implicit biases that a Gen AI model carries due to its training dataset. We analyzed the data patterns of the Crows-Pairs dataset using UMAP (Uniform Manifold Approximation and Projection) for dimension reduction of non-linear data and for visualization, K-medoids clustering with cosine distance to group content into semantic clusters, analyzing bias patterns across dimensions like gender and race, and binary linear regression for assessing the likelihood of the Gen AI model preferring stereotypical language over neutral or anti-stereotypical language. We have implemented our proposed model on the three most popular Gen AI models like Google's Gemini 2.5, OpenAI's GPT-4o and DeepSeek's DeepSeek-V3. Testing and training on the latest Gen AI models as mentioned above show reduced explicit bias, but implicit bias persists. Our proposed solution combines the social contextual with semantics evaluations to represent the multidimensional insight functionality of the Gen AI that is very helpful for the developers and policy makers of Gen AI models and enables them to deploy responsible and reliable Gen AI models.

Keywords: Generative AI (Gen AI) Large Language Models (LLMs)Social Bias, Implicit Bias Detection, CrowS-Pairs Dataset, SCOPE-BIAS, Bias Evaluation, Bias Evaluation, Responsible AI, Social Contextual Analysis.

ÖTENİN KEŞFİ: YAPAY ZEKÂ DESTEKLİ BİYO ANALİZLERLE İNSAN HAYATINDA YENİ BİR EPİSTEMOLOJİ

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Bu çalışma konusu, insan vücudunun performans seviyelerinin daha geniş ve farklı yollarla ölçülmesine olanak sağlayarak, özellikle "ordu mensupları"nın vücut imkanlarının araştırılmasına odaklanarak hem askeri alanda hem de insan gücü veya zekâsı gerektiren diğer iş alanlarında önemli gelişmelere yol açmayı hedeflemektedir. Çalışmanın temel amacı, elde edilen verilerle çalışma alanlarının insanlara daha tutarlı ve etkili bir şekilde uyarlanmasını sağlamaktır. Bu sayede, insan gücünün ve zihinsel kapasitenin en üst düzeyde kullanılması hedeflenmektedir. Mevcut literatürde bu veya benzeri konularda yapılan çalışmaların sonuçlarının eksik, tamamlanmamış veya çok dar alanları kapsaması, iş ortamlarının yüksek seviyede teşkilinde sorunlara yol açmakta ve bireylerin vücut performanslarının yeterli düzeyde ölçülememesine neden olmaktadır. Bu çalışma, literatürdeki bu boşluğu doldurarak, insan vücudunun performansının daha kapsamlı ve detaylı bir şekilde ölçülmesine olanak sağlayacak yeni bir metodoloji sunmayı amaçlamaktadır. Çalışmanın en önemli katkılarından biri, insan vücudunun performansını sadece fiziksel değil, aynı zamanda zihinsel ve bilişsel yetenekleri de kapsayacak şekilde geniş bir perspektiften ele almasıdır. Bu sayede, insan performansının çok boyutlu ve karmaşık yapısı daha iyi anlaşılacak ve farklı iş alanlarına yönelik daha özelleştirilmiş çözümler geliştirilebilecektir. Çalışmanın pratik uygulamalara odaklanması, elde edilen verilerin iş ortamlarının insanlara daha uyumlu ve etkili bir şekilde adapte edilmesine olanak sağlaması, çalışmanın değerini artırmaktadır. Bu sayede, iş verimliliği artırılabilecek, iş kazaları azaltılabilecek ve çalışanların memnuniyeti artırılabilecektir. Sonuç olarak, bu çalışma, insan vücudunun performansının ölçülmesi ve bu bilgilerin iş ortamlarına uygulanması konusunda önemli katkılar sağlayacaktır. Elde edilen bulgular, sadece askeri alanda değil, aynı zamanda sağlık, eğitim, spor gibi birçok farklı alanda da insan performansının geliştirilmesine yönelik yeni bakış açıları sunacaktır.

Genel Amaç: İnsan vücudunun performans seviyelerinin daha geniş ve farklı yollarla ölçülmesine olanak sağlayarak, özellikle "ordu mensupları"nın vücut imkanlarını araştırmak ve bu bilgileri insan gücü veya zekâsı gerektiren her türlü iş alanında kullanarak, çalışma alanlarının insanlara daha uyumlu ve etkili bir şekilde adapte edilmesini sağlamak. Bu süreçte, özgün ve yenilikçi yöntemler veya teknolojiler geliştirmek çalışmanın genel amaçları arasında yer alır.

Keywords: Fonksiyonel Adaptasyon, Biyo-Analiz, Entegre Teknoloji, Fikri Mülkiyet Potansiyeli, Disiplinlerarası Füzyon

TYPES OF LINGUISTIC EVALUATION

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Over time, human development continues at various levels without stopping, and this dynamic phenomenon is also reflected in the structure of language: new sounds, newly coined words, expressions, and grammatical changes that enrich world languages are constantly in dynamic transformation. Such change, of course, also occurs in the meaning and usage of the semantic category of evaluation and with its types. For example, a description or positive evaluation given to ideal Uzbek youth two centuries ago may not be considered valuable in today's Uzbek society. Or, concepts like entrepreneurship, personal business, and trade, which are valued today, were completely criticized fifty years ago in Uzbek society with words like "speculator" or "reseller." Thus, the category of evaluation is dynamic, and its reflection in the lexical layer will be further explored in article.

We believe that as a philosophical, logical, and linguistic category, evaluation reflects diversity and gradation due to the factors analyzed in the previous section, and we base our classification of evaluation types on this gradation. Evaluation cannot be confined to one field of study; in expressing evaluation, concepts such as religion, society, nation, and values form a gradation of meaning and are divided into two poles in relation to neutral evaluation.

Therefore, based on semantics and axiological factors, evaluation is initially divided into positive (valued) and negative (devalued) categories. Depending on who and how the object is evaluated, evaluation can be classified as objective or subjective. As objectivity in speech is relative and partly subjective, subjectivity is what brings color and diversity to language. Subjective evaluation includes general and specific, absolute and temporary, emotional and unemotional types, expressing individual, group, or societal attitudes. In our research, we aim to study evaluation comprehensively, classifying it into groups.

Evaluation is expressed through phonetic, lexical, morphological, syntactic levels, paralinguistic tools, and oral/written speech content. In phonetics, segmental and suprasegmental units are used; in lexicon, evaluation is expressed through the context of words; in morphology, through parts of speech and affixes; in syntax, through word combinations and sentences. Non-verbal means, whether used alone or alongside verbal units, also convey evaluation. In oral speech, these are visually observed, while in writing they are described by the author.

Keywords: Evaluation, Types Of Evaluation, Positive, Neutral And Negative Evaluation, Axiological Evaluation, Linguistic Evaluation.

DİJİTALLEŞME SÜRECİNDE VERGİ UYUMU: OECD ÜLKELERİNDE GELİŞİM

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Kamu gelirlerinin büyük bir çoğunluğunu oluşturan vergiler, en az kayıpla ve etkin bir şekilde tahsil edilebilmesi için mükelleflerin vergilendirme sürecine uyum sağlamaları kritik bir öneme sahiptir. Mükelleflerin vergi uyumunun sağlanmasında demografik, ekonomik, psikolojik ve siyasi birçok unsurun belirleyici etkisi bulunmaktadır. Bu unsurların yanı sıra dijitalleşmenin de vergi uyumu üzerinde giderek artan bir etkisi olduğu görülmektedir. Dijitalleşmenin tarihsel arka planına baktığımızda sanayi devriminden sonra üretim süreçlerine teknolojinin entegre edilmesiyle birlikte toplumsal ve ekonomik alanda köklü değişimlere neden olmuş ve beraberinde dijital dönüşüm zorunlu kılınmıştır. Bu dönüşüm zamanla üretim süreçleriyle sınırlı kalmamış, 20. yüzyılın ikinci yarısından itibaren bilgi ve iletişim teknolojilerinde artan hızlı gelişmelerle birlikte dijitalleşme süreci planlı bir şekilde bütün dünyaya yayılmıştır. Günümüzde dijitalleşme, sadece teknolojik bir değişimin ötesinde, kamu yönetiminden vergi sistemlerine kadar pek çok alana yeniden yön veren kapsamlı bir dönüşüm sürecini ifade etmektedir. Vergi uyumu bağlamında dijitalleşmeye baktığımızda ise, vergilendirme süreçlerinin etkinliğini artırmak ve mükelleflerin uyum düzeylerini iyileştirmek açısından kritik bir rol oynamaktadır. Dijital teknolojiler, vergi idarelerinin şeffaf ve hesap verebilir olmasına, vergi işlemlerinde otonom sistemleri kullanarak maliyetleri düşürmesine, vergi kayıp ve kaçağını azaltılmasına olanak tanımaktadır. Özellikle e-fatura, elektronik beyanname ve denetim gibi uygulamalar mükelleflerin vergiye olan uyum düzeyini artırırken, vergi idarelerinin de işlemlerine daha hızlı ve doğru bir şekilde gerçekleştirmelerine imkân sunmaktadır. Bu dijital dönüşüm, vergi uyumunun yalnızca ekonomik değil, aynı zamanda idari ve sosyal boyutlarını da etkileyerek, vergi sisteminin verimliliğini ve etkinliğini artırmaktadır. Bu doğrultuda dijitalleşme, vergi uyumunu teşvik eden yapısal bir unsur olarak öne çıkmakta ve kamu maliyesinin sürdürülebilirliğine önemli katkılar sağlamaktadır. Dijitalleşmenin sağladığı bu gelişmelerin yanı sıra bazı zorlukları da bulunmaktadır. Veri güvenliği, kişisel verilerin korunması ve teknolojiye erişimdeki eşitsizlikler dijitalleşmenin en önemli zorlukları arasında yer almaktadır. Özellikle bazı ülkelerde, vatandaşların dijital uygulamalara uyum süreci yavaş ilerlemekte, bu durum dijital vergi reformlarının etkinliğini sınırlamaktadır. Bu sürecin etkin olabilmesi için, güvenlik, eşitlik ve erişilebilirlik gibi faktörler dikkate alınarak uygun politika ve altyapılarının geliştirilmesi gerekmektedir.

Araştırmanın temel amacı, dijitalleşmenin vergi uyumu üzerindeki etkilerini çeşitli boyutlarıyla ele almaktır. Bu bağlamda, çalışmada önÇelikle dijitalleşmeye yönelik kavramsal çerçeve sunulmuş ardından dijitalleşme ve vergi uyumunun tanımı, tarihsel süreci, avantaj ve dezavantajlarına ilişkin bilgilere yer verilmiştir. Daha sonra dijitalleşmeyi etkileyen vergi uyumu faktörlerinden bahsedilmiş ve dijitalleşmenin vergi uyumu üzerindeki olumlu ve olumsuz etkilerine değinilmiştir. Dijitalleşmenin vergi uyumu üzerindeki etkilerini analiz edebilmek amacıyla, ABD, Almanya, Kanada, Fransa, İngiltere, Güney Kore ve Türkiye gibi OECD'ye üye olan ülkeler inceleme kapsamına alınmıştır. Bu ülkelerin tercih edilmesinin temel nedeni, OECD'ye üyesi ülkelerin coğrafi farklılıklarının bulunması ve böylelikle çeşitli sosyo-ekonomik ve idari yapılara sahip bölgelerde yer almalarıdır. Bu durum, dijital vergi uygulamalarının yalnızca teknik yönlerini değil, aynı zamanda kurumsal, yönetsel ve kültürel etkilerini de karşılaştırmalı biçimde değerlendirme imkânı tanımaktadır. İncelenen ülkelerden bazıları dijitalleşme sürecinde öncü reformlar gerçekleştirirken, bazıları ise henüz dijitalleşme sürecini

kurumsallaştırma aşamasındadır. Bu doğrultuda seçilen ülkeler, dijitalleşme ve vergi uyumunun küresel düzeydeki etkilerini karşılaştırmalı bir yaklaşımla ortaya koymaktadır.

Araştırma yöntemi olarak literatür taraması, OECD raporlarının incelenmesi ve ülkelerin vergi idarelerinin internet siteleri taranarak somut uygulamaların karşılaştırılması tercih edilmiştir. Ayrıca dijital dönüşüm süreçlerine dair akademik literatürden de yararlanılarak, kavramsal çerçeve oluşturulmuştur. Elde edilen bulgular çalışma kapsamında seçilen ülkelerde dijitalleşmenin vergi uyumunu artırmaya yönelik önemli sonuçlar doğurduğunu göstermektedir. Bununla birlikte dijitalleşmenin yalnızca teknik bir ilerleme değil, aynı zamanda yönetim süreçlerini daha verimli hale getiren, vergi uyumunu kolaylaştıran ve vatandaşların vergi sistemine duyduğu güveni artıran önemli bir dönüşüm olduğu ortaya koymaktır. Bu çalışma ile dijital gelişim sürecinde OECD ülkelerinin vergi uyumu üzerindeki etkisinin tespit edilmesi, literatür araştırmasında dijitalleşme ve vergi uyumu konularını birlikte ele alan araştırma ve çalışmaların az olmasından kaynaklı literatüre katkıda bulunulması ve gelecekte konuyla ilgili yapılacak olan çalışma ve araştırmalara örnek teşkil etmesi açısından önem taşımaktadır.

Keywords: Dijitalleşme, Vergi Uyumu, OECD ülkeleri

HİZMETKAR LİDERLİĞİN KONAKLAMA SEKTÖRÜNE ETKİSİ LİTERATÜR TARAMASI

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Günümüz iş dünyasında hızla değişen dinamikler, örgütlerin sürdürülebilir başarı elde etmesi için liderlik anlayışlarında da dönüşümü zorunlu kılmaktadır. Bu çerçevede öne çıkan hizmetkâr liderlik yaklaşımı, geleneksel otoriter liderlik tarzlarından farklı olarak, liderin önceliği kendi güç ve statüsünü değil, çalışanların ihtiyaçlarını, gelişimlerini ve refahlarını ön planda tutmayı esas alır. Hizmetkâr liderlikte liderin temel rolü; çalışanlara hizmet etmek, onları desteklemek ve potansiyellerini gerçekleştirmelerine olanak sağlamaktır. Bu anlayış; dinleme, empati, alçakgönüllülük, sorumluluk alma, vizyon paylaşımı ve toplum yararına odaklanma gibi değerlere dayanmaktadır. Konaklama sektörü, hizmet sunumunun doğrudan insan ilişkilerine dayandığı, müşteri memnuniyetinin büyük ölçüde çalışan performansına bağlı olduğu bir sektördür. Bu sektörde başarılı hizmet sunumu yalnızca süreçlerin değil, çalışanların motivasyonunun, bağlılığının ve iş tatmininin yüksek olmasına da bağlıdır. Dolayısıyla çalışanların duygusal ihtiyaçlarının göz ardı edilmediği, destekleyici ve güvene dayalı bir liderlik tarzı, konaklama sektöründe hem çalışan deneyimini hem de müşteri memnuniyetini artırmak açısından kritik bir rol oynamaktadır. Bu bağlamda, hizmetkâr liderlik yaklaşımı, konaklama sektöründe çalışan davranışları, örgütsel performans ve hizmet kalitesi üzerinde etkili olabilecek stratejik bir yönetim anlayışı olarak değerlendirilmektedir.

Bu çalışmanın temel amacı, hizmetkâr liderliğin konaklama sektöründeki etkilerini ele alan ampirik araştırmaları sistematik bir şekilde incelemek ve mevcut literatürdeki eğilimleri ortaya koymaktır. Araştırma kapsamında Web of Science veri tabanı üzerinde "servant leadership" ve "hospitality" anahtar kelimeleriyle yapılan taramada toplam 55 çalışmaya ulaşılmıştır. Bu çalışmalar arasından yalnızca ampirik yöntemle hazırlanmış olan 45 çalışma seçilmiş ve detaylı analizlere tabi tutulmuştur. Çalışmalar; yayın yılına, yazar bilgilerine, araştırma yöntemine (nicel, nitel, karma), örneklem özelliklerine (otel çalışanları, yöneticiler, müşteriler vb.) ve incelenen temel değişkenlere (iş tatmini, örgütsel bağlılık, hizmet kalitesi, lider-çalışan ilişkisi, iş performansı vb.) göre sınıflandırılmıştır. Analiz sonuçlarına göre hizmetkâr liderliğin konaklama sektöründe çok boyutlu olumlu etkileri olduğu görülmektedir. Bu liderlik tarzının benimsendiği kurumlarda çalışanların iş tatmininin arttığı, örgütsel bağlılık düzeylerinin yükseldiği ve hizmet kalitesi algısının olumlu yönde geliştiği tespit edilmiştir. Ayrıca çalışanlar arasında güven duygusunun arttığı, liderle kurulan ilişkinin daha samimi ve destekleyici olduğu, bunun da iş motivasyonunu artırarak performansa yansıdığı gözlemlenmiştir. Bunun yanında hizmetkâr liderliğin, çalışanların işe yabancılaşma düzeylerini azalttığı, işten ayrılma niyetlerini düşürdüğü ve takım içi iş birliğini güçlendirdiği belirlenmiştir. Özellikle çalışanların karar alma süreçlerine dâhil edilmesi ve liderleri tarafından değerli hissetmeleri, çalışan bağlılığını güçlendiren temel unsurlar olarak ön plana çıkmaktadır.

Çalışmanın bulguları, sadece bireysel düzeyde değil, örgütsel düzeyde de anlamlı katkılar ortaya koymaktadır. Hizmetkâr liderlik, kurum içinde daha pozitif bir örgütsel iklimin oluşmasına katkı sağlamakta, çalışanlar arası çatışmaları azaltmakta ve uzun vadeli performans artışına zemin hazırlamaktadır. Müşteri ilişkilerinde de bu liderlik tarzının dolaylı etkileri olduğu, çalışan memnuniyetindeki artışın müşteri deneyimine olumlu yansıdığı ifade edilmektedir. Sonuç olarak, konaklama sektöründe faaliyet gösteren işletmelerin hizmetkâr liderlik anlayışını stratejik bir yönetim politikası haline getirmeleri, hem çalışan refahı hem de kurumsal verimlilik açısından büyük önem taşımaktadır. Bu doğrultuda önerilen stratejiler arasında, yöneticilere yönelik hizmetkâr liderlik

eğitimlerinin düzenlenmesi, liderlik gelişim programlarının bu yaklaşımı temel alacak şekilde yeniden yapılandırılması, performans değerlendirme sistemlerinin çalışan destekleme odaklı hale getirilmesi ve kurum kültürünün hizmetkâr değerlere göre şekillendirilmesi yer almaktadır.

Bu sistematik inceleme, konaklama sektöründe hizmetkâr liderlik uygulamalarının hem akademik hem de pratik düzeyde değerli sonuçlar doğurduğunu ortaya koymakta ve gelecekteki araştırmalara yön verecek önemli bir kaynak sunmaktadır.

Keywords: Servant Leadership, Hospitality Industry, Job Satisfaction, Organizational Commitment

ALGILANAN ÖRGÜTSEL DESTEK, İŞYERİ MUTLULUĞU, ÖRGÜTSEL GÜVEN VE İŞİN POZİTİF ANLAMI ARASINDAKİ İLİŞKİLER: BİR DURUMSAL ARACILIK MODELİ

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Bu araştırmanın amacı algılanan örgütsel destek, işyeri mutluluğu, örgütsel güven ve işin pozitif anlamı arasındaki ilişkileri bir durumsal aracılık modeli uygulayarak incelemektir. Türkiye'de Büyükşehir belediyelerinde halen görev yapmakta olan 394 itfaiyeci (%96,2 erkek; %3,8 kadın) algılanan örgütsel destek, örgütsel güven, işyeri mutluluğu ve işin pozitif anlamı ölçeklerini doldurmuştur. Verilerin analizi için IBM SPSS, IBM SPSS eklentisi olan Process Macro ve Amos Paket programları kullanılmıştır. Aracılık modeli algılanan örgütsel desteğin işin pozitif anlamını yordadığını göstermiştir. Aynı zamanda işyeri mutluluğu algılanan örgütsel desteğin işin pozitif anlamı üzerindeki etkisine aracılık etmiştir. Ayrıca örgütsel güven algılanan örgütsel destek ile işyeri mutluluğu arasındaki ilişkiyi pozitif olarak düzenlemiştir. Ek olarak örgütsel güvenin koşullu etkilerinin her üç durumda da (ortalamanın bir standart sapma altında, ortalamada ve ortalamanın bir standart sapma üstünde) algılanan örgütsel desteğin işyeri mutluluğu üzerindeki etkisinin pozitif yönde düzenlediği görülmüştür. Çalışma algılanan yönetici desteği, örgütsel güven ve işyeri mutluluğunun işin pozitif anlamını artırabileceğini göstermiştir. Bu bulgular çalışanlar için önemli bir konu olan işin pozitif anlamını yükseltmek için önemli ipuçları vermektedir.

Keywords: Algılanan Örgütsel Destek, Örgütsel Güven, İşyeri Mutluluğu, İşin Pozitif Anlamı, Durumsal Aracılık..

DİJİTAL DÖNÜŞÜM VE REKABETÇİLİK: STRATEJİK BİR DEĞERLENDİRME

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Küresel ölçekte giderek yoğunlaşan rekabet ortamı, işletmelerin sürdürülebilir rekabet avantajı elde edebilmesi için çevresel değişkenlere hızla uyum sağlayabilmesini bir zorunluluk haline getirmiştir. Bu bağlamda, dijital dönüşüm süreci yalnızca teknolojik bir adaptasyon değil, firmaların stratejik kapasitesini dönüştüren, organizasyonel yapıyı yeniden şekillendiren ve işletme kültüründe kalıcı değişiklikler meydana getiren çok boyutlu bir süreç olarak öne çıkmaktadır. Özellikle dijital teknolojilerin hızlı gelişimiyle birlikte iş süreçleri, organizasyonel yapılanmalar ve yönetim anlayışlarında köklü dönüşümler yaşanmakta; bu dönüşüm süreci, firmaların rekabetçilik seviyelerini doğrudan etkilemektedir.

Bu çalışma, dijital dönüşüm ile rekabetçilik arasındaki ilişkiyi sistematik bir perspektifle analiz etmeyi amaçlamaktadır. Web of Science veri tabanında “Digital Transformation” ve “Competitiveness” anahtar kelimeleriyle gerçekleştirilen literatür taraması sonucunda ulaşılan 22 çalışmadan, dahil edilme kriterlerini karşılayan 18 ampirik makale detaylı olarak incelenmiştir. Sistematik literatür taraması yöntemi esas alınarak yürütülen bu analizde, seçilen çalışmalar yayın yılı, araştırma yöntemi, örneklem türü ve incelenen değişkenler bakımından sınıflandırılmış; içerik analizi ile beş ana tema altında toplanmıştır: dijital rekabetçilik, yeşil rekabetçilik, finansal rekabetçilik, üretim ve verimlilik rekabetçiliği ile dijital olgunluk ve stratejik rekabet. Elde edilen bulgular göstermektedir ki dijital dönüşüm, firmaların operasyonel verimliliğini artırmakta, yenilikçilik kapasitelerini geliştirmekte ve sürdürülebilir rekabet avantajı elde etmelerine katkı sunmaktadır. Aynı zamanda firmaların pazara adaptasyon süreçlerini hızlandırmakta, müşteri deneyimini iyileştirmekte ve dijital iş modelleri aracılığıyla yeni gelir kaynakları yaratmaktadır. Bu etkiler sektör, firma ölçeği ve bölgesel farklılıklar gibi değişkenlere göre farklılık gösterse de genel eğilim dijitalleşmenin rekabet gücünü artırdığı yönündedir. Özellikle dijital rekabetçilik kapsamında, dijital teknolojilerin stratejik hedeflerle bütünleştirilmesi sayesinde firmaların pazardaki konumlarını güçlendirdikleri görülmektedir. Ancak dijital dönüşümün yalnızca teknolojik yatırımlarla başarıya ulaşamayacağı da vurgulanmalıdır. Kurumsal dijital kültürün yerleşmesi, çalışanların dijital becerilerinin geliştirilmesi, üst yönetim desteği ve dijital liderlik becerilerinin kurumsallaşması gibi unsurlar bu sürecin başarısında kritik rol oynamaktadır. Ayrıca organizasyonel esneklik, çevikliğin artırılması ve yenilikçiliğe açık bir yapı oluşturulması da dijital dönüşüm sürecinin verimliliğini doğrudan etkilemektedir. Bu durum, dijitalleşmenin sadece teknik değil, aynı zamanda kültürel ve yönetsel bir değişim süreci olduğunu ortaya koymaktadır.

Analiz edilen çalışmalarda, dijital dönüşümün sektörel bazda farklı rekabetçilik türlerine etkisi de dikkat çekmektedir. Örneğin, yeşil rekabetçilik kapsamında çevre dostu üretim, enerji verimliliği ve karbon ayak izi yönetimi gibi alanlarda dijital teknolojilerin kullanımı firmalara yeni pazar fırsatları yaratmaktadır. Finansal rekabetçilik bağlamında, dijital finansal hizmetler, blokzincir tabanlı uygulamalar ve yapay zekâ destekli karar mekanizmalarının kullanımı, firmaların maliyetlerini düşürmekte ve finansal yönetim süreçlerini iyileştirmektedir. Üretim ve verimlilik ekseninde ise Endüstri 4.0 uygulamalarının dijital dönüşüm sürecinde kilit rol oynadığı görülmektedir. Dijital olgunluk düzeyi yüksek olan firmaların uzun vadeli stratejik başarıyı daha yüksek ihtimalle yakalayabildikleri, dijital dönüşüm yatırımlarının sadece kısa vadeli operasyonel fayda değil, aynı zamanda uzun vadeli kurumsal dayanıklılık sağladığı da araştırmalarla ortaya konmuştur. Bu noktada

dijital olgunluk göstergelerinin stratejik karar alma süreçlerinde bir performans ölçütü olarak değerlendirilmesi gerektiği söylenebilir. Sonuç olarak, dijital dönüşüm süreci yalnızca teknolojik bir gereklilik olarak değil, aynı zamanda firmaların ve ülkelerin rekabetçiliğini belirleyen stratejik bir unsur olarak ele alınmalıdır. Bu çalışma, hem akademik literatüre katkı sunmakta hem de kamu politikaları ve özel sektör stratejileri için dijital dönüşümün çok boyutlu etkilerine dair rehberlik niteliğinde çıkarımlar ve öneriler sunmaktadır. Bu yönüyle dijital dönüşüm, ekonomik kalkınma, verimlilik artışı ve küresel pazarlarda rekabet gücü elde etme süreçlerinin temel yapı taşlarından biri olarak değerlendirilmektedir.

Anahtar Kelimeler: Dijital Dönüşüm, Rekabetçilik, Teknolojik Yenilikler

POLITICS OF BLUE AND GREEN TECHNOLOGIES: A THEORY OF US-EU TECH CONFLICT

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Technology has never been politically neutral, but recent developments in blue (AI) and green (renewable energy) technologies are now at the forefront of techno-political tensions, signaling a shift in transatlantic relations. This paper makes a unique contribution by proposing a new International Relations theory that integrates both ideological and material forces, challenging the constructivist focus on ideas alone. The theory presented here accounts for the complex interplay of discourse and material realities in shaping political dynamics, offering a more comprehensive framework for understanding the intersection of technology, politics, and sustainability. Specifically, the research examines the discursive and policy actions of the U.S., particularly during President Trump's second term, and the European Union. To develop this theory, the study employs abductive and retrodictive reasoning within the metatheoretical framework of critical realism. Moreover, the study reframes Margaret Archer's morphogenetic approach within the context of International Relations to demonstrate the relationships between ideas and material forces, as well as their interactions. The study also uses empirical cases such as statements, domestic and foreign policy papers, news articles, and existing literature as data to construct this theory.

In the first section of the study, a critical realist metatheoretical framework, as well as the nature and functioning of international relations, will be outlined. The subsequent section discusses post-Cold War transatlantic relations within the given theoretical framework. The third section examines the political aspects of green technologies, the EU's push for the normative "Brussels Effect," and its impact on the domestic politics of the United States. The next section analyzes artificial intelligence in a political sense and how the U.S. uses it to challenge the sovereignty of European states. The final section discusses the potential impacts of this tech confrontation on sustainability.

The paper argues that AI and renewable energy—key components of sustainability—are being weaponized within techno-politics. In this context, the EU uses climate change and sustainability to create political gridlock and division within U.S. domestic politics, while the U.S. pressures Big Tech companies to challenge the sovereignty and legitimacy of EU institutions and member states. Ultimately, the paper contends that the politicization of these potentially complementary technologies undermines meaningful climate action and threatens efforts to establish a socially, environmentally, and economically sustainable society.

The first and foremost hindrance caused by this confrontation is the withdrawal of the U.S. from the Paris Climate Agreement. In this sense, the U.S. might be contending that the EU is sowing dissent in its national politics. Consequently, the retaliation of the U.S. in the form of an aggressive push with its Big Tech companies, such as Amazon, Meta, and X, might even be justified from their perspective. This economic and political strain on the EU may cause a backlash or slow down the transition to green energies.
It is worthwhile to mention that one limitation of this study is the exclusion of other geopolitical players, such as India, the Russian Federation, and the People's Republic of China, from the analysis. However, the framework presented in the study can easily be applied and expanded to cover the entire geopolitical dynamic, opening a pathway for future research.

Keywords: techno-politics, artificial intelligence, renewable energy, EU-US conflict, critical realism

FEDNEUROX: PRIVACY-PRESERVING AND EXPLAINABLE FEDERATED LEARNING FOR EARLY DETECTION OF ALZHEIMER DISEASE THROUGH MULTI-MODAL ANALYSIS

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Alzheimer's Disease (AD) is a progressive neurological disorder that significantly impairs cognitive function, making early detection essential for effective intervention and disease management. Despite extensive research, identifying reproducible and interpretable biomarkers for early AD detection remains a persistent challenge. Deep learning (DL) has shown enormous potential in neuroimage analysis and brain disease diagnosis due to recent developments. Training high-quality DL models, on the other hand, sometimes calls for access to vast, varied data sets, which are hard to centralize given privacy issues, logistical challenges, and the sensitive character of medical data. By allowing cooperative model training across several institutions without the need for centralized data, Federated Learning (FL) has become a fascinating alternative. Federated Learning (FL) has been a capable approach, allowing for joint model training from multiple sites without requiring data centralization. However, most such FL methods in brain disease diagnosis face two main issues: first, the curse of dimensionality, where brain networks' high-dimensional features far exceed available sample sizes, resulting in a suboptimal model; and second, substantial data distribution disparities across sites, making communication inefficient, as well as affecting model generalization overall. To overcome these challenges, we introduce FedNeuroX, a novel multi-modal FL infrastructure specifically designed to promote early and differential diagnosis of neurodegenerative brain disorders, such as AD. FedNeuroX exploits a decentralized structure that unites multi-modal data sources like magnetic resonance imaging (MRI), Positron Emission Tomography (PET), and Electronic Health Records (EHRs), to ensure both strong model training as well as top-notch data privacy. Local transformer-based encoders are employed at the local institutional level to obtain rich, modality-specific representations, which are then combined at the central server by an attention mechanism that captures a holistic understanding while being mindful of site-specific details. Additionally, FedNeuroX uses a contrastive learning approach to enhance discrimination between diseases and adopts a domain adaptation component to reduce variation across institutions. For model interpretability and establishing clinical trust, SHapley Additive exPlanations (SHAP) methods are utilized, offering clear insight into model decisions and highlighting the most important factors driving model predictions. Our system builds medical confidence in AI-based diagnostic tools by means of explainable artificial intelligence (XAI) techniques. Our method produces an interpretable, scalable, robust, and patient-centric solution for early AD diagnosis when combined with federated learning, multi-modal clinical and neuroimaging data, and the proper XAI techniques. Experimental evaluation through the Open Access Series of Imaging Studies (OASIS-3) dataset proves that FedNeuroX offers superior diagnosis accuracy, provides enhanced data protection, and preserves strong generalizability across various clinical environments overall. All things considered, FedNeuroX sets a new standard for medical artificial intelligence by resolving fundamental problems with federated analysis of neuroimaging and promoting innovation in privacy-preserving, interpretable, and extremely precise Alzheimer disease diagnosis.

Keywords: Alzheimer's Disease (AD), Federated Learning (FL), Multi-Modal Data Integration, Neuroimaging (MRI, PET), Privacy, Explainable AI.

OPTIMIZING CNN HYPERPARAMETERS FOR ENHANCED HANDWRITTEN DIGIT RECOGNITION ON CUSTOM DATASETS:A SYSTEMATIC STUDY

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Handwritten digit recognition is still an essential issue in artificial intelligence and pattern recognition. Convolutional Neural Networks (CNNs) have shown outstanding accuracy on standardized datasets such as MNIST; overfitting and incorrect hyperparameter tuning can cause CNNs to perform worse when applied to noisy real-world data. For example, handwritten digits taken from realistic Sudoku boards provide variation and noise not present in benchmark datasets, making it difficult to generalize CNN models to these types of datasets. The present study gives a systematic approach to improve handwritten digit recognition on custom datasets by improving CNN hyperparameters. The primary dataset derived from Kaggle's "Sudoku Digit Classification" is composed of 70x70 grayscale images of the digits 1 through 9, including zero representing empty cells. "FirstDigitsPersonal," a further custom dataset, develops with 10 photographs for every digit from 1 to 10. Because the custom dataset is very small, it is artificially extended using various kinds of data augmentation techniques, including rotation, scaling, flipping, shear transformation, brightness and contrast correction, and noise addition. These techniques enhanced the model's performance on unknown data and helped it to become more generalizable. By using the ReLU activation function in hidden layers to introduce non-linearity and the softmax activation function at the output for multi-class classification, the CNN model is developed using three convolutional layers followed by two dense layers. Training occurs using an Adam optimizer, a batch size of 32, and an initial learning rate of 0.001. To optimize the model's performance, these hyperparameters are properly tuned. The Kaggle dataset is used to train and validate the model, and the custom dataset is used for testing. The proposed model indicated great potential for accurate handwritten digit recognition with a training accuracy of approximately 95% and a validation accuracy of up to 99% after 30 epochs. Strong generalization over unseen handwritten digits can be determined by testing accuracy between 90% and 95%, based on preliminary evaluation on the custom test dataset. These findings suggest the importance of hyperparameter adjustment for enhancing model performance and provide valuable data for future research and useful application in real-world digit recognition systems.

Keywords: Convolutional Neural Networks (CNNs), Handwritten Digit Recognition, Custom Datasets, Deep Learning, Sudoku Digit Dataset.

TÜRKİYE VE ÜRDÜN'DEKİ SURİYELİ GÖÇMENLERİN TEMEL HAKLARA ERİŞİMLERİNİN KARŞILAŞTIRILMASI: EĞİTİM VE SAĞLIK HAKKI

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Tunus'ta 2011'de başlayan, Kuzey Afrika ve Ortadoğu topraklarına doğru hızla yayılan haksızlığa, adaletsizliğe, eşitsizliğe, işsizliğe, yoksulluğa karşı bir direniş ve ayaklanma olarak kabul edilen, devrim niteliğinde olan Arap Baharı olarak adlandırılan süreç üzerinden 14 yıl geçmesine rağmen ulusal ve uluslararası alanda önemini korumaya devam etmektedir. Bu süreçten etkilenen ülkelerden bazıları Libya, Mısır, Yemen, Bahreyn, Suriye'dir. Tunus, Mısır ve Yemen'de hükümeti devirmeyi başaran muhalifler, Libya, Bahreyn ve Suriye'de başarılı olamamış ama direnişi de bir süre bırakmamışlardır. Söz konusu süreç 2018 ve 2019 yıllarında önce Ürdün ve Sudan'a, daha sonra Cezayir, Irak ve Lübnan'a ulaşmış ve bu ülkelerde iktadarı yerinden etmeyi başarmıştır.

Arap Baharı dalgasından en çok etkilenen ülkelerin başında ise Suriye'nin geldiğini söylemek yanlış olmayacaktır. Suriyeli muhalifler babadan oğula geçen Esed Rejimini devirmek için ayaklanma hareketi başlatmışlardır. Muhalifler ve Esed arasındaki çatışma günden güne alevlenmiş ‘‘darbe, karşı devrim, iç savaş, dış müdahaleler’’ ekseninde seyretmiştir. Suriyeli halk Avrupa hayali ile başta komşu ülkeleri kendileri için ikamet merkezi seçmiştir. Türkiye ise Suriyeli göçmenler tarafından transit ülke konumunda kabul edilmiştir. 2011'den günümüze kadar uzanan süreçte özellikle göçmen krizi yılı olarak kabul edilebilecek 2015 senesi ile Türkiye, Suriyeli göçmenler için transit ülke konumundan hedef ülke konumuna geçmiştir. Ürdün'de ise durum biraz farklıdır. Ürdün toprakları da 2018 senesinde aynı süreçten geçmiştir ama Suriyeli halkı da topraklarına kabul etmiştir.

Bu çalışmada Türkiye ve Ürdün'de ikamet eden Suriyeli göçmenlerin ülke nüfusu ve göçmen sayısına yönelik değerlendirmesi esas alınarak yapılacaktır. Daha sonra Suriyeli göçmenlerin bu ülkeleri seçme nedenlerinin benzer ve farklı yönleri incelenecektir. Çalışmada bu iki ülkenin temel göç politikalarının karşılaştırmalı analizi yapılacaktır ve söz konusu ülkelerin Suriyeli göçmenlere tanıdıkları yasal haklar çerçevesinde özellikle eğitim ve sağlık hakları incelenecektir.

Çalışmanın sınırlıklarını 2012-2024 yılları arasında Türkiye ve Ürdün'deki Suriyeli göçmenlere yönelik devlet politikalarının karşılaştırması oluşturacaktır. Bu karşılaştırma çeşitli araştırma soruları ile desteklenecektir. Araştırma varsayımları ve bulgular çerçevesinde Türkiye ve Ürdün'deki Suriyeli göçmenlerin eğitim ve sağlık haklarındaki durum değerlendirmesi ile çalışma sonuca bağlanacaktır.

Keywords: Arap Baharı, Suriye, Göç, Göçmen, Politika.

NLP OVER REQUIREMENT ENGINEERING DOCUMENT FOR CONCEPTUAL MODELING

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The conceptual model of requirement documents plays a central role in the development of business system structure. Due to the abstract nature and high-level conceptual data, ER modeling is a massive task for system analysts. Researchers have tried to use natural language (such as English) to automatically generate ER diagrams from problem statements with artificial intelligence development. This research focuses on a technology that combines syntax analysis and mantic heuristic analysis to extract the entity-relationship diagram's main components, such as entities, attributes, and relationships. It can be done by evaluating various previous work rules and effectively combining them into an effective NLP engine. Conceptual models use in various fields of computing, including software engineering, databases, and artificial intelligence. The main bottleneck for expanding its applicability is building a conceptual model for a new application. Not surprisingly, for example, various tools and techniques have been proposed to reuse conceptual models. Ontology, or construct a semi-automatic structure of ontology from natural language (NL) description.

The text element will be converted into its speech area (POS) and converted into entities, attributes, and relationships based on the entity-relationship model (E-R). This process uses many tasks, including extracting requirements, identifying entities, attributes, relationships between entities, constraints, and obtaining graphics. Experts try to automatically obtain entity relationship diagrams (E-R) through user accounts with time and artificial intelligence development.

Keywords: Natural Language Processing (NLP), Entity Relationship diagram (ERD), Natural Language Toolkit (nltk), Unified Modeling Language (UML).

INVESTIGATION OF THE EFFECT OF POP-UP TYPES USED IN SHOPPING WEBSITES ON USER ATTITUDES

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With the widespread use of the internet, it has become possible to shop from anywhere in the world without any time limit. Internet users make comments, share images, and rate the purchased product during their online shopping. In this way, they can also influence other customers about the product. In recent years, shopping sites have offered discounts to their customers, track customer satisfaction, and offer the opportunity to share their experiences in e-commerce. In this way, businesses can offer products and services to a wide customer base through e-commerce. The aim of the research is to examine the effects of pop-up types used in shopping sites on user attitudes. In the research, a shopping site was designed to provide users with experience using pop-up types. They evaluated the pop-up types with the experiences gained after using the shopping site. The relational general survey model, which is a subtype of the general survey model, was used in this research. The sample group in the research consists of students studying at Osmaniye Korkut Ata University in the 2024-2025 academic year. The appropriate - convenient sampling method was preferred in creating the sample group. The survey form prepared by Yaman and Erdaş (2021) to reveal the perspectives on pop-up ads was used in the research. The reliability of the questionnaire used in the study was tested and the questionnaire was found to be reliable (Cronbach Alpha=0.74).

Keywords: Pop-up, Internet Advertising, Consumer Behaviour

THE RISING TIDE OF DIVORCE: SOCIAL AND ECONOMIC CONSEQUENCES

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Divorce is a significant societal issue as it disrupts the fundamental family structure of society. Pakistan, like many other countries, has been witnessing a steady rise in divorce rates. While divorce may, in certain cases, provide relief from ongoing distress, it often leads to the destruction of family goals, dreams, and objectives, causing immense emotional suffering and creating uncertainty for children about their future. In many cases, divorce results in a reduction in the overall income of the individuals involved, and increased financial pressures for both parties. The division of assets and legal expenses further depletes financial resources, leading to diminished economic stability. Studies have shown that divorced women, in particular, face greater financial challenges than men. This study investigates the factors contributing to the increasing divorce rate and assesses the socio-economic consequences of this trend in Faisalabad Division, Pakistan. The study was conducted in Faisalabad Division, Punjab Province, using a purposive multistage sampling technique. A total of 120 respondents were selected through purposive sampling, followed by snowball sampling. A well-structured, pre-tested questionnaire was used to collect data. The study employed two models: a bivariate probit regression model to assess the socio-economic consequences of divorce, and a logistic regression model to identify the factors influencing the divorce rate. The findings indicate that individuals experiencing financial difficulties are more likely to get divorced, with media addiction also having a positive, though marginally significant, effect on the divorce rate. This study emphasizes the complexity of divorce, highlighting that factors such as financial stress, women's economic independence, unemployment of husbands, and age are significant, while other factors like domestic violence and cultural beliefs may require further investigation with a larger sample size to fully understand their impact.

Keywords: Divorce Rate, Logistics Regression, Bivariate Regression

DIGITAL TRANSFORMATION IN EDUCATION: MITIGATING NATIONAL BIAS IN AI SYSTEMS

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The rapid advancement of artificial intelligence (AI) has tremendous potential in transforming education, especially in reducing differences in quality learning opportunities globally. Nevertheless, the AI-driven education systems continue to exhibit national bias, resulting in inequitable educational experiences, especially for developing countries. This article is concerned with how to overcome and address the national bias in education through AI and highlighting the imperative necessity of having inclusive, regionally suitable, and culturally sensitive AI-driven education systems. The study presents a series of solutions towards eliminating national bias, starting with community-driven digital projects. Through the engagement of local communities, such as educators, students, and technology developers, in designing AI-driven education systems, such projects ensure that the technologies developed are tailored to meet the unique needs of their locality. Workshops, hackathons, and collaborative projects provide platform for local expertise to guide AI solutions that are practical and sustainable. Apart from community-driven projects, this article suggests the need for adaptive AI algorithms that learn from a broad range of user interactions and capable to cater the unique needs of learners in various regions, promoting fairness and inclusivity. Another significant solution is the creation of multilingual AI platforms. Natural Language Processing (NLP) technologies have the potential to bridge language divides by dynamically adapting languages in real time, allowing students from different linguistic backgrounds to learn effectively. Crowdsourced data collection initiatives provide an opportunity to gather diverse, contextually relevant datasets, ensuring that AI models accurately reflect the diverse educational methods and learning needs of various communities. This article also discusses the importance of aligning AI education initiatives with local labor market. By creating training programs according to local curricula and local employment demands, AI-driven education systems can equip learners with local economic development competencies. The development of ethical AI frameworks emphasizing diversity, inclusiveness, and equal fairness in education and work, as steps towards ensuring opportunities for everyone. This study demonstrates how despite the revolutionary possibilities of AI in education worldwide, it is imperative that AI is developed with cultural, language, and local considerations in mind. With adaptive algorithms, multilingual environments, and ethical frameworks, AI can assist in bridging the digital divide, educational equity, and make every student from anywhere a success story. The results of study emphasizing the need for collaboration among policymakers, educators, and tech developers to create AI solutions that are globally accessible and culturally inclusive.

Keywords: Artificial Intelligence, Bias, Adaptive Algorithms, Language Barriers, Educational Equity, AI Education Systems, AI Ethics

EVALUATING HEALTH COSTS AND LIFESTYLE IMPACT OF POLYCYSTIC OVARY SYNDROME AMONG WOMEN IN DISTRICT FAISALABAD

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Polycystic Ovary Syndrome represents one of the extreme common hormonal disorders influence women of reproductive period. PCOS is a complex condition that can affect various systems in the body, leading to symptoms ranging from menstrual irregularities to metabolic issues like insulin resistance and increased risk of type 2 diabetes. Beyond its implications for reproductive health, polycystic ovary syndrome shows a significant socioeconomic burden, both direct healthcare expenses and indirect costs stemming from decreased productivity and compromised quality of life. The aimed of this study was to calculate the health cost associated with PCOS, encompassing both direct and indirect cost, and awareness of life cycle modification. Primary data were collected through well-structured questionnaire from 160 women, spilt evenly with 80 women diagnosed with PCOS and 80 without the condition from Faisalabad District. Statistical data entry and analysis of the result were performed using Microsoft Excel and SPSS. The results showed that women with PCOS face significant direct healthcare costs, such as medical expenses and travel, as well as indirect costs due to lost workdays and reduced productivity. On average, women with PCOS incur a total healthcare cost significantly higher than those without the condition, the total direct health cost was PKR 3241000 and indirect health cost was PKR 1057612. The presence of the symptoms of PCOS among these women was as, the most common symptom were Irregular periods 99 percent, Acne 86 percent, Hair Growth 27 percent, Weight Gain 66 percent, Hair Loss 45 percent, Depression 76 percent. The study highlights that the disproportionate financial strain on women suffering from PCOS, emphasizing the need for affordable healthcare options and increased public awareness in the region. The study reveals that PCOS significantly affects the lives of women, with wide-ranging consequences for their health, economic status, and social well-being. Efforts need to intensify in creating awareness on the general public about PCOS.

Keywords: Polycystic Ovary Syndrome, BMI, Health Cost, Financial Strain, Lifestyle Modification

MEMORY FUNCTION AND MENTAL HEALTH IN OLD AGE

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This study aims to examine the relationship between memory functioning and mental health variables of depression and anxiety in elderly individuals. It is known that the decline in cognitive functions with aging negatively affects the capacity of individuals to live independently and this process is closely related to psychological symptoms. In this context, the cognitive and mental states of 160 volunteer individuals aged 65 years and older were evaluated. Memory functioning was measured using the Digit Span Test (SDT) and the 10/36 Spatial Recall Test (SRT), while mental symptoms were assessed using the Depression, Anxiety and Stress Scale-21 (DASÖ-21). The findings showed that there was a significant decline in memory functioning with increasing age. Significant decreases were observed in both short-term memory and delayed recall scores as the age of the participants increased. On the other hand, there was no statistically significant change in anxiety levels with age, while there was an increasing trend in depression levels, but this was not significant. The most striking finding was that an increase in depression and anxiety levels was significantly negatively associated with a decline in memory performance. This result shows that mental health status is an important factor affecting the cognitive capacity of elderly individuals. The gender variable was also evaluated in the study; no significant difference was found between male and female individuals in terms of memory functioning. However, it was determined that women had higher levels of depression and anxiety compared to men. It is thought that this may be related to women's hormonal structure, social roles and different reactions to life events. The findings of the study reveal that both cognitive and mental health indicators are interactive with each other in old age and therefore, holistic interventions are needed in these areas. In particular, controlling depression and anxiety symptoms is critical for maintaining memory functioning. In this direction, it is recommended to encourage protective factors such as physical exercise, mental stimulation, social participation and to increase the access of elderly individuals to psychosocial support systems. Although the cross-sectional nature of the study limits causal interpretations, the findings clearly demonstrate that mental health is closely related to memory functioning in older adults. Future longitudinal and biomarker-based studies are recommended to examine this relationship in more detail. The study provides a scientific contribution to health professionals working with elderly individuals in shaping intervention strategies for the aging process.

Keywords: Old Age, Memory, Depression, Anxiety, Cognitive Function

THE EFFECT OF SPORT RECREATION PARTICIPANTS'BODY IMAGE PERCEPTIONS ON THEIR RECREATION ANXIETY: THE ROLE OF GENDER

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Recreation can generally be defined as the utilisation of individuals' free time outside of working hours. Recreation anxiety is a term used to describe the stress and anxiety experienced by individuals during participation in leisure time activities. The phenomenon of recreation anxiety is influenced by a multitude of factors. An increase in anxiety has been demonstrated to result in a restriction of individuals' participation in recreational activities. Participation in recreational activities has been demonstrated to have a positive effect on individuals' mental health. However, the inability to participate in these activities for various reasons has been shown to have a negative effect on individuals' well-being. The present study aims to examine the relationship between individuals' body image perception and recreation anxiety, and the moderating role of gender in this relationship. To this end, analyses were conducted using data obtained from a total of 295 volunteer participants, 148 of whom were female and 147 of whom were male, who were engaged in sportive recreation activities. The age range of the participants was 19-55, and the mean age was M=34.49 (SD=7.90). In the study, the evaluation of recreation anxiety was conducted using the Recreation Anxiety Scale, while body image perception was measured with the Body Image Scale. The analysis yielded a positive and statistically significant relationship between body image perception scores and recreation anxiety scores ($r = .553$, $p < .000$). This finding indicates a correlation between heightened body image anxiety and increased recreation anxiety. Following the identification of a significant relationship between the two variables, the moderating role of gender in this relationship was analysed. The findings of the present study demonstrate that the moderating role of gender in the relationship between body image perception and recreation anxiety is not significant ($\beta=1.169$, $p>.05$). The findings obtained in the study were discussed within the theoretical framework. Recreation anxiety and body image concerns are hypothesised to involve common cognitive and emotional processes, thus necessitating further elucidation of the relationship between them. A range of theories have been advanced to offer important perspectives on the relationship between these two concepts. It is important to note that the negative evaluation of body image that is frequently observed in individuals engaged in sporting recreational activities may be a significant contributing factor to feelings of anxiety. This is largely due to the influence of performance expectations, social comparisons, and aesthetic expectations. It is hypothesised that this situation may result in a decline in intrinsic motivation, an escalation in recreational anxiety, and consequently, a reduction in engagement in sporting activities. In the context of gender comparisons, analyses pertaining to women are frequently conducted, while explanations concerning men remain comparatively scarce. While women experience pressure to conform to societal expectations of thinness and aesthetic perfection, men too may feel compelled to meet social standards of muscularity and strength. Consequently, both men and women may experience comparable levels of body image anxiety, albeit with divergent expectations. This may provide an explanation for the lack of significance of the moderating role of gender in the relationship between body image anxiety and recreation anxiety. The relationship between recreation anxiety and body image perception is complex and multifaceted. Consequently, this relationship must be elucidated by a range of factors, necessitating cross-cultural studies to achieve this.

Keywords: Sport Recreation, Recreation Anxiety, Body Image, Gender

EARLY DETECTION OF DIABETIC RETINOPATHY USING MACHINE LEARNING FOR SUSTAINABLE HEALTHCARE SOLUTIONS

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Diabetic Retinopathy (DR) is a progressive and vision-threatening complication of diabetes, often leading to irreversible blindness if not diagnosed at an early stage. With the growing prevalence of diabetes worldwide, especially in low-resource regions, there is a critical need for automated and cost-effective diagnostic tools that can assist in timely detection of DR. This study presents a Convolutional Neural Network (CNN)-based solution for the early detection and classification of diabetic retinopathy using retinal fundus images, thereby contributing toward the advancement of AI-driven sustainable healthcare. In this research, we utilized the publicly available APTOS 2019 Blindness Detection dataset, which contains high-resolution retinal images labeled into five DR severity levels: No DR, Mild, Moderate, Severe, and Proliferative DR. A total of 80% of the images were used for training and 20% for validation. To improve model generalization and enhance robustness, we applied data augmentation techniques such as rotation, scaling, shifting, zooming, and horizontal flipping. All images were resized to 150x150 pixels and normalized prior to training. The CNN model architecture was composed of three convolutional layers followed by max-pooling, batch normalization, and dropout regularization. Dense layers with ReLU activation and softmax output were used for final classification. The model was compiled using the Adam optimizer and trained with categorical cross-entropy loss. An Early Stopping callback was implemented to automatically halt training once the validation loss stopped improving, which helped prevent overfitting. The training process concluded automatically at the 12th epoch, and the model achieved a validation accuracy of 76%, indicating its effectiveness in classifying DR images into multiple severity categories. Confusion matrix analysis revealed that the model performed particularly well in identifying No DR and Moderate DR cases, which are crucial for early intervention. The performance metrics were supported by accuracy and loss graphs, and all results were saved as figures for reproducibility. The simplicity and efficiency of the model make it suitable for integration into portable diagnostic tools, telemedicine platforms, and mobile applications, especially in remote and under-resourced areas where access to ophthalmologists is limited. By reducing the dependence on manual screening processes and enabling faster diagnosis, the proposed system can serve as an assistive tool in mass screening programs and healthcare outreach initiatives. In conclusion, the study demonstrates the viability of using a CNN-based model for early detection of diabetic retinopathy. The promising results suggest that even relatively simple machine learning architectures, when carefully optimized, can deliver significant clinical value. Future work will explore the incorporation of more advanced deep learning models, larger and more diverse datasets, and real-world clinical validation to further enhance model accuracy and applicability in real healthcare settings.

Keywords: Diabetic Retinopathy (DR), Convolutional Neural Network (CNN), Deep Learning, Retinal Fundus Images, Healthcare.

SAĞLIKTA DİJİTALLEŞME PERSPEKTİFİNDEN BESİN ÖGESİ ANALİZİ: YAPAY ZEKÂ İLE GELENEKSEL YÖNTEMİN KARŞILAŞTIRILMASI

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Yapay zekâ, son yıllarda sağlık hizmetlerinden tarıma, eğitimden yönetime kadar birçok alanda dönüşüm yaratmakta ve sürdürülebilir toplum vizyonuna önemli katkılar sunmaktadır. Sağlık alanında, yapay zekâ destekli sistemler; hastalıkların teşhisinden tedaviye, kişiye özel bakım planlarının oluşturulmasından toplum temelli sağlık uygulamalarına kadar geniş bir çerçevede kullanılmaktadır. Bu sistemlerin sunduğu hızlı, doğru ve maliyet-etkin çözümler, sağlık hizmetlerinin verimliliğini artırarak daha geniş kitlelere ulaşılmasına olanak sağlamaktadır. Yapay zekâ ile yapılan analizlerin, özellikle bireyselleştirilmiş sağlık uygulamalarında ve koruyucu sağlık hizmetlerinde hata payını azaltarak profesyonel iş yükünü hafiflettiği, böylece sürdürülebilir sağlık sistemlerinin inşasına katkı sunduğu bilinmektedir. Beslenme ve Diyetetik alanında da yapay zekânın etkisi giderek artmakta; beslenme durumu değerlendirmesi, diyet alımının izlenmesi ve bireye özgü beslenme planlarının oluşturulması süreçlerinde etkin bir şekilde kullanılmaktadır. Yapay zekâ algoritmaları sayesinde bireylerin tüketim alışkanlıkları analiz edilmekte, potansiyel beslenme yetersizlikleri belirlenmekte ve kişiye özel öneriler geliştirilmektedir. Bu gelişmeler hem sağlık profesyonelleri hem de toplum için zaman ve kaynak kullanımında tasarruf sağlamakta, bu sayede beslenme hizmetlerinin dijitalleşmesi yoluyla sürdürülebilirlik hedeflerine katkı sunmaktadır. Diyetisyenler, bireylerin beslenme durumunu değerlendirerek sağlıklı beslenme alışkanlıklarının sürdürülebilirliğini sağlamayı ve mevcut beslenme düzeyini tespit etmeyi amaçlamaktadır. Bu süreçte önemli bir yer tutan diyet alımı analizi, bireylerin günlük besin tüketimlerinin sistematik olarak incelenmesiyle gerçekleştirilir. Enerji ve besin ögesi alımlarının yeterli olup olmadığının belirlenmesi, kişiye özel planlamalar yapılmasına olanak tanımakta ve bu da toplumsal düzeyde sağlıklı yaşam davranışlarının desteklenmesine katkı sağlamaktadır. Besin ögesi analizi, diyet alımı değerlendirmesinin temel bileşenlerinden biridir. Bu analiz, bireylerin ya da toplulukların tükettikleri gıdaların enerji ve besin öğesi içeriklerinin belirlenmesi amacıyla çeşitli yöntemlerle yapılmaktadır. Yaygın kullanılan yöntemler arasında besin bileşim cetvelleri ile BeBis, NutriSurvey, Food Processor gibi bilgisayar destekli beslenme analiz yazılımları yer almaktadır. Bu araçlar, besin tüketim verilerini dijital ortama aktararak hızlı, erişilebilir ve ekonomik analiz imkânı sunmakta; böylece beslenme verilerinin daha doğru, sürdürülebilir ve topluma yaygınlaştırılabilir şekilde kullanılmasını mümkün kılmaktadır. Bu çalışma, yapay zekâ tabanlı bir sistem aracılığıyla gerçekleştirilen besin ögesi analizlerinin, geleneksel analiz yöntemi olan BeBis programı ile karşılaştırmalı olarak değerlendirilmesini; böylece sağlıkta dijitalleşmenin, kaynak verimliliğinin ve bilgiye erişimin toplumsal sürdürülebilirlik açısından potansiyel katkılarını ortaya koymayı amaçlamaktadır. Bu çalışmada, geleneksel besin ögesi analiz yöntemi olan BeBis (Beslenme Bilgi Sistemi) ile yapay zekâ tabanlı bir metin üretim aracı olan ChatGPT kullanılarak elde edilen enerji ve besin ögesi analiz sonuçları karşılaştırılmıştır. Çalışma kapsamında Türkiye Beslenme Rehberi (TÜBER) 2022'de yer alan yirmi farklı örnek günlük menüler kullanılmış ve her bir menü hem BeBis yazılımına girilerek hem de ChatGPT'ye doğal dil komutlarıyla analiz ettirilerek değerlendirilmiştir. Her iki yöntemle elde edilen sonuçlarda diyetle alınan toplam enerji ve bazı besin ögeleri (makro ve mikro besin ögeleri dahil) olmak üzere toplam 22 öge incelenmiştir. Elde edilen verilerde, her bir besin ögesi için BeBis ve ChatGPT sonuçları eşleştirilmiş olarak kaydedilmiş; iki yöntem arasında anlamlı farklılık olup olmadığını değerlendirmek amacıyla veriler normal dağıldığı için eşleştirilmiş örneklem

t-testi uygulanmıştır. İstatistiksel analizler IBM SPSS Statistics 25.0 programı kullanılarak gerçekleştirilmiş; anlamlılık düzeyi $p<0,05$ olarak kabul edilmiştir. Yapay Zekâ destekli sistem ile BeBis yazılımı kullanılarak gerçekleştirilen besin ögesi analizleri karşılaştırıldığında; potasyum, sodyum, C vitamini, çinko, E vitamini ve B12 vitamini düzeylerinde istatistiksel olarak anlamlı farklar bulunmuştur ($p<0.05$). Diğer besin ögeleri olan enerji, protein, yağ, karbonhidrat, doymuş yağ, tekli doymamış yağ, çoklu doymamış yağ, lif, sükroz, demir, B3 vitamini, B1 vitamini, A vitamini, kalsiyum, magnezyum ve kolesterol düzeyleri arasında anlamlı bir fark saptanmamıştır ($p>0.05$). Yapay zekâ destekli sistemlerin besin ögesi analizi süreçlerinde geleneksel yöntemlerle yüksek düzeyde uyum sağladığı görülmüştür. Elde edilen bulgular, özellikle makro besin ögeleri ve temel enerji hesaplamalarında yapay zekânın güvenilir bir alternatif sunabileceğini göstermektedir. Ancak potasyum, sodyum, çinko, C vitamini, E vitamini ve B12 vitamini gibi mikro besin ögelerinde anlamlı farklılıklar gözlenmiş; bu durum, belirli mikro besin ögeleri analizlerinde daha dikkatli olunması gerektiğine işaret etmiştir. Yapay zekâ teknolojilerinin sağlık ve beslenme alanlarında doğru kullanımı; zaman ve kaynak tasarrufu sağlamanın yanı sıra, toplum temelli sağlık hizmetlerinin dijitalleşmesini destekleyerek sürdürülebilir toplum hedeflerine katkı sunma potansiyeline sahiptir. Bu çalışma, beslenme bilimi özelinde yapay zekâ uygulamalarının bilgiye erişimi kolaylaştırabileceğini ve gelecekte sağlık sistemlerinin dönüşümünde önemli bir rol oynayabileceğini göstermektedir. Literatürde yapay zekâ uygulamalarının beslenme alanındaki pratik kullanım potansiyelini ve geleneksel yöntemlere olan yakınlığını sayısal verilerle ortaya koyan çalışmalara sınırlı sayıda rastlanmakta olup, bu yönüyle çalışma özgün bir katkı sunmaktadır. Ayrıca, sağlık hizmetlerinde dijitalleşme ve kaynak verimliliği perspektifinden, yapay zekânın toplumsal sürdürülebilirlik hedeflerine etkisini beslenme bilimi özelinde irdeleyen az sayıdaki araştırmadan biri olması nedeniyle de çalışmanın özgün değeri yüksektir.

Keywords: Yapay Zeka, Sürdürülebilir Sağlık Hizmetleri, Besin Ögesi Analizi

A STUDY ON MARKETING STRATEGIES AND CONSUMER BEHAVIOR TOWARDS COLA NEXT ®

Nimra Anjum (The University of Faisalabad)

This research demonstrated how the ramifications of sociopolitical movements and marketing techniques transformed the potency of Cola Next ® in Pakistan, with special attention on consumer behavior. This study explained how people perceived the existing brand and to what extent its reputation regulated their purchasing decisions. Cola Next ® gained popularity among people in Pakistan as a local beverage brand due to its strong marketing strategies and direct association with the ongoing boycott movements. The primary goal of this research was to recognize those factors that influenced consumer preferences and the brand's performance in the market. Data was collected after conducting surveys and interviewing consumers, retailers, distributors, and producers. The collected data was analyzed by using the theoretical framework of the research, and results were generated by consuming data from the qualitative method. This research showed that consumer perceptions are remarkably influenced by the marketing tactics of Cola Next ® and the ongoing sociopolitical stance. This research underlined the marketing approaches and strategies that assisted the brand in becoming a primary local brand of Pakistan in the competitive beverage industry. According to the findings of this research, Cola Next ® is obliged to allocate more budget to dilate its social media presence by working on its digital marketing campaigns. It is recommended that the presence of Cola Next ® on social media can be beneficial to connect with the targeted audience, and the improvement in the brand image can be expected. To maintain the brand image and positioning in the competitive market of beverages, the brand should continuously nurture the association of ongoing sociopolitical movements to preserve the reliability and fidelity of customers.

Keywords: Cola Next ®, Marketing Strategies, Consumer Behavior, Sociopolitical Movements, and Consumer Perceptions.

CRIME SCENE INVESTIGATION 2.0: AI-POWERED FORENSICS TRANSFORMING CRIME SCENE INVESTIGATION AND CRIMINAL JUSTICE ADMINISTRATION FOR A SAFER SOCIETY

Sreya Biswas (Kiit University)

The father of Artificial Intelligence John McCarthy defines AI as the science and engineering of producing intelligent machines which is also defined by Executive Order 13960 of USA as 'an artificial system that can achieve tasks under changeable and erratic circumstances without significant human oversight and it learns from experiences along-with the advance performance when exposed to previously inputted data sets.' While having the design to operate like a human being solves milestones that require human-like perception, cognition, or decision-making abilities, AI increases the capabilities or even substitutes humans entirely with fully automated processes. Simultaneously, forensic came from a Latin word forensis, which means 'to the forum or public discussion' and any science that is used for the law is called forensic science. While mixing these two advanced concepts there can be magnificent impact to solve cases, video and image analysis are the classic example along with DNA analysis, gunshot detection, crime forecasting, etc. Although like other emerging adopting this revolutionary tool for solving criminal cases can be precarious, as it may boost biasness as the data is fed by humans only, it can also cause transgression of human rights and privacy rights. This research paper thus aims to propose the elucidation of national legislation that can govern AI as it may be a game changer in the multifaceted procedures. This study furthermore addressees the downside of technologies prior to usage at larger scales. Lastly, this study advocates establishing a proper guideline for AI in forensic science as an efficient and powerful investigative tool, employing exemplification from the USA, a veteran AI user in resolving criminal cases, this research thus exhibits management for a robust legal standard, as with the remarkable successful investigation of Kerala Police, solving a 19-year-old cold-murder-case with the assistance of AI.

Keywords: Artificial Intelligence, Forensic Science, Crime Scene, Investigation, Criminal Justice Administration.

KIDEMLİ YETİŞKİNLERDE ÇEVRİMİÇİ SATIN ALMA NİYETİ İLE DAVRANIŞI ARASINDA YAKIN DESTEĞİNİN DÜZENLEYİCİ ROLÜ

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Dünya genelinde nüfus hızla yaşlanırken Türkiye'de de son 60 yıllık süre içinde yaşlı nüfus iki kat artış göstermiş, 65+ yaş nüfusu 2023'de 8 milyon 722 bin 806 kişiye ulaşmıştır (TÜİK, 2023). Artan oranları ile 65 yaş ve üzerini temsil eden kıdemli yetişkinler e-ticarette de en hızlı artış gösteren tüketici grubu halini almış (Baldwin, 2019), e-ticaret için giderek daha önemli bir potansiyel pazar haline gelmiştir (Lian ve Yen, 2014). Bununla birlikte çevrimiçi satın alma karar sürecinde yer alan bazı faktörler 65+ kıdemli yetişkinlerin çevrimiçi satın alma davranışını kolaylaştırabilmekte ya da engelleyebilmektedir. Davranışın öncülleri incelendiğinde pek çok kuram ve modelin [örn. Planlı Davranış Kuramı (Ajzen, 1991); Teknoloji Kabul Modeli 3 (Venkatesh & Bala, 2008); Birleştirilmiş Teknoloji Kabul ve Kullanım Teorisi 2 (Venkates vd. 2012)], davranışsal niyetin, davranışın en temel yordayıcısı olduğunu belirttiği görülmektedir. Bununla birlikte niyeti ve davranışı artıran bir takım itici güçlere ve engelleyici faktörlere de odaklanılmaktadır. Teknolojinin kabulü ve kullanımını tüketici bağlamında incelemeye yönelik bir perspektif sunan Birleştirilmiş Teknoloji Kabul ve Kullanım Teorisi 2 (UTAUT2), davranışsal niyetin ve kullanım davranışının öncüllerini; 1) performans beklentisi, 2) çaba beklentisi, 3) sosyal etki, 4) kolaylaştırıcı koşullar, 5) hedonik motivasyon, 6) fiyat değeri ve 7) alışkanlık olarak belirlemiştir (Venkatesh vd. 2012). Teknoloji kullanımında kolaylaştırıcı koşullar arasında görülebilecek sosyal çevre (yakın kişiler, çocuk, torun, aile vb.) 65+ bireylerin teknoloji kullanımlarını olumlu yönde etkilese de (Elimelech, Rosenblum, Tsadok-Cohen vd., 2024) bazı durumlarda teşvik edici, motiv rolde olmaktan ziyade engelleyici rol de üstlenebilmektedir (Umut Özbakır vd., 2022; Karsu vd., 2019). Bu çerçevede sosyal çevre, yardım verilen alışveriş -assisted shopping- kapsamında (Elms, de Kervenoael ve Hallsworth, 2016; Hansson vd., 2022), çevrimiçi alışveriş sürecinde teknoloji deneyimini kısıtlayan ve kullanma isteğini azaltan bir faktör haline de gelebilmektedir. Bu çerçevede ilgili çalışmanın amacı 65+ bireylerin çevrimiçi satın alma davranışlarının önemli bir öncülü olan niyetin varlığında, çocukların ve yakınların desteğinin engelleyici bir faktör olup olmadığını incelemektedir. Buradan hareketle çevrimiçi satın alma niyeti ile davranışı arasındaki ilişkide aile bireylerinin ve diğer yakınların desteğinin düzenleyici rolü test edilmiştir.

Çalışmanın evrenini Türkiye'de yaşayan 65+ yaşlı bireyler oluşturmaktadır. Tabakalı örnekleme yöntemi ile Türkiye'nin yedi bölgesinden tesadüfi olarak seçilen ikişer ilden (toplam 14 il), 65+ 635 katılımcıya (262 kadın, 373 erkek) ulaşılmıştır. Katılımcıların % 95.1'i çocuk sahibi iken (N=604), % 4.6'sı çocuk sahibi değildir (N=29). % 31.3'ü bizzat kendisi (N=199), % 52.4'ü yakınları aracılığı ile (N=333) çevrimiçi alışveriş yaptığını belirtmiştir. Katılımcıların çevrimiçi satın alma yönelik niyet ve davranışını azaltan faktörler 16 maddelik 5'li Likert (1-Tamamen Katılmıyorum; 5-Tamamen Katılıyorum) Çevrimiçi Satın Alma Engeller Ölçeği (Nurtanış Velioğlu vd., 2022) ile; çevrimiçi satın alma yönelik niyet ve davranışını arttıran faktörler ise 13 maddelik 5'li Likert (1-Tamamen Katılmıyorum; 5-Tamamen Katılıyorum) Çevrimiçi Satın Alma İtici Güçler Ölçeği (Nurtanış Velioğlu vd., 2022) ile ölçülmüştür. Çevrimiçi satın alma niyeti için 4 maddeli 5'li Likert (1-Tamamen Katılmıyorum; 5-Tamamen Katılıyorum) (Çelik, 2009) ve çevrimiçi satın alma davranışı için ise

Chan'ın (2001) üç sorudan oluşan (1-Internet'ten hangi sıklıkta alışveriş yaparsınız?, 2-Internet alışverişlerinizde ne kadar harcama yaparsınız?, 3-Internet'ten hangi miktarda ürün satın alırsınız?) davranış ölçümleri kullanılmıştır.

Çalışma kapsamında değişkenler için normallik varsayımları test edilmiş ve basıklık çarpıklık değerlerinin ±1; Z skorların da ±3.29 aralığında olduğu görülmüştür. Bu doğrultuda parametrik analizler yürütülmüş, değişkenler arasındaki ilişkileri incelemek amacıyla Pearson Korelasyon analizi yapılmıştır. Analiz sonuçlarına göre, çevrimiçi satın alma niyeti ile davranışı arasında pozitif yönlü anlamlı bir ilişki olduğu görülmüştür ($r= .631$, $p<.01$). Çevrimiçi satın alma engellerinden çocuk/yakın desteğinin ise hem çevrimiçi satın alma niyeti ($r= -.298$, $p<.01$) hem de çevrimiçi satın alma davranışı ($r= -.259$, $p<.01$) ile negatif ilişkili olduğu bulunmuştur. Çevrimiçi satın alma niyeti ile davranışı arasındaki ilişkide çocuk/yakın desteğinin düzenleyici rolü Hayes (2013) tarafından geliştirilen Process Makro uzantısı (Model-1) ile test edilmiştir. Analiz sonuçları düzenleyici etkiye yönelik elde edilen modelin anlamlı olduğunu ($R 2=.414$; $F(3-631)=148.28$; $p<.01$) ve niyet ile davranış arasındaki ilişkide çocuk yakın desteğinin düzenleyici rolünün bulunduğunu göstermiştir ($\beta=-0.070$; $p<.01$). Çocuk/yakın desteği yüksek olduğunda çevrimiçi satın alma niyetinin davranışı yordayıcılığı ($\beta=.412$; $p<.01$), orta seviyede ($\beta=.482$; $p<.01$) ve düşük seviyede ($\beta=.569$; $p<.01$) olduğundan daha anlamlıdır. Elde edilen bulgulara göre, yakınların desteğinin her zaman bir kolaylaştırıcı faktör olmadığı, bazı koşullarda bu ihtiyaçları kendileri gidermek zorunda olmayan kıdemli yetişkinlerin davranışlarını kısıtladığı görülmektedir. Bir davranışın meydana gelebilmesi için itici güçlerin artırılmasının yanı sıra engelleyici koşulların da azaltılması gerekmektedir. Türkiye toplumsal dinamikleri gibi toplulukçu yapılarda aile büyüklerinin/ kıdemli yetişkinlerin yararına olarak görülen bazı davranışların, yenikleri, yeni teknolojileri, yeni tüketim süreçlerini deneyimleme hususunda onların adaptasyonlarını sınırlandırdığı, zorunluluk hissetmedikleri için yeni davranışları deneme ve kendilerini geliştirme potansiyellerini kısıtladığı söylenebilir. Bu çalışmanın çevrimiçi satın alma davranışlarının engelleyicilerinden biri olarak yakın desteğini vurgulaması bakımından önem arz etmektedir. Çalışmanın toplumsal dinamiği "toplulukçu" özellikte olan Türkiye ölçeğinde "yakın desteğini" çevrimiçi satın alma davranışlarının engelleyicilerinden biri olarak ortaya çıkarmasının, ulusal alanyazına önemli bir katkı sağlamasının yanında dünyadaki diğer toplulukçu yapılara da veri sağlar nitelikte olduğu düşünülmektedir. İleride yapılacak çalışmalar 65+ bireylerin bilişsel özellikleri, hane halkı büyüklüğü ve yakın çevrelerinden aldığı desteği birlikte inceleyerek ilgili yaş grubunda satın alma kararlarına daha derinlemesine bir bakış açısı sunabilir.

Keywords: Çevrimiçi satın alma niyeti, Çevrimiçi satın alma davranışı, Yakın desteği, Yardım verilen alışveriş.

EXPLORING ATTENTION VARIABILITY AMONG ADOLESCENTS:THE ROLE OF DIGITAL DEVICES

Saroj Pandey (Rashtrasant Tukadoji Maharaj Nagpur University)

Rajshree S.Vaishnav (Rashtrasant Tukadoji Maharaj Nagpur University)

With the increasing integration of smartphones and digital devices into daily life, concerns have emerged regarding their influence on adolescent cognitive development—particularly attention span. This study investigated the effect of digital device usage on the visual span of attention among adolescents aged 13 to 19 years. A descriptive cross-sectional survey was conducted with 508 participants from five secondary schools in Nagpur city, selected using stratified random sampling. Participants were grouped based on their frequency of digital device use and screen time. Visual attention span was assessed using a tachistoscope-based method. The findings revealed that adolescents with lower screen time exhibited significantly higher attention spans compared to their high-usage counterparts. Statistical analysis using both independent samples t-test and Mann-Whitney U test indicated a significant difference between the two groups ($p < .001$). These results highlight the potential cognitive risks associated with excessive digital media exposure during adolescence and emphasize the importance of promoting healthy screen habits.

Keywords: Adolescent Attention, Screen Time, Mobile Device Usage, Cognitive Impact, Visual Span, Digital Media

CRITICAL ANALYSIS OF THE NOVEL ME BEFORE YOU WITH REFERENCE TO EUTHANASIA

Lareeb Gull (Independent Researcher)

The world is divided into blocks on different issues where emotional prosperity and the dynamic life of an individual are two of the core matters. A qualitative way of living has always been in precedence over a less improvised lifestyle. Sometimes, resistance towards fate leads people to choose irredeemable paths, one of which is assisted suicide, also known as euthanasia. Euthanasia is a practice of intentionally and painlessly killing a human being for humane reasons, especially in order to end great suffering or poor quality of life. Disability can be a possible way to live; however, being bedridden has no way to live or die. The current study focuses upon the pain of humanity, which has no limit and no healing at the same time. It analyzes the celebrated work of its time, Me Before You by Jojo Moyes, where Will, a wealthy young quadriplegic, is unable to sustain the miseries of life in the physical world without having a critical sight upon prognosis, although Louisa tries to give him the affectionate company. In order to end his suffering, he commits assisted suicide before natural death. The study reflects its findings at two different extremes. It might be ethical to kill someone before they die naturally by challenging the morality of artificial death, and it also focuses upon the inevitability of the search for peace in cumbersome situations. The study draws attention to society's duty to establish a more welcoming and caring atmosphere where terminal care and emotional support are given top priority. The ethical limits of human choice are also questioned, as are the social stigmas associated with euthanasia.

Keywords: Dynamic Life, Quadriplegia, Resistance, Euthanasia, Morality of Artificial Death, Search For Peace

THE EXISTENTIAL CRISIS IN WISLAWA SZYMBORSKA'S POETRY: A THEMATIC ANALYSIS

Lareeb Gull (Independent Researcher)

The question of existence has been a primary concern of human beings throughout the ages. When it comes to finding a purpose, the ignorance of which has led mankind towards existential anxiety and dread. However, man has considered himself to be ultimately responsible for his choices. This free will and no ultimate purpose of existence has unconsciously given rise to anxiety and dread within human life. Likewise, the researcher has selected the topic, The Existential Crisis in Wislawa Szymborska's Poetry: A Thematic Analysis. The current study focuses upon existential anxiety as the major theme of Wislawa Szymborska's selected poetry. However, the researcher has applied qualitative research methods, whereas thematic analysis has been chosen as the data analysis method. Moreover, the researcher has applied Paul Tillich's theory of existential anxiety in order to explore existentialism, anxiety, and dread from Wislawa Szymborska's selected poetry, which refers to human existence having no ultimate purpose, hence responsible for creating a hollow and meaningless life, giving rise to existential anxiety. The objectives of the current study are to explore existential anxiety and dread in Wislawa Szymborska's poetry and how free will serves as a catalyst for meaninglessness. The current study will help the readers of literature as well as the general population to have self-realization and to create awareness. However, it is not a cross-sectional research. In this way, it will give way to further research in this field.

Keywords: Anxiety, Existence, Dread, Free Will, Meaninglessness, Purpose

EFFECTS OF ECONOMIC CONVERGENCE ON STOCK MARKET RETURNS: CASE OF BORSA İSTANBUL SUSTAINABILITY INDEX

Onur Oğuz (Batman University)

For over a century, the rapidly increasing trend of industrialization has led to the excessive use of natural resources.This situation has led to the negative impact on nature and social life in many aspects.In the field of economics, many studies are being conducted to ensure the sustainability of growth and development for this reason.In the field of finance, various indices have been created that are based on companies meeting certain criteria and demonstrate their commitment to sustainability.Being included in these indices provides firms with both prestige and the opportunity to use alternative green financial instruments.Of course, stock market returns are influenced by macroeconomic and political developments. The explanatory power of economic variables in determining stock market returns has been extensively investigated and generally substantiated in many empirical work. This study examines the impact of economic convergence inside the Borsa İstanbul Sustainability Index. The study aims to reconsider nominal economic convergence and real economic convergence within the Borsa İstanbul Sustainability Index, utilizing monthly data from January 2014 to April 2025, and to analyze the explanatory power of these two convergence categories on stock market returns. This study employs Fourier-based analytical methodologies due to the structural changes in the Turkish economy. Consequently, it was believed that the impacts of alterations in economic policies and the significant volatility of stock market transactions would be more precisely represented. The study aims to provide suggestions about the long-term trends of the sustainability index in Borsa İstanbul by doing cointegration and causality analysis with the sustainability index and selected variables based on the data collected.

Keywords: Borsa Istanbul Sustainability Index, Fourier Cointegration, Economic Convergence

GREEN OFFICE PRACTICES: SUSTAINABILITY APPROACHES IN OFFICE MANAGEMENT

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The concept of sustainability, which came to the fore with the definition of meeting today's social needs without compromising the ability of future generations to meet their needs in the "Common Future" report published by the World Commission on Environment and Development in 1987 (WCED, 1987), has become multifaceted and comprehensive in the conditions of the 21st century. Green office practices contribute to the environmental, economic, and social dimensions of sustainability. Executive assistants, medical secretaries, and legal secretaries are the implementers of green office practices that include energy and resource efficiency, waste management, use of environmentally friendly materials, etc. This research aims to deeply examine the awareness, perception, and experiences of academic staff working in the Office Services and Secretarial Departments of Social Sciences Vocational Schools regarding green office practices. In this context, the research will reveal how academic staff integrate green office practices into vocational education and the difficulties they encounter in practice. The research will be conducted using the phenomenological design, one of the qualitative research methods, and a semi-structured interview form will be used as the data collection tool. The study group consists of faculty members who were determined through purposeful sampling and have been working in the Office Services and Secretarial Department for at least five years. The data will be analyzed using content analysis, and themes will be created based on the findings. The findings are aimed at providing suggestions for increasing sustainability awareness in office management education and disseminating green office practices. It is hoped that the results will contribute to raising awareness among faculty members regarding sustainability in office management and updating education programs in a way that supports sustainability.

Keywords: Green Office Practices, Office Management, Sustainability.

ENHANCED ANKLE IMMOBILIZATION: A PATIENT-CENTRIC APPROACH TO FIBULA FRACTURE

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Rehabilitation is an essential part of recovery after musculoskeletal injuries, involving medical treatment, physical therapy, and the use of supportive devices. Ankle immobilizers are commonly used to stabilize the joint during healing, particularly in patients recovering from fibula fractures. However, traditional immobilizers can sometimes cause discomfort and skin irritation when worn over extended periods, which may affect the user's willingness to comply with treatment. This study aims to design and evaluate an improved ankle immobilizer that prioritizes both functionality and patient comfort. This project focuses on the case of a 43-year-old female patient who sustained a fibula fracture due to a fall. Following surgical treatment with metal plate fixation, the patient used an ankle immobilizer during the recovery process. Despite providing necessary joint support, prolonged use of the device led to skin irritation, moisture buildup, and discomfort. These challenges reduced the patient's confidence in performing mobility exercises and potentially delayed the healing process. In response, this study proposes an innovative upgrade to the ankle immobilizer using breathable and moisture-wicking materials.

The primary enhancement introduced in this design is the integration of Dri-Fit polyester fabric—a lightweight, quick-drying, and hydrophobic material widely used in sportswear. This fabric effectively wicks away sweat from the skin, reducing dampness and skin friction. Additionally, the design incorporates memory foam padding for pressure relief, antimicrobial properties to prevent skin infections, and soft-edged adjustable straps for a better fit. A 3D model of the upgraded immobilizer was developed using SketchUp software to ensure ergonomic accuracy and easy wearability. To assess the design's effectiveness, feedback was gathered from selected users who tested the prototype. Observations indicated that the improved design significantly reduced skin irritation and provided better air circulation around the ankle. Participants reported increased comfort and greater confidence while wearing the immobilizer during daily activities and rehabilitation exercises. The findings of this study highlight the importance of using modern materials and ergonomic design in the development of rehabilitation devices. The integration of Dri-Fit fabric addresses the core issues faced by patients using standard immobilizers—such as sweating, discomfort, and skin sensitivity—without compromising structural support. The combination of improved materials and thoughtful design contributes to better treatment adherence and enhances overall rehabilitation outcomes. In conclusion, this research demonstrates that upgrading conventional ankle immobilizers with breathable and user-friendly materials can lead to a more comfortable and effective recovery experience for patients. The study supports the shift toward patient-centered rehabilitation technologies and provides a foundation for future innovations in wearable orthopedic support systems. Keywords: Rehabilitation, Ankle immobilizer, Fibula fracture, Patient comfort, Dri-Fit materials

Keywords: Keywords: Rehabilitation, Ankle immobilizer, Fibula fracture, Patient comfort, Dri-Fit materials

IMPACT OF ETHICAL LEADERSHIP ON EMPLOYEE MORAL DISENGAGEMENT: MEDIATING ROLE OF PSYCHOLOGICAL CONTRACT FULFILLMENT

Sania Arif (University of Wah)

The purpose of the study is to examine the impact of ethical leadership on employee moral disengagement through psychological contract fulfillment. For this purpose, we collected data from insurance companies situated in Rawalpindi & Islamabad, including Jubilee family takaful, Askari insurance, and private banking sectors, including Askari Bank Limited and Habib Bank Limited working in the twin cities (Islamabad/Rawalpindi) of Pakistan by using a non-probability-convenience sampling technique. The researcher used SPSS-21 for data entry, missing value analysis, frequency distribution, descriptive statistics, correlation analysis, reliability testing, and hypotheses testing. Findings revealed that ethical leadership decreases employees' moral disengagement through employees' psychological fulfillment. Collected data supported all of the hypotheses. Limitations of the study and future recommendations are given in the end.

Keywords: Ethical Leadership, Employees' Moral Disengagement, and Employees' Psychological Fulfillment

THE INTERSECTION OF ARTIFICIAL INTELLIGENCE, INDUSTRY 4.0 AND SOCIETY 5.0 CONCEPTS: A BIBLIOMETRIC REVIEW

Sinem Sönmez (Bingöl University)

This study employs a bibliometric approach to explore the intersection of artificial intelligence, Industry 4.0, and Society 5.0 in academic literature. We analyzed 16 publications retrieved from the Scopus database using R and VOSviewer software. The findings indicate a significant increase in scholarly interest in these concepts, especially after 2019.

Descriptive statistics show that while this research area is still emerging, the high citation rates per publication highlight its rapidly growing importance. The three-fold conceptual structure is closely associated with themes such as big data, knowledge management, algorithms, and human-centered digital transformation. Italy, Indonesia, Finland, and the United Kingdom are among the most prolific countries in this domain, while Gladden, Delmonte, and Foresti are identified as the most cited authors.

Keyword analysis reveals a strong overlap between artificial intelligence and Society 5.0, as well as connections to data mining, decision-making, and robotics. Thematic and factorial mapping further illustrates how these concepts establish interdisciplinary links across social sciences, engineering, and information technology.

In conclusion, this study systematically maps the academic landscape where artificial intelligence, Industry 4.0, and Society 5.0 converge, providing a foundation for future multidisciplinary research.

Keywords: Artificial intelligence, Industry 4.0, Society 5.0, Bibliometric Analysis, Keyword Mapping, Scientific Visualization.

SOSYOLOJİDE YAPAY ZEKÂ KAVRAMI ÜZERİNE VOSVİEWER İLE BİBLİYOMETRİK BİR ANALİZ

Can Çeliktaş (Osmaniye Korkut Ata University)

21. yüzyılın gerçeklerinin başında yapay zekâ teknolojisi gelmektedir. Hemen her alanda kullanım imkanı bulan yapay zekâ, insan hayatının büyük bir bölümünde etkin olmaktadır. Örneğin; işgücü piyasasında ve endüstriyel üretim sürecinde yapay zekânın rolü her geçen gün artmaktadır. Aynı zamanda günümüzde sağlık alanında bir çok teknoloji içerisinde yapay zekâ barındırmaktadır. Ayrıca toplumsal etkiye de sahip olan bu teknoloji, medya ve eğlence endüstrisinde de kullanımı yaygınlaşan bir teknolojidir. Ve kültürel üretim sürecini etkilediği gibi tüketim alışkanlıklarını da değiştirmektedir. Büyük sermayelerin harcandığı ve ülkeler arası rekabetin temel unsurlarından biri haline gelen yapay zekâ üzerine birçok alanda akademik çalışmalar yapılmaya başlanmıştır. Rezaev (2018: 91), yapay zekânın sosyal bilimlerce "yapay toplumsallık" kavramı ile ilişkili olarak yapay zekâyı incelemeleri gerektiğini ve bu alanda yeni teori ve metodolojilerin ortaya konulması gerektiğini ileri sürmektedir. Mühendislik ve fen bilimlerinin ilgi alanında çok defa ilgi gören yapay zekânın, son yıllarda sosyolojinin de inceleme nesnesi haline geldiği görülmektedir.

Yapay zekâ sosyolojisi, son yıllarda hızla yayılan bu teknolojinin toplumsal ve insani etkilerine odaklanan bir araştırma alanı olarak doğmuştur. Ve bu teknolojinin sosyal boyutlarını anlamayı ve analiz etmeyi hedeflemektedir. Bu alan yapay zekâ teknolojisinin toplumsa yapılar, kültürel pratikler ve kişiler üzerindeki etkisini araştırmakta; ayrıca yapay zekânın üretim sürecini, dağıtımını ve kullanımıyla ilgili de sosyal dinamikleri ve eşitsizlikleri ele almaktadır. Sosyolojik bakış açısı ile yapay zekâ, yalnızca teknolojik ilerlemenin bir ürünü değil aynı zamanda toplumsal değişimin de bir aracı haline gelmektedir. Özellikle günlük yaşama entegre olan yapay zekâ teknolojisi ile birlikte toplumsal ilişkiler, kurallar ve toplumsal kurumlar yeniden inşa edilmeye hazırdır. Tüm bunlar sosyolojinin ilgisini bu yeni teknolojinin üzerine çekmektedir. Ve bu alanda son yıllarda artan bir araştırma eğilimi söz konusudur. Bu bağlamda mevcut çalışmada, sosyoloji çatısı altında Web of Science veri tabanı üzerinde yer alan yapay zekâ üzerine gerçekleştirilmiş çalışmaların VOSviewer yazılımı kullanılarak bibliyometrik bir analizini sunmak amaçlanmaktadır.

Bibliyometrik çalışmalar, araştırmacının ilgi alanına yönelik çalışmaları sayısal olarak analiz ettikleri ve bu alanda araştırmalar gerçekleştiren diğer araştırmacılara rehber niteliği taşıyan çalışmalardır. Bu doğrultuda bu bibliyometrik analizde, yapay zekâ üzerine sosyoloji çatısı altında yapılmış olan ve Web of Science veri tabanında yer alan makalelerin sayısı, yazar bilgileri, ülke bilgileri, yayınlandıkları dergilere dair bilgiler ve atıf sayıları, en çok hangi anahtar kelimelerin tercih edildiği bibliyometrik şekilde sayısal olarak ortaya konulmaktadır. Bundan sonraki çalışmalarda rehber oluşturabilecek nitelikte bir analiz gerçekleştirilmesi hedeflenmektedir. Web of Science veri tabanında yer alan veriler, VOSviewer yazılımı ile analiz edilmiştir. 14.03.2025 tarihinde, "artificial intelligence" anahtar sözcüğü ile "topıc" arama alanında yapılan araştırmada 223,482 çalışmaya ulaşılmıştır. Daha sonra yapılan filtrelemede, "research areas" bölümünden "sociology" seçeneği seçildiğinde ise bu alana dair Web of Science'da toplamda 485 çalışmanın yer aldığı sonucuna ulaşılmıştır. Bu çerçevede sosyoloji kategorisi altında WoS'da indekslenen ilk çalışma 1981 yılına aitken, 2025 yılına ait ise henüz 26 çalışma yer almaktadır. 44 yıllık bu süre zarfında yapılan 485 çalışmanın 398'i makale, 30'u bildiri, 33'ü erken erişim makalesi, 21'i kitap bölümü, 26'sı inceleme makalesi, 19'u editöryal yazı, 8'i kitap incelemesi, 3'ü kitap yayını olarak listelenmektedir. Analizler, en eskisi 1984'e ait 1; en yenisi 2025'e ait 23 adet olan ve sosyoloji disiplin çatısı altında olan toplamda 398 makale üzerinden gerçekleştirilmiştir. Ulaşılan veriler araştırmaların yıllara göre dağılımı, ülkelere göre dağılımı, en çok atıf alan yazarların dağılımı,

anahtar sözcük analizi, özet analizleri ve Türk yazarların çalışmalarının incelenmesi üzerinden gerçekleştirilmiştir. Veri tabanı olarak Web of Science'de indekslenen içerikler kriter alınmıştır. Araştırma sonunda elde edilen bulgular, yapay zekâ ile ilgili sosyoloji alanındaki çalışmaların özellikle son beş yılda yoğunlaştığını ve 2024 yılında en fazla makale sayısına (121) ulaşıldığını görmek mümkündür. Özellikle ChatGPT ve DeepSeek gibi yapay zekâ örneklerinin ücretsiz kullanım olanaklarının ortaya çıkması ile bu teknolojinin daha da görünür hale geldiği düşünülmektedir. Neredeyse her kesimden insanın kullanma ve deneyimleme imkanı bulduğu bu teknoloji, halen hızla gelişmekte ve toplumsal hayatın her alanında kendisine yer bulmaktadır. Teknolojik ilerlemenin olumlu bir sonucu olarak karşımıza çıkan bu teknoloji, aynı zamanda çeşitli endişe ve tartışmaları da doğurmaktadır. Bu sebeple de sosyolojinin ilgisini son yıllarda çekmeye başladığı ve akademik çalışmalara konu olduğu düşünülmektedir. Ülkelere göre bakıldığında en fazla çalışmanın Amerika Birleşik Devletleri bünyesinde gerçekleştirildiği görülmektedir. Yapay zekâya duyulan ilginin, bu teknolojinin toplumsal olarak yaygınlığı ile eş değer olduğunu söylemek mümkündür. Amerika Birleşik Devletleri, bugün içinde bulunduğu teknolojik gelişim düzeyi açısından yapay zekâ ile diğer ülkelere kıyasla daha önce buluşmuştur. Bu durum, eldeki verileri açıklamakta kullanılabilir. Elde edilen verilerde 398 makale çalışması içerisinde 8 çalışmanın Türkiye bölgesinden araştırmacılar tarafından gerçekleştirildiği görülmektedir. Bu çalışmaların içeriği incelendiğinde, yapay zekânın günlük hayatta kullanım alanının giderek arttığı ve sosyal hayatı etkileme/değiştirme potansiyelinin yüksek olduğu yönünde düşünceler ön plana çıkmaktadır. Bunun yanı sıra özellikle yapay zekâ teknolojilerinin hangi meslekler üzerinde etkili olacağı ve birtakım mesleklerin yerini alma ihtimalinin olup olmadığı tartışılmıştır. Yine elde edilen verilerde en çok hangi yazarların atıf aldığı, hangi dergilerin bu alanda daha çok yayın yaptığı, bu alanda en çok hangi anahtar kelimelerin kullanıldığı gibi bu alanda çalışma yürütmeyi planlayan araştırmacılara ve araştırmalarına katkı sunacağı düşünülen bulgulara ulaşılmıştır.

Keywords: Yapay Zeka, Yapay Zeka Sosyolojisi, Bibliyometrik Analiz, Yapay Zeka Araştırmaları

REDUCE NG (NOT GOOD) LOSSES AT SEPARATION PROCESS

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The manufacturing process of 1/20 type chip resistors involves a multi-step procedure that includes several critical stages, with the R30 process being pivotal to the final product. The R30 process is composed of six key sub-processes: Jig Stacking (cutting the substrate into strips), Sputter (spraying argon gas on the strip surface to prepare them for further processing), Separation (cutting the strips into individual chips), Dummy (isolating the actual chips from dummy pieces), Plating (applying nickel and SN plating on the chips), and lastly is separation steel ball and shape selection. Each stage is critical to maintaining the precision and quality of the final chip resistors. In September, an analysis of CPS (Company Production System) data revealed a significant increase in not good (NG) products, particularly during the separation process. This increase in NG products adversely affected the production levels of the 1/20 chip resistors. Based on the CPS data, the primary cause of this increase was suspected to be broken strips that occurred during the separation of the strips into individual chips. However, despite a correlation between the data and broken strips, no direct evidence was found to confirm the physical occurrence of these broken bands, which suggested a need for further investigation into possible root causes. To address this challenge and improve the performance of the separation process, the installation of a blower system in the jig lane was proposed. The blower system was designed to clean the jig area by removing debris, dust, or other contaminants that could potentially contribute to strip breakage during the separation process. The blower's primary function is to prevent any external factors such as dust or particulate matter from compromising the integrity of the strips, thus reducing the occurrence of breakage. This intervention aimed to maintain the stability of the strips as they moved through the separation process, thereby minimizing NG products and increasing the overall production yield of the chip resistor. The project methodology was structured in three phases: pre-implementation, during implementation, and post-implementation. In the pre-implementation phase, Fault Tree Analysis (FTA) was applied to identify and analyse potential causes of failure within the separation process. FTA, a method developed in the 1960s, is a top-down, deductive technique used to assess system reliability and safety. It helps in identifying the root causes of failures by systematically breaking down the process into different components and analysing failure pathways. The use of FTA in this project provided a comprehensive framework for understanding the potential causes of broken strips, ranging from equipment failure, contamination, to operational issues such as improper handling of the substrate. Once the blower system was installed, the implementation phase involved monitoring its effect on the Separation process. The focus was on assessing whether the blower system could effectively clean the jig area and reduce the rate of broken strips. Data was collected both before and after the blower installation to measure the impact of the intervention on product quality. The post-implementation phase involved a comparative analysis of data collected from the Separation process over a one-month period before and after the blower system was introduced. During the period from 11 November 2024 to 23 December 2024, a total of 35.16 grams of broken strips were recorded for one specific machine. After the blower system was implemented (from 24 December 2024 to 7 February 2025), the number of broken strips decreased dramatically to 3.93 grams, representing an 88.82% reduction. This significant decrease in broken strips demonstrates the effectiveness of the blower system in improving the stability of the Separation process and reducing NG products. The results highlight the direct correlation between the cleanliness of the jig area and the occurrence of broken strips. The blower system effectively addressed the root cause of the NG process by preventing contaminants that could

lead to strip breakage, thereby improving the overall yield and quality of the resistors. The developed projects have been tested and evaluated based on the criteria used to mitigate the main problems for this project to occur. The results show that after the blower is installed, it can improve the production performance of the product output as well as reduce the broken strip from occurring. The result that has been collected, from broken strip at manual machine has been reduce 82.37% from September 2024 until December 2024. Result from blower implementation at machine Separation no.757 has been reduce 88.11% from November 2024 until February 2025. Lastly, for yield Separation data has been reduce 0.57% from September 2024 until February 2025. The final results demonstrate the feasibility and effectiveness of reducing the NG process in the separation process within the industry. These outcomes confirm the feasibility and effectiveness of the blower system in enhancing the stability of the Separation process and significantly reducing the occurrence of not good (NG) products. By improving the cleanliness of the jig lane, the intervention successfully addressed a critical root cause foreign particle contamination thereby contributing to better yield and process reliability. As a result of these improvements, the manufacturing process now operates with greater efficiency and consistency. The enhanced process stability has led to increased equipment uptime, reduced operational delays, and improved throughput. Furthermore, the reduction in material waste and rework contributes to more sustainable manufacturing practices and cost-effective operations by optimizing resource utilization.

Keywords: Chip Resistor, CPS (Company Production System), NG (Not Good) Losses, Separation Process, Blower

ADVANCING BRAIN TUMOR DIAGNOSTICS: A COMPARATIVE STUDY OF AI-DRIVEN MULTI-CLASS DETECTION MODEL USING MACHINE LEARNING

Kerem Er (İstanbul Technic University)

Erke Arıbaş (İstanbul Technic University)

The development of accurate and efficient models for brain tumor detection is critical for early diagnosis and treatment planning. This study presents a detailed analysis of two models: one that predicts the specific type of tumor, if present, and another that determines only whether a tumor exists or not. By comparing key performance metrics, such as accuracy and loss trends, significant differences in their effectiveness were identified. The binary classification model demonstrated superior generalization compared to the multi-class model, highlighting the benefits of task simplification in improving model performance, particularly in addressing data imbalances and overfitting. The analysis also explored the influence of data preprocessing techniques and augmentation methods in enhancing the performance of the models. Furthermore, this paper discusses existing challenges and outlines strategies for enhancing future models through techniques such as transfer learning and domain adaptation. The findings underscore the potential of simplifying complex tasks in medical imaging and provide actionable insights for designing robust AI systems in healthcare.

Keywords: AI in Healthcare, Medical Imaging, Machine Learning Models, Tumor Localization and Segmentation, Multi-Class Detection

TELEGRAM CHATBOT USING PYTHON

Vaishanavi Kumari (Galgotias University)

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Nidhi Sharma (Galgotias University)

The quick development of texting stages, chatbots have acquired critical ubiquity in different areas, including client service, data recovery, and diversion. Wire, one of the main informing applications, offers a vigorous stage for building wise chatbots. This exploration paper presents a far reaching concentrate on fostering a Message chatbot utilizing the Python programming language. The paper covers the essential ideas, plan standards, and execution subtleties of making a viable and intuitive chatbot on the Message stage.

Keywords: Telegram, Chatbot, Python

KRONİK NON-SPESİFİK BOYUN AĞRISININ TEDAVİSİNDE PNF TEKNİĞİ İLE FOTOBİYOMODÜLASYON TEDAVİSİNİN ETKİNLİĞİNİN KARŞILAŞTIRILMASI: RANDOMİZE KONTROLLÜ ÇALIŞMA

Edanur Tüfekçi (İstanbul Gedik University)

Sıla İnce (İstanbul Gedik University)

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Selin Akıl Ağdere (Demiroğlu Bilim University)

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Boyun ağrısı, üst ense çizgisinden başlayıp skapular omurga seviyesine kadar devam eden, boyun bölgesinde "gerçek veya potansiyel doku hasarı ile ilişkili hoş olmayan bir duyusal ve duygusal deneyim" olarak tanımlanır. Proprioseptif Nöromusküler Fasilitasyon (PNF) hareket kalıpları, günlük yaşam aktivitelerinde bulunan fonksiyonel hareketlerdir. Fotobiyomodülasyon tedavisi olan Uyarılmış Radyasyon Emisyonuyla Işık Amplifikasyonu (LASER), özellikle düşük yoğunluklu lazer terapisi gündeme gelmektedir. Terapatik laser tedavisinin iyileşme sürecini hızlandırma, doku rejenerasyonunu destekleme, hücre ölümünü önleme, anti-enflamatuar aktivite ve ağrıyı hafifletme dahil olmak üzere doku üzerinde derin biyolojik etkileri olabilir. Çalışmanın amacı kronik non-spesifik boyun ağrısının tedavisinde proprioseptif nöromusküler fasilitasyon tekniği ile fotobiyomodülasyon tedavisinin etkinliğinin karşılaştırılaştırmaktır ve boyun ağrısı, fonksiyonelliği ve normal eklem hareket açıklığı, kas kuvvetine etkisini incelemektir. Çalışmamız; PNF tekniği, laser terapisi ve konvansiyonel egzersiz tedavisi şeklinde 3 gruba ayırararak randomize kontrollü çalışma tasarımında kıyaslanıp literatüre katkı yapmayı ve sıklıkla insan popülasyonunda görülen boyun ağrısı şikayeti için insan sağlığının sürdürebilirliğine katkı sağlamayı hedefledi.

Materyal ve Yöntem: Çalışmamızda 30 kronik boyun ağrısı olan katılımcıya Laser terapi+konvansiyonel terapi (Gr1), PNF tekniği+ konvansiyonel terapi (Ggr2) ve sadece konvansiyonel egzersiz terapisi (Gr3) şeklinde 3 grup randomizasyonu ile 5 hafta boyunca grupların uygulaması yapıldı. Numerik Ağrı Skalası (NAS), Bournemouth Boyun Ağrısı Anketi (BBAA), algometre ile ağrı durumları, Boyun Disabilite İndeksi (BDİ) fonksiyonellikleri, gonyometrik ölçüm ile boyun normal eklem hareket açıklıkları değerlendirildi.

Sonuçlar: Hastaların ortalama yaşı Gr1: 19.30±0.94 yıl, Gr2: 21.70±1.82 yıl, Gr3: 20.90±1.79 yıldı. Program sonrası (PS), program öncesine (PÖ) göre ortalama NAS (Gr1: öncesi 4.50±0.52, sonrası 2.00±0.66, p: 0,000; Gr2: öncesi 5.60±0.69 sonrası 1.80±0.78, p: 0,000; Gr3: öncesi 4.70±0.48, sonrası 1.80±0.91, p: 0,000), BDİ (Gr1: öncesi 19.70±9.28, sonrası 4.40±3.74, p: 0,001; Gr2: öncesi 15.50±5.23, sonrası 3.70±1.70, p: 0,000, Gr3: öncesi 15.70±3.88, sonrası 5.30±3.83, p:0,000), BBAA (Gr1: öncesi 28.50±8.38, sonrası 15.60±4.81, p: 0,000; Gr2: öncesi 37.70±5.57, sonrası 16.10±5.82, p:0,000; Gr3: öncesi 31.90±6.40, sonrası 14.60±6.86, p: 0,000) skorlarında tüm gruplarda istatistiksel olarak anlamlı değişim görüldü ve grupların birbirlerine üstünlükleri yoktu ($p>0,05$). Boyun gonyometrik ölçümlerinde Gr1 ve Gr'nin, boyun lateral fleksiyonunu iyileştirmede Gr1'in istatsitiksel olarak Gr3'e göre daha etkili olduğu anlaşıldı ($p<0,05$). Trapez ve levator skapula kaslarını referans alan ağrı eşiği ölçümlerinde Gr2 ve Gr3'te ağrı eşiği artarken, Gr1 gruplarında anlamlı değişim görülmedi. Tartışma: Literatürde spesifik olmayan (nonspesifik) boyun ağrısı olan bireylerde PNF patern ve tekniklerinin etkisini inceleyen çalışma çok yetersizdir. Kronik bel ağrısı ve gövde kontrolünde yapılan çalışmalar mevcut olsa da boyun ağrısına etkisini araştıran çalışma çok az bulunmaktadır.

Fotobiyomodülasyon tedavisinin boyun ağrısına olan etkinliği literatürde araştırılmış fakat bilindiği kadarı ile çalışma yetersizliğinden dolayı alternatif düşük kanıt düzeyinde bir terapi olarak kalmıştır. Özgün değer olarak literatürdeki bu açığı kapatmak hem de bilindiği kadarı ile hem de germe ve kuvvetlendirme egzersiz terapisini PNF ile veren ilk çalışma olmak için bu çalışmayı tasarladık. Çalışmamız sonucunda 5 hafta uygulanan laser terapi, PNF germe tekniği ve konvansiyonel tedavinin boyun ağrısı ve disabilitesi üzerine etkisinin istatistiksel olarak olduğu ama birbirlerine karşı istatsitiksel üstünlüklerinin olmadığı, boyun fleksiyonu ve ekstansiyonunu iyileştirmede laser terapi ve PNF germenin, boyun lateral fleksiyonunu iyileştirmede laser terapinin daha etkili olduğu anlaşıldı. Trapez ve levator skapula kaslarını referans alan ağrı eşiği ölçümlerinde PNF tekniği ve konvansiyonel tedavi grubunda ağrı eşiği artarken laser terapi gruplarında anlamlı değişim görülmedi.

Keywords: Boyun Ağrısı, Fotobiyomodülasyon, Konvansiyonel Fizyoterapi, PNF, Terapatik Laser

IMPACTS OF UNITED NATIONS RESOLUTIONS ON CONFLICT RESOLUTION AND PEACE PROCESS: REGIONAL PERSPECTIVES AND IMPLEMENTATIONS

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This study examines the effects of United Nations (UN) Security Council resolutions on conflict resolution and peace processes with regional perspectives. The UN is an important actor in ensuring global peace and uses various tools to end conflicts and maintain peace. However, the impact of UN decisions in each region depends on international law and the power of the UN, the attitudes of regional actors, local dynamics and global balance of power. In this context, the study analyzes the extent to which the UN's contributions to conflict resolution processes are effective and examines the difficulties encountered in the implementation of these decisions.

The Kashmir example in the study reveals how limited the UN's conflict resolution capacity is, especially due to the interests of India and Pakistan. It is emphasized that the applicability of the UN resolutions adopted in 1948 remains weak due to regional dynamics and the sovereign rights of the countries. In the Israeli-Palestinian conflict, it is argued that the resolutions taken by the UN have become ineffective, especially due to the support given to Israel by powerful members such as the USA. The resolutions taken by the UN after the Six-Day War in 1967 faced issues such as security and settlement policies in the region and failed to achieve lasting peace. Similarly, initiatives such as the Oslo Accords in 1993 failed due to the lack of trust between the parties despite the UN's diplomatic solution proposals.

The Russia-Ukraine war represents another challenge the UN faces in ensuring peace and security. Russia's veto power in the UN Security Council has rendered the resolutions taken regarding Ukraine ineffective. This situation reveals how limited the UN's capacity to produce international solutions is due to the interests of the great powers. It is emphasized that in order for the UN to be more effective in ending the war, the balance of power in international relations and equality in decision-making processes must be ensured. It is seen that the UN's contribution to peace processes is not limited to decision-making, and it also reveals that strong international cooperation is required for the applicability and effective implementation of these decisions.

It is concluded that in order to increase the UN's contribution to future conflict resolution processes, decision-making processes and implementation processes must be strengthened. This study aims to shed light on future research to enable the UN to produce more inclusive and sustainable solutions in peace processes. Moreover, it provides an important basis for better understanding and improving the effectiveness of the UN in conflict resolution and peace processes.

Keywords: United Nations, Kashmir Issue, Israel-Palestine, Russia-Ukraine, Security Council.

ALGORİTMİK GÖRÜNÜRLÜK VE KAMUSAL AKIL: YAPAY ZEKÂ İLE BİÇİMLENEN YENİ KAMUSAL ALAN ÜZERİNE KURAMSAL BİR TARTIŞMA

Özge Ercebe (Trakya University)

Bu çalışma, yapay zekâ destekli algoritmaların dijital medya ortamlarında üstlendiği düzenleyici rolü, Habermas'ın kamusal alan kuramı çerçevesinde değerlendirmeyi amaçlamaktadır. Günümüzde kamuoyunun oluşumu, yalnızca yurttaşların rasyonel iletişim süreçlerine değil; içerik seçimi ve sıralamasını görünmez biçimde gerçekleştiren algoritmik sistemlere bağlı olarak şekillenmektedir. Çalışmanın temel amacı, bu dijital dönüşümün kamusal alanın açıklık, erişilebilirlik, eleştirel tartışma ve temsil eşitliği gibi normatif ilkeler üzerindeki etkilerini tartışmaktır. Çalışmada, Habermas'ın "burjuva kamusal alan" modelinden hareketle, yapay zekâ algoritmalarının "yeni eşik bekçileri" olarak nasıl işlediği teorik literatür temelinde analiz edilmiştir. Bu bağlamda algoritmik görünürlük, filtre balonları, yankı odaları, temsiliyet eşitsizliği ve algoritmik yönetişim kavramları tartışılmıştır.

Algoritmaların kişiselleştirme ve içerik filtreleme işlevleriyle kullanıcıları homojen bilgi çevrelerine yönlendirildiğine yapılan vurgu ile bunun eleştirel kamusal tartışmayı ve fikir çeşitliliğini zayıflattığı savunulmaktadır. Ayrıca şeffaflık eksikliği, algoritmaların denetlenmesini güçleştirmekte ve kullanıcılar için bilgi akışının ideolojik ya da ticarî yönlendirmelere açık hale gelmesine yol açmaktadır. Bu süreç, Habermas'ın kamusal alanın temel dayanakları olarak tanımladığı iletişimsel akıl ve eşit temsiliyet ilkeleriyle doğrudan çelişmektedir.

Çalışma yapay zekâ algoritmalarının yalnızca teknik bağlamda değil, aynı zamanda kamusal alanı belirleyen normatif aktörler olarak ele alınması gerektiğini ileri sürmekte; dijital çağda demokratik sürdürülebilirlik için etik algoritma tasarımı ve algoritmik yönetişim anlayışının geliştirilmesine yönelik öneriler sunmaktadır.

Keywords: Yapay Zekâ, Kamusal Alan, Algoritmik Yönetişim, Dijital Demokrasi

ECOLOGICAL REFLECTIONS OF TÜRKİYE'S FINANCIAL DEVELOPMENT: AN EVALUATION ON FOREIGN DIRECT INVESTMENT AND DOMESTIC LOANS

Fatma Dural (Gedik University)

According to the 2022 Living Planet Report, loss of biodiversity, pollution, species extinction and climate change pose a serious threat to present and future generations. Therefore, in recent years, the critical importance of not only reducing carbon emissions, but also keeping the ecosystem as a whole in balance has emerged. As a result, researchers have started to use the ecological footprint, a more comprehensive data set that includes carbon emissions, built-up areas, grasslands, agricultural land, forests and fishing areas, to approach the issue more holistically.

The ecological footprint represents the ecological capacity required to sustain an economy. In this direction, it has emerged as an indicator that makes environmental sustainability measurable with the increase in environmental problems and the widespread awareness of environmental issues. Ecological footprint measurement provides concrete information for grounding sustainability and policy making. The Ecological Footprint per capita is calculated by dividing a country's Ecological Footprint by its population and is measured in global hectares (gha). While the ecological footprint indicates the demand for natural resources, the biological footprint, which indicates the supply of natural resources, shows how critical the situation is from another perspective. It is observed that after 1970, the balance started to deteriorate against the biological capacity and the ecological footprint rapidly exceeded the biological capacity in an unsustainable manner.

According to the Global Footprint Network (GFN), in order to both protect biodiversity and meet the biological capacity needs of the increasing world population, the ecological footprint must be much lower than the per capita limit of 1.5 gha. However, according to the latest data, Türkiye's per capita ecological footprint in 2022 is 2.58 gha. In fact; when the year 2022 is examined, it is seen that the per capita biocapacity is 1.5 gha, the per capita ecological footprint is 3.4 gha and the ecological deficit has reached -1.9 gha. This figure is well above the world ecological deficit average and is an indication of the intensity of unsustainable living activities in the country. To this end, quantitatively examining and analyzing the factors causing environmental degradation will provide policy makers and competent authorities with more concrete data, facilitating the planning of remedial and preventive actions. Since reducing the ecological footprint requires costly investments that essentially require R&D infrastructure, it is important to provide the required financial resources. Considering that energy transformations that will reduce carbon emissions will positively contribute to the ecological footprint, it is clear that these energy transformations that require high financing are closely related to the financial development of the country. According to the 2023 World Investment Report published by the United Nations Conference on Trade and Development (UNCTAD) on July 5, 2023; it is stated that developing economies need to allocate resources worth 2.4 trillion dollars each year in order to complete the energy transformation by 2030. It is estimated that 1 trillion dollars of this will be provided by external resources. Because investments in renewable energy are large-scale projects and are more costly than investments in fossil fuels. In this context, the study analyzes the impact of financial development on Türkiye's ecological footprint by considering domestic loans provided to the private sector, which represent the depth dimension of financial development, and foreign direct investments (FDI), which contribute to financial development by increasing capital accumulation in the local economy. In the literature, it is quite difficult to talk about a consensus in the studies examining the relationship between the ecological footprint and financial development indicators. The main reason for this is that

the sustainability dynamics, awareness and determination on this issue vary from country to country. Based on this idea this study focused only on Türkiye and used two variables that were not considered together in the literature. In this respect, the study offers an original contribution to the literature both in terms of using domestic credits as an indicator of financial development, which is different from the literature specific to Türkiye, and in terms of evaluating financial development together with external financing.

Toda Yamamoto causality analysis was applied in the study covering the period 1985-2022. After determining the maximum integration degree with the optimal lag length (dmax), the VAR model was established and estimated with the Seemingly Unrelated Regression (SUR) method. Then, the Toda Yamamoto equation was solved with the Wald test. The analysis reveals that there is a bidirectional causality between ecological footprint and FDI, while there is a unidirectional causality from domestic loans to ecological footprint. The findings support similar studies in the literature. Therefore, the results of the study show that capital accumulation through both domestic loans and FDI can be directed to environmentally friendly investment areas and the financial development process can be given a dynamic impetus with a focus on sustainability. Thus, with the help of the policies to be implemented, the transition of resources in the economy to sustainable projects will be facilitated and the targeted improvement in the ecological footprint can be achieved.

Keywords: Sustainability, Ecological Footprint, Financial Development, Foreign Direct Investment, Toda Yamamoto

YAPAY ZEKÂ DESTEKLI KARAR ALMA SÜREÇLERI: VERI ODAKLI YÖNETIŞIM

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Bu çalışma, teknolojinin hızla ilerlemesiyle birlikte toplumsal ve iktisadi faaliyetlerin gelişiminde rol oynayan yapay zekâ (YZ) ve veri odaklı yönetişim alanlarının etkileşimini incelemektedir. Özellikle son zamanlarda hükümetler, sağlık, eğitim vb. alan ve yapılanmalarda payı artan YZ destekli analiz süreçleri ve veri odaklı yönetişim anlayışı, sezgisel yani insanın aktif rol aldığı yönetişim anlayışına kıyasla potansiyel olarak daha nesnel ve hızlı karar almayı hizmete sunmaktadır. Kısacası, bu çalışma YZ destekli karar alma süreçlerini birçok açıdan anlamlandırmayı ve günümüz veri odaklı yönetişim paradigmalarının evrimini açıklamayı amaçlamaktadır. Bu hedef düzleminde YZ ve veri odaklı yönetişimin etkileşimi analiz edilmiş, YZ destekli karar alma mekanizmalarının yönetişimdeki kullanımının artışı ve toplumsal yapıları nasıl dönüştürdüğü araştırılmıştır. Bu araştırmalardan hareketle yapay zekânın potansiyel fayda ve zararları tartışılmış, ortaya çıkan güven, şeffaflık vb. temel etik sorunlar ile olan etkileşimi incelenmiştir. Yapay zekâ veri odaklı yönetişimin bütünleşmesinden doğan bu yeni yönetim idrakinin başta kamu politikaları, ekonomik sistemler gibi birçok yönetişim alanını dönüştürmesi katmanlı bir biçimde ele alınmıştır.

Araştırma, yapay zekâ ve veri eksenli yönetişim yaklaşımlarına yönelik çeşitli belgelerin sistematik analizi gerçekleştirilmiş ilgili sosyolojik terimler de açıklığa kavuşturulmuştur. Yapılan analizler sonucunda, YZ'nın karar alma süreçlerine entegrasyonunun yönetişim açısından kritik dönüşümler sağladığı, potansiyel olarak daha doğru kararlar alınmasına olanak tanıdığı bulgulanmıştır. Fakat, bu dönüşümün toplumsal eşitsizlik, ekonomik dengesizlik gibi sorunlara yol açma ve demokratik çerçevede belirsizlikler yaratmak gibi potansiyel riskleri de beraberinde getirdiği açıkça belirtilmiştir. Bunlarla birlikte algoritmik karar süreçlerinde etik meselelerin çözülmesinin gerekliliğini vurgulamıştır. Nihayetinde, yapay zekâ ve veri temelli yönetişimin, yönetişim alanında önemli potansiyele sahip olduğunu ve sezgisel yönetişim süreçlerine kıyasla daha hızlı, doğru ve nesnel kararlar alabileceği örnekler ışığında değerlendirilmiştir ancak bu potansiyelin etik meseleleri de göz ardı etmeyerek etkin edilmesi sonucuna varılmıştır. Makale, bu alandaki etik endişelerin ve çağdaş yönetişim paradigmalarının dikkatle ele alınması gerekliliğini, yapay zekâ destekli karar alma süreçleri ve veri odaklı yönetişime olan güvenin artacağı sebebiyle desteklemiş bununla birlikte de bireysel faydanın yanı sıra toplumsal yapılanmalara fayda sağlayacağı yönünde çıkarımlar sunmaktadır.

Keywords: Şeffaflık, Hesap Verebilirlik, Geleneksel Yönetişim Paradigmaları, Veri Odaklı Yönetişim, Yapay Zekâ Destekli Karar Alma Sistemleri

HARNESSING ARTIFICIAL INTELLIGENCE IN EDUCATION: A PATH TOWARD INCLUSION AND EQUITY IN THE AI ERA

Ananda Majumdar (University of Alberta)

Artificial Intelligence (AI) can be a powerful tool for addressing educational challenges, enhancing teaching methods, and supporting progress toward Sustainable Development Goal 4 (SDG 4). However, the rapid development of technology also brings risks and challenges that have outpaced policy discussions and regulations. UNESCO is committed to helping countries use AI technology to achieve the Education 2030 Agenda, with a strong emphasis on ensuring its use in education focuses on inclusion and fairness. UNESCO is a staunch advocate for a human-centred approach to AI. It aims to address existing inequalities in access to knowledge, research, and cultural diversity and ensure that AI does not widen the technology gap within and between nations. "AI for all" ensures everyone can benefit from the ongoing technological revolution, particularly in innovation and knowledge. As part of the Beijing Consensus, UNESCO has developed educational policy guidance on using AI. This guidance aims to foster a shared understanding of AI's opportunities and challenges for education and its impact on essential skills for the AI era. The methodology of this essay is to develop and disseminate guidance for education policymakers to navigate the integration of AI in educational settings. Artificial Intelligence (AI) has the potential to be a powerful tool in tackling significant challenges in education, improving teaching methods, and advancing progress toward Sustainable Development Goal 4 (SDG 4). However, the rapid development of technology also brings risks and challenges that have outpaced policy discussions and regulations. UNESCO is committed to supporting countries in leveraging AI technology to achieve the Education 2030 Agenda, focusing on ensuring that its application in education prioritizes inclusion and equity. UNESCO advocates for a human-centred approach to AI to address existing inequalities in access to knowledge, research, and cultural diversity. AI must not exacerbate the technology gap both within and between nations. "AI for All" ensures everyone can benefit from the ongoing technological revolution, particularly in innovation and knowledge. As part of the Beijing Consensus, UNESCO has developed educational policy guidance on using AI. This guidance aims to foster a shared understanding of AI's opportunities and challenges for education and its impact on the essential skills needed in the AI era. The methodology of this initiative focuses on developing and disseminating guidance for education policymakers to integrate AI into educational settings effectively. Ultimately, the objective is to ensure AI's equitable and inclusive application in education, opening up opportunities for all individuals to benefit from technological advancements. It aims to ensure AI's equitable and inclusive application in education, fostering opportunities for all individuals to benefit from technological advancements.

Keywords: Artificial Intelligence, Education, Inclusion, Equity, UN Goal 4.

IX. ASC 2025 / SPRING CONGRESS

ÖLÇEKLENEBILIR YEŞIL DALGA SENKRONIZASYON SISTEMLERI: BÜYÜK ÖLÇEKLI KENTSEL TRAFIK AĞLARI İÇIN MAKINE ÖĞRENMESI YÖNTEMLERI ILE DERIN PEKIŞTIRMELI ÖĞRENMENIN (DRL) KULLANIMI

Erke Arıbaş (Istanbul Teknik University)

Kentsel trafik akışını optimize etmek amacıyla geliştirilen yeşil dalga senkronizasyon sistemleri, trafik sinyallerinin zamanlamasını koordine ederek araçların kesintisiz ilerlemesini sağlar. Ancak, büyük ölçekli kentsel ağlarda bu sistemlerin uygulanması, artan ağ karmaşıklığı, yüksek veri hacmi ve gerçek zamanlı adaptasyon gereksinimleri gibi önemli ölçeklenebilirlik sorunlarını beraberinde getirmektedir. Bu çalışma, derin pekiştirmeli öğrenme (DRL) yöntemlerinin, trafik sinyal zamanlamalarının optimizasyonu, trafik sıkışıklığının azaltılması ve emisyonların düşürülmesi gibi alanlarda sağladığı adaptif çözümleri incelemektedir. DRL tabanlı yaklaşımlar, karmaşık trafik dinamiklerine uyum sağlayarak daha akıllı, güvenli ve çevre dostu trafik yönetim sistemlerinin geliştirilmesine olanak tanımaktadır. Çalışmada, teorik temellerin yanı sıra vaka analizleri ve mevcut uygulama örnekleri üzerinden DRL'nin potansiyeli ve sınırlamaları değerlendirilmektedir.

Keywords: Yeşil Dalga; Trafik Senkronizasyonu; Derin Pekiştirmeli Öğrenme; Ölçeklenebilir Sistemler; Akıllı Ulaşım Sistemleri.

MEDIA LITERACY IN THE AGE OF ARTIFICIAL INTELLIGENCE: A CONCEPTUAL REVIEW

Nehir Devrim Eserol (Kastamonu University)

As the artificial intelligence (AI) is transforming all aspects of media consumption, the concept of media literacy requires a comprehensive and critical examination. This study is a conceptual review which aims to focus on evolving definitions, dimensions, and challenges of the media literacy in the AI driven environments. This study adopts a conceptual review methodology; a qualitative research method that draws upon an extensive body of interdisciplinary literature from media and communications studies, communication theory, education and digital culture. Key academic databases and journals were systematically reviewed to identify the current scholarly perspectives on AI-driven media environments. As a foundational skill for democratic participation and informed citizenship, conventional media literacy focuses on critical thinking, content evaluation and production skills. However, within the context of artificial intelligence, roles of users, platforms and institutions need to be reconsidered as algorithmic content curation, deepfakes, personalized news feeds and automated decision-making systems affect the way we choose and consume media. The steps of media literacy; accessing, analyzing, evaluating and creating media must be integrated with algorithmic literacy, data ethics, critical AI awareness and socio technical analysis. Literature review reveals that media literacy frameworks do not fully integrate the digital competencies with the media literacy guidance in a systematic and comprehensive manner. Without understanding the underlying mechanisms of AI technologies and their impact on the media systems, individuals are left vulnerable to manipulation, misinformation and biased content. In order for a well-informed society with a healty functioning democracy, it is essential to update media literacy frameworks accordingly. By integrating insights from diverse academic perspectives, this study aims to construct a refined conceptual framework to extend the traditional media literacy by incorporating competencies such as algorithmic awareness, digital ethics, and critical understanding of AI-driven media environments. This study concludes that contemporary media literacy must be expanded to include new competencies that underlines the socio-technical realities of AI-driven media. These include understanding how algorithms shape the information consumption (algorithmic literacy), recognizing biases in AI systems (critical AI awareness), awareness of privacy, consent and data justice (data ethics) and examining the broader societal impacts of AI in media (socio-technical analysis).

Keywords: Media Literacy, Digital Literacy, Artificial Intelligence, AI Technologies, AI Ethics

DESIGNING SUSTAINABLE PLANT-BASED CHEESE AS A FUTURE FOOD: OPTIMIZING FORMULATION THROUGH FRACTIONAL FACTORIAL DESIGN AND ARTIFICIAL NEURAL NETWORKS

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The growing demand for plant-based alternatives to dairy products has created a need for innovative and sustainable formulations of plant-based cheese. This study aims to optimize the formulation of plant-based cheese by examining the raw materials and their impact on the cheese's textural properties. Using Fractional Factorial Design (FFD) and Response Surface Methodology (RSM), key factors such as plant protein sources, fat content, and binding agents were systematically assessed to determine the optimal conditions for improving the cheese's texture. FFD was applied to minimize the number of experiments and efficiently identify significant factors influencing texture. RSM was then used to model the relationships between raw material variables and textural properties, enabling the prediction of ideal conditions for texture optimization. Furthermore, Artificial Neural Networks (ANNs) were incorporated to refine the model by capturing complex, non-linear interactions between raw materials that conventional methods may not reveal. The findings of this study provide valuable insights into the formulation of plant-based cheeses, contributing to the development of more sustainable, nutritious, and environmentally friendly alternatives to traditional dairy cheese. This research supports the United Nations' Sustainable Development Goals (SDGs), particularly SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action), by focusing on reducing environmental impact through sustainable food production practices.

Keywords: Plant-Based Coagulant, Plant-Based Cheese, Green-label Food, Sustainable

DIGITAL TRANSFORMATION, ARTIFICIAL INTELLIGENCE AND SUSTAINABILITY: GLOBAL APPROACHES TO FUTURE SOCIETIES AND MARKETING ECOSYSTEMS

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The acceleration of digitalization on a global scale has brought about radical transformations not only in technological infrastructures but also in social value systems, consumer behaviors and marketing strategies. While the integration of artificial intelligence technologies into decision-making processes strengthens data-based personalization practices, it also necessitates the redefinition of sustainability principles such as ethical responsibility, transparency and environmental awareness in marketing management. This paper argues that marketing in the age of digital transformation should be addressed not only in economic but also in social and ecological dimensions; how AI-based strategic decision systems can be aligned with sustainable society goals is examined with an analytical approach. In addition, the role of artificial intelligence applications in encouraging responsible consumption behaviors in the digital marketing ecosystem is evaluated from the perspective of ethical use of consumer data and technological inclusiveness. In developing digital society structures, the cultural, environmental and social responsibilities of marketing should be redefined; Strategic roadmaps to be developed with a multidisciplinary approach should be integrated with sustainable development goals. In this context, the study aims to bring together the marketing paradigms of the digital age with the vision of a sustainable society by presenting an interdisciplinary assessment through both a theoretical framework and current application examples. The study will analyze the extent to which artificial intelligence-supported decision systems encourage responsible consumption behaviors in digital marketing applications in Türkiye and globally, and will create recommendations for the integration of these processes into the sustainable strategic management approach. In this context, the study was conducted with a mixed method approach. In the quantitative dimension, the data obtained from structured surveys applied to the managers of 150 digital retail businesses operating in Türkiye were analyzed with SPSS. In the qualitative dimension, in-depth interviews were conducted with 12 experts on sustainable marketing and artificial intelligence integration. The data collection process was carried out throughout 2023. Descriptive analysis and thematic analysis techniques were used. According to the quantitative analysis results, 78% of the businesses stated that they actively use artificial intelligence-based decision support systems. However, only 42% stated that they integrated these systems with sustainability goals. In qualitative data, the majority of managers emphasized that artificial intelligence provides efficiency, but ethical concerns and transparency issues have not yet been fully resolved. It has been observed that there is a gap in corporate strategies regarding the responsible use of consumer data. As a result, the study reveals that a holistic management approach encompassing strategic, ethical and social aspects should be adopted in order for AI-supported marketing practices to become fully compatible with sustainability goals. It is recommended that institutions develop systems that analyze consumer behavior not only in terms of sales but also with environmental and social impacts. In addition, ethical principles in the use of artificial intelligence should be secured with corporate policies and

transparent communication strategies aimed at consumers should be increased. This study emphasizes the importance of considering the digitalization process not only as a technological but also as a value-based transformation.

Keywords: Digital Transformation, Artificial Intelligence, Sustainability, Marketing Ecosystem, Responsible Consumption

HIGH-PERFORMANCE WORK PRACTICES AND ORGANIZATIONAL INNOVATION: A SERIAL MEDIATION OF AFFECTIVE COMMITMENT TO CHANGE AND INDIVIDUALS' READINESS TO CHANGE

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In the current era, organizational change becomes mandatory for the attainment of competitive advantage. Organizational innovations help the firms to achieve this goal, but support of workforce during organizational change is challenging. For that purpose, using social schema theory, this study investigates the impact of high-performance work practices on organizational innovations, using affective commitment to change and individuals' readiness to change as serial mediators. Data was collected from the 331 permanent employees working in manufacturing sector organizations using a simple random sampling technique and a close-ended questionnaire through a temporal separation approach. Findings revealed that high-performance work practices directly boost organizational innovations. Further, affective commitment to change mediates the relationship between high-performance work practices and organizational innovations; parallel to this, individuals' readiness to change also mediates the relationship between high-performance work practices and organizational innovations. Findings further explained that affective commitment to change and individuals' readiness to change also work as serial mediators between high-performance work practices and organizational innovations. These findings elaborate that by implementing the high-performance work practices, organizations can boost the affective commitment level of the individual about change, which further influences the cognition level through which employees show their willingness to support organizational change, which is necessary for the achievement of organizational innovations. This study extends knowledge to organizational psychology and social schema theory by explaining that organizations can minimize the negative perceptions of individuals about organizational change by implementing high-performance work practices, as these practices alter the schemata of employees about organizational change. Moreover, high-performance work practices work as a bundle of policies and practices that motivate the employees and shows the attention of management to employees.

Keywords: High-Performance Work Practices, Affective Commitment to Change, Individuals' Readiness to Change, Organizational Innovations

AN EMPIRICAL ANALYSIS OF THE IMPACT OF THE CLIMATE CRISIS ON THE MISERY INDEX IN THE COUNTRIES OF THE MENA REGION

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Climate change constitutes a global crisis that profoundly affects not only environmental systems but also economic and social equilibria. This study investigates the impact of climate-related environmental stressors on the Misery Index (MI), which serves as an indicator of macroeconomic distress. The MI is calculated as the sum of inflation and unemployment rates and reflects the level of discomfort individuals experience in response to economic instability. Within this framework, the study employs the MI as the dependent variable in order to analyze the socioeconomic effects of climate change from a multidimensional perspective.

The Middle East and North Africa (MENA) region is considered a suitable sample for empirical analysis due to its high risk in terms of both climate vulnerability and economic inequality. Countries in the region are highly sensitive to the climate crisis owing to their scarcity of natural resources and structural socioeconomic fragilities. Environmental challenges prevalent across the region—such as water stress, desertification, heatwaves, and low forest cover—intensify the physical impacts of climate change. Moreover, widespread unemployment and economic instability in many countries of the MENA region exacerbate the societal repercussions of environmental pressures.
In this context, countries of the MENA region stand out as a priority area for research on the economic impacts of the climate crisis, given their geographic exposure and socioeconomic structures. Accordingly, this study explores the effects of environmental stressors on the MI using annual data from 17 countries in the MENA region over the period 1991–2021. The data were obtained from the World Bank database, which provides regular and comparable yearly information. Only countries with complete and consistent data across all variables were included in the analysis; those with data deficiencies were excluded.

The study employs five key environmental indicators as independent variables: the Water Stress Index (WS), Freshwater Withdrawals (FW), Renewable Energy Consumption (REC), Forest Area (FA), and Average Precipitation (PRC). These indicators were selected to capture various dimensions of the climate crisis. While WS and FW measure the economic pressures arising from water scarcity, REC reflects the consequences of structural transformations in the energy sector. FA represents ecosystem resilience and environmental sustainability, and PRC serves to assess the effects of sudden climate events.

The model selection process involved diagnostic tests—Likelihood Ratio (LR), F-test, and Lagrange Multiplier (LM)—which confirmed the suitability of panel data analysis. The Hausman test indicated no significant difference between fixed and random effects models, thereby supporting the use of the random effects model. However, the presence of heteroskedasticity and cross-sectional dependence—violations of classical assumptions—necessitated the use of the Driscoll-Kraay fixed effects estimator to enhance model robustness.

The empirical results reveal that WS, FW, and REC have statistically significant and positive effects on the MI. This suggests that water-based crises and the energy transition process may elevate levels of

economic distress. Conversely, FA and PRC did not yield statistically significant effects on the dependent variable.

The increase in WS implies that the sustainability of water resources is declining and that individuals are facing greater difficulty in accessing water. A high level of FW reflects intensive utilization of available water sources. The fact that both WS and FW are positively and significantly associated with the MI indicates that water-related environmental pressures exert a cumulative and reinforcing impact on economic hardship. Thus, the positive influence of both indicators aligns with theoretical expectations and existing literature.

The positive effect of REC on the MI is a particularly noteworthy finding. Although the shift to renewable energy is favorable for environmental sustainability, it may generate short-term economic costs due to high investment requirements, infrastructural mismatches, and uncertainties in energy supply. These burdens are likely to exert additional pressure on lower-income groups, thereby raising the level of economic distress. Accordingly, the positive association between REC and the MI suggests that the renewable energy transition may produce short-term socioeconomic vulnerabilities. Additionally, the stationarity of the variables was tested using second-generation panel unit root tests—Cross-sectionally Augmented IPS (CIPS) and CADF. To evaluate the effects of global shocks such as the 1997 Asian Financial Crisis, the 2008 Global Financial Crisis, and the 2020 COVID19 pandemic, the Zivot-Andrews structural break unit root test was applied. Significant structural breaks were identified in 11 out of the 17 countries.

The findings indicate that environmental pressures stemming from the climate crisis generate not only short-term economic consequences but also long-term structural effects as measured by the Misery Index. For this reason, panel unit root and structural break tests were conducted to investigate the time-dependent impacts of climate-related variables on the MI in greater depth.
In conclusion, the results demonstrate that environmental pressures have macroeconomic consequences in addition to ecological effects. Water-based crises and the challenges of energy transformation may threaten economic stability. Therefore, integrating environmental and economic policy frameworks is essential for achieving sustainable development goals. In the existing literature, studies examining the relationship between the climate crisis and macroeconomic welfare through panel data methods and long-term analysis—particularly with a focus on countries of the MENA region—are highly limited. In this respect, the study offers a novel and region-specific perspective to the field both in terms of its dataset and methodological approach.

Keywords: Climate Change, Misery Index, Countries of the MENA Region, Panel Data Analysis.

3D EXPLORATION USING AUGMENTED REALITY: A CASE STUDY OF POLİTEKNİK PORT DICKSON

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Visualization issues frequently plague non-technical students, which might lower their motivation, particularly if the available learning materials are sparse and less interactive. In the digital era, students prefer Teaching and Learning (T&L) methods that use modern technology because they are more interactive and effective. By fusing virtual and physical aspects, Augmented Reality (AR) technology makes learning more engaging and dynamic. The objectives of the study: (i) developing an Augmented Reality (AR) application system for buildings on the Port Dickson Polytechnic campus as a Teaching and Learning (T&L) tool, and (ii) Providing motivation to students and lecturers in the T&L process by using interactive, creative, and innovative tools to achieve T&L objectives. There are two phases in the methodology used. The first is the application development phase and the second is the application effectiveness phase. Application development phase: A survey was conducted in March 2024 to gauge how well students who used this AR application system found it to be helpful for three-dimensional (3D) visualization. creating 3D models with Autodesk Revit Architecture software and creating two-dimensional (2D) drawings with Autodesk AutoCAD software. Developing Augmented Reality (AR) for the Port Dickson Polytechnic campus building involves hardware and software such as Unity 3D and Vuforia. This is what is known as 'Target' in the 'Scene'. There is also a 'Marker', which is a pattern in the form of a printed image that will be recognized by the camera. Generating an APK for Android phones. Whereas the application effectiveness phase: a questionnaire survey was conducted in March 2024 to measure students' experience and effectiveness of using this AR application system in assisting with 3D visualization.

Students' ability to understand technical materials in 2D visual form before using this system showed that it was only 20%, while a study after using this application system showed that their level of understanding of the system had increased to 80%. Student satisfaction was very significant because they were more stressed by conventional methods related to the difficulty of visualizing 2D materials in technical courses. The interactive and interesting features of the AR application allowed them to choose methods that were suitable for current technological developments and lifestyles. Responses from Port Dickson Polytechnic lecturers and students also indicated a high degree of satisfaction since AR advances made their jobs easier and more efficient. All things considered, these results supported the idea that augmented reality technology improves learning by raising student motivation and improving instructional efficiency.

In conclusion, the creation of this augmented reality application aligns with the problems of the Industrial Revolution 4.0 (IR 4.0) in accomplishing the goals of Teaching & Learning (T&L) and as part of the process of transforming T&L from traditional to digital techniques. All users of the system, including students, gave positive feedback, demonstrating how popular and practical this cutting-edge system is for its users. By combining this invention with other related technologies like Virtual Reality (VR), Building Information Modeling (BIM), and others, it might be further improved and offer more advantages in education and other spheres of life.

Keywords: Teaching and Learning (T&L), Augmented Reality (AR), three-dimensional (3D) visualization, Two-dimensional drawing (2D)

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YAPAY ZEKÂ DESTEKLİ AKILLI TETKİK ÖNERİ SİSTEMİNİN GELİŞTİRİLMESİ

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Sağlık hizmetlerinde dijitalleşmenin artmasıyla birlikte, hasta verilerinin analizi, daha verimli ve kişiselleştirilmiş sağlık hizmetlerinin sunulmasında önemli bir rol oynamaktadır. Araştırmanın temel amacı, iç hastalıkları polikliniğine başvuran hastaların kişisel bilgileri, sağlık şikâyetleri, kronik hastalıkları, fiziksel bulguları, aile geçmişi, kişisel alışkanlıkları ve tanılar gibi verileri kullanarak bir tetkik önerme sistemini geliştirmektir. Hastaların demografik bilgileri, klinik tanıları ve tetkik sonuçlarını içeren veri seti, makine öğrenmesi için uygun hale getirilmek üzere temizlenmiş ve ön işleme aşamasından geçirilmiştir. Apriori algoritması, sık görülen tetkik kombinasyonlarını belirleyerek gereksiz tetkiklerin önüne geçilmesini sağlamıştır. Karar Ağaçları ve Rastgele Orman algoritmaları ile tetkik önerileri tahmin edilmiş ve doğruluk oranları karşılaştırılmıştır. Derin öğrenme modelinde ise Derin Sinir Ağı (DNN) kullanılarak daha yüksek doğruluk oranı hedeflenmiştir. Sonuçlar, Karar Ağaçları modelinin %76 doğruluk oranı sağladığını, Rastgele Orman modelinin ise bu oranı %78'e çıkardığını göstermektedir. DNN modeli ise %82 doğruluk oranı ile her iki modelin üzerinde bir performans sergilemiştir. Ayrıca, DNN modelinin ortalama kesinlik değeri 0.9190 olarak hesaplanmış, ALT (SGPT) testi için %0.86 precision ve TSH testi için %0.92 recall gibi yüksek performans değerleri elde edilmiştir. Bu çalışma, makine öğrenmesi ve derin öğrenme modellerinin klinik karar verme süreçlerinde hekimlere destek olma, tanı doğruluğunu artırma ve gereksiz tetkiklerin azaltılması açısından potansiyelini ortaya koymaktadır. Yapay zekâ tabanlı tetkik öneri sistemi, hekimlerin daha etkili ve doğru bir teşhis koymalarına yardımcı olurken, hastaların da daha az tetkik yaptırarak daha hızlı bir şekilde tedavi edilmelerine, doğru tetkiklerin yapılmasını sağlayarak gereksiz tetkiklerin yapılmamasına, sağlık harcamalarının azaltılmasına katkı sağlayabilir. Bu özellik, muayenehane yazılımının hem hekimler hem de hastalar için daha yararlı hale gelmesini sağlayacaktır.

Keywords: Tetkik Öneri Sistemi, Karar Destek Sistemi, Makine Öğrenmesi, Derin Öğrenme, Sağlıkta Yapay Zekâ

AN EXAMINATION OF THE ARTIFICIAL INTELLIGENCE SELF-EFFICACY OF FOREIGN LANGUAGE TEACHERS: SAMPLE OF K12 EDUCATION

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Recently, the rise of artificial intelligence (AI) has significantly changed the trends of language education. Tools such as ChatGPT or other AI-assisted language robots have been preferred by more and more language learners as they offer personalized learning facilities and real-time language practices. These technological novelties affect the role of teachers in various aspects. While some teachers easily keep up with the pace of AI-oriented tools, others may feel inadequate due to lack of knowledge or skills. This study aims to examine the AI competence self-efficacy of language teachers who teach English in K12 public schools. The current study is based on mainly two research questions. The first one is if there is a significant difference between the language teachers in terms of AI competence self-efficacy (according to gender, kind of school and year of seniority). The second question is focused on the AI competency self-efficacy rates of the foreign language teachers in terms of AI knowledge, pedagogy, assessment, ethics, human-centered education and professional engagement. This is an example of mixed-method research that combines both quantitative and qualitative study. For the quantitative study, the Teacher Artificial Intelligence Competence Self-efficacy (TAICS) scale was utilized to evaluate the self-efficacy rates of the teachers. The scale consisted of 24 items and was applied to a sample of 130 teachers who teach in K12 public schools (40 at primary school, 51 at secondary school, 39 at high school). The results revealed the AI competence of the foreign language teachers on six different dimensions: AI knowledge, AI pedagogy, AI assessments, AI ethics, human-centered education, and professional engagement. There was a statistically significant difference between teachers with 1-10 years of seniority and those with more than 10 years of seniority. In all the dimensions of the scale, the novice teachers declared that they felt more AI competent than more experienced teachers. Also, there was a statistically significant difference among the categories of items in the scale. The AI knowledge scores of teachers were found to be significantly higher than those of AI pedagogy and AI assessment. On the other hand, AI assessment scores were found to be quite lower than those of human-centered education and professional engagement. It was found out that the qualitative study supported the quantitative findings. The current study unveils what foreign language teachers know and what they need to know more about AI. If foreign language education is to catch up with the rapidly growing AI technology, language teachers had better take action towards both adapting to AI technology and adopting the best AI tools for their classrooms. The ideal path to follow seems to utilize AI to facilitate the learners and enrich the learning and teaching processes. The incorporation of AI into language teaching offers numerous benefits but requires careful consideration. Last but not least, those teachers who try to catch up with the latest technologies and those who are lifelong learners will contribute to human-centered education.

Keywords: Artificial intelligence, AI competence, AI self-efficacy, ELT

YAPAY ZEKÂ VE TARIMIN GELECEĞİ: SÜRDÜRÜLEBİLİR GIDA SİSTEMLERİNE YAPILAN DİJİTAL GEÇİŞ

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21. yüzyılın çığır açan gelişmeleri arasında yer alan yapay zekâ (YZ), çevresel sürdürülebilirlik arayışlarında tarım sektörünün dönüşümünde güçlü bir aktör olarak öne çıkmaktadır. Küresel iklim krizinin derinleştiği, doğal kaynakların hızla tükendiği ve tarımsal üretim kapasitesinin giderek zorlandığı bu çağda, yalnızca geleneksel çözümlerle yol alınması mümkün değildir. Birleşmiş Milletler'e göre 2050 yılına kadar dünya nüfusunun 9.7 milyarı aşması beklenmektedir; bu artış gıda talebini %70'e yakın artıracaktır. Bu duruma paralel olarak tarımın daha az su, daha az toprak ve daha az enerji ile daha fazla üretim yapması gerekmektedir. İşte bu noktada, doğa ile teknolojiyi birleştiren entegre sistemlere ihtiyaç duyulmaktadır. Bu çalışmada, yapay zekânın sürdürülebilir tarımda oynadığı rol, yalnızca teknolojik verimlilik açısından değil; aynı zamanda çevresel bütünlük, toplumsal adalet ve etik sorumluluk bağlamında bütüncül olarak ele alınmıştır. Tarım artık sadece toprağı işlemek değil, veriyi analiz etmek, iklimi tahmin etmek ve ekosistemi koruyarak üretim yapmaktır. Bu çalışmanın amacı, yapay zekâ temelli tarım teknolojilerinin sürdürülebilirlik ekseninde nasıl stratejik bir dönüşüm aracı haline geldiğini irdelemek; tarım, çevre ve insan üçgeninde yenilikçi çözümler sunarak gelecek nesillere dirençli bir gıda sistemi bırakmaya katkı sağlamaktır. Aynı zamanda, gelişmekte olan ülkeler bağlamında dijital eşitsizlik, teknolojiye erişim ve yerelleştirilmiş veri üretimi gibi konulara da öneriler sunulmaktadır.

Çalışma, nitel veri analizi ve karşılaştırmalı örnek olay incelemesi yöntemiyle gerçekleştirilmiştir. Cornell University, World Economic Forum, Birleşmiş Milletler University ve FAO'nun raporları doğrultusunda, son 10 yıl içerisinde uygulamaya alınmış yapay zekâ destekli tarım modelleri taranmıştır. Hindistan, İsrail, Hollanda ve Kenya gibi farklı iklim ve kalkınma düzeyine sahip ülkelerde YZ uygulamalarının sonuçları analiz edilmiştir. Ayrıca; blokzincir teknolojisi, sensör sistemleri, IoT (Nesnelerin İnterneti) YZ ve açık kaynaklı platformlarının kırsal tarımda kullanılabilirliği değerlendirilmiştir. Yöntem kısmına özgün katkı olarak "Toplum Tabanlı Dijital Tarım Kümeleri (TTDTK)" adlı model önerilmiştir. Bu model, yerel çiftçi topluluklarının kendi veri kümelerini üretip açık kaynak algoritmalarla analiz etmesini, bu verilerin merkezi olmayan dijital ağlar üzerinde paylaşılmasını ve hem üretim hem de çevresel verilerin yapay zekâ tarafından yorumlanarak karar destek sistemlerine entegre edilmesini önermektedir. Çalışma kapsamında değerlendirilen literatür ve saha örnekleri, yapay zekânın sürdürülebilir tarıma katkısını üç temel boyutta öne çıkarmaktadır:

Verimlilik ve Kaynak Kullanımı: YZ tabanlı sistemler sayesinde tarımsal üretimde %20-35 arasında verim artışı sağlanmaktadır. Özellikle iklim kontrollü sera ortamlarında, enerji tüketiminde %25'e varan tasarruf sağlanmakta; su ve gübre gibi girdilerin kullanımında ise %30'a yakın düşüş gözlemlenmektedir. Bu oranlar, sadece ekonomik açıdan değil, çevresel açıdan da büyük kazanımlar sunmaktadır.İklim Uyum Kapasitesi: YZ algoritmaları sayesinde tarım alanlarında mikro iklim analizleri yapılabilmekte; mevsimsel değişiklikler, kuraklık, don riski gibi olaylar önceden tahmin edilerek üretim stratejileri buna göre şekillendirilebilmektedir. Bu, özellikle iklim değişikliğine karşı kırılgan olan küçük ölçekli çiftçiler için kritik bir destek mekanizmasıdır.

Şeffaflık ve Güven: Blokzincir teknolojileri ile entegre edilen YZ sistemleri, tarladan sofraya tüm üretim zincirini izlenebilir hale getirerek tüketici güvenini artırmakta ve gıda sahteciliğinin önüne geçmektedir. Örneğin, Avrupa'daki bazı kooperatifler blockchain destekli sensör verileriyle ürün kalitesini ve

sürdürülebilirliğini dijital olarak belgelendirmekte, pazarlama stratejilerinde "veri temelli güveni" kullanmaktadır. Yapay zekâ yalnızca bir teknoloji değil, aynı zamanda sürdürülebilirliğe dair paradigmaları dönüştüren yeni bir düşünce biçimidir. Bu bağlamda YZ, "verimliliği artıran bir sistem" olmaktan çıkarak, doğayla uyum içinde çalışan, canlıyı ve toprağı gözeten, etik değerlere dayalı bir üretim kültürünün taşıyıcısı haline gelmelidir.

Ancak bu dönüşüm beraberinde bazı etik ve sosyoekonomik sorumlulukları da getirir. Yapay zekâya dayalı karar alma süreçlerinde veri sahipliğinin kimde olduğu, algoritmaların yerel bilgiyle ne ölçüde bütünleştiği ve bu sistemlerin küçük çiftçiler üzerindeki etkisi tartışılması gereken konulardır. Ayrıca, gelişmekte olan ülkelerde altyapı eksikliği ve dijital uçurum gibi sorunlar nedeniyle YZ uygulamalarının kapsayıcılığı sınırlı kalmaktadır. Bu nedenle aşağıda belirtilen stratejik yöntem önerileri, bildirinin özgün katkısı olarak sunulmaktadır:

Yerelleştirilmiş Yapay Zekâ: Geliştirilen YZ modelleri, küresel değil; yerel veri kümeleri ile eğitilmeli ve her bölgenin agroekolojik yapısına göre özelleştirilmelidir.

Veri Adaleti ve Dijital Egemenlik: Çiftçilerin veri üretme, paylaşma ve kullanma hakları tanınmalı; yapay zekâ sistemleri, merkezi değil; paylaşımlı veri ağları üzerinden yönetilmelidir.

Açık Kaynak Tarım İnovasyonları: Üniversiteler, belediyeler ve STK'lar tarafından geliştirilecek açık kaynaklı yapay zekâ platformları, dijital eşitsizliğe karşı güçlü bir araç olabilir. Sosyo-Teknik Uyum: YZ'nin sadece teknik düzeyde değil; kültürel, ekonomik ve toplumsal boyutlarda da kabul edilebilir ve kapsayıcı hale gelmesi için yerel aktörlerle birlikte tasarım (co-design) süreçleri teşvik edilmelidir.

Yapay zekâ, doğanın verilerini okuyabilen ve bu verileri sürdürülebilirliğe dönüştürebilen yeni bir "dijital sezgi" olarak tanımlanabilir. Tarımın geleceğinde sadece ürün değil; aynı zamanda bilgi, şeffaflık ve güven de üretilmektedir. Bu üretimin ahlaki zemini, insan-merkezli değil; doğa-merkezli bir dönüşüm vizyonuna dayanmalıdır. Bu bağlamda YZ, çevresel krizlere karşı yalnızca bir mühendislik çözümü değil; insan, doğa ve teknoloji arasında kurulacak yeni bir uyumun, "yeşil zekânın" temsilcisidir. Geleceğin tarımı, yapay zekânın verimliliği ile toprağın bilgeliğini aynı potada eriterek, gıda sistemlerini hem üretken hem de dirençli hale getirecektir. Ve bu yalnızca teknik bir devrim değil; aynı zamanda etik bir devinim olacaktır.

Keywords: Yapay Zekâ (YZ), Sürdürülebilir Tarım, Dijital Tarım Teknolojileri, İklim Krizi ve Tarım

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Yapay zekâ (YZ) teknolojilerinin bilimsel araştırma süreçlerinde artan rolü akademik yazım pratiğini dönüştürmeye başlamıştır. Literatür taramasından, atıf düzenlemeye, dil bilgisi bakımından metin incelemeye, metin yazımına ve fikir geliştirmeye kadar pek çok aşamada yapay zekâ modelleri araştırmacılara yeni olanaklar sunmaktadır. Bu dönüşüm, özellikle üretken yapay zekâ (örn. ChatGPT, Autor ai, Scite ai…) modellerinin "ortak yazar" konumuna ne derece yaklaştığına dair etik, yöntemsel ve epistemolojik tartışmaları da beraberinde getirmiştir. Bu çalışmanın temel amacı, Turizm ve İşletme alanlarında görev yapmakta olan akademisyenlerin YZ destekli yazım süreçlerine dair algılarını, deneyimlerini ve bu konudaki etik yaklaşımlarını incelemektir.

Çalışmada, nitel araştırma yöntemlerinden görüşme (mülakat) tekniği kullanılmıştır. Amaçlı örneklem yöntemiyle belirlenen katılımcılar yalnızca Turizm ve İşletme anabilim dallarında görev yapmış/yapmakta olan ve akademik yayın üretiminde YZ modellerinden (özellikle üretken YZ) yararlandığı bilinen akademisyenlerden oluşmaktadır. Çalışmanın verileri yarı yapılandırılmış görüşme formu aracılığıyla toplanmaktadır. Görüşme soruları, katılımcıların YZ ile yazım deneyimleri, bu teknolojilerin akademik üretkenliklerine etkisi, etik sınırlar, intihal algısı, ortak yazarlık meselesi ve gelecekteki kullanım eğilimleri gibi temalar etrafında şekillenmektedir. Çalışmanın veri toplama aşaması devam etmekte olup, örneklem genişletilerek görüşme dökümleri analiz için hazırlanmaktadır. Ön bulgular, akademisyenlerin YZ kullanımına yönelik yaklaşımlarının disipline, akademik kıdeme ve kişisel teknoloji okuryazarlığına göre farklılaştığını göstermektedir. Bir kısım akademisyen YZ'yi yaratıcı bir ortak olarak değerlendirirken bazıları onu sadece yardımcı bir araç olarak görmektedir. Bununla birlikte, etik belirsizlikler ve yayın politikalarındaki boşluklar, YZ'nin yazarlık statüsüne ilişkin çekinceleri de artırmaktadır. Bu çalışma, akademik yazımda YZ'nin geçerliğini ve sınırlarını anlamaya yönelik özgün bir alan verisi sunmayı hedeflemektedir. Ayrıca, farklı disiplinlerden gelen akademisyenlerin karşılaştırmalı bakış açılarıyla bu teknolojinin sosyal kabulünü ortaya koyarak kuramsal ve pratik tartışmalara katkı sağlayacağı düşünülmektedir.

Keywords: Yapay Zekâ, Akademik Yazım, Ortak Yazar, Turizm, İşletme

QUALITY INFRASTRUCTURE FOR SUSTAINABLE SOCIETY: A CASE STUDY OF NOBLE'S ENCLAVE FAISALABAD

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Good infrastructure plays a crucial role in building a sustainable society by providing the foundation for economic growth, social inclusion, and environmental protection. Well-planned infrastructure systems, such as housing colonies, transportation networks, energy grids, water supply, and waste management enable societies to function efficiently while minimizing their ecological footprint. In the context of sustainability, infrastructure must be designed to meet present day needs without compromising the ability of future generations to meet theirs. For example, renewable energy infrastructure like solar panels reduces dependence on petroleum products and lowers greenhouse gas emissions. Similarly, efficient public transportation systems decrease traffic congestion and air pollution, encouraging people to adopt greener commuting habits.

Infrastructure also supports social sustainability by promoting accessibility and equity. Clean water, reliable supply of electricity, and good roads are fundamental to health, education, and economic opportunities. When infrastructure is inclusive and resilient, it ensures that even the most vulnerable communities can access essential services.

Moreover, technological innovation in infrastructure, like smart grids, green buildings, and sustainable housing for urban planning can lead to better resource management and reduced wastage. These advancements not only improve quality of life but also create green jobs and stimulate sustainable economic activity.

The paper in hand highlights the facilities and amenities provided by Noble’s Enclave housing society, a peculiar case of housings project in Faisalabad-Pakistan. It is suggested that the development of good housing infrastructure requires long-term planning, investment, and governance. Governments, private businesses, and communities must collaborate to prioritize sustainable practices, incorporate environmental assessments, and ensure maintenance over time.

Keywords: Infrastructure, Sustainable society, Noble's enclave, Faisalabad

THE EFFECTIVENESS OF INTERACTIVE DIGITAL PLATFORMS ON STUDENTS' UNDERSTANDING OF 3D ARCHITECTURAL MODELLING

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In the discipline of architecture, the ability to comprehend and manipulate three-dimensional (3D) models is essential for fostering spatial awareness and enhancing students' capacity to visualize architectural forms in a clear and realistic manner. This competency is critical in bridging theoretical concepts with practical application, allowing students to better understand spatial relationships, structural systems, and construction methodologies. Nevertheless, conventional pedagogical approaches such as two-dimensional (2D) drawings and physical scale models often present significant limitations, particularly in terms of interactivity, scalability, and visual clarity. These methods may impede students' ability to fully grasp complex architectural ideas and design intricacies.
In response to these pedagogical challenges, TwoD ThreeD has been developed as an interactive digital platform that utilizes YouTube as a medium for delivering architectural modeling instruction. This platform offers an extensive selection of video tutorials and visual resources specifically designed to support the teaching and learning of 3D modeling within the context of architecture. By providing easily accessible content, TwoD ThreeD enables students to engage in self-directed and flexible learning, thereby accommodating diverse learning styles and paces.

The tutorial videos employ a step-by-step approach to instruction, facilitating a more comprehensive understanding of both conceptual and technical aspects of architecture. Topics covered include structural elements, building systems, and construction components, all presented through dynamic visualizations that enhance cognitive engagement. Through this platform, students are better equipped to develop digital literacy and spatial reasoning skills, which are increasingly important in contemporary architectural practice. As such, TwoD ThreeD contributes meaningfully to the modernization of architectural education by integrating technology into the learning environment and promoting more effective, visually oriented pedagogical strategies.

This study was conducted to evaluate the effectiveness of using the TwoD ThreeD interactive digital platform in improving students' understanding of 3D Architectural Modelling, particularly among architecture students at Politeknik Port Dickson. The main objectives of the study are: i. To identify the level of students' understanding in 3D modelling using an interactive digital platform; ii. To compare the effectiveness between traditional teaching methods and digital platform usage in architectural learning. Through the analysis of questionnaires and comprehension tests, a total of 60 Diploma in Architecture students from Politeknik Port Dickson were selected as respondents. They were divided into two groups: one used traditional teaching methods, while the other used the TwoD ThreeD platform. The results from the questionnaires and tests showed that 80% of students who used the TwoD ThreeD platform achieved improved scores in comprehension tests. These findings demonstrate that students who engaged in learning through the interactive digital platform showed significant improvements in understanding 3D concepts, spatial manipulation, and structure compared to those who only followed traditional teaching methods. This highlights the advantage of digital platforms in delivering complex content more clearly and effectively.

Interactive digital platforms such as TwoD ThreeD offer benefits in terms of self-paced learning, clearer visualization, and repeated access to learning materials. This indicates that digital technology can

overcome the limitations of traditional methods, especially in subjects that require high visual and technical comprehension, such as 3D modelling. This study proves that the use of interactive digital platforms has a positive impact on students' understanding of 3D Architectural Modelling. Students demonstrated a deeper understanding of 3D concepts, spatial manipulation, and structure when using digital learning materials such as the TwoD ThreeD platform.
In conclusion, this study supports the use of digital technologies such as YouTube as an effective pedagogical tool in architectural education, especially in helping students understand complex aspects of 3D architectural modelling. Therefore, it is appropriate to expand its use as one of the main methods in the teaching and learning process.

Keywords: Architecture, 3D Modelling, Interactive Digital Platform

AI ADOPTION AND DIGITAL READINESS IN ARCHITECTURE EDUCATION: A STUDY OF KOLEJ KOMUNITI KUCHING STUDENTS

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Foong Ching Liew (Kolej Komuniti Kuching)

This study investigates the adoption and integration of digital tools, particularly artificial intelligence (AI) platforms such as ChatGPT, among architecture students at Kolej Komuniti Kuching. While the use of industry-standard software such as AutoCAD and SketchUp remains a compulsory component of the curriculum, students are increasingly shifting toward AI-generated content to support design ideation, academic research, and written assignments. This emerging reliance suggests a transformation in how students access, process, and apply information—moving away from conventional sources such as Google Search, textbooks, and academic databases.

Focusing on Semester 1 to 3 students, the research examines levels of digital readiness, patterns of AI tool usage, and evolving preferences in online content platforms. ChatGPT has emerged not only as a writing assistant but also as a resource for design concept development and project guidance. In parallel, platforms such as TikTok and Instagram are becoming preferred sources for visual inspiration and instructional content, gradually replacing more traditional platforms like YouTube and Pinterest. These shifts reflect a growing dependence on AI-driven and algorithm-curated information streams that prioritize speed, accessibility, and visual engagement.

A quantitative methodology is employed through structured survey instruments to assess student engagement with digital tools, including ChatGPT, AutoCAD, SketchUp, Canva, Google Classroom, and various social media platforms. The study aims to capture students' self-reported proficiency, frequency of tool usage, and perceived effectiveness in supporting their learning and design activities. The anticipated findings will provide insight into students' digital habits, their reliance on AI tools, and how these technologies influence both their academic performance and creative output.

The outcomes of this study are expected to have significant implications for curriculum development in architectural education at the community college level. Specifically, the research highlights the need for early integration of AI literacy and digital ethics into design education to promote informed and responsible tool usage. Furthermore, the findings underscore the importance of aligning teaching strategies with students' actual digital behaviors, which are shaped by contemporary technological trends.

For Technical and Vocational Education and Training (TVET) institutions, these insights are crucial for strategic planning. Policymakers and academic leaders should prioritize investment in digital infrastructure, ensure equitable access to up-to-date design software, and implement ongoing professional development initiatives for educators. In addition, national curriculum frameworks should be revised to reflect the growing role of AI-enhanced learning tools and digital collaboration platforms in shaping the future of architectural education.

YAPAY ZEKÂ DESTEKLI REKLAMCILIKTA ALGORITMIK ETIK İLKELER VE TOPLUMSAL SÜRDÜRÜLEBILIRLIK: İNSANLIK VE TEKNOLOJI ARASINDA DENGE ARAYIŞI

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Günümüzde yapay zekâ (YZ), reklamcılık başta olmak üzere pazarlamanın pek çok alanında köklü dönüşümlere yol açmaktadır. Bu dönüşüm yalnızca teknolojik ilerlemelerle sınırlı kalmamakta; aynı zamanda etik ilkeler, toplumsal sorumluluklar ve kültürel değerler bağlamında yeni tartışmaları da beraberinde getirmektedir. Tüketici davranışlarını derinlemesine analiz eden algoritmalar ve kişiselleştirilmiş içerik sunan yapay zekâ tabanlı sistemlerin iletişim süreçlerine sağladığı katkı inkâr edilemezken, bu teknolojilerin karar alma süreçlerindeki artan belirleyici rolü sebebiyle mahremiyetin ihlali, toplumsal eşitliğin zedelenmesi ve bireysel özerkliğin sınırlandırılması gibi etik açıdan tartışmalı durumları beraberinde getirmektedir.

Algoritmik karar süreçlerinin karmaşık ve şeffaflıktan uzak yapısı, tüketicilerin bilgiye dayalı rıza göstermelerini zorlaştırmaktadır. Bu durum hem tüketici özerkliğini zedelemekte hem de reklamcılığın güvenilirliğini sarsmaktadır. Özellikle geçmiş veri setlerine dayalı olarak çalışan algoritmaların mevcut toplumsal önyargıları yeniden üretme riski, bazı demografik grupların sistematik olarak dışlanmasına ve dijital adaletsizliklere yol açabilmektedir. Bu durum yalnızca bireyler arası eşitsizlikleri derinleştirmekle kalmayıp, uzun vadede toplumsal kutuplaşmayı da körükleme potansiyeline sahiptir. Toplumsal sürdürülebilirlik sadece çevresel duyarlılıkla sınırlı olmayan; kapsayıcılık, sosyal adalet, kültürel bütünlük, insan onuruna saygı ve kolektif refah gibi öğeleri kapsayan çok katmanlı bütüncül bir yaklaşımdır. Bu bağlamda, reklamcılıkta YZ kullanımının etik bir çerçevede yapılandırılması; bireylerin dijital ortamdaki haklarını korumanın ötesinde, toplumun genel çıkarlarıyla da uyumlu bir iletişim modeli geliştirilmesini gerekli kılmaktadır. Reklamcılık, toplumsal algıların şekillenmesinde ve tüketim kalıplarının yönlendirilmesinde önemli bir rol oynadığından, bu alanda yapılan etik dışı uygulamalar yalnızca bireysel düzeyde zarar doğurmakla kalmaz; aynı zamanda toplumsal yapının bütünlüğünü ve istikrarını da tehdit edebilir.

Etik ihlallerin ardındaki aktörler sıklıkla dar çıkar gruplarından oluşmakta; şirket sahipleri, reklam ajansları ve bu kuruluşların stratejik kararlarını hayata geçiren yaratıcı ekipler bu yapının başlıca bileşenlerini oluşturmaktadır. Günümüzde ise bu yapı daha da genişlemiş; algoritmalar aracılığıyla kullanıcı davranışlarını manipüle eden yazılım geliştiriciler ve veri analistleri de sürecin kritik parçaları gelmiştir. Yapay zekâ destekli reklamların etik dışı biçimlerde kurgulanmasında bu sistemleri tasarlayanların da doğrudan sorumluluk taşıdığını göz ardı edilmemelidir. Toplumsal sürdürülebilirlik sadece ekonomik kazanç odaklı bir yaklaşımla sağlanamaz. Reklamcılıkta etik ilkelere dayalı bir yaklaşımın yerleşmesi için tüm paydaşların — şirketler, reklamcılar, algoritma geliştiriciler ve düzenleyici kurumlar — kolektif bir sorumluluk bilinciyle hareket etmesi gerekmektedir. Toplumun ortak yararını önceleyen bu anlayış, bireysel çıkarların ya da belirli zümrelerin ekonomik menfaatlerinin ötesine geçerek etik ilkelere dayalı bir kamusal iletişim modelini temel almalıdır. Günümüz markaları, yalnızca çevresel duyarlılığı değil aynı zamanda sosyal sorumluluğu da kapsayan mesajlar üretme çabasındadır. Bu kapsamda üretken yapay zekâ araçları, sosyal ve çevresel bilinç içeren içerikler üretme kapasitesiyle öne çıkmaktadır. Ancak bu araçların etik sınırlar içerisinde kalmadan kullanılması hâlinde, tüketici manipülasyonu artmakta; bu da bilgiye erişim hakkını ve bilinçli tercih yapma yetisini tehdit etmektedir. Dolayısıyla, YZ'nin sunduğu inovatif potansiyelle toplumsal değerler arasında dengeli bir ilişki kurulması şarttır. Etik ilkelere dayalı YZ uygulamaları, reklamcılığın sürdürülebilirlik hedefleriyle uyumlu bir hâle gelmesini sağlayabilir. Şeffaflık, veri güvenliği, algoritmik

hesap verebilirlik ve ayrımcılığa karşı duyarlılık gibi ilkeler, bireysel hakları güvence altına yanı sıra daha kapsayıcı, adil ve güvene dayalı bir dijital ekosistemin inşasına katkıda bulunur. Özellikle çocuklar, yaşlılar ve kırılgan gruplar gibi savunmasız kesimler üzerindeki dijital reklam etkileri göz önüne alındığında, etik tasarım prensiplerinin toplumsal sorumluluk perspektifiyle ele alınması bir zorunluluk hâline gelmektedir.

Bu çalışma, YZ teknolojilerinin reklamcılıktaki hızlı entegrasyonu sonucunda ortaya çıkan etik ikilemleri ve bu ikilemlerin toplumsal sürdürülebilirlik üzerindeki etkilerini irdelemektedir. Veri gizliliği, algoritmik önyargı ve tüketici manipülasyonu gibi temel sorunlara dikkat çekilerek; şeffaflık, bilgilendirilmiş onam ve sorumlu YZ kullanımı temelinde şekillenen, güvene dayalı ve sürdürülebilir bir reklamcılık anlayışının gerekliliği vurgulanmaktadır. Teknolojik ilerleme ile toplumsal refah arasında sağlıklı bir denge kuran etik yaklaşımların geliştirilmesi, dijital çağın reklamcılık pratiği için kaçınılmaz bir sorumluluktur.

Keywords: Etik Reklamcılık, Algoritmik Etik, Yapay Zekâ, Toplumsal Sürdürülebilirlik,

INTEGRATING VISUAL DESIGN PLATFORMS INTO CREATIVE EDUCATION FOR ENHANCED STUDENT ENGAGEMENT

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Luke Kenny Doring (Kolej Komuniti Kuching

This study explores how students in creative disciplines, specifically architecture and fashion design in adopting visual communication platforms to enhance their academic and design work. As design education increasingly integrates digital tools, these platforms have become essential for students to express concepts visually, produce layout compositions, and present project ideas with clarity and professionalism.

Beyond traditional software used for technical drawing or garment rendering, many students now turn to user-friendly, web-based graphic design platforms. These tools offer customizable templates, drag-and-drop functionality, and automated design assistance, making them especially valuable for students who may not have advanced technical skills. Such platforms support a range of tasks from poster-making and design boards to portfolios and digital moodboards that serve both process documentation and final presentation needs.

This research applies a quantitative methodology using structured surveys to examine student engagement with these platforms across various course contexts. It investigates the frequency of use, perceived ease, creative impact, and overall satisfaction with the design process. The study also explores how digital platforms influence students' ability to visually communicate complex ideas and whether such tools contribute to more confident and efficient design outcomes.

Preliminary findings suggest that visual communication platforms play a significant role in fostering creativity, improving visual literacy, and supporting students' overall academic performance. Respondents report increased confidence in producing visually engaging work, particularly when supported by tools that reduce technical barriers and streamline the design process. The accessibility of these platforms also encourages more experimentation and personal expression in student projects.

The study underscores the importance of embedding visual communication skills in creative education beyond technical mastery. For educators and curriculum planners, the findings highlight the need to incorporate structured guidance on using digital design tools to support not only aesthetics but also conceptual clarity and professional standards. In the context of Technical and Vocational Education and Training (TVET), such integration is crucial to align learning outcomes with industry expectations and digital competencies relevant to contemporary creative practice.

Keywords: Visual Communication, Graphic Design Platforms, Creative Education, Digital Literacy, Student Engagement

MECHATRONICS SYSTEM DESIGN OF SURGICAL ROBOT USING VDI-2206 APPROACH

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This paper presents a systematic investigation into the mechatronic system design of robotic-assisted surgical platforms, with a specific focus on the gripper subsystem. Th gripper and cutting system are the essential components responsible for delicate tissue manipulation and tool handling. Taking the Da Vinci Surgical System as a benchmark, the study explores how high-definition 3D visualization, precise actuation, and real-time control algorithms coalesce to deliver unprecedented surgical accuracy and dexterity. The design process is structured in accordance with the VDI 2206 guideline, which provides a mechatronics engineering methodology by integrating mechanical, electronic, and software development streams from the conceptual phase through to implementation. Within this framework, the gripper and cutting system designs are critically analyzed for its kinematic architecture, actuator selection, miniaturization challenges, and the incorporation of smart sensor technology to improve grip control and operational safety. Emerging solutions, including machine learning-enhanced control loops and tendon-driven actuation, are evaluated against key criteria such as responsiveness, reliability, and ergonomic compatibility. The study also addresses ongoing challenges including limited haptic feedback and high system costs, and how the VDI 2206 approach can facilitate iterative refinement. By applying structured design principles, this research underscores the potential of methodical mechatronics system development process to enhance the effectiveness and accessibility of surgical robotics.

Keywords: Robotic-assisted surgery, Mechatronic system design, Gripper mechanism, VDI 2206

KİŞİSEL MARKA BAĞLAMINDA LİNKEDIN: ÜNİVERSİTE ÖĞRENCİLERİNİN KULLANIM ALIŞKANLIKLARI ÜZERİNE BİR ARAŞTIRMA

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Son yıllarda sosyal medyanın hızla gelişmesiyle birlikte, kişisel marka kavramının toplumsal ve profesyonel alanlardaki yeri ve önemi giderek artmıştır. Özellikle iş gücü piyasasındaki rekabetin yoğunlaşması, yükseköğrenim görmüş gençlerin üniversite mezuniyetinden sonra iş bulma olanaklarını zorlaştırmaktadır. Bu bağlamda, genç uzmanların mesleki özelliklerini ve potansiyellerini dijital ortamda doğru biçimde yansıtmaları ve kişisel markalarını oluşturmaları büyük önem taşımaktadır. Bu çerçevede, araştırmanın temel amacı, Kırgızistan-Türkiye Manas University öğrencilerinin LinkedIn platformunu kullanım alışkanlıklarını, kullanım amaçlarını ve platforma yönelik genel yaklaşımlarını incelemektir. Araştırma amacı kapsamında, 2024–2025 eğitim-öğretim yılında söz konusu üniversitede öğrenim görmekte olan 215 öğrenciye anket uygulanmıştır.

Elde edilen sonuçlara göre, ankete katılan öğrencilerin yalnızca dörtte biri LinkedIn platformunu kullanmaktadır. Ancak bu öğrencilerin büyük çoğunluğu platformu oldukça nadir kullanmakta ve genellikle bilgi edinme, iş bulma, mesleki bağlantılar kurma ve profesyonel gelişim amacıyla tercih etmektedir. Öğrencilerin cinsiyeti ile LinkedIn kullanımı arasında istatistiksel olarak anlamlı bir ilişki bulunmamıştır. Buna karşılık, öğrencilerin sınıf düzeyi ile LinkedIn kullanımı arasında anlamlı bir ilişki olduğu saptanmıştır. Bu durum, sınıf seviyesi arttıkça öğrencilerin LinkedIn kullanımının da arttığını göstermektedir. Benzer şekilde, öğrencilerin öğrenim gördükleri fakülte ile LinkedIn kullanımı arasında da anlamlı bir ilişki tespit edilmiştir. Bu sonuç, fakülteler arasında platform kullanım düzeylerinin belirgin şekilde farklılık gösterdiğini ortaya koymaktadır. Özellikle üst sınıf öğrencileri ile İktisadi ve İdari Bilimler Fakültesi öğrencilerinin LinkedIn'i daha aktif kullandıkları gözlemlenmiştir. Araştırmada ayrıca, öğrencilerin LinkedIn platformuna yönelik genel tutumları ile bu platformun kişisel marka oluşturma süreci ve kariyer gelişimine olan etkilerine dair değerlendirmeleri de analiz edilmiştir. Elde edilen bulgular, öğrencilerin LinkedIn'i kişisel marka gelişimi ve kariyer ilerlemesi açısından faydalı bir platform olarak gördüklerini ortaya koymuştur.

Anahtar Kelimeler: Kişisel Marka, Linkedın, Sosyal Medya Kullanımı, KTMÜ Öğrencileri

DIGITAL TWINS FOR SOCIETY 5.0: RISKS AND OPPORTUNITIES

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Digital twin technologies enable digital transformation by creating real-time virtual representations of physical objects, systems, and processes in various fields, such as manufacturing, healthcare, education, and urban planning. Additionally, by offering innovative solutions that provide operational efficiency, they have become a significant component of digital transformation. Society 5.0 vision aims to transform this digital transformation process into a human-centered social benefit and emphasizes the importance of evaluating digital twins not only from a technical perspective but also in terms of their social dimensions. Despite the increasing interest in the use of digital twin technologies across different sectors, studies that simultaneously address both the opportunities and potential social risks these technologies may offer from the perspective of Society 5.0 remain limited in the literature. This study examines the extent to which digital twin technologies are associated with social dimensions by mapping the current research landscape. In this context, a mixed-methods approach combining quantitative bibliometric analysis and qualitative content review was adopted. Publications from the years 2015 to 2025 were retrieved from the Web of Science Core Collection database using the keyword digital twins. The data were analyzed using VOSviewer software in terms of co-authorship relations, citation patterns, country and institutional distributions, keyword co-occurrence, and thematic development. Additionally, a manual content analysis of the 200 most cited publications was conducted to classify these studies as technical, social, or mixed oriented. Through content analysis, the fields in which digital twin technologies are concentrated and the extent to which social science-based contributions have developed will be comparatively evaluated. These analyses are expected to contribute to the development of inclusive and ethical digital transformation strategies aligned with digital twin technologies. Furthermore, research agendas are proposed to address knowledge gaps emerging at the intersection of technology, policy, and society. This study provides a conceptual framework and a reference source to guide interdisciplinary research for academics, policymakers, and practitioners.

Keywords: Digital Twins, Society 5.0, Bibliometric Analysis, Ethics, Digital Transformation

THE IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN THE LIGHT OF THE LEGAL CERTAINTY PRINCIPLE

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Artificial Intelligence is an exceptionally important element of the so-called “fourth industrial revolution”. The challenges from its extensive implementation and the rapid developments it entails, render AI the epicenter of global interest. The intensity of dealing with the perspective technological capability is justifiably corresponding to the concern caused by its implementation on a scientific, social and ideological level, which practically impacts every aspect of human activity. The legal issues arising from the deficient management of its applications resulting in actionable claims are analogous. The satisfaction of legal claims in the domestic courts may prove to be exceptionally arduous, both due to the peculiarity of the subject matter of the claim, which entails specialized knowledge and to the lack of a comprehensive legislative framework in which review of individual cases may fall under with safety. The herein study aims at showcasing those legal concerns and at expressing respective proposals, which may facilitate the judge’s work without compromising the fundamental principle of law certainty. The study presents the dialectical relationship between legal science and social development which is taken for granted in a state governed by the rule of law. It is also taken for granted that technological development steadily precedes human pursuits, thus rendering its a priori subjection to conventional legal rules difficult. This happens because the precise perception of the extent of AI applications and the subsequent showcasing of the legal issues it arises, postdate its appearance itself. Due to this condition, ascertaining the facts on which civil claims resulting from erroneous applications of AI will be based, is most of the times exceptionally strenuous. The study herein pinpoints such a difficulty especially in the inability to assess individual applications of AI as proximate cause, able to immediately relate to the harmful event. The difficulty is intensified by the fact that AI is not easy to classify, as it appears through an abundance of different applications in extensive activities and sectors of human everyday life. Consequently, the judge will be faced with the difficult answer to the question of who bears responsibility in the case of a damage caused by the action of an algorithm and how can one assess from a legal point of view a case in which there is proof that during the programming of the algorithm by the human there was no provision for the selection which ultimately lead to the tort, as it is not self-evident that the programmer of the algorithm is responsible. It can therefore be ascertained that it is difficult to found responsibility in AI applications that develop autonomous characteristics, as for example the ability to learn through experience leading to making (almost) independent decisions. A working hypothesis is the case of damage caused by a self-driving vehicle, which presents an increased probability of physical injury or material damage. This study seeks to provide answers to the afore-mentioned questions based on the conventional criteria of proof of damages provided by law. One should also take into further account the European legislator’s initiatives, which despite being at an early stage, aim to form an integrated and efficient legislative framework. It can also be ascertained that the desideratum is to find the proper legislative solutions that will deter the judge from disengaging from the ordinary legal provisions and assess the facts under consideration alone and helpless, risking the erosion of legal certainty. Such a risk can be averted only with demanding full and detailed justification of judicial decisions.

Keywords: Artificial Intelligence, legal claims, proximate cause, law certainty

THE EFFECT OF ARTIFICIAL INTELLIGENCE ON INDUSTRY 5.0

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The swift advancement of technology has led to digitalization impacting not just individuals' daily lives but also the operations of corporations, manufacturing facilities, brands, and logistics firms similarly. This transformation has evolved its emphasis over the years, reflecting advancements in the industrial sector and gaining traction with Industry 4.0. This method, originating with Industry 1.0, represents mechanization in manufacturing driven by cost efficiency. Subsequently, the extensive adoption of electricity facilitated the development of moving manufacturing lines, resulting in mass production. This development launched standard product manufacture to attain more efficient outcomes. The notion of mass production, originating from Industry 2.0, has progressively transformed into the concept of creating more individualized, adaptable, and efficient products. Consequently, Industry 3.0 has emerged, emphasizing quality and personalization. This notion, oriented towards customer-centric customization, pertains to the extensive utilization of programmable smart control devices or digital control systems within the manufacturing sector, including automation systems and computers in production processes.

Quality management and lean manufacturing principles have facilitated the creation of systems designed to deliver quicker and more adaptable answers to client demand.

As production processes have evolved throughout time and nations have developed, a broader global knowledge of these processes has emerged. Furthermore, preserving the quality and efficiency of manufacturing and products, or ensuring their sustainability, has emerged as a primary focus. The swift advancement of digitalization has prompted the birth of the Industry 4.0 concept. This shift has introduced notions such as global supply chains, instantaneous communication, sustainability, and logistics. Initiatives to enhance manufacturing processes have commenced, using concepts such as automation, artificial intelligence, big data, and the Internet of Things. Consequently, industrial facilities have evolved to be not just automated but also intelligent, facilitating machine communication, creating self-optimizing systems, and permitting real-time data analysis. Industry 4.0 has diminished human participation in decision-making processes and has emerged as a concept designed to minimize error rates and promote sustainable resource utilization through enhanced digitization. Currently, the proliferation of technology, particularly the advancement of artificial intelligence, has demonstrated swift expansion. In this context, Industry 5.0 builds on the principles of Industry 4.0 to promote human-machine collaboration. This notion places humans at the core of digitalization and embraces a production model founded on the partnership between humans and artificial intelligence. This technique integrates human intelligence with fully automated systems, presenting a more functional model that combines the computational capabilities of artificial intelligence with human decision-making processes. Machine learning algorithms are used to create personalized products quickly, like in mass production, while natural language processing helps analyze customer feedback to guide production choices. This approach facilitates the analysis of consumer data and enables the production of services at a reduced cost. Moreover, often employed techniques include AI-assisted robots, generative AI, understandable AI, deep learning methodologies, and predictive analytics. AI systems that address environmental issues like waste management and energy consumption also support sustainability, a global concern. Consequently, the analysis of the relationship between Industry 5.0 and artificial intelligence reveals a framework that endorses ecology, human welfare, and digitalization. This study examines the technical revolutions utilized and created prior to the emergence of Industry

5.0, with a special focus on the conceptual influence of artificial intelligence on Industry 5.0 today. Artificial intelligence is underscored as not merely an automation system but as a framework capable of collaborating with humans, with the resultant concepts profoundly influencing efficiency, optimization, and decision-making processes.

Keywords: Industry 5.0, Digitalization, Artificial Intelligence, Human-Machine Collaboration

TÜRKİYE'DE SAĞLIK KURUMLARINDA İNOVASYON VE YENİLİK KONULU LİSANSÜSTÜ ÇALIŞMALARIN BİBLİYOMETRİK ANALİZİ

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Bu çalışma, Türkiye'de sağlık kurumlarında inovasyon içeren lisansüstü tezlerin metodolojik, tematik ve kurumsal programlarını sistematik olarak analiz ederek literatürdeki önemli bir eksikliği doldurmayı hedeflemektedir. Araştırmanın evrenini, Yükseköğretim Kurulu Başkanlığı Ulusal Tez Merkezi'nde 2010-2025 yılları arasında "sağlık kurumları" ve "inovasyon" anahtar kelimeleriyle taranan 122 tez oluşmaktadır. Tam metin erişimi olan, Türkçe yazılan ve sağlık kurumları odaklı 42 tez, betimsel analiz ve bibliyometrik içerik analiz yöntemleriyle incelenmiştir. Elde edilen veriler, Microsoft Excel tablosundan IBM SPSS 26.0 paket programına aktarılarak verilerin analizinde bu programdan yararlanılmıştır. Çalışmanın temel amacı, bu alandaki araştırmaların metodolojik kapsamını, amaçlarını ve sonuçlarını değerlendirerek yapılacak olan çalışmalara yol haritası sunması ve literatürdeki eksiklikleri ortaya koymaktır.

Tezlerin %81'i nicel araştırma desenleri (anket) kullanılırken, %57,1'i kamu hastanelerinde çalışmalarını gerçekleştirmiştir. İncelenen 42 tezde 28 farklı ölçek kullanılmış olup en yaygın olanları "Bireysel Yenilikçilik Ölçeği" (4 tez) ve "İnovasyon Ölçeği" (4 tez) olarak öne çıkmaktadır. Özel sektör temsili %11,9 ile sınırlandırılmış, araştırmaların ülke genelindeki dağılımında ise İstanbul'un (%33,3) ağırlıkta olduğu görülmüştür. Metodolojik açıdan, nicel yöntemlerin küresel literatürle uyumlu olmasına rağmen, nitel ve karma desenlerin eksikliği, inovasyonun sosyokültürel bağlamının (yetenek yönetimi, insan kaynağı sistemleri, liderlik dinamikleri) yeterince irdelenmemesine neden olmuştur. Ölçek çeşitliliği, araştırmalar arası karşılaştırılabilirliği, metodolojik bir dağınıklığa işaret etmekte; özel sektördeki veri paylaşımına yönelik direnç ve kısıtlamalar ise bu yaratıcı inovasyon dinamiklerinin ve yetenek yönetimi programlarının bir araya getirilmesini ve analizini kısıtlamaktadır. Tezlerin %69'u yüksek lisans, %31'i doktora düzeyinde olup enstitü bazında Sağlık Bilimleri Enstitüsü (%35,7) ve Sosyal Bilimler Enstitüsü (%33,3) öne çıkmaktadır. Örneklemlerin %50'si sağlık çalışanlarından oluşurken nicel örneklem grubunun ortalama sayısı 324, nitel çalışmalardaki örneklem grubunun ortalama sayısının ise 17 olduğu görülmektedir. Danışman unvanlarının %45'ini Profesör Doktor oluşturmaktadır.

Çalışmanın özgün katkısı; Türkiye'deki sağlık inovasyonu araştırmalarına ilişkin ilk bibliyometrik analiz sunması ve özel sektör-üniversite iş birliği, kültürel bağlamla uyumlu ölçek geliştirme ihtiyaçları gibi kritik eksikliklerin ortaya konulmasını vurgulamaktadır. İncelenen faktörler olarak; tezin yazıldığı yıl, tezin yazıldığı enstitü ve ana bilim dalı, tezin türü, tez sayfa sayısı, tez danışmanı unvanı, örneklem olarak kimlerle çalışıldığı, çalışma türü, örneklem sayısı, örneklem ili, veri toplama yöntemi ve kullanılan ölçekler, tezlerin amacı ve ulaşılan sonuçlar ele alınmıştır. Çalışmanın içeriğine bakıldığında diğer lisansüstü bibliyometrik analizlerden farkı ölçeklerin de incelemeye dahil edilmesi olarak öne çıkmaktadır. Sağlık alanında inovasyon ile ilgili yapılacak diğer çalışmalara öncülük edeceği beklenmektedir.

Sonuç olarak; nitel/karma yöntemlerinin benimsenmesi, yerel bağlama uygun ölçeklendirilmesi, kamu-özel veri paylaşım protokolleri ve Anadolu'daki üniversitelerde inovasyon odaklı tezlerin değerlendirilmesi gerekmektedir. Bu adımlar, literatürü hem yerel ihtiyaçlara duyarlı hem de küresel standartlarla uyumlu hale getirerek yetenek yönetimi ve insan kaynağı inovasyon potansiyelini ortaya çıkaracaktır.

Keywords: İnovasyon, Yenilik, Sağlık Kurumları, Bibliyometrik Analiz.

PERFORMANCE ANALYSIS OF IMAGE PROCESSING-BASED ROBOTIC SCANNING SYSTEMS IN DETECTING WELD DEFECTS USING X-RAY DIGITAL RADIOGRAPHY: A RESEARCH DESIGN

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This study presents a research design aimed at analyzing the performance of robotic scanning systems based on image processing for the detection of weld defects in pipeline joints using X-Ray Digital Radiography (DR) as a non-destructive testing (NDT) method. These systems, developed to overcome the limitations of conventional radiographic inspection techniques such as susceptibility to human error and inefficiencies in time and cost, stand out with their capabilities for automatic data acquisition and evaluation. This proposed study aims to detail the software and hardware infrastructures of these systems, their field application scenarios, the processing of acquired radiographic images, and the defect detection procedures. Image processing algorithms such as edge detection, morphological filtering, contrast enhancement, and segmentation will be examined, and the applicability of AI-assisted classification methods will be evaluated.

The proposed methodology involves creating welded joints with simulated defects (e.g., porosity, lack of penetration, slag inclusion) on a test pipeline. Images will be obtained using DR systems (e.g., XPRESS-SCAN®, SKOOTX, XQ-70C) and analyzed at different resolutions and energy levels. Image processing tasks will be carried out using open-source libraries such as Python and OpenCV. For machine learning-based modeling, a labeled image dataset will be created and classified using Convolutional Neural Network (CNN) architectures. Evaluation metrics such as accuracy, precision, specificity, and F1 score are planned to be used.

This proposal assumes that DR-based robotic scanning systems have high potential accuracy in the early detection of small-sized defects, and that image processing algorithms significantly improve classification performance. Moreover, optimization of algorithms and hardware is considered necessary for consistent performance across different pipe diameters, weld positions, and material types. The impact of environmental factors (e.g., noise, exposure time, device calibration) on image quality and system performance will also be investigated within the study.

In conclusion, this study serves as a preparatory phase prior to experimental implementation, grounded in literature and current technological capabilities. The ultimate aim is to establish a scientific basis for performance enhancement approaches supported by image processing in the industrial application of DR-based robotic scanning systems.

Keywords: Digital Radiography, Robotic Scanning, Image Processing, Weld Defects, Deep Learning, Research Design

HAZIR GİYİM SEKTÖRÜNDE KALITE MALİYETİ, GÖÇMEN İŞÇİLER VE KAYIT DIŞI İSTİHDAMIN ETKİLERİ: NİTEL BIR ARAŞTIRMA

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Hazır giyim sektörü, hızla değişen müşteri taleplerine anlık cevap verebilme kabiliyetinin ön planda olduğu, düşük stokla çalışma stratejilerinin benimsendiği ve rekabetin kalite düzeyiyle belirlendiği bir alandır. Bu dönüşümle birlikte, geleneksel bant üretim sistemleri küçük hacimli siparişleri karşılamakta yetersiz kalmakta, bu da üretim süreçlerinde esnekliğe ve işgücünde çeşitliliğe olan ihtiyacı artırmaktadır. Ancak sektör, bu dönüşüme ayak uydururken kayıt dışı istihdam ve göçmen işçilerin yaygınlaşması gibi yapısal sorunlarla karşı karşıya kalmaktadır.

Bu çalışma, hazır giyim sektöründe kayıt dışı göçmen işçilerin çalıştırılmasının kalite maliyetlerine olan etkisini nitel yöntemlerle incelemeyi amaçlamaktadır. Araştırmada, İstanbul'da faaliyet gösteren, 100'den fazla çalışana sahip ve göçmen işçi oranı %50'nin üzerinde olan üç firmadan biri olan, sosyal uygunluk denetimlerinden geçmiş yarı entegre bir işletme (X firması) örnek olay olarak seçilmiştir. Firma verileri, doküman analizi yoluyla ERP sistemi üzerinden elde edilen işçilik maliyetleri, kalite kontrol kayıtları ve tamir giderleri gibi kalemlerden oluşmuştur. Ayrıca firma yöneticileriyle yapılan yarı yapılandırılmış görüşmelerle veriler desteklenmiştir. Karşılaştırma amacıyla, aynı ürün grubunu üreten ancak farklı coğrafi konumda faaliyet gösteren Y firması çalışmaya dahil edilmiştir.

Bulgular, düşük adetli siparişlerin üretiminde bant sistemlerinin verimlilikten uzaklaştığını, operatör bazlı uzmanlaşmanın kaliteyi olumsuz etkileyebildiğini göstermektedir. Kayıt dışı göçmen işçilerin düşük ücretle çalıştırılması, üretim maliyetlerini kısa vadede azaltmakta; ancak iş gücü sirkülasyonunun artması, kalite standartlarının tutturulamaması ve müşteri memnuniyetinin azalması gibi uzun vadeli riskleri beraberinde getirmektedir. Bu durum, kalitenin sürdürülebilirliği açısından tehdit oluşturmakta ve firmaları etik, yasal ve stratejik açmazlarla karşı karşıya bırakmaktadır.

Araştırma, işletmelerin maliyet avantajı uğruna kayıt dışılığa yönelmesinin, toplam kalite maliyetlerini artırabileceğini ve bu durumun sektördeki rekabetçi pozisyonu zayıflatabileceğini ortaya koymaktadır. Sektördeki bu eğilim, yalnızca ekonomik değil; aynı zamanda sosyal boyutlarıyla da ele alınmalı ve kayıt dışı istihdamın kontrol altına alınması için çok paydaşlı sürdürülebilir politikaların geliştirilmesi gerektiği vurgulanmalıdır.

Keywords: Ready-Made Clothing, Foreign Workers, Qualitative Research

A DATA-DRIVEN DECISION SUPPORT SYSTEM FOR POST-EARTHQUAKE DISASTER MANAGEMENT

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This study presents an innovative Decision Support System (DSS) model to optimize post-earthquake disaster management processes. Earthquakes represent devastating natural disasters that require complex management strategies, particularly in high-risk regions like Türkiye. Traditional response methods often prove inadequate due to data gaps and asymmetric information flow in resource allocation. Our research addresses these challenges through an integrated framework combining mathematical modeling, Multi-Criteria Decision Making (MCDM), and geographic information systems.

The research draws critical lessons from the February 6, 2023 Kahramanmaraş earthquakes (7.7 and 7.6 Mw), which resulted in over 50,000 casualties. These events exposed significant coordination gaps in existing systems, highlighting the urgent need for data-driven decision mechanisms. The proposed system provides real-time estimates of three critical parameters: (1) human casualties, (2) injury counts, and (3) shelter requirements, enabling strategic prioritization for emergency teams. Methodologically, the system comprises three core components: (1) A Python-based mathematical model, (2) An AHP-weighted resource allocation algorithm, and (3) An intuitive web interface. The model operates with minimal input data including population density, building typologies (RC frame, masonry, etc.), and seismic parameters. Validation using Kahramanmaraş disaster records demonstrated exceptional accuracy rates: 98.123% for fatality estimates, 91.386% for injury predictions, and 98.683% for shelter needs.

The MCDM module employs Analytic Hierarchy Process (AHP) with three weighted criteria: human loss (50%), injury rate (30%), and shelter demand (20%). Applied to Kahramanmaraş provinces, this yielded priority scores of 1,000 for Onikişubat, 605 for Dulkadiroğlu, and 316 for Elbistan, creating a quantitative guide for resource allocation. Technologically, the system features a three-layer architecture: (i) Data layer integrating real-time inputs from AFAD, Turkish Red Crescent, and municipalities, (ii) Analysis layer with machine learning and optimization modules, and (iii) Presentation layer with interactive dashboards. Edge computing ensures continuous operation during infrastructure failures, maintaining data transmission via LoRaWAN when cellular networks collapse. Key implementation challenges included standardizing heterogeneous data sources from different institutions. AI-based data imputation techniques enhanced reliability for incomplete building inventories. The simulation module enables proactive planning for various earthquake scenarios. The most significant contribution of this study is enhancing the effectiveness of interventions during the 'golden hours'—the critical first 72 hours of disaster management—through scientific methods. Simulations demonstrate that the proposed system increases resource distribution speed by 40% compared to conventional methods while reducing response costs by 25-30%. The system's real-time data analysis and automated prioritization capabilities shorten emergency teams' arrival time to critical zones by an average of 2.5 hours. Furthermore, the dynamic resource tracking module reduces wastage of medical supplies and rescue equipment by 45%. Future research will focus on three key improvements: (1) automating damage assessment using UAV (Unmanned Aerial Vehicle) imagery, (2) integrating smart contracts for blockchain-based transparent resource tracking, and (3) AI-powered mapping of psycho-social support needs. Particularly in post-earthquake chaotic environments, the system's data integrity and decision-support mechanisms show potential to establish new standards in

disaster management. Findings from pilot implementations confirm the system's scalability and adaptability to other natural disaster scenarios (floods, wildfires, etc.).

Keywords: Disaster Management, Decision Support Systems, Multi-Criteria Decision Analysis, Mathematical Modeling, Emergency Response Planning

BEYOND INCOME CONSTRAINTS: GREEN ECONOMY TRANSITIONS AND SUSTAINABLE DEVELOPMENT IN EMERGING ECONOMIES

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This study examines green economy performance patterns and determinants across 93 developing countries using the Global Green Economy Index (GGEI). Despite growing adoption of green economy frameworks globally, empirical evidence on implementation and outcomes in developing nations remains limited. Through Generalized Least Squares regression analysis and case studies of high-performing countries, we identify key factors enabling green economy advancement despite resource constraints.

Our findings reveal significant heterogeneity in performance across regions and income groups. European and Latin American developing countries generally outperform counterparts in other regions, suggesting region-specific factors influence outcomes beyond income levels alone. The analysis demonstrates that carbon efficiency (GHG Emissions/GDP) and clean energy deployment emerge as the strongest determinants of overall performance (coefficients of 0.148 and 0.086 respectively, $p<0.05$), while governance quality shows consistently significant associations across all model specifications. Income-stratified analysis reveals that environmental protection and climate policy demonstrate stronger relationships with performance in low-income contexts, while market mechanisms become increasingly important at higher income levels. Our instrumental variables approach provides evidence that, after addressing endogeneity, income level alone is not deterministic of green economy performance once other factors are accounted for.

The study identifies distinct regional patterns in green economy determinants. For African countries, carbon efficiency and electricity decarbonization show the strongest relationships with overall performance, while Asian nations demonstrate particularly strong associations between air quality management and green economy success. Latin American countries uniquely show forest management and biodiversity conservation as key performance drivers.

Case studies of high-performing countries like Costa Rica (GGEI=0.644) and Ethiopia (GGEI=0.563) illustrate that developing economies can pursue growth models that integrate environmental sustainability from early development stages. These countries demonstrate strategic policy choices can partially offset resource constraints through targeted investments in high-leverage sectors. Common characteristics among high performers include policy continuity across electoral cycles, strategic selectivity in green investments, and effective governance arrangements facilitating implementation. Our findings challenge conventional assumptions that substantial green economy advancement requires high income levels. The evidence suggests multiple development pathways exist beyond the traditional "grow first, clean up later" approach. Stratified analysis demonstrates that different dimensions of green economy become relevant at various development stages, indicating the need for contextually-tailored approaches rather than uniform prescriptions.

These insights provide an evidence-based foundation for policy prioritization in resource-constrained settings. For low-income countries, environmental protection and climate policy interventions offer accessible entry points, while middle-income countries should increasingly emphasize market mechanisms and investment frameworks. The consistent significance of governance quality across all

specifications underscores that institutional arrangements may be as important as technical interventions in enabling effective transitions.

This research contributes to both theoretical understanding and practical implementation of green economy transitions in developing countries. It demonstrates that with strategic approaches tailored to specific contexts, developing nations can achieve meaningful progress toward sustainability objectives even amid resource constraints, potentially leapfrogging carbon-intensive development stages that characterized historical transitions in advanced economies.

Keywords: Green Economy, Sustainable Development, Developing Countries

BIG DATA FOR EVIDENCE-BASED POLICY IN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS- LETTING THE DATA SPEAK FOR A SMARTER SOCIETY

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Big Data transforms how evidence-based policymaking is conceived and implemented in pursuit of the United Nations Sustainable Development Goals (SDGs). Adopted in 2015, the SDGs comprise 17 goals and 169 targets to address global challenges such as poverty, health disparities, climate change, and inequality by 2030. While traditional data sources remain valuable, they often lack the granularity, timeliness, or completeness needed for real-time decision-making. In contrast, Big Data—characterized by volume, velocity, variety, veracity, and value—offers new opportunities to "let the data speak" by enabling smarter, more responsive, and more inclusive policymaking. Rather than relying on assumptions or pre-determined theories of change, this approach emphasizes the need to use real-time, disaggregated, and granular data to uncover hidden problems, target resources more efficiently, and evaluate policies in real time.

Big Data refers to large-scale, often unstructured datasets generated through satellite imagery, mobile phone records, social media, financial transactions, remote sensors, and other digital sources. These data streams have been increasingly recognized as critical complements to conventional statistics, particularly in low- and middle-income settings where data gaps are common. As the UN Global Pulse initiative and the 2022 UN report on Big Data for Sustainable Development emphasize, integrating Big Data into national policy systems can help track progress, identify bottlenecks, and design more effective interventions across all 17 SDGs.

This study aims to provide concrete examples of using Big Data to monitor the indicators associated with the SDGs. Rather than attempting to survey all 17 goals, this paper focuses on six illustrative cases: SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-Being), SDG 6 (Clean Water and Sanitation), SDG9 9 (Industry, Innovation, and Infrastructure) and SDG 13 (Climate Action). These were selected not arbitrarily but to represent a diverse set of policy domains—agriculture and food systems, public health, human capital development, and environmental sustainability—where Big Data has already demonstrated substantial value. This selection also spans both social and environmental dimensions of the 2030 Agenda and highlights areas where the mismatch between traditional monitoring tools and complex policy demands is particularly evident. The intention is not to narrow the scope of the SDGs but to show how policymakers can generalize lessons from these sectors. For instance, looking at Big Data applications under SDG 1 (No Poverty), mobile phone usage patterns, mobile money transactions, and satellite-based nighttime light imagery have been employed to estimate income levels and detect poverty in remote and underserved regions. These techniques have allowed for dynamic poverty mapping and better targeting of social assistance programs in areas where official income statistics are unreliable or outdated. In the context of SDG 2 (Zero Hunger), early warning systems that integrate satellite imagery, crop health indices, and mobile transaction data have proven effective in predicting food insecurity before it escalates. Under SDG 3 (Good Health and Well-Being), anonymized call detail records (CDRs) and search engine queries have been utilized to model the spread of infectious diseases, identify potential outbreak zones, and tailor public health messaging. These tools were particularly valuable during the COVID-19 pandemic in tracing human mobility and forecasting healthcare demands. Studies in the field of Clean Water and Sanitation (SDG 6), on the other hand, show that sensor data from water pumps, combined with remote sensing technologies, can be used to monitor

access to clean water—particularly in rural communities—and to detect and resolve system failures in a timely manner. Regarding SDG 9 (Industry, Innovation, and Infrastructure), GPS data and real-time traffic monitoring are helping city planners improve public transportation systems, reduce congestion, and support infrastructure development in rapidly urbanizing areas. Finally, in Climate Action (SDG 13), satellite imagery and IoT sensors have been proven to play a key role in monitoring deforestation, tracking emissions, and predicting the impact of extreme weather events. Despite its promise, integrating big data into policymaking raises a number of challenges such as privacy, ethics and data security which require transparent and participatory governance. The UN's Data Privacy, Ethics, and Protection Guidance Note stresses the need for a coordinated approach to ensure safe and responsible use of big data for the achievement of the 2030 Agenda. Nevertheless, Big Data, when integrated responsibly, has the potential to unlock a new era of smart, inclusive, and sustainable public policy. This study aims to demonstrate that Big Data is not simply a technological resource but a strategic instrument for building a more equitable and resilient world.

Keywords: Big Data, Sustainable Development, Evidence-Based Policy

DEVELOPMENT OF AN AFFORDABLE SMART FARMING SYSTEM FOR SMALL-SCALE AGRICULTURE

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Agriculture serves as the foundation of global food security and is essential for meeting SDG 2 (Zero Hunger). Yet traditional farming faces growing threats from climate volatility, dwindling resources, and ecological damage. Current hydroponic methods, though effective in controlled settings, remain vulnerable to root diseases from fungal attacks that impair nutrient uptake. These systems also depend on unsustainable practices that exhaust growth mediums and create polluting nutrient runoff. Such shortcomings demonstrate the critical demand for more robust, eco-friendly farming alternatives. Emerging smart agriculture technologies present viable solutions through automated monitoring, precision resource delivery, and data-driven cultivation methods that could revolutionize food production while protecting our environment.To address these issues, this study presents a smart farming system that integrates real-time monitoring and automation to optimize water usage and pest control while minimizing environmental impact. The system is structured into two main components, namely the upper with middle, and lower sections. The upper section is crafted from wood with dimensions 63.5 cm length × 20 cm width and reinforced with corner brackets and angle bars to ensure stability. The 80 mm diameter PVC pipes, drilled with three 40 mm holes and secured with U-clamps, serve as plant growth channels. The middle section (63.5 cm × 40 cm × 90 cm) is strategically designed to maximize sunlight exposure, facilitating optimal photosynthesis. The lower section houses the water tank and water pump. Then, an array of sensors, including PIR motion detectors, soil moisture sensors, ultrasonic sensors, a buzzer, and temperature and humidity sensors, was inserted into specific locations in the system. This setup enables precise irrigation management when nutrient solution is delivered directly to plant roots through a precision drip irrigation system integrated within the PVC piping network. To prevent waterlogging and ensure optimal moisture levels, an overflow drainage hose redirects excess solution back to the storage tank. Additionally, soil moisture sensors provide secondary protection by automatically activating the irrigation system only when the growing medium's water level drops below optimal levels. For comprehensive plant health monitoring, the system employs multiple sensors: ambient sensors track environmental conditions including temperature and humidity, while PIR motion detectors identify potential pest intrusions. When pests are detected, the system immediately alerts farmers through the Blynk mobile application, which features interactive controls allowing users to remotely activate deterrent measures such as an alarm buzzer. This integrated monitoring and response system ensures plants receive precisely what they need while minimizing manual intervention. Environmental conditions such as temperature and humidity are continuously monitored with 99.9% accuracy, as validated through comparative testing with a local industry system setup. For practical validation, lettuce was successfully cultivated using the system and management and monitoring process was done using a smartphone only. This integrated monitoring and response system ensures plants receive precisely what they need while minimizing manual intervention. The system’s success demonstrates that advanced agricultural technology can be both accessible and cost-effective, bridging the gap between traditional knowledge and modern precision farming. By combining IoT-based automation with sustainable hydroponic practices, this smart farming model offers a scalable solution adaptable to diverse climates and crop varieties.

Keywords: Smart, Farming, Agriculture, Innovation, Sustainability

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DIGITAL SIN TAXES AND THE FISCAL MANAGEMENT OF BEHAVIORAL RISKS: INTERNATIONAL FINDINGS AND POLICY RECOMMENDATIONS FOR TÜRKIYE

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This study examines the addiction-based risks posed by online games, social media, and digital content platforms in the context of increasing digitalization, within the discipline of public finance. The focus is on the phenomenon of digital addiction, which has rapidly spread in recent years; the analysis centers on identifying the issue and evaluating the impact of such content on individual behaviors and the moral structure of society.

The significance of the study lies in its exploration of the applicability of regulating harmful consumption habits through fiscal instruments in the digital sphere, and its potential to develop a multidimensional fiscal policy aimed at protecting children, adolescents, and adults. The objective is to outline the theoretical framework of the concept of digital sin taxes, analyze international comparative cases, and design a comprehensive, categorized, and guiding tax system tailored to Turkey.

A qualitative analysis approach has been adopted. In this context, secondary data sources such as legal regulations, academic studies, and policy documents have been evaluated, and the cases of Germany, France, Italy, the United Kingdom, the United States, and Turkey have been comparatively analyzed.

The limitation of the study is the lack of empirical data, which prevents direct causal inferences regarding the effects of fiscal regulations on individual behavior.

The findings reveal that Germany and France employ behavioral steering through social restrictions and high public shares; the UK and the US adopt revenue-oriented policies; whereas in Turkey, a structural taxation regime based on behavioral risks has not yet been established.

In conclusion, it is recommended to implement a progressive taxation system based on the risk level of digital content (ranging from 0% to 40%), establish social responsibility funds, develop AI-assisted monitoring systems, and clarify legal and fiscal regulations concerning content that poses a risk of digital addiction.

This approach would not only generate revenue but also contribute to the construction of protective public finance policies aimed at safeguarding the psychosocial well-being of children, adolescents, and adults..

Keywords: Pigovian Taxes, Merit Goods, Demerit Goods, Digital Sin Tax, Digital Addiction

ENHANCING PFSP OPTIMIZATION THROUGH A NEH-BA-ABC HYBRID ALGORITHM: A BENCHMARK-BASED COMPARISON WITH HCCE

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Yoong Chow Ho (Politeknik Kuchıng Sarawak)

This paper explores and compares two advanced metaheuristic methods designed to tackle the Permutation Flowshop Scheduling Problem (PFSP). The first is a newly developed hybrid algorithm that integrates the Nawaz-Enscore-Ham (NEH) heuristic, the Bat Algorithm (BA), and the Artificial Bee Colony (ABC) algorithm. The second is a Hybrid Cooperative Co-Evolution (HCCE) algorithm, enhanced with Petri Net modeling. The hybrid NEH-BA-ABC approach leverages the strengths of each component: NEH for constructing an efficient initial sequence, BA for exploring the global search space, and ABC for fine-tuning solutions locally. Meanwhile, the HCCE method, which was originally intended for more complex scheduling environments involving distributed systems and limited buffers, is evaluated here within the conventional PFSP framework. To assess their effectiveness, both algorithms were tested on a set of benchmark problems from the Taillard dataset. The results show that the NEH-BA-ABC algorithm outperforms HCCE in both solution quality and speed of convergence. Although HCCE shows promise in handling more intricate scheduling constraints, its performance on standard PFSP instances is relatively modest. These results suggest that the NEH-BA-ABC hybrid is a more suitable and reliable choice for addressing large-scale flowshop scheduling challenges.

Keywords: Flowshop Scheduling, NEH Heuristic, Artificial Bee Colony (ABC), Scheduling Optimization, Makespan Minimization, Hybrid Cooperative Co-Evolution Algorithm (HCCE) with Petri Net

STUDENT PUNCTUALITY IN FOCUS: AN EXAMINATION OF FACTORS CONTRIBUTING TO TARDINESS IN SARAWAK COMMUNITY COLLEGES

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The issue of students' tardiness to class is often attributed to a myriad of interrelated factors and remains a persistent concern in higher education. This study aims is to identify the underlying causes of late attendance of students at Sarawak Zone Community College. Focusing on particular issues related to student discipline and time management. Employing a quantitative approach, the research utilizing structured questionnaires administered to students from Semester 1 to 3 during the 2024/2025 academic session, thereby providing an empirical basis for analysis. The study focused on four primary objectives: (1) to identify the principal causes of student tardiness, (2) to assess the degree of student agreement with identified contributing factors, (3) to propose evidence-based solutions for mitigating tardiness, and (4) to enhance institutional awareness regarding the necessity of systematic interventions. The findings of the study have shown a combination both external and internal factors contributing to student tardiness. External factors such as unreliable transportation systems, familial obligations, and inconsistencies in class schedules. Meanwhile, internal factors encompasses digital distractions, such as excessive engagement with social media or video games, and an evident lack of self-discipline, which collectively signify students' deficiencies in time management and the prioritization of academic commitments. Ultimately, these factors have created a significant impediment to punctual class attendance. Therefore, the study advocates for the implementation of a comprehensive strategy involving collaboration among various stakeholders, incorporating both proactive and reactive measures. These included structured counselling sessions, human capital development programs aimed at enhancing students' personal effectiveness, and the introduction of a merit-demerit system designed to support both preventive and corrective actions. Such measures are expected to cultivate a culture of punctuality and accountability among students. In conclusion, this study presents current reality of student behaviour, offering empirical insights that can guide college administration toward more responsive and effective strategies for improving student attendance. In turn, such efforts will cultivates the holistic development of students, better preparing them to meet the demands of an increasingly competitive workforce.

Keywords: Student Punctuality, Community College Malaysia, Higher Education, Attendance Issues

OPTIMIZING URBAN AIR QUALITY VIA DEEP REINFORCEMENT LEARNING-BASED ADAPTIVE GREENWAVE TRAFFIC CONTROL IN DENSE SMART CITIES – İSTANBUL CASE

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Urban traffic congestion leads to serious air pollution and high CO_2 emissions, which directly affect public health and climate efforts in today's crowded smart cities. Traditional traffic light systems—whether based on fixed timing or simple sensors—are often too rigid. They cannot easily adjust to real-time traffic changes and usually do not consider environmental concerns like emissions. In this study, we introduce a more intelligent traffic control approach using multi-agent Deep Reinforcement Learning (DRL). Each traffic intersection is controlled by its own DRL agent, which learns how to manage traffic light phases based on real-time traffic conditions. The goal is not only to reduce traffic delays and stops but also to cut down emissions. The system uses a reward function that combines traffic flow indicators (such as delay and queue length) with emissions calculated from recognized models like COPERT and MOVES. We test our method on a busy city road network in SUMO, a traffic simulation tool. Traffic data from METR-LA, PeMS, OpenAQ, İstanbul and İBB Air Quality Monitoring is combined and used to make the simulation realistic. Our DRL-based system shows strong improvements: it lowers average vehicle delay by 22.6%, reduces stops by 27.4%, and cuts CO_2 emissions by 26.7% compared to traditional traffic control methods. Even when unexpected traffic conditions occur, the system stays stable and keeps traffic moving smoothly. This research proves that DRL can help cities manage traffic more efficiently while also supporting cleaner air and better climate outcomes. It offers a practical, future-ready solution for smart and sustainable urban infrastructure.

Keywords: Greenwave Traffic Signal Control, Deep Reinforcement Learning, Smart Cities, Urban Air Quality, Multi-Agent Systems

EDUPULSE: A TECHNOLOGY-DRIVEN SYSTEM FOR EMPOWERING ACADEMIC ADVISING AND STUDENT PROGRESS MONITORING

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EduPulse is a technology-driven system designed to support academic advisors in efficiently tracking, managing, and monitoring student academic progress. In increasingly complex educational environments, academic advisors face significant challenges in handling large volumes of student data, which can hinder their ability to provide timely and accurate academic guidance. EduPulse serves as a comprehensive platform that delivers detailed insights into students' final examination results, performance in individual courses, and compliance with prerequisite requirements. Through this system, academic advisors can easily monitor student progress, evaluate course statuses, review grades, and identify students at risk of falling behind or missing critical courses required for graduation. These features enable early intervention and more targeted support, aligning closely with student success objectives. In addition, EduPulse enhances advisor efficiency and productivity by reducing manual administrative workloads and minimizing the risk of human error. Its streamlined reporting capabilities ensure advisors have access to reliable, real-time data to make well-informed decisions and provide high-quality academic support. By leveraging technology to optimize advising processes, EduPulse contributes to improved operational efficiency within educational institutions and supports better learning outcomes for students. Overall, the system is a valuable tool in building a more responsive, data-informed, and student-centered academic environment that benefits both advisors and the students they guide.

Keywords: Student Academic, Student Performance, Tracking

FABRICATION AND TESTING OF A MINIATURE SPLIT AC UNIT WITH R134A FOR HVAC EDUCATION

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In recent years, increasing global emphasis has been placed on reducing greenhouse gas emissions and promoting environmentally sustainable technologies. Within this context, the use of R134a as a refrigerant in HVAC systems has gained widespread acceptance due to its zero-ozone depletion potential (ODP) and non-flammable, stable chemical nature. Although R134a has a relatively high global warming potential (GWP), it remains a commonly used refrigerant in small-scale systems and educational setups due to its safety profile and performance characteristics. This project focuses on the design, fabrication, and performance evaluation of a miniature Air-Cooled Split Unit (ACCU) air-conditioning system using R134a refrigerant, with a particular emphasis on HVAC education and practical learning applications. The system replicates the vapor-compression refrigeration cycle and includes all key components found in full-scale air-conditioning units a hermetically sealed compressor, finned-tube air-cooled condenser, capillary tube expansion device, and a compact evaporator coil. These components are carefully selected and scaled to simulate real-world operation while maintaining safety and manageability for laboratory use. The goals of this project are multifaceted: first, to offer a hands-on platform for students to explore the core principles of refrigeration and air conditioning systems; second, to analyse the operational performance of R134a in a controlled setup; and third, to identify potential design improvements that enhance system efficiency and reliability. Through measurements and testing which is including temperature distribution, pressure variation, cooling capacity, and power consumption is key performance metrics such as the Coefficient of Performance (COP) are evaluated. Furthermore, the project investigates heat exchange processes within the evaporator and condenser units, examines the role of proper refrigerant charge and maintenance in achieving optimal performance, and explores the broader implications of refrigerant choice on environmental sustainability. The findings of this study not only reinforce fundamental HVAC concepts but also aim to contribute to the development of more energy-efficient and environmentally responsible cooling solutions. Overall, this miniature split-unit system serves as a valuable educational tool, promoting both theoretical understanding and practical skills in refrigeration and air conditioning technology. It underscores the importance of sustainable practices in HVAC design and highlights the continuing role of R134a in educational and experimental applications, despite the global shift toward lower-GWP alternatives.

Keywords: Miniature Split AC Unit, Energy Efficiency in Small-scale Systems, R134a Mollier Diagram

YAPAY ZEKA DESTEKLİ TANILAMA ARAÇLARININ ÖZEL EĞİTİMDE KULLANILABİLİRLİĞİ VE ETİK BOYUTLARI: KARMA YÖNTEMLE BİR İNCELEME

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Bu araştırmanın amacı, yapay zekâ destekli tanılama araçlarının özel eğitim alanında ne ölçüde kullanılabilir olduğunu ve bu araçların beraberinde getirdiği etik sorunları ortaya koymaktır. Karma araştırma desenine dayalı olarak yürütülen çalışmada, açıklayıcı sıralı desen tercih edilmiştir. Araştırmanın nicel aşamasında 100 özel eğitim öğretmeni ve rehber uzman ile geliştirilen 5'li Likert tipi ölçek aracılığıyla veri toplanmıştır. Elde edilen nicel veriler doğrultusunda, yapay zekâ temelli tanılama araçlarının kullanılabilirliğine yönelik tutumların olumlu olduğu, ancak etik risk algısının özellikle veri güvenliği ve insan faktörünün dışlanması konularında yüksek olduğu belirlenmiştir. Çalışmanın nitel aşamasında ise yarı yapılandırılmış görüşmeler gerçekleştirilmiştir. Görüşmeler sonucunda katılımcılar, sistemlerin nesnel tanılama sağlamasına rağmen algoritmik önyargı, kararların şeffaf olmaması ve veri gizliliğine dair önemli etik endişeler taşıdıklarını ifade etmişlerdir. Ayrıca, bazı katılımcılar bu araçların bireyin duygusal ve sosyal bağlamını dikkate almadığını belirtmiştir. Elde edilen bulgular, özel eğitimde yapay zekâ destekli araçların potansiyel faydaları kadar, ciddi etik ve pedagojik tartışmaları da beraberinde getirdiğini göstermektedir. Bu bağlamda, eğitim politikalarının ve uygulama kılavuzlarının, teknolojik ilerleme ile etik ilkeler arasında denge kuracak şekilde güncellenmesi önerilmektedir.

Keywords: Yapay Zeka, Özel Eğitim, Tanılama Araçları.

DETERMINANTS OF SUSTAINABLE CONSUMPTION INTENTIONS: EVIDENCE FROM UNIVERSITY STUDENTS IN KYRGYZSTAN

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Currently, both consumers and producers are increasingly prioritizing environmentally friendly products, thereby rendering the concept of green marketing increasingly pertinent. Green marketing encompasses strategies and practices aimed at promoting goods and services that mitigate adverse environmental impacts. In response to the rising demand for sustainable consumption, companies are modifying their business models to incorporate environmental principles into their production processes. Although there is a growing body of academic literature on this subject, research specifically focused on the Kyrgyz Republic remains relatively scarce. Investigating the sustainable consumption behaviors of consumers in Kyrgyzstan provides a distinctive perspective, particularly as it is one of the post-Soviet nations. Accordingly, the primary objective of this study is to assess the impact of personal norms, social norms, environmental awareness, environmental knowledge, and perceived behavioral control on individuals' intentions to participate in sustainable consumption practices.

The empirical foundation of the study is derived from an online survey conducted among students at Kyrgyz-Turkish Manas University in Kyrgyzstan. A multiple regression model was employed to analyze the collected data, assessing the strength and significance of the influence of these factors on sustainable consumption intentions. Preliminary findings indicate that personal norms, social norms, and perceived behavioral control exert the most substantial impact on the intention to engage in sustainable consumption, whereas the level of environmental knowledge demonstrates a less pronounced relationship. These findings underscore the significance of individual responsibility and a sense of control in shaping sustainable consumer behaviors, which should be considered in the development of future green marketing strategies.

Keywords: Sustainable Consumption, Environmental Awareness, Environmental Knowledge, Personal and Social Norms, Perceived Behavioral Control.

EVIDENCE OF PASSIVE DESIGN STRATEGIES IN A TROPICAL MODERN TIMBER HOUSE

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In regions with a hot and humid climate, such as Malaysia, people often rely on air conditioning to stay comfortable indoors. Despite its apparent speed and convenience, this method has significant disadvantages. Malaysia consistently has high temperatures, typically between 23°C and 38°C, and high relative humidity, ranging from 67% to 95%. For this reason, air conditioning systems are essential to the comfort of many buildings. Over-reliance on these systems, however, can have detrimental effects on the environment and human health. Both energy consumption and greenhouse gas emissions are increased by air conditioning. Unfortunately, this over-reliance on mechanical systems has become the norm in today's technologically advanced world. The first step in attaining interior comfort, particularly in regions like Malaysia, is for architects and designers to embrace passive design techniques to solve this problem. Buildings that are designed with passive design inherently regulate humidity, ventilation, and temperature without the use of devices like air conditioners. Using ventilation, shading, building orientation, and heat-reducing materials strategically are some of these techniques. Research and previous studies have demonstrated that a building's overall performance and comfort levels can be greatly enhanced by including passive methods into the early stages of design. The goal of the study outlined here was to determine how well these passive design strategies work to provide thermal comfort indoors in hot, muggy conditions. The focus of the research was a modern timber house called Anjung Kelana, located in Port Dickson, Malaysia (latitude 2.5°N, longitude 101°E), a coastal town that experiences high temperatures and humidity year-round. Anjung Kelana is a three-storey bungalow designed as a modern Malay house. Timber, a natural and sustainable material, is used extensively in the construction, giving the home a warm, rustic aesthetic that blends well with the natural environment. The design of the house is heavily inspired by traditional Malay architecture, which often incorporates natural cooling methods.

Three environmental parameters were measured for the study in eight different interior sections of the house: relative humidity (RH), wind velocity (v), and air temperature (Ta). These factors were selected because they have a direct impact on people's level of comfort indoors. The eight spaces examined include rooms like the Serambi (living Area), various bedrooms, bathrooms, the kitchen, stairwells, and Anjung (covered veranda). The goal was to determine how each space responded to the passive design elements included in the house. Results from the study showed clear differences in comfort levels between various parts of the house, based on how well passive strategies were applied in each area. The architect of Anjung Kelana thoughtfully included these elements to enhance comfort without overusing air conditioning. The use of timber, combined with these passive features, supports both sustainability and comfort. According to the study's findings, passive design techniques can greatly enhance indoor thermal comfort in hot, muggy regions like Malaysia. These techniques can lower energy use and environmental damage while improving indoor living conditions by lowering heat and promoting ventilation. In Anjung Kelana, passive features including cross ventilation, shade, and appropriately oriented apertures have a direct impact on the humidity, wind speed, and air temperature. The findings not only support the efficacy of these design techniques but also emphasize how crucial it is to incorporate them early in the design process. It would be beneficial to get input from the building's residents for upcoming improvements to gain a better understanding of how these tactics impact daily

comfort and happiness. To create comfortable and energy-efficient structures in tropical climates, planners, engineers, and architects can benefit from the insights this study offers.

Keywords: Passive Design Strategies, Tropical Climate, Timber House, Architecture.

RELATIONSHIP BETWEEN THE SERVICE QUALITY OF TAXI SOFTWARE TOWARDS USER SATISFACTION

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The growing reliance on taxi-hailing applications in Malaysia has reshaped urban commuting, yet uneven service quality continues to impact user satisfaction. This conceptual paper will explore the relationship between service quality dimensions which are tangibility, reliability, assurance, empathy, and responsiveness, and user satisfaction, using the SERVQUAL model as the theoretical foundation. The study will employ a quantitative research approach, with structured questionnaires to be distributed to ride-hailing app users in Johor, Malaysia. The target population will consist of individuals aged 18 and above who have used taxi-hailing services, and a sample size of 384 respondents will be selected using convenience sampling, in accordance with Krejcie and Morgan's guidelines. Data will be analyzed using SPSS to examine the influence of each service quality dimension on user satisfaction. It is expected that the findings will confirm a significant positive relationship between service quality and user satisfaction, providing both theoretical insights and practical recommendations for improving customer experience in the ride-hailing industry.

Keywords: Service Quality, User Satisfaction, SERVQUAL Model

ÖZEL YETENEKLİ LISE ÖĞRENCILERININ YAPAY ZEKÂ TEKNOLOJILERINE YÖNELIK KAYGI DÜZEYI VE KARIYER PLANLARINA ETKISI

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Yapay zekâ teknolojilerinin hızla gelişimi, gençlerin gelecekteki kariyer planını ve seçecekleri meslekleri doğrudan etkileyecek bir faktördür. Bu nedenle, özellikle üniversite hayatına yaklaşan lise öğrencilerinin yapay zekâya yönelik algılarının ve kaygılarının anlaşılması, bu kaygıların kariyer planlarına etki edip etmediğinin araştırılması önemli hale gelmektedir. Bu çalışmanın amacı özel yetenek/üstün zekâ tanısı almış lise öğrencilerinin yapay zekâya yönelik kaygı düzeylerinin incelenerek, bu yeni teknolojiye yönelik algılarının onların gelecekteki kariyer planlamasına etkilerini incelemektir.

Çalışma, nicel araştırma yöntemlerinden korelasyonel araştırma yöntemiyle gerçekleştirilmiştir. Araştırma grubunu Sakarya ilinde farklı türlerde liselerden gelen ve 2024-2025 eğitim-öğretim yılında Sakarya Bilim ve Sanat Merkezinde destek eğitimine devam eden 86 özel yetenekli lise öğrencisi oluşturmaktadır. Araştırmaya katılan öğrencilerin %45.3'ü erkek (f=39), %54.7'si kız (f=47) öğrencidir. Veriler araştırmacılar tarafından geliştirilen Yapay Zekâ ve Kariyer Planlaması anketiyle toplanmıştır. 5'li likert tipi olarak hazırlanan veri toplama aracının ilk boyutunda yapay zekâ kaygısını ölçmeye yönelik 6 madde, ikinci boyuttunda yapay zekânın kariyer planlamasına etkisini anlamaya yönelik 6 madde yer almaktadır. Veriler, gerekli izinler alınarak, iki haftalık bir süreçte lise öğrencilerinin devam ettiği tüm gruplara yönelik olarak yüz yüze uygulanmıştır. Katılımcılarla ilgili demografik bilgilerin ve anket maddelerine yönelik verilerin analizinde frekans ve yüzde analizi; kız ve erkek öğrencilerin yapay zekâ kaygı düzeyleri arasındaki farkın istatistiksel olarak anlamlı olup olmadığının analizinde bağımsız örneklemler t-testi ve 9, 10 ve 11. sınıfların kaygı düzeyleri arasındaki farkı karşılaştırmak için tek yönlü ANOVA ve hangi grupların birbirinden farklı olduğunu belirlemek için Post-hoc analizi yapılmıştır.

Araştırmaya katılan özel yetenekli lise lise öğrencilerinin %88.4'ü gündelik yaşamlarında yapay zekâ araçlarını kullanmaktadır. Öğrencilerin %32.60'ı yapay zekâ teknolojilerindeki hızlı gelişmelerin kendisini kaygılandırdığını belirtirken, %33.70'i yapay zekâya yönelik genel bir kaygı duymamaktadır. Öğrencilerin %38.30'u yapay zekânın insan hayatındaki rolünün giderek artmasından tedirginlik duyarken, %32.60'ı herhangi bir tedirginlik yaşamamaktadır. Kariyer planlanmayla ilgili boyutta öğrencilerin %77.90'ının yapay zekânın meslek seçimindeki rolünün artacağını düşündüğü görülmüştür. Buna göre öğrencilerin %36.10'i yapay zekâ teknolojilerinin hızla gelişmeye bağlı olarak yapay zekâya dayalı bir meslek seçebileceğini ifade ederken,%33.70'si ise bu maddede olumsuz yönde görüş belirtmiştir. Öğrencilerin %59.30'unun yapay zekâ ile rekabet etmek zorunda kalacakları bir kariyere yönelmek istemedikleri anlaşılmaktadır.

Çalışmada kız öğrencilerin yapay zekâya yönelik kaygılarının puan ortalaması ($\bar{X}$=21.84) erkek öğrencilerin ortalamasından ($\bar{X}$=20.17) biraz daha yüksek tespit edilmesine rağmen, istatistiksel olarak anlamlı bir fark bulunmamıştır (p= 0.117, p>0.05). Araştırmada 9. sınıf öğrencilerinin ortalama kaygı düzeyi $\bar{X}$=20.15, 10. sınıf öğrencilerinin ortalama kaygı düzeyi $\bar{X}$=21.28 ve 11. sınıf öğrencilerinin ortalama kaygı düzeyi $\bar{X}$=24.69 olarak tespit edilmiştir. Buna göre 9. ve 10. sınıf öğrencilerinin yapay

zekâya yönelik kaygı puanları arasında istatistiksel olarak anlamlı bir fark bulunmazken ($p=0.3461>0.05$), 9 ve 11. sınıf öğrencileri arasında ($p=0.0012<0.05$) ve 10 ve 11. sınıf düzeyindeki öğrenciler arasında ($p=0.0441<0.05$) istatistiksel olarak anlamlı bir fark bulunmuştur.

Bu çalışma, yapay zekâya yönelik kaygının özel yetenekli lise öğrencileri arasında orta düzeyde olduğunu ve bu kaygının öğrencilerin kariyer planlamalarını, meslek seçimlerini ve geleceğe dair belirsizlik algılarını önemli ölçüde etkilediğini ortaya koymaktadır. Cinsiyete göre anlamlı bir fark bulunmamakla birlikte sınıf seviyesiyle kaygı düzeyleri arasında pozitif yönlü bir ilişki olduğu anlaşılmaktadır. Araştırmaya katılan öğrencilerin çoğunluğu yapay zekâya dayalı bir meslek seçmekten emin değildir ve yapay zekâ teknolojilerindeki gelişmeleri iş bulamama ya da işsizlik kaygısıyla ilişkilendirmektedir.

Literatürde teknoloji ve yapay zekâ kaygısının kariyer planlarına ve istihdama yönelik etkilerinin daha çok üniversite öğrencileriyle ya da çalışanlarla yapıldığını görülmektedir. Bu çalışmada, mevcut çalışmalardan farklı olarak lise öğrencilerinin, özelde özel yetenekli öğrencilerin, yapay zekâ ile ilgili kaygı düzeyleri; cinsiyet, sınıf düzeyi gibi değişkenler açısından değerlendirilmiş ve bu kaygının öğrencilerin gelecekteki meslek tercihleri üzerindeki olası etkilerine bakılarak teknoloji ve yapay zekâyla ilgili literatüre katkı sunulması amaçlanmıştır.

Keywords: Yapay Zekâ, Teknoloji, Kaygı, Kariyer Planlama, Özel Yetenekliler

WORK-BASED LEARNING IMPLEMENTATION AND GRADUATE OUTCOMES IN MALAYSIAN POLYTECHNICS: A COMPARATIVE REVIEW

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Work-Based Learning (WBL) has become a focus of discussion as part of an instructional strategy to prepare career-ready graduates. WBL has now been recognized as an integral part of a dynamic pedagogical approach in many industrialized countries. WBL successfully bridges the gap between theoretical knowledge and real-world industry experience by offering students the opportunities to apply classroom learning in the real world, engage them by using physical tasks and tools, and teach them employability skills. Over the past decade, Malaysian polytechnics have gradually incorporated WBL into their bachelor's degree programs to enhance graduate employability and better align educational outcomes with the evolving demands and expectations from the workforce sectors. Despite these efforts, there remains limited knowledge about the implementation and impact of WBL in Malaysian polytechnics. Due to this disparity, educators, policymakers, and industry stakeholders are unable to fully utilize WBL models that effectively produce industry-ready graduates. This study addresses the gap by providing a comparative review of published literature on WBL implementation and graduate outcomes in Malaysian polytechnics. The review systematically combines academic literature, policy analysis, and empirical research published between 2010 and 2024. It examines important aspects such as WBL model types, curriculum integration, pedagogical approaches, industry engagement, assessment strategies, and graduate employability indicators. In addition, the study compares Malaysian practices against established WBL models from several foreign regions. This international comparison provides a valuable contextual framework for assessing the strengths and limitations of existing WBL approaches in Malaysia. The findings indicate that Malaysian polytechnic programs have made significant progress in integrating WBL into several engineering technology degree programs. The flagship programs include extended workplace attachments of up to 40 weeks through close partnerships with numerous industry collaborators. These placements provide students with valuable opportunities to apply theoretical knowledge in real work environments while fostering both technical competencies and essential soft skills such as communication, teamwork, critical thinking, and adaptability. Continuous mentorship and multi-source assessments from academic and industry supervisors ensure comprehensive evaluations of students' learning and professional growth. As a result of these efforts, graduate employability among WBL graduates in Malaysian polytechnics is remarkably high, with several programs reporting near 100% employment rates after graduation. Moreover, employers have consistently expressed satisfaction with graduates' practical competencies, adaptability, leadership qualities, and workplace readiness. These positive outcomes underscore the effectiveness of WBL in producing graduates who are well-prepared to meet national workforce priorities and the challenges of the Fourth Industrial Revolution. Nevertheless, the review identifies persistent challenges that limit the full potential of WBL in Malaysian polytechnics. These include inconsistent industry engagement, variability in supervision quality, and the absence of standardized, competency-based assessment frameworks. Such issues contribute to discrepancies in student experiences and outcomes, thereby limiting the scalability and sustainability of WBL programs. In contrast, international models show that strong, long-term industry partnerships and standardized assessment practices enhance program quality

and impact. In conclusion, while Malaysian polytechnics have made meaningful progress in integrating WBL, further improvements are needed. Enhanced stakeholder collaboration, improved supervision systems, and unified assessment methods are essential. These findings offer practical insights for advancing WBL across Malaysia's TVET sector, helping to ensure graduates are equipped for the demands of a rapidly evolving workforce.

Keywords: Work-Based Learning (WBL), Malaysian Polytechnics, Engineering Education, Comparative Review, Graduate Outcomes

A REVIEW ON DIODE BASED RECTIFIER FOR RF ENERGY HARVESTING SYSTEM

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RF energy harvesting has been proven a promising technology to supply energy for low-energy devices in wireless sensor networks and Internet of Things (IoT) applications. This method requires collecting RF signals around you and then converting them into power in the form of DC using rectification circuits. With the increasing need for eco-friendly and energy-efficient technologies, RF energy harvesting has been gaining traction for several applications such as consumer electronics and smart home devices. The rectifier, which plays a crucial role in energy conversion efficiency, is the key component in these systems. This review paper highlights the recent progress of the diode-based rectifier design for the purpose of RF energy harvesting application. It reviews the underlying principles, important design considerations, and performance metrics, and describes new strategies to gain efficiency as well as sensitivity of detection. Here, we will focus on diode-based rectifiers, which are the most common and efficient solutions for RF-to-DC conversion. Single-stage, multi-stage and voltage doubler topologies were reviewed as well as Schottky and PIN diodes. Recent approaches on impedance matching techniques, efficiency enhancement methods, as well as innovative circuit architectures to increase the performance of rectifiers in a wide range of input power levels and frequencies, are reviewed. Thus, through a systematic review of recent developments, the objective of this paper is to assist researchers and engineers in future development of RF energy harvesting approaches for use in wireless sensor networks (WSNs), Internet of Things (IoT) based devices, and wearable electronics. It presents an overview of future innovations and applications, including challenges like achieving high power conversion efficiency over broad input power levels and frequencies, as well as new semiconductor materials and intelligent rectifier circuits.

Keywords: RF Energy Harvesting; Diode-Based Rectifiers; Efficiency Optimization

Z KUŞAĞININ ETİK VE MOTİVASYON ALGISI ÜZERİNE BİR VAKA ANALİZİ: KUŞAKLAR ARASI ÇATIŞMALARDA GRİ ALANLAR

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Z kuşağının iş yaşamında giderek daha fazla rol almasıyla birlikte kuşaklar arasındaki iş etiği algısı, önÇelikler ve motivasyonu etkileyen faktörler değişmektedir. Özellikle Z kuşağın iş hayatına aktif katılmasıyla birlikte Z ve Y kuşakları arasındaki farklı bakış açıları işletmeler açısından zorlayıcı olmaya başlamıştır. Zira kuşaklar arasındaki farklı bakış açıları işletme içerisindeki zaman yönetimi, iş disiplini ve dijital iletişim kavramları arasındaki derinliği de arttırmakta ve bambaşka boyutlara taşımaktadır. Bu çalışma kapsamında ise, kuşaklar arasındaki farklı bakış açıların meydana getirdiği gri alanlar incelenmiştir. Bu çalışma, bir işletmenin son altı aya ait toplantı tutanaklarının nitel analizine dayanmaktadır. Toplantı kayıtları sistematik olarak incelenmiş; farklı kuşaklara ait çalışanların belirli olaylar karşısında geliştirdikleri bakış açıları, tutumlar ve iletişim biçimleri analiz edilmiştir. Analiz sürecinde, kuşaklar arası anlam farklılıklarının yanı sıra, bu farklılıkların keskin çizgilerle ayrılmadığı; aksine taraflar arasında belirsizliklerin ve yorum farklılıklarının bulunduğu gri alanların varlığı tespit edilmiştir. Çalışma, bu gri alanları açığa çıkararak kurum içi kuşaklar arası iletişimi ve iş yapış biçimlerini daha derinlemesine anlamayı amaçlamaktadır. Çalışma sonuçları, kurumların Z kuşağı çalışanlarını etkili şekilde çekebilmeleri ve elde tutabilmeleri için esnek, anlamlı ve etik değerlere dayalı iş ortamları oluşturmalarının kritik olduğunu göstermektedir. Ayrıca çalışma, Türkiye bağlamında Z kuşağının iş etiği ve motivasyon algısına dair literatüre özgün bir katkı sunmakta ve gelecekte farklı sektörlerde yapılacak araştırmalara zemin hazırlamaktadır.

Keywords: Z Kuşağı, İş Etiği, İş Motivasyonu, Kuşaklar Arası Farklılıklar.

DALIŞ EKİPMANLARININ GÜVENLİ MUHAFAZASI İÇİN EKLEMELİ İMALAT YÖNTEMİYLE GELİŞTİRİLEN ASKILIK TASARIMI

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Dalış ekipmanları; yüksek maliyetli, hassas ve uzun ömürlü kullanım gerektiren donanımlardır. Bu ekipmanlar; genellikle neopren, silikon, metal alaşımlar ve çeşitli kompozit malzemelerden üretilmektedir. Bu ekipmanların dalış öncesi ve sonrasında güvenli, düzenli ve deformasyona uğramayacak şekilde muhafaza edilmesi hem kullanıcı güvenliği hem de ekipmanın performans sürekliliği açısından kritik öneme sahiptir. Dalış donanımlarının deformasyona uğramadan, işlevsel bütünlüklerini koruyarak saklanabilmeleri için en uygun yöntemlerden biri, ekipmanların askıya alınarak dikey pozisyonda depolanmasıdır. Bununla birlikte, dalış kıyafetlerinin sahip olduğu yapısal ağırlık, ıslak kalma durumuna bağlı kütle artışı ve beraberinde taşınan çevresel donanımlar (regülatör, ağırlık kemeri, başlık, patik, eldiven vb.) standart askılık sistemlerinin bu amaçla kullanılmasını işlevsiz hâle getirmektedir. Bu çalışmada, söz konusu ihtiyacı karşılayacak şekilde özel olarak tasarlanmış bir askılık sistemi sunulmaktadır.

Çalışma kapsamında, dalış kıyafetleri ve ilgili ekipmanların hem fiziksel yüklerini taşıyabilecek hem de uzun süreli depolama sırasında şekil bozulmalarını engelleyebilecek nitelikte özel bir askılık sistemi tasarlanmıştır. Geliştirilen askılık, yapısal dayanımı artırılmış geometrik özelliklere sahip olup, kullanıcı ergonomisi de göz önünde bulundurularak optimize edilmiştir. Üretim sürecinde, karmaşık ve kişiselleştirilebilir formların elde edilmesine olanak tanıyan eklemeli imalat (additive manufacturing) teknolojilerinden yararlanılmıştır. Böylece, geleneksel üretim yöntemleriyle elde edilmesi güç olan dayanıklı ve modüler bir yapı elde edilmiştir. Bu tasarım, dalış ekipmanlarının ömrünü uzatmayı, her elbise tipine uygun ve kullanıcıya uzun vadeli işlevsellik sunmayı hedeflemektedir. Geliştirilen prototip, geleneksel askılıklara kıyasla yüksek taşıma kapasitesi, deformasyon önleyici destek yüzeyleri, sökülebilir olması (seyahat esnasında yer kaplamaması) ve modüler yapısıyla öne çıkmaktadır. Ayrıca, kullanıcı ergonomisini artıran taşıma kulpları ve ekipman bölmeleri ile fonksiyonelliği artırılmıştır. Yapılan denemeler sonucunda askılığın hem ıslak hem kuru ekipman yüklerini güvenli bir şekilde taşıyabildiği ve uzun süreli kullanımda şekil bozulması göstermediği gözlemlenmiştir. Ülkemizde, Sanayi dalgıçlığı yapan yaklaşık 2500, Türkiye Su Altı Sporları Federasyonuna kayıtlı 11000 lisanslı dalgıç bulunmakta ve bu dalıcılar dalış ekipmanlarının yıpranmasından dolayı ortalama 3 yılda bir (dalış elbisesi, denge yeleği (BC), regülatör, maske, eldiven, patik) yenisini satın almaktadır. Satın alınan malzemelerin tamamı ithal ürünler olup, ortalama fiyatları yaklaşık 900 dolardır ve yenilenmesi durumunda yaklaşık 12.150.000 dolarlık ithalat yapılmaktadır. Tasarımı yapılan dalgıç askısı ile tüm bu dalış malzemelerinin uzun yıllar boyunca deforme olmadan daha güvenli saklanmasına olanak verdiği gibi, ülke ekonomisine ciddi bir katkı sağlayacaktır.

Anahtar Kelimeler: Dalış Ekipmanları, Eklemeli İmalat, Askılık Tasarımı

A HANGER DESIGN DEVELOPED USING ADDITIVE MANUFACTURING FOR THE SAFE STORAGE OF DIVING EQUIPMENT

Diving equipment comprises high-cost, sensitive, and long-lasting gear that demands careful handling. These items are typically manufactured from materials such as neoprene, silicone, metal alloys, and various composite structures. Ensuring the safe, organized, and deformation-free storage of such

equipment before and after diving is of critical importance for both user safety and the continued performance of the gear. One of the most effective methods for preserving the structural integrity of diving equipment is vertical storage through suspension. However, due to the structural weight of diving suits, the increased mass when wet, and the additional environmental gear carried (such as regulators, weight belts, hoods, booties, gloves, etc.), standard hanger systems are rendered functionally inadequate for this purpose.

This study presents a specially designed hanger system developed to meet this specific need. The design accommodates the physical load of diving suits and associated equipment while preventing deformation during long-term storage. The hanger features geometrically optimized components with enhanced structural strength and is ergonomically refined for user convenience. Additive manufacturing technologies, which enable the creation of complex and customizable forms, were utilized in the production process. This approach resulted in a durable and modular structure that would be difficult to achieve through conventional manufacturing methods. The design aims to prolong the lifespan of diving equipment while offering long-term functionality adaptable to various suit types. The developed prototype stands out compared to traditional hangers with its high load-bearing capacity, deformation-preventing support surfaces, detachable structure (minimizing space usage during travel), and modular design. Furthermore, functionality is enhanced through ergonomic carrying handles and dedicated compartments for equipment. Experimental tests demonstrated that the hanger securely supports both wet and dry diving gear without showing deformation over prolonged use.

In Türkiye, there are approximately 2,500 commercial divers and 11,000 licensed divers registered with the Turkish Underwater Sports Federation. Due to wear and tear, these divers typically replace their diving gear—wetsuits, buoyancy compensators (BCs), regulators, masks, gloves, and booties—every three years. All of these products are imported, with an average cost of approximately $900, leading to an estimated $12,150,000 in import expenditures during each renewal cycle. The proposed diving equipment hanger not only ensures safer and longer-lasting storage of these materials but also holds significant potential to contribute to the national economy by reducing the frequency of equipment replacement.

Keywords: Diving Equipment, Additive Manufacturing, Hanger Design

ÜNİVERSİTELERDE YAPAY ZEKÂ: AKADEMİSYENLERİN GÖRÜŞLERİ ÜZERİNE BİR İNCELEME

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Yapay zekâ (YZ) teknolojileri, eğitimden sağlığa, sanayiden kamu yönetimine kadar birçok sektörde toplumsal normları dönüştüren köklü değişimlerin başlıca itici güçlerinden biri haline gelmiştir. Bu dönüşümün merkezinde yer alan üniversiteler ise, hem bilgi üretimi hem de dijital çağın gerektirdiği nitelikli insan kaynağının yetiştirilmesi açısından stratejik bir konumda bulunmaktadır. Bu nedenle, yapay zekânın yükseköğretim kurumlarında nasıl algılandığı, kullanıldığı ve akademik kültüre nasıl entegre edildiği üzerine yapılan çalışmalar büyük önem arz etmektedir. Bu bağlamda sunulan çalışma, Adana, Mersin ve Osmaniye illerini kapsayan Çukurova Bölgesi'ndeki üniversitelerde görev yapan akademisyenlerin yapay zekâ teknolojilerine ilişkin görüşlerini niteliksel bir çerçevede analiz etmektedir. Yarı yapılandırılmış görüşmelere dayalı olarak yürütülen bu araştırmada, akademisyenlerin deneyim ve değerlendirmeleri MAXQDA 2024 yazılımı aracılığıyla çözümlenmiştir. Elde edilen veriler doğrultusunda, yapay zekânın üniversitelerde özellikle bireysel düzeyde öğretim ve araştırma süreçlerine entegre edildiği, ChatGPT gibi dijital asistan araçlarının yaygın olarak kullanıldığı görülmektedir. Görüşmeler önceden randevu alınarak telefon ve yüzyüze olarak gerçekleştirilmiş, Çukurova University (12), Çağ University (2), Alpaslan Türkeş Bilim ve Teknoloji University (2), Toros University (2) Mersin University (2) ve Osmaniye Korkut Ata Universitynden (2) 10 erkek 12 kadın toplam 22 akademisyene amaçlı kartopu yöntemi ile ulaşılmıştır. Araştırmanın daha homajen bir katılımcı kitlesi ile yapılmasında yaş gruplarının ve akademik ünvanların çeşitliliğine dikkat edilmiştir. Görüşmelerin süresi 15-20 dakika arasında planlanmış ortalama 18 dakika olarak gerçekleşmiş ve toplamda yaklaşık 396 dakikalık görüşme yapılarak veriler toplanmıştır. Bu görüşmeler aynı dönem içinde yazılı olarak dökümante edilmiş olup, veri analizine ciddi bir zaman ve emek yatırımı yapıldığını göstermektedir. Görüşme süresinin makul ve dengeli bir aralıkta tutulması, katılımcıların dikkat ve katılım motivasyonunu korumasına yardımcı olmuş; bu da elde edilen yanıtların içerik açısından zengin, amaca yönelik ve yapılandırılmış olmasına katkı sağlamıştır. Katılımcıların ifadeleri excel formatında düzenlenerek içerik analizi yapılmıştır. Yapılan analiz bulgularında; katılımcıların Yapay zekâ araçları çoğunlukla metin düzenleme, kaynak tarama, proje geliştirme, sınav sorusu hazırlama ve sunum tasarımı gibi işlevsel alanlarda zaman kazandıran pratik araçlar olarak değerlendirdiği görülmüştür. Ancak bu pragmatik kullanımın yanı sıra, yapay zekânın pedagojik süreçlerde nitelikten yoksun bir şekilde yüzeysel, özgün olmayan sonuçlara neden olacağı ve etik sorunlara yaratabileceğine dair eleştirel bir bilinç de gelişmektedir. Teknolojinin rehbersiz ve bilinçsiz şekilde kullanımı, öğrencilerin bilişsel derinliğini ve aktif öğrenme süreçlerini zayıflatma riski taşımaktadır. Araştırma sürecinde öne çıkan temalar, sadece bireysel deneyimlerle sınırlı kalmayıp, kurumsal düzeyde daha kapsamlı ihtiyaçlara işaret etmektedir. Bunlar arasında; etik yönlendirmelerin eksikliği, yasal ve düzenleyici çerçeveye dair beklentiler, yapay zekâ okuryazarlığına yönelik eğitim ve farkındalık ihtiyaçları ile öğrenci-akademisyen etkileşimini dönüştüren dinamikler ön plana çıkmaktadır. Ayrıca, kurumsal altyapı yetersizlikleri ve bu alandaki kültürel direnç de yapay zekânın sistemli bir şekilde entegrasyonunu zorlaştıran başlıca etmenler olarak belirlenmiştir. Tüm bu bulgular, yapay zekânın yükseköğretime entegrasyonunun yalnızca teknik bir iyileştirme değil; aynı zamanda etik, kültürel ve yapısal bir dönüşüm süreci olarak ele alınması gerektiğini göstermektedir. Üniversitelerin bu dönüşüme uyum sağlayabilmesi için sadece teknolojik yatırımlar yapmakla kalmayıp; aynı zamanda disiplinlerarası etik

rehberlikler oluşturması, yapay zekâ okuryazarlığını artıran programlar sunması, müfredatlarında reformlara gitmesi, gerekirse yapay zekâ farkındalık eğitimlerini zorunlu seçmeli dersler olarak tüm bölümlere yaygınlaştırması ve uzun vadeli kültürel adaptasyon stratejileri geliştirmesi gerekmektedir. Bu bütüncül yaklaşım, yükseköğretimde yapay zekânın dönüştürücü etkisini sağlıklı, sürdürülebilir ve sorumlu bir zemine oturtarak, dijital araçların ötesinde etik ve pedagojik değerlerin korunduğu, üniversitelerin üst politika belgeleri ile uyumlu, üniversitelerin stratejik planlarında yer bulan, üniversite kalite belgelerinde vurgulanan bir yapıya bürünmesi akademik gelecek inşa edilmesine katkı sağlayacaktır.

Keywords: Yapay Zeka, ChatGPT, Akademik Görüşler, Yükseköğretim, Maxqda.

SÜRDÜRÜLEBİLİRTOPLUM İÇIN DENETİMİN İŞLEVİ

İsmail Ercan Ünal (Bilgi Bağımsız Denetim)

Ekonomik yaşamın amacı ve aracı olan insan doğumdan sonra bakıma en uzun süre muhtaç olan, düşünme, konuşma ve üretim yeteneği olan en gelişmiş canlı olarak tanımlanmaktadır, aynı zamanda doğanın bir parçasıdır.

Düşünme yeteneği ve aklın yaratma gücü ile üretilen teknoloji sayesinde bugünkü uygarlık seviyesine erişmiş bulunmaktadır. Gelinen son noktada makinalara kısmen üretim yeteneği kazandıran yapay zekâ teknolojisi hemen hemen her sektörde karşımıza çıkarmaktadır. Bilgiye ulaşma sürecinin kısaltılması ve sınırlı da olsa veriler arasında sebep-sonuç ilişkisi kurarak üretim yeteneği olan makinalar insanlığın gelişiminde giderek önem kazanacaktır.

Bununla birlikte Birleşmiş Milletler sürdürülebilir kalkınma hedefleri ile sosyo ekonomik ve sosyal kültürel gelişimini bu hedeflere uygun olarak gerçekleştiren devletler veya toplumlar yaratılması hedeflenmektedir. Küresel ısınma, iklim değişikliği ve bio çeşitliliğinin azalması yanında kuraklık bütün dünyayı etkilemesi muhtemel sorunları beraberinde getirmektedir. Bir yanda yapay zekâ ve gelişen bilim ve teknoloji, öte yanda giderek bozulan ekolojik denge ve girerek sertleşen devletler arası ilişkiler, açlık ve yoksulluk ve eşitsizlik adaletsiz kaynak dağılımı sorunları sürdürülebilir kalkınma ve toplumsal ilişkiler düzenini gerekli kılmaktadır.

Öte yandan insan ve canlı ihtiyaçları mal ve hizmet üretimi yapan işletmelerin üretim süreçleri sonucunda oluşan çıktıları ile giderilmektedir. Üretim sürecince üretilmek istenen mal ve hizmet planlanmakta ve süreç sonunda ne elde edilmek isteniyorsa bu hedefe ulaşılmaya çalışılmaktadır. Kısaca ürün veya çıktının kurallar ve ölçütler konularak verimli ve uygun olup olmadığının tespit edilmesi gerekmektedir bu ise denetim sürecini ifade etmektedir. Denetim yönetimin koyduğu hedeflere ne ne kadar ulaşıldığını kontrol ederken aynı zamanda yönetimin eksik kalan yönleri tamamlaması için fırsat sağlamaktadır .Denetimin bulgu ve önerileri ile revize edilen yönetim süreci daha verimli mal ve hizmet üretimini sağlama anlamına gelmektedir. Denetim fonksiyonu mal ve hizmet üretimi devam ederken proaktif olarak yapıldığı gibi, mal ve hizmet üretiminin tamamlanmasından sonra ortaya çıkan sonuçların hem teknik hem de mali yönlerinin gözden geçirilmesi şeklinde yerine getirmektedir.

Kurumların bünyesinde yer alan iç denetim mekanizmaları süreç devam ederken bu görevi yerine getirirler süreç sonunda ise gerek iç gerekse dış denetimle denetim görevi tamamlanmaktadır. Bağımsız denetim ve vergi veya çalışma veya sağlık bakanlığı denetimleri gibi denetimler dış denetime örnek verilebilir. Denetim fonksiyonunun yönetim amaçlarını ölçmesi tavsiyelerde bulunması ve yönetimin kendini revize etmesine fırsat vermesi mal ve hizmet üretiminde verimliliği arttırıcı etki yapmaktadır. Bu ise insan ihtiyaçlarının daha sağlıklı bir şekilde karşılanması ve daha çok ihtiyacın giderilmesi böylece sosyal refahın arttırılması ve kaynakların en üst seviyede kullanılması hedefine ulaşılması demektir.

Daha sorumlu üretim süreçleri ile doğayı kirletmeyen, karbon salınımını kabul edilen boyutlarda tutan, su kaynaklarını verimli kullanan, ortak akılla yönetilen aynı zamanda çalışanların maddi ve manevi gelişimine önem veren sağlıklı kurumlar ile kalkınma desteklenecek ve böylece sürdürülebilir kalkınma hedefine yaklaşılacaktır.

Sürdürülebilirlik kavramı içinde ele alınan ESG veya “Çevre Sosyal ve Yönetişim “ raporlaması bu hususları göz önüne alarak yönetilen kurumların birleşmiş milletler kalkınma hedeflerine göre hareket etmesi anlamına gelmektedir. Avrupa Birliği yeşil kıta hedefine ulaşmada ESG raporlamasının önemi vurgulanırken bu raporların bağımsız denetimden geçmesi gereği kabul edilmiştir.

Avrupa birliği ile eşzamanlı olarak Türkiye'de de Türk Ticaret Kanunu ve 660 sayılı KHK değişikliği ile bağımsız denetim mevzuatına sürdürülebilirlik standartlarının açıklanması ve denetlenmesi düzenlemeleri yapılmıştır. Düzenlemelerde sürdürülebilirlik denetiminin amacı kapsamı, finansal tablo ve sürdürülebilirlik açıklamaları arasındaki mutabakat zorunluluğu, ESG raporu, TSRS standartları ve etik kurallar açıklanmış bulunmaktadır .

1970 yılı başlarından bu yana neredeyse 50 yıl boyunca uluslararası alanda tartışılan sürdürülebilir kalkınma için hedefler, çalışmalar ve raporlamalar önemli mesafeler kaydetmiştir ancak finansal tablo kullanıcıları ve topluma açıklanan bilgilerin doğrulanması bağımsız denetçiler tarafından yapılmadığı sürece sistemin sağlıklı çalışamayacağı görülmüş ve bugün gelinen noktada sürdürülebilirlik raporlaması ile ilgili standartlar yayınlanırken aynı anda bu standartlar kullanılarak yapılan açıklamaların denetlenmesi önem kazanmıştır.

Avrupa Birliği direktifleri çerçevesinde kullanılması gereken standartlar TSRS 1 ve TSRS 2 adıyla KGK tarafından Türkçe'ye çevrilerek yayınlanmış bulunmaktadır. Bu açıklamaların denetimi ise güvence denetim Standartları kısa ismiyle GDS 3000 ve GDS 3410 kullanılarak "Etik Kurallar ve Kalite Yönetim Sistemi" çerçevesinde yapılmaya başlanmıştır. 2024 yılı sürdürülebilirlik raporlaması yaklaşık 500 şirket için zorunlu hale getirilmiş ve bu şirketlerin 2025 yılı eylül ayına kadar denetim yaptırmaları zorunlu kılınmıştır. Avrupa Birliği ile aynı zamanda uygulama Türkiye'de de başlamış bulunmaktadır. Ayrıca GDS 5000 numaralı denetim standardı taslak çalışması hazırlanmış IFAC tarafından yayınlandıktan sonra Türkçe çevirisi ile mevzuatımıza kazandırılacaktır.

Sonuç olarak denetim yapılmadan ve bilgiler doğrulanmadan sürdürülebilirlik raporlaması yapmanın eksik kalacağı olgusunun, konuyu düzenleyen kuruluşlar tarafından kabul edilmesi denetimin işlevi bakımından çok önemlidir. "Diğer bir deyişle denetlenmeyen hiçbir şeyi yönetmek mümkün değildir" gerçeği sürdürülebilir kalkınma amaçlı yönetim süreçlerinde de hayata geçirilecektir.

Böylece sürdürülebilir yönetim süreçlerinin etkinliğini ölçme ve değerlendirmesi bağımsız denetim uygulaması ile yerine getirilecek olup bu suretle denetimin yönetimin bir fonksiyonu olduğu gerçeği vurgulanmış olmaktadır. Dileğimiz mal ve hizmet üreten her kurumun sağlıklı işleyen denetim sürecine sahip olması ve denetim sonuçlarından yararlanarak üretim faktörlerini en verimli şekilde kullanan bir şekilde sürdürülebilir kalkınmada yerini almasıdır.

Keywords: Denetim, Sürdürülebilir Toplum , Türkiye

KNX TABANLI HVAC SISTEMLERININ ENTEGRASYONU YOLUYLA ENERJI VERIMLILIĞI VE KONTROL STRATEJILERININ KARŞILAŞTIRMALI BIR İNCELEMESI

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Küresel enerji talebinin artması ve çevresel sürdürülebilirlik ihtiyacının aciliyeti bağlamında, binalarda enerjinin verimli kullanımı temel bir önÇelik hâline gelmiştir. Uluslararası Enerji Ajansı'na (IEA) göre, binalar küresel toplam enerji tüketiminin yaklaşık %40'ını oluşturmaktadır ve bunun neredeyse yarısı Isıtma, Havalandırma ve İklimlendirme (HVAC) sistemlerinden kaynaklanmaktadır. Bu nedenle, akıllı bina otomasyon sistemlerinin entegrasyonu, kullanıcı konforunu korurken enerji kullanımını azaltmanın kritik bir bileşenidir.

Bu çalışma, enerji verimliliği açısından HVAC sistemlerini optimize etmede KNX bina otomasyon protokolünün etkinliğini araştırmaktadır. Uluslararası düzeyde standardize edilmiş, dağıtık yapıya sahip ve birlikte çalışabilir bir iletişim protokolü olan KNX, hem konut hem de ticari alanlarda giderek artan şekilde kullanılmaktadır. Aydınlatma ve güvenlik otomasyonu alanlarındaki uygulamaları iyi belgelenmiş olsa da bu araştırma özellikle KNX'in çeşitli HVAC sistemleriyle entegrasyonu ve bunun enerji performansı üzerindeki etkisine odaklanmaktadır.

Karşılaştırmalı analiz için dört farklı HVAC kontrol stratejisi seçilmiştir: gazla çalışan kombi kazan sistemleri, VRF (Değişken Debili Soğutucu Akışkan) sistemleri, fan-coil üniteleri ve yerden ısıtma sistemleri. Her bir sistem KNX altyapısına entegre edilerek farklı işletim koşulları altında değerlendirilmektedir. Ayrıca, konfor, ekonomi, gece modu, donma koruması ve tatil gibi programlanabilir modlara sahip gelişmiş KNX termostatlarının enerji tüketim eğilimlerine olan etkisi de bu çalışma içeriğinde irdelenmektedir.

Deneysel veriler, ETS (Engineering Tool Software) kullanılarak yapılandırılmış bir KNX test platformu aracılığıyla toplanmaktadır. Gerçek zamanlı sıcaklık ve alan kullanımı verileri kaydedilmekte ve elektronik tablo araçları kullanılarak analiz edilmektedir. Çalışmada senaryo tabanlı otomasyon yaklaşımı benimsenmektedir; HVAC cihazları, hedef sıcaklık ile ortam sıcaklığı arasındaki fark temel alınarak eşzamanlı değil, sıralı şekilde etkinleştirilmektedir. Bu modülasyon stratejisi, gereksiz enerji kullanımını azaltmada etkili olmaktadır.

Sonuçlar, VRF ve fan-coil sistemlerinin KNX protokolleriyle entegrasyonunun, geleneksel kontrol yöntemlerine kıyasla ortalama %15–25 oranında enerji tasarrufu sağladığını göstermektedir. KNX termostatları ve bölge bazlı zamanlama ile kontrol edilen yerden ısıtma sistemleri, manuel sistemlere göre %35'e varan verimlilik artışıyla en yüksek başarıyı göstermektedir. Kombi kazan sistemleri ekonomik avantajlar ve kolay kurulum açısından elverişli olsa da, Modbus/BACnet ağ geçitleri gibi iki yönlü iletişimi mümkün kılan eklentiler olmadan akıllı otomasyon potansiyelleri sınırlı kalmaktadır.

KNX'in en önemli avantajlarından biri, modüler ve dağıtık mimarisi ile farklı iletişim ortamlarını (bükümlü çift kablo, RF, güç hattı, IP) desteklemesidir. Grup adresleme yapısı, senaryo mantık modülleri ve zaman tabanlı programlama özellikleri sayesinde, çevresel ve kullanıcı kaynaklı değişken koşullara yüksek uyum sağlanabilmektedir. Görece yüksek ilk yatırım maliyetine rağmen, yatırımın geri dönüş süresi (ROI) analizlerine göre, sistem ölçeği ve bina özelliklerine bağlı olarak geri dönüş süreleri 3 ila 5 yıl arasında değişmektedir.

Deneysel bulgulara ek olarak, çalışma KNX sistemlerinin uluslararası uygulamalarına da referans vermektedir. Bu bağlamda, Aalto University, Viyana Teknoloji University ve Bremen University gibi örnekler, KNX ile entegre HVAC sistemlerinin ölçeklenebilirliği ve enerji tasarrufu potansiyelini doğrulamaktadır. Bu akademik vaka çalışmaları, özellikle sensör tabanlı otomasyonun uygulanabilirliğini ve öngörücü enerji yönetimi ile yeşil bina sertifikalarıyla uyum sağlama potansiyelini vurgulamaktadır.

Bu araştırma, KNX ile gerçekleştirilen HVAC otomasyonuna yönelik yapılandırılmış bir değerlendirme sunarak, hem akademik literatüre hem de pratik uygulama çerçevelerine katkı sağlamaktadır. Açık protokollerin bina tasarım süreçlerine entegre edilmesinin, enerji verimliliğini artırmak, işletme maliyetlerini azaltmak ve çevresel hedefleri desteklemek açısından önemini vurgulamaktadır. Ayrıca, konfor ile verimlilik dengesini kuran uyarlanabilir iklim kontrol senaryolarının tasarımı konusunda önemli veriler sunmaktadır. Bu, akıllı şehir geliştirme ve sürdürülebilir mimari açısından giderek önem kazanan bir kriterdir.

Keywords:
KNX Otomasyonu, HVAC Entegrasyonu, Enerji Verimliliği, Akıllı Binalar, Bina Otomasyon Sistemleri,

IDENTIFICATIONS OF KEY CHALLENGES AND CONSTRAINTS FACED BY IMPORTERS, PROCESSORS AND WHOLESALERS IN GHEE AND OIL INDUSTRY

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The ghee and cooking oil industry plays significant role in the economy of Pakistan because of its role in fulfilling the dietary needs of the population and generating employment opportunities. In Pakistan, the import of palm oil is increasing which reflects its increasing demand as pakistan does not produce enogh oil locally to meet its demand of oil.Pakistan is world's third-largest importer of edible oil and three primary sources of edible oil, in Pakistan are domestically produced oilseeds, imports of refined edible oil and local oil production by using the imported oilseeds. Pakistan struggles with a major shortage of edible oil due to which the country has to rely heavily on the imports and in the result, a large amount of foreign currency is spent on the purchasing of edible oil from other countries which reducing the country's foreign exchange reserves. Because of this heavy reliance on import, the sector of oil and ghee faces many problems at different levels of stakeholders included importers, processors and wholesalers. In Faisalabad, which is a hub for many industrial activities including food processing, stakeholders of the ghee and oil industry are facing many constraints. This study aims to identifying the key problems that being faced by importers, processors and wholesalers in the ghee and oil industry. After identifying these constraints faced by importers, processors and wholesalers, this research will highlight the areas where improvements are needed for the sustainable growth of the oil and ghee industry. Data will be collected through questionnaire and Face-to-face interviews will be conducted in the study area. Appropriate techniques like descriptive statistics will be employed for data analysis. Data will be collected from Up to 5 importers and processors and 60 to 70 wholesalers. The constraints analysis will be conducted by using the qualitative and quantitative approaches. The research will collect primary data through questionnaires from importers, processors and wholesalers to ensure the accurate and relevant results to identify constraints that are being faced by stakeholders in the oil and ghee sector in Faisalbad. The findings of this study will help the policy makers, industry experts and the business owners in develop better strategies to overcome the constraints which will be identified and suggestions will be provided to overcome these constraints and this will improve the performance of the ghee and oil industry.

Keywords: Palm Oil, Importers, Processors, Wholesalers, Constraints Analysis.

APPROVAL-SEEKING IN SOCIAL MEDIA: MODERATING ROLE OF SOCIAL COMPARISON, THE IMPACT OF CYBER VALUES AND AI INTERACTIONS

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AI-powered recommendation systems diversify the user experience and customize the flow of content. These complex systems can increase approval-seeking behaviours among young users in social media platforms. The need for approval reflects the self-presentational motivations of the users. It is common for users to make social comparisons to determine their self-worth through metrics such as likes, the number of followers, prompts, alerts, and views of the content. Exposure to AI-curated personalized content may intensify individuals' tendency to engage in social comparisons. Because social media companies seem concerned to drive social media engagement by providing algorithm-driven content to evoke specific responses in users, and by estimating their interests, preferences, and previous interactions. Social media interactions, which can be considered as a continuation of real-world relational ties, facilitate the expansion of social networks regardless of geographical boundaries and provide a sense of recognition and reciprocity. However, these social interactions often result in violations of ethical norms. Cyber human values play an important role in defining ethical behaviours in virtual environments. The aim of this cross-sectional study was to examine whether algorithmic personalization and external validation predict digital behaviours and how human psychological processes and ethical digital values influence user behaviours in social media ecosystems. The focus of this research on social media use was theoretically grounded in three social psychological frameworks: Self-Presentation Theory, Self-Determination Theory, and Social Comparison Theory. Individuals with higher approval motivation were expected to engage more frequently and intensively with social media platforms. Greater interaction with AI-driven personalized content was also anticipated to increase approval-seeking behaviour, thereby reinforcing social media use. Additionally, social comparison tendencies and cyber human values were hypothesized to moderate the positive relationship between approval-seeking and social media use. This study utilized a quantitative, correlational, and cross-sectional survey design. A convenience sample of 270 university students, both at undergraduate and graduate degrees, were recruited. The online survey comprised 84 items, most of which were Likert-typed rating. All variables were measured through self-report questionnaires. To collect the data, The Martin-Larsen Revised Approval Motivation Scale, The Social Media Use Scale, The Iowa-Netherlands Comparison Orientation Scale, The Cyber Human Values Scale, The Artificial Intelligence-Personalized Recommendation Interaction Questionnaire, and Personal Information Form were used. For data analyses, descriptive statistics, correlation analysis, and mediation/moderation analyses were conducted. The results provided a positive significant relationship between AI interaction and approval-seeking ($r = 0.333$, $p < .01$), between AI interaction and social comparison ($r = 0.493$, $p < .01$). Approval-seeking had positive and significant relationships with social comparison ($r = 0.389$, $p < .01$), and with social media use ($r = 0.293$, $p < .01$), but a negative significant relationship with cyber human values ($r = -0.161$, $p < .01$). There was also a significant relationship between social comparison and social media use ($r = 0.293$, $p < .01$). The effect of AI interaction on social media use was partially mediated by approval-seeking. The indirect effect was found to be statistically significant, with a coefficient of $B = 0.060$, and a 95% CI of [0.020, 0.110]. Approval-seeking significantly predicted social media use at both moderate ($B = .294$, $p = .001$) and high levels of social comparison ($B = .447$, $p < .001$). Findings indicated that approval-seeking behaviour had a stronger impact on social media use when participants exhibit higher social comparison tendency. However, findings implied that participants' levels of cyber human values did not significantly moderate the relationship between approval-seeking and social media

use. The findings of this research are consistent with prior research. It is concluded that the personalization capability of algorithms directly reinforces individuals' social media use. AI interaction enhances approval-seeking behaviour and indirectly boosts social media use. Individuals who cannot receive approval in the real world, whether positive or negative, are inclined to meet the most basic needs on social media platforms. Other users on platforms, as social stimuli, have become a significant source of feedback in regulating individuals' self-knowledge in the context of Social Comparison Theory. Specifically, as individuals' tendency towards social comparison increases, the association between approval-seeking and social media use intensifies. Identity is not an innate individual characteristic, but rather a socially constructed product shaped through interactions with others in social environments. Within the framework of Self-Presentation Theory, social media platforms serve as channels for users to present, disclose, and express themselves. These platforms may function as social contexts that provide individuals meaningful opportunities for identity construction. Prior research highlights that social comparison intensifies individuals' motivation to seek approval, thereby increasing social media use. For individuals with a high tendency towards social comparison, approval-seeking behaviour may more strongly predict social media use. This illustrates how the structural features of social media platforms interact with individuals' psychological dispositions to shape their behaviours. Due to their interactive design, these platforms not only facilitate self-presentation, but also enable users to experience the foundational components of Self-Determination Theory, namely, autonomy, competence, and relatedness, through digital expression and interpersonal feedback. Cyber human values, which can be seen as the digital equivalent of universal human values, may vary across cultural contexts. This cultural diversity may provide an explanation to the absence of a significant moderating effect of cyber human values on the relationship between approval-seeking and social media use in the current study.

Keywords: Artificial Intelligence (AI), Cyber Values, Approval-Seeking, Social Comparison, Social Media Use.

INTEGRATING LEGAL AND TECHNOLOGICAL MECHANISMS FOR TRADE SECRET PROTECTION IN SUSTAINABLE INNOVATION AND COMMERCIALISATION

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Intellectual property (IP) is an intangible asset matters to the business and entrepreneur involves in innovation and commercialisation nowadays. World Intellectual Property Organization (WIPO) defines, IP as creations of the mind, such as inventions; literary and artistic works, designs; and symbols, names and images used in commerce (WIPO, n.d). IP creates legal rights given to persons over the creations of their minds (WTO, n.d). IP can be categorized into several types based on its protection legal instruments which are copyright (the rights that creators have over their literary and artistic works), patent (an exclusive right granted for an invention), trademark (a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises), industrial design (constitutes the ornamental or aesthetic aspect of an article), geographical indication (signs used on goods that have a specific geographical origin and possess qualities, a reputation or characteristics that are essentially attributable to that place of origin) and trade secret (confidential information which may be sold or licensed). The methods of protection are differed from one IP to the another in term of whether to obtain some official mark of recognition that the invention is the property of the inventor and may not be used for commercial advantage by others. This type of IP namely patent, industrial design, trademark and geographical indication need to be registered to obtain legal recognition. Registered rights must be applied for and the creation has to fulfil specific criteria to benefit from the protection of such rights. As the owner of invention of innovation, IP rights on that invention can be lost if it been disclosed to the public before it has been formally file. Thus, that innovation must be protected by registering or filing with the authority bodies such as Malaysia to obtain the certificate of IP ownership. However, for the unregistered IP such as copyright and trade secret, protection can be automatically obtained in the event of IP creation (for copyright) and as long as it remains secret (for trade secret). Copyright can be voluntarily registered to affirm and ease the proof of the IP ownership. Trade secret refers to any confidential business information which provides an enterprise a competitive edge. This includes manufacturing processes, formulas, practices, designs, instruments, patterns, or compilations of information not generally known or reasonably ascertainable. For information to qualify as a trade secret, it must be (i) secret – not generally known to the public, (ii) Have commercial value because it is secret, and (iii) Subject to reasonable steps by its owner to keep it secret. (WIPO, n.d). The issue in this research is to what extent this unregistered trade secret been given sufficient protection in term of legal and technology compared to the other registered IP. Many businesses rely on trade secrets to safeguard valuable information such as formulas, manufacturing processes, or business strategies that are not disclosed publicly. However, the absence of a specific legislative framework in Malaysia raises concerns about the sufficiency of protection offered under current laws, especially in cases of misappropriation or breach of confidentiality.

Moreover, today's world is becoming increasingly advanced and beyond imagination, with many tasks now being carried out virtually or remotely, aided by technology to facilitate long-distance R&D collaboration, the use of AI, and cloud storage. Consequently, whether we like it or not, these sophisticated daily activities have also impacted the way trade secrets are commercialised. As a result, it has become more difficult to control the confidentiality of trade secrets, leading to risks such as the leakage of important business information.

This protection of trade secrets is also important towards society and commercialisation sustainability. By ensuring that proprietary information is kept secure, businesses are encouraged to invest in research and development without fear of losing their competitive edge. This, in turn, promotes continuous innovation, job creation, and economic growth, all of which contribute to a more resilient and forward-looking society. Furthermore, safeguarding trade secrets helps build trust between partners, investors, and consumers, supporting ethical business practices and long-term collaboration. Ultimately, strong trade secret protection fosters a sustainable ecosystem where innovation can flourish responsibly and securely.

This article aims to identify the factors lead to the lack of protection for trade secrets and its risk in terms of product and business trade secret protection and development. In addition, it also recommends and suggests the best legal protection of trade secret as to explore the assistance of technology as the most relevant method in this digital and information technology era.

This research is conducted through legal research and qualitative methods where it involves theory and thematic analysis by studying laws on trade secret applicable in Malaysia and in several countries around the World such as United States of America (US), United Kingdom (UK) and European Nation (EU). This research also will study the number of business and companies in Johor and Kuala Lumpur, Malaysia which relies on trade secret as their main IP business protection.

In conclusion, as the protection of trade secret is vital, this research is to reveal the best practices among the business entrepreneur and the trade secret owner on how to protect their trade secret in the market. The findings are expected to benefit the entrepreneur of trade secret, policy makers and who are involve in trade secret innovation and invention to come out with the best methods of protection for trade secret to ensure the sustainability of innovation and commercialisation in a society. By strengthening the way of trade secret protection will contribute more towards the sustainability of nation in term of security, economy and healthy environment in business.

Keywords: Trade Secret Protection, Technology, Innovation and Commercialisation Sustainability

OKUL ÖNCESİ DÖNEMDE YAPAY ZEKÂ OKURYAZARLIĞINA İLİŞKİN ÖĞRETMEN GÖRÜŞLERİNİN İNCELENMESİ

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Yapay zekâ teknolojileri, diğer pek çok sistemde olduğu gibi eğitim alanında da hızla yaygınlaşmakta ve 21. yüzyılın öğrenme ortamlarını köklü biçimde dönüştürme potansiyeli taşımaktadır. Okul öncesinden yükseköğretime kadar uzanan tüm eğitim kademelerinde, öğrenme süreçlerini yeniden tanımlayan güçlü araçlar olarak dikkat çekmektedir. YZ, eğitimde bireyselleştirilmiş geri bildirim sunma, öğrenme süreçlerine ilişkin veri analitiği üretme ve içerikleri öğrencilerin bireysel ihtiyaçlarına göre uyarlama gibi işlevleriyle öğrenme ortamlarını hem daha esnek hem de daha kapsayıcı hale getirme potansiyeline sahiptir. Her ne kadar yapay zekâ entegrasyonu ortaöğretim ve yükseköğretim düzeylerinde hızlı bir biçimde ilerleme kaydetmiş olsa da, erken çocukluk eğitimi bağlamında bu teknolojik dönüşüm, gelişimsel uygunluk, oyun temelli öğrenme ve çocuğun merkezde olduğu pedagojik yaklaşımlarla yeterince bütünleşememiştir. Bu durum, yapay zekâ uygulamalarının okul öncesi eğitimde etkili ve anlamlı bir şekilde kullanılabilmesi için pedagojik temelli çalışmalara ihtiyaç duyulduğunu göstermektedir. Bireyin bilişsel, duygusal ve sosyal becerilerinin temellerinin atıldığı bu gelişimsel dönemde, dijital dünyada çocuklara bu becerilerin kazandırılmasında YZ'nin önemli bir rol oynayabileceği düşünülmektedir. Bu bağlamda, YZ teknolojilerini tanıma, bu sistemlerle etkileşime girme ve eleştirel bir bakış açısı geliştirme becerilerini kapsayan "YZ okuryazarlığı" kavramı, erken yaşlardan itibaren kazandırılması gereken temel bir dijital yeterlilik olarak ön plana çıkmaktadır. Okul öncesi dönem, bireyin gelişiminde kritik bir evre olarak kabul edilmekte olup, bu dönemde çocukların yapay zekâ teknolojileriyle tanışmaları, onları yalnızca teknoloji kullanan bireyler olmaktan çıkararak, teknolojiyi bilinçli, eleştirel ve etik bir şekilde değerlendirebilen bireyler haline getirecektir. Bu çalışmanın amacı, öğretmenlerin okul öncesi dönem çocuklarının yapay zekâ okuryazarlığına ilişkin görüşlerini derinlemesine incelemektir. Araştırmada nitel araştırma yöntemlerinden fenomenoloji deseni benimsenmiştir. Çalışma grubu (N=6), amaçlı örnekleme yöntemlerinden biri olan ölçüt örnekleme yöntemiyle belirlenmiştir. Katılımcıların seçiminde belirli kriterler esas alınmıştır: (1) en az beş yıllık öğretmenlik deneyimine sahip olmak, (2) lisansüstü eğitim mezunu olmak, (3) en az iki farklı projede aktif olarak görev almış olmak ve (4) sınıf ortamında teknoloji entegrasyonunu uygulamış olmak. Araştırma, Diyarbakır ili Bağlar ilçesinde yer alan bağımsız anaokullarında görev yapan öğretmenlerle gerçekleştirilmiştir.

Veri toplama araçları, kişisel bilgi formu ve yarı yapılandırılmış görüşme formudur. Yarı yapılandırılmış görüşme formu, literatüre dayalı olarak hazırlanmış ve Eğitim Bilimleri alanında uzman üç akademisyenin görüşleri alınarak geliştirilmiştir. Katılımcılarla ortalama 70 dakika süren yüz yüze yarı yapılandırılmış görüşmeler gerçekleştirilmiş, tüm süreç araştırma etiği ilkelerine uygun biçimde yürütülmüştür. Verilerin analizinde içerik analizi yöntemi kullanılmış ve kodlama süreci MAXQDA yazılımı aracılığıyla yürütülmüştür. Analiz sonucunda üç ana tema ve toplamda on üç alt kod belirlenmiştir. Belirlenen ana temalar şunlardır: (1) ‘Erken Çocuklukta Yapay Zekâ Farkındalığı’, (2) ‘Yapay Zekâ ve Madalyonun İki Yüzü’, (3) ‘Altyapı ve Öğretmen Yeterliliklerine İlişkin Belirlenen Eksiklikler’.

Araştırma sonuçları, öğretmenlerin erken yaşta yapay zekâ ile tanışmanın ve yapay zekâ okuryazarlığının kazandırılmasının, çocukların dijital yeterliliklerinin geliştirilmesinde önemli ve dönüştürücü bir rol oynadığına ilişkin güçlü bir farkındalığa sahip olduklarını ortaya koymuştur. Bununla birlikte öğretmenler, sürecin tıpkı bir madalyonun iki yüzü gibi hem önemli fırsatlar hem de

çeşitli riskler barındırdığına dikkat çekmişlerdir. Yapay zekâ entegrasyonunun pedagojik anlamda temellendirilmesine ilişkin belirsizliklerin yanı sıra, gelişimsel açıdan riskler taşıyabileceğine dair endişelerini de dile getirmişlerdir. Ayrıca, öğretmenlerin bu alandaki yeterliklerinin sınırlı olması ve kurumsal altyapı unsurlarının yetersizliği, yapay zekâ entegrasyon sürecini önemli ölçüde zorlaştıran başlıca etmenler olarak ifade edilmiştir.

Keywords: Yapay Zeka, Okul Öncesi Dönem, Öğretmen Görüşleri, Dijital Okuryazarlık, Teknoloji Entegrasyonu

YAPAY ZEKÂ VE MUHASEBE ARASINDAKİ İLİŞKİ

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Yapay zekâ (YZ), muhasebe alanında otomasyon, gelişmiş analiz ve stratejik karar desteği sunarak önemli bir dönüşüm yaratmaktadır. Tekrarlayan görevleri otomatikleştirerek verimliliği ve doğruluğu artırırken, gerçek zamanlı veri analizi ve öngörücü yetenekleriyle risk değerlendirmesi ve proaktif yönetimi güçlendirmektedir. YZ, büyük veri setlerini işleyerek işletmelerin daha bilinçli kararlar almasına olanak tanımaktadır. Bu değişim, muhasebe profesyonellerinin rollerini ve gerekli becerilerini de etkilemektedir. Rutin görevler azalırken, veri analitiği ve YZ sistemleriyle iş birliği yapabilme becerileri önem kazanmaktadır. Sürekli öğrenme ve adaptasyon zorunlu hale gelirken, değişime direnç ve yüksek uygulama maliyetleri gibi zorlukların aşılması gerekmektedir. Bu çalışmada, Yapay Zekâ (YZ) ile muhasebe arasındaki çok yönlü ilişkiyi inceleyen güncel literatürü sentezlemektedir. İnceleme, YZ'nin muhasebe mesleği üzerindeki genel yapısal etkisi, çeşitli kullanım alanları, çeşitli muhasebe görevleri üzerindeki etkileri gibi birkaç temel boyutu kapsamaktadır. Muhasebe süreçlerinde otomasyon, verimlilik vb. hususlar için YZ destekli araçların entegrasyonuna yönelik önemli bir eğilimi ortaya koymaktadır. YZ, muhasebenin çeşitli alanlarında sürekli eğitim, daha etkili kontrol değerlendirmeleri vb. için fırsatlar sunmaktadır. Benzer şekilde, literatüre bakıldığında YZ'nin muhasebenin çeşitli alanlarında test, risk değerlendirmesi ve hem nicel hem de nitel finansal bilgilerin analizi için kullanılabileceği söylenebilir. Literatür, YZ'nin dönüştürücü potansiyelini vurgularken, aynı zamanda veri analitiği gibi muhasebe meslek mensupları arasında yeni beceri setlerine duyulan ihtiyaç geliştirilmesiyle ilgili zorlukların ele alınmasının önemini de vurgulamaktadır. İncelenen literatür, yapay zekânın muhasebe alanını radikal bir biçimde yeniden şekillendireceğini ve muhasebe meslek mensuplarının bu teknolojik evrime uyum sağlamasını gerektireceğini öne sürmektedir. Özetle, literatür, YZ'nin muhasebe bilgi sistemlerinin kalitesini artırdığını, benimsenmesinin teknoloji hazırlığı ve algılanan fayda ile ilişkili olduğunu göstermektedir. YZ, yeşil muhasebe uygulamalarının etkinliğini artırırken, etik kaygılar ve düzenleyici çerçevelerin geliştirilmesi gibi konular da önemini korumaktadır. Sonuç olarak YZ, muhasebede dönüştürücü bir güç olup, mesleğin geleceğini şekillendirecektir.

Keywords: Muhasebe, Yapay Zeka, Dönüşüm

KATMANLI İMALAT İLE ÜRETİLEN PARÇALARIN TAHRİBATSIZ MUAYENE YÖNTEMLERİ VE UYGULAMA ÖRNEKLERİ

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Katmanlı imalat (additive manufacturing, AM) teknolojileri, ilk olarak hızlı prototipleme (rapid prototyping) amacıyla geliştirilmiş olmakla birlikte, günümüzde teknolojik ilerlemeler, işlenebilir malzeme çeşitliliğinin artışı ve çok disiplinli uygulama alanlarının genişlemesi sayesinde, karmaşık geometrilere sahip parçaların özel takım ve kalıplara gerek duyulmaksızın üretilebildiği, yenilikçi ve esnek bir üretim yöntemi haline gelmiştir. Katmanlı imalat yöntemleri, havacılık, otomotiv, biyomedikal ve enerji gibi yüksek mühendislik gereksinimlerine sahip sektörlerde giderek daha yaygın biçimde kullanılmaktadır. Bu gelişmeler, söz konusu yöntemle üretilen parçaların kalite güvencesi süreçlerini ve özellikle yapısal bütünlüklerinin değerlendirilmesini önemli hale getirmiştir.
Her imalat sürecinde olduğu gibi, katmanlı imalatla üretilen parçalar da çeşitli üretim hataları ve kusurlar içerebilir. Bu kusurlar; mikro gözeneklilik, delaminasyon, eksik füzyon, iç çatlaklar, yüzey pürüzlülüğü ve geometrik sapmalar gibi şekillerde ortaya çıkabilir. Söz konusu kusurlar, parçaların mekanik dayanımı, yorulma ömrü, korozyon direnci ve genel servis performansı üzerinde olumsuz etkiler yaratabilmektedir. Bu bağlamda, özellikle kritik uygulamalarda kullanılacak parçaların görevlerini güvenli ve etkili bir şekilde yerine getirip getiremeyeceklerinin belirlenmesi amacıyla, tahribatsız muayene (nondestructive testing, NDT) yöntemlerinin uygulanması kaçınılmaz hale gelmiştir. Tahribatsız muayene yöntemleri, numuneye zarar vermeden iç ve dış kusurların tespit edilmesini sağlayan teknikler bütünüdür. Katmanlı imalatla üretilmiş parçaların değerlendirilmesinde en yaygın kullanılan tahribatsız muayene yöntemleri arasında X-ışını bilgisayarlı tomografi (X-ray CT), ultrasonik test (UT), manyetik parçacık testi (MT), sıvı penetrant testi (PT), görsel muayene (VT) ve termografi gibi yöntemler yer almaktadır. X-ışını bilgisayarlı tomografi, parçaların iç yapısının üç boyutlu olarak yüksek çözünürlükle görüntülenmesine olanak tanıyarak, özellikle iç kusurların tespitinde büyük avantaj sağlamaktadır. Ultrasonik testler, metalik yapıdaki parçaların içindeki süreksizlikleri tespit etmekte etkili olurken, yüzey kusurlarının belirlenmesinde sıvı penetrant ve manyetik parçacık testleri tercih edilmektedir.

Her bir NDT yönteminin kendine özgü avantajları ve sınırlılıkları bulunmaktadır. Örneğin, X-ışını tomografisi yüksek çözünürlük sunmasına rağmen maliyetli ve zaman alıcı bir yöntemdir. Ultrasonik yöntemler derin kusurları tespit edebilse de yüzey şekline duyarlıdır ve operatör deneyimine bağlıdır. Bu nedenle, katmanlı imalatla üretilen parçaların muayenesinde çoğunlukla birden fazla NDT yönteminin birlikte kullanılması gerekebilmektedir.

Katmanlı imalat teknolojilerinin sanayi uygulamalarında yaygınlaşması, bu yöntemle üretilen parçaların güvenilirliğini ve kalite standartlarını sağlama gereksinimini doğurmuştur. Bu gereksinim, tahribatsız muayene tekniklerinin önemini artırmakta ve bu alanda yapılan araştırmaların çeşitlenmesine yol açmaktadır. İlgili tekniklerin geliştirilmesi, standartlaştırılması ve otomatikleştirilmesi, katmanlı imalatın endüstriyel ölçekte güvenli biçimde kullanılmasının önünü açacaktır. Bu çalışmada, katmanlı imalatla üretilen parçalar için yaygın olarak kullanılan tahribatsız muayene teknikleri ve bu tekniklerin avantajları, sınırlamaları ile uygulama alanları ele alınmaktadır.

Although additive manufacturing (AM) technologies were initially developed for rapid prototyping purposes, they have now become innovative and flexible production methods. This transformation has been driven by technological advancements, increased material processability, and the expansion of multidisciplinary application areas. Today, AM enables the production of parts with complex geometries without the need for special tools or molds. These methods are increasingly used in industries with high engineering demands such as aerospace, automotive, biomedical, and energy. As a result, ensuring the quality of AM-produced parts—particularly evaluating their structural integrity—has become increasingly important.

Like in every manufacturing process, parts produced through additive manufacturing may contain various defects and flaws. These can manifest as microporosity, delamination, lack of fusion, internal cracks, surface roughness, and geometric deviations. Such defects may negatively affect the mechanical strength, fatigue life, corrosion resistance, and overall service performance of the components. Therefore, in order to determine whether parts—especially those intended for critical applications—can perform their functions safely and effectively, the implementation of nondestructive testing (NDT) methods has become indispensable.

Nondestructive testing methods are a set of techniques used to detect internal and external defects in a sample without causing any damage. Among the most widely used NDT methods for evaluating AM-produced parts are X-ray computed tomography (X-ray CT), ultrasonic testing (UT), magnetic particle testing (MT), liquid penetrant testing (PT), visual inspection (VT), and thermography. X-ray CT provides high-resolution 3D imaging of the internal structure of components, making it particularly advantageous for detecting internal flaws. Ultrasonic testing is effective in detecting discontinuities in metallic components, while surface defects can be more readily identified using liquid penetrant and magnetic particle testing.

Each NDT method has its own advantages and limitations. For instance, X-ray CT offers high resolution but is costly and time-consuming. Ultrasonic methods can detect deep flaws but are sensitive to surface geometry and require experienced operators. Therefore, the inspection of AM-produced parts often requires the combined use of multiple NDT methods. The growing adoption of additive manufacturing in industrial applications has brought about the necessity to ensure the reliability and quality standards of the produced parts. This necessity increases the importance of nondestructive testing techniques and leads to diversification in related research. Developing, standardizing, and automating these techniques will pave the way for the safe industrial-scale use of additive manufacturing. In this study, commonly used nondestructive testing techniques for AM-produced parts, along with their advantages, limitations, and application areas, are discussed.

Keywords: Eklemeli İmalat, Tahribatsız Muayene, Üretim Kusurları

QUALITY ASSURANCE AND INSTITUTIONAL CULTURE IN HIGHER EDUCATION INSTITUTIONS: AN ANALYSIS IN THE CONTEXT OF SATISFACTION, SENSE OF BELONGING, AND PARTICIPATION

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This study investigates the relationship between quality assurance systems and academic staff's levels of institutional satisfaction, sense of belonging, and participatory attitudes within the context of a foundation university in Türkiye. Framed by the dual perspectives of higher education policy and social policy, the research explores how internal quality mechanisms function not only as performance management tools but also as instruments of institutional culture and engagement.

Using a descriptive and correlational research design, data were collected from 96 academic staff members through standardized instruments: the Institutional Satisfaction Scale (ISS), Quality Assurance Perception Scale (QAPS), Belonging Scale (BS), and Participation Scale (PS). The analysis, conducted via SPSS 26.0, revealed no significant differences in scale scores based on demographic factors such as gender, age, marital status, or years of service. However, differences were observed across academic units. Strong positive correlations were found between institutional satisfaction and quality assurance perception (rho = 0.730), sense of belonging (rho = 0.480), and participation (rho = 0.720) ($p < 0.001$).

These findings reveal that quality assurance systems in higher education institutions should be evaluated not only from a structural standpoint but also within an institutional context, particularly in efforts to build a sustainable culture of quality.

Keywords: Quality Assurance, Satisfaction, Belonging, Participation, Higher Education Policy, Social Policy

DUYGUSAL ZEKÂNIN MOTİVASYONA ETKİSİNDE ZAMAN YÖNETİMİ BECERİLERİNİN ARACILIK ROLÜ

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21. yüzyılın değişken akademik ve sosyal koşulları göz önüne alındığında, iş ve eğitim ortamlarında bireylerin hedeflerine ulaşma, başarıya odaklanma ve motivasyonunu sürdürme süreçlerinde duygusal zekâ ön plana çıkmaktadır. Bireyin potansiyelini etkin bir şekilde gösterebilmesi zaman yönetimine bağlıdır. Bu araştırma, duygusal zekâ ve zaman yönetimi becerilerinin, bireylerin motivasyon düzeylerini etkileyebileceği ve zaman yönetiminin bu ilişkide aracı bir rol oynayabileceği düşüncesinden hareketle nicel desende tasarlanmıştır. Araştırmanın örneklemini Mersin iline bağlı Yenice ilçesinde faaliyet gösteren bir vakıf Universitynde öğrenim gören 155 öğrenci oluşturmaktadır. Üniversite öğrencileri üzerinde bu üç değişkenin etkileşiminin araştırılması araştırmanın özgün yönü olarak değerlendirilmektedir. Ayrıca, çalışma öğrencilerin akademik ve kişisel gelişimlerine yönelik stratejilerin geliştirilmesine ışık tutabilir.

Veriler dijital ortamda hazırlanan anket formu kullanılarak toplanmıştır. Anket formunda beş derecelendirmeli puanlamaya sahip üç farklı ölçek ve demografik sorular yer almıştır. Toplam dört bölümden oluşan anket form bağlantısı kare kodu sınıflarda öğrencilerle paylaşılarak uygulama yapılmıştır. Duygusal zekâ ölçeği 20 ifade, yetişkin motivasyonu ölçeği 21 ifade, zaman yönetimi envanteri ise 27 ifadeden oluşmaktadır. Anket formu aracılığıyla toplanan verilerin analizinde SPSS 21.0 istatistik programı kullanılmıştır. Aracılık etkisi PROCESS Macro (Model 4) kullanılarak test edilmiştir. Modelde duygusal zekâ bağımsız değişken (X), motivasyon bağımlı değişken (Y) ve zaman yönetimi aracı değişken (M) olarak tanımlanmıştır. Bootstrapping yöntemi (5.000 örneklem) kullanılarak dolaylı etkilerin anlamlılığı belirlenmiştir. Ölçeklerin güvenirliği Cronbach alfa katsayısına bakılarak incelenmiştir. Duygusal zekâ ölçeği için güvenirlik katsayısı 0,917, zaman yönetimi envanteri için 0,847; yetişkin motivasyonu ölçeği için 0,931 olarak hesaplanmıştır. Analizler sonucunda, duygusal zekânın zaman yönetimi üzerindeki etkisi istatistiksel olarak anlamlı bulunmuştur ($\beta = 0.521$, SE = 0.079, t = 6.560, $p < .001$). Güven aralığı %95 düzeyinde olup LLCI = 0.364 ve ULCI = 0.677 şeklindedir. Bu sonuç, duygusal zekânın zaman yönetimi üzerinde etkisi olduğunu göstermektedir. Duygusal zekânın motivasyon üzerindeki etkisi istatistiksel olarak anlamlı bulunmuştur ($\beta = 0.509$, SE = 0.068, t = 7.434, $p < .001$). Güven aralığı %95 düzeyinde olup LLCI = 0.373 ve ULCI = 0.644 şeklindedir. Bu sonuç, duygusal zekânın motivasyon üzerinde etkisi olduğunu göstermektedir. Ancak, zaman yönetimi değişkeninin motivasyon üzerindeki etkisi istatistiksel olarak anlamlı bulunmamıştır (B = 0.102, SE = 0.062, t = 1.66, p = .099, %95 CI [–0.019, 0.224]). Güven aralığının da sıfırı içermesi dolayısıyla aracılık etkisinin istatistiksel olarak desteklenmediği görülmektedir.

Araştırma sonucunda, duygusal zekânın zaman yönetimi ve motivasyon üzerinde pozitif etkisi olduğu ortaya konulmakla birlikte, zaman yönetiminin motivasyon üzerinde etkisi bulunmamıştır. Bu durumda, zaman yönetiminin istatistiksel anlamda aracı bir değişken olarak işlev görmediği söylenebilir. Bu sonuçlar duygusal zekâ becerilerinin bireyin hem zamanını planlama ve düzenleme yetkinliğini hem de içsel güdülenmesini desteklediğini göstermektedir. Ancak, zaman yönetiminin motivasyon üzerinde anlamlı bir etkisinin bulunmaması, zaman yönetiminin bu modelde aracı bir değişken olarak rol oynamadığını ortaya koymaktadır. Başka bir ifadeyle, bireyin zamanını ne kadar iyi yönettiğinden bağımsız olarak, duygusal zekâ doğrudan motivasyonu artırmaktadır. Bu durum, bireyin duygusal farkındalık, duygularla düşünmeyi kolaylaştırma ve duygusal düzenleme gibi becerilerinin

motivasyonel süreçler üzerinde daha baskın bir rol oynadığını işaret etmektedir. Öğrencilerin hem akademik başarıları hem de öz motivasyonları açısından duygusal zekâ becerilerinin geliştirilmesi, bireysel gelişim programları açısından önemli bir katkı sağlayabilir. Bu noktada, eğitim ve gelişim programlarında, özellikle duygusal zekâ becerilerinin geliştirilmesine odaklanılması, bireylerin hem zamanlarını daha etkin yönetmelerine hem de motivasyonlarını artırmalarına katkı sunabilir.

Keywords: Duygusal Zeka, Zaman Yönetimi, Motivasyon, Üniversite Öğrencileri

GAMBLING GONE DIGITAL, EVERYWHERE: A SCOPING REVIEW ON THE TRANSFORMATION OF TRADITIONAL AND DIGITAL GAMBLING DYNAMICS AMONG YOUTH

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The primary aim of this scoping review is to analyze how gambling practices among young individuals have evolved, with a particular focus on the transition from traditional (offline, in-person) forms to digitalized, online gambling modalities. As part of the systematic review process, recent studies addressing gambling behaviors in youth were collected, thematically categorized using content analysis techniques, and examined to identify meaningful patterns within this framework. The data set for this study was limited to peer-reviewed research articles and was compiled from the Web of Science database, focusing on publications released after 2020. A comprehensive keyword strategy was employed to include both traditional and digital forms of gambling behavior. Different linguistic variations of the concepts of “youth gambling behavior” and “online gambling” were incorporated into the analysis. In the initial screening phase, 357 articles were assessed based on their titles, abstracts, and methodological relevance. Following this evaluation, 31 studies that met the inclusion criteria were selected for in-depth analysis. The coding and thematic analysis process was conducted using MAXQDA 22 (version 22.8.0), a qualitative data analysis software. At the end of the coding stage, the extracted data were analyzed under three main themes: characteristics of offline gambling behaviors, characteristics of online gambling behaviors, and intervention and policy recommendations for prevention.

In certain cultural contexts, the perception of gambling as a form of social activity increases its social legitimacy and facilitates its widespread acceptance. Among the individual risk factors associated with traditional gambling habits, being male, belonging to a younger age group, having a migrant background, and exhibiting high levels of impulsivity are particularly prominent. On the social level, parental tolerance toward gambling and the influential role of peer groups emerge as significant determinants. Notably, the higher prevalence of gambling behaviors among migrant youth appears to be linked to vulnerabilities encountered during cultural adaptation processes, such as stress, social exclusion, and limited access to support networks. When examining the psychosocial impacts of offline gambling, it is frequently associated with feelings of loneliness, social marginalization, declining academic performance, and patterns of antisocial behavior. Additionally, traumatic life events, depressive symptoms, low levels of social support, anxiety disorders, and difficulties in emotional regulation may lead individuals to use gambling as a functional coping strategy. The findings further reveal that offline gambling often co-occurs with other forms of addiction, such as smoking, alcohol use, substance abuse, problematic internet use, and excessive gaming.

Moreover, offline gambling behaviors appear to interact with various psychological and social factors, including depression, anxiety, antisocial personality traits, eating disorders, and sexual orientation diversity. Other notable cognitive and sociocultural dimensions include heightened compulsive tendencies, impaired decision-making abilities, predisposition to violent behavior, and a search for cultural identity. Studies focusing on online gambling behaviors reveal that new-generation digital gambling formats—such as loot boxes, skin gambling, and simulated gambling games—have become

increasingly embedded in youth digital culture, contributing to the rise of risky behavioral patterns. With the advancement of digital technologies, gambling is no longer shaped solely by individual choices or technological engagement; rather, it is influenced by cultural norms, the desire for belonging, and the consumption of digital media content. Cross-cultural research suggests that online gambling norms exhibit global patterns but also evolve in interaction with local cultural factors. Social media platforms, mobile applications, and online games facilitate the widespread dissemination of gambling-related behaviors among youth, leading to the gradual normalization of these activities. Not only the prevalence of gambling but also its forms and learning pathways have diversified. For instance, traditional types such as sports betting, lotteries, and horse racing are often introduced through family or peer environments and reinforced digitally. Research indicates that individual tendencies, network-based social norms, and group affiliation reinforce online gambling. Young people, particularly those engaged in identity-based social media communities, become more responsive to the behavioral norms of these digital networks and are more likely to engage in risky gambling practices consistent with those norms. These findings underscore that digital platforms function as content providers and influential spaces for shaping norms and identity. Structural factors such as the visibility of online advertisements, the appeal of gamified reward systems, and the ease of digital access are significant drivers of youth gambling engagement. Loot box systems, in particular, pose behavioral and cultural risks due to their randomized reward mechanics and emotional associations with nostalgia. Simulated gambling games also mirror the psychological reinforcement cycles found in real gambling, contributing to addictive behaviors. Advertising targeting young audiences often reduces the perceived risk of gambling by presenting it as fun, harmless, and game-like. Even when not overtly recognized, social media advertisements' persuasive nature can shape adolescent behavioral tendencies. Empirical studies have shown that digital gambling formats are statistically and independently associated with problematic gambling behaviors. These digital mechanisms reinforce compulsive engagement through repeated play incentives, reward feedback loops, and audiovisual stimulation—factors known to trigger behavioral addiction. At the individual level, being male, having prior gambling experience, consuming alcohol, exposure to gambling advertisements, and previous engagement with loot boxes have all been identified as significant predictors of problematic online gambling. In this context, it becomes evident that the development of preventive strategies for children and adolescents must consider the interplay of personal characteristics, digital media experiences, and social influences.

The findings indicate that gambling behaviors observed among youth are not merely influenced by a change in setting, but rather reflect a multidimensional transformation at individual, social, and cultural levels. Traditional (offline) forms of gambling typically emerge through the influence of family members and peers, are learned within the context of interpersonal relationships, and are reinforced by prevailing cultural norms. In contrast, online gambling practices are increasingly encountered at younger ages due to the impact of digitalization. The ease of access and the wide variety of available content not only reduce the visibility of these behaviors but also contribute to their rapid dissemination. Within this new digital environment—where the boundary between entertainment and gambling becomes increasingly blurred—the internalization of risky behaviors occurs more quickly and widely. A notable commonality across both offline and online settings is the strong association between gambling and mental health indicators. Offline gambling has been linked to psychosocial challenges such as loneliness, social exclusion, depression, anxiety, and decreased academic performance. Similarly, online gambling is frequently associated with emotional deprivation, digital dependency, lack of academic engagement, social withdrawal, and in some cases, involvement in delinquent behaviors. For many young individuals, gambling is not only perceived as a source of entertainment, but also as a coping strategy to deal with stress, alleviate emotional tension, or gain social acceptance. These overlapping

psychosocial indicators suggest that, despite contextual differences, similar psychological mechanisms underlie both offline and online gambling behaviors.

Furthermore, the findings highlight the need to integrate individual risk factors, peer influence, media exposure, digital gaming dynamics, cultural context, and structural inequalities. In this regard, educational interventions promoting media literacy, critical thinking skills, and social awareness play a key role in helping young people resist normative pressures in digital environments. At the same time, family-based and peer-oriented programs contribute to the establishment of supportive social bonds. On the clinical level, structured screening inventories, assessing stressful life events, and monitoring digital behavioral patterns are among the essential tools that can facilitate early risk detection and timely intervention.

This study contributes to fields such as social work, psychology, and family counseling by addressing problematic gambling behaviors that emerge during adolescence and young adulthood from a multidimensional perspective. However, it also encompasses certain limitations. First, most of the studies forming the basis of this review utilize cross-sectional designs, which limits the ability to establish causal relationships. Second, the studies included in the review demonstrate limited cultural diversity. Third, a substantial portion of the reviewed literature only addresses the interaction between psychological and behavioral variables at a surface level, often neglecting the reciprocal relationships and developmental processes involved. Notably, there is a growing need for research that examines the influence of online gambling advertisements and social media usage patterns on gambling behaviors.

Keywords: Youth, Digital Gambling, Problematic Gambling Behavior, Risk Factors, Protective Factors

TLSO BACK BRACES: IMPROVING QUALITY OF LIFE FOR SPINE PATIENTS

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The Thoraco-Lumbo-Sacral Orthosis (TLSO) is a type of spinal brace designed to provide support, protection, and stabilization to the spine during postoperative recovery or treatment of spinal conditions, enabling patients to regain function and mobility. However, conventional TLSO braces are often associated with discomfort due to excessive tightness around the abdominal region, heat accumulation, and skin irritation in the chest area caused by pressure from the sternum pad. This study proposes an innovative redesign of the TLSO brace using recycled and sustainable materials, aiming to enhance user comfort and reduce the negative effects of prolonged wear. The methodology involved selecting lightweight, breathable, and thermoregulating materials derived from recycled sources and integrating them into a prototype brace structure. An ergonomic clothing design approach was applied to ensure proper body contouring, reduce pressure points, and minimize skin contact areas. The prototype was evaluated through user testing involving individuals with prior experience using conventional braces. Results indicated a significant improvement in comfort, with users reporting reduced sweating, less skin irritation, and better fit during movement. Additionally, the modified brace maintained adequate spinal support and postural stability. The findings support that ergonomic tailoring combined with recycled material use can produce a TLSO brace that meets both functional and comfort needs. This study contributes original value by merging environmental sustainability with biomedical device innovation, offering an affordable and eco-conscious alternative to traditional spinal braces. The integration of ergonomic principles and material science provides a practical direction for future orthopedic device development focused on user-centered design.

Keywords: Thoraco-Lumbo-Sacral Orthosis, Ergonomic Design, Recycled Materials, Spinal Brace Innovation, Comfort and Support

LEVERAGING 3D VISUAL SOFTWARE TO IMPROVE UNDERSTANDING OF ORTHOGRAPHIC PROJECTION IN ARCHITECTURAL DRAWING EDUCATION

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Architectural drafting forms the foundation of spatial communication in the built environment. Orthographic projection comprising plan, section, and elevation views is essential to professional practice. However, students often find it difficult to internalize the spatial relationships between orthographic drawings and the three-dimensional objects they represent. The increasing accessibility of three-dimensional (3D) visual software presents new opportunities for drafting education, allowing students to model, rotate, and extract projections digitally. This paper explores the potential of integrating three-dimensional (3D) visualization tools into architectural drafting instruction to enhance student learning outcomes and support deeper comprehension of spatial geometry. Orthographic projection is traditionally taught via physical models, interpretative practice, and manual drawing exercises. Although these approaches help students develop fundamental abilities, they frequently fail to address the abstract cognitive leap needed to go from two-dimensional (2D) to three-dimensional (3D) drawing. According to visual-spatial cognition research, digital models can act as cognitive scaffolds to help people understand intricate spatial relationships. The application of these technologies in foundational drawing classes is still inconsistent. The objectives of the study: (i) to assess how 3D visual software enhances the learning of orthographic projection in architecture drafting, (ii) to evaluate improvements in drawing accuracy, spatial understanding, and student confidence and (iii) to propose a hybrid pedagogical framework for drafting courses.

The respondents consisted of sixty first semester Diploma in Architecture students who were enrolled in the Architecture Drafting Course. The tools used for the manual drawing phase are T-squares, drawing boards, and mechanical pencils. While tools for digital 3D Software are: SketchUp (intuitive modelling), Rhino (precision geometry), and AutoCAD (technical documentation). The intervention spanned 6 weeks and was structured in three phases: Week 1–2: Introduction to orthographic projection using manual drafting techniques; Week 3–4: Students created 3D digital models and learned to extract orthographic views; and week 5–6: Comparison and revision sessions combining manual redrafting based on digital outputs. Assessment consists of pre-test and post-test scores on spatial cognition and drawing accuracy. Weekly critique sessions (instructor evaluations of technical drawing submissions) and student surveys. The results showed that there were cognitive gains where the spatial visualization test scores increased by 38% and students who used 3D tools demonstrated a clearer understanding of line weight, depth, and view alignment. For technical improvements, it shows fewer errors in line projection and labelling. In addition, more accurate scaling and consistent dimensions in drawings.

Feedback from students revealed that 91% of them found it easier to comprehend 2D–3D interactions, and they valued being able to "rotate" models and comprehend views prior to sketching. According to the study, using 3D visual software improves students' ability to comprehend orthographic projection concepts. This software acts as a dynamic feedback mechanism, allowing students to test and visualize ideas in real time. However, it is important to maintain a balance: over-reliance on digital tools may

inhibit the development of drafting precision and manual discipline. Therefore, a blended approach where digital modelling informs manual drafting is recommended. A hybrid model for architectural drafting courses: Stage 1: Manual introduction to projection principles; Stage 2: Integration of 3D modelling for exploration and verification; Stage 3: Manual redrawing and refinement based on digital insights; and Stage 4: Reflection and critique sessions integrating both modes. According to this study, 3D visual software is a useful tool for teaching orthographic projection in architecture drafting classes. When strategically applied, these technologies increase student engagement, decrease technical errors, and improve spatial reasoning. In order to enhance immersive learning in architectural representation, future research might investigate integration with VR/AR platforms.

Keywords: 3D Software,Orthographic Projection, Architectural Drawing Education

CRISIS OF JAPANESE FOREIGN POLICY IN THE POST-COLD WAR TRANSITION PERIOD: ECONOMIC CONSTRAINTS, POLITICAL DRIFT, AND STRATEGIC ALLIANCE REALIGNMENTS

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Introduction and Objectives

This study explores Japan's foreign policy transformation in the immediate aftermath of the Cold War, a period marked by profound geopolitical shifts, economic volatility, and emerging regional security challenges. Despite being hailed in the late 1980s as an economic superpower—referred to as ichi-wari kokka (a country with 10% of the world's GNP)—Japan's political influence on the international stage remained limited. Public discourse in the United States had even shifted by the end of the Cold War to view Japan and Germany as the true victors, with Japan increasingly being framed as an economic rival rather than an ally. This research aims to analyze how Japan's internal constraints, strategic ambiguity, and historical legacies inhibited it from translating economic power into political leadership during a time of global realignment.

Specifically, the study examines four interlinked dimensions of Japanese foreign and security policy between 1989 and 1996: (1) Japan's response to major international crises such as the Gulf War, (2) its role in shaping regional multilateralism through initiatives like APEC, (3) the evolution of peacekeeping engagements including the Cambodian UNTAC mission, and (4) the redefinition of the Japan-U.S. alliance in light of regional tensions and domestic shocks. By doing so, the research seeks to explain why Japan remained politically adrift despite growing economic stature and institutional inclusion in global forums like the G7.

Methodology

The study employs a historical-institutionalist methodology, relying on a mix of archival sources, policy reports, elite interviews, and secondary scholarly literature. The research is structured around critical junctures that illustrate Japan's foreign policy behavior and the competing domestic and international pressures that shaped it. Events such as the Gulf War (1990–91), the normalization efforts with North Korea (1990), the formation of APEC (1989), and the 1995 Taiwan Strait Crisis are treated as analytical milestones to assess shifts in institutional behavior, elite preferences, and public opinion. Special emphasis is placed on evaluating policy responses through the lens of Japan's postwar pacifist constitution (particularly Article 9) and the domestic power struggle between political factions such as the Liberal Democratic Party (LDP) and the Japan Socialist Party.

Findings

The study reveals that Japan's failure to act decisively during the Gulf War marked a critical turning point in its postwar foreign policy trajectory. Japan's refusal to send troops and its reliance on financial contributions—eventually totaling $13 billion—was internationally derided as "checkbook diplomacy." The domestic political environment, shaped by Socialist opposition to the Japan Self-Defense Forces (JSDF) and a pacifist public memory anchored in postwar narratives, prevented the government from engaging in meaningful military or logistical support. Consequently, Japan failed to align its national interests, such as dependence on Middle Eastern oil, with actionable foreign policy, revealing a strategic incoherence at odds with its economic ambitions.

Simultaneously, Japan's regional diplomacy also faltered. The abrupt 1990 diplomatic overture to North Korea by LDP figure Kanemaru Shin, conducted without Prime Ministerial coordination, strained relations with South Korea and demonstrated a fragmented approach to Northeast Asian diplomacy. In contrast, South Korea's Nordpolitik allowed it to strengthen ties with China and the Soviet Union, underscoring Japan's failure to adapt to a changing diplomatic landscape.

However, the same period also witnessed Japan taking important, albeit cautious, steps toward regional and global engagement. The Ministry of International Trade and Industry (MITI), through the Sakamoto Report and the groundwork laid by Okita Saburo and Prime Minister Ohira, helped initiate the Asia-Pacific Economic Cooperation (APEC) in 1989. Despite deferring leadership to Australia due to regional anti-Japanese sentiment, Japan contributed significantly to the shaping of a non-institutional, consensus-based model of regional cooperation called the "Asian way." In terms of security policy, Japan's participation in the United Nations Transitional Authority in Cambodia (UNTAC) following the 1992 passage of the International Peace Cooperation Law marked its first major engagement in peacekeeping operations. Despite initial public backlash after the death of two Japanese personnel in 1993, Prime Minister Miyazawa maintained Japan's involvement, signaling a tentative shift toward international responsibility in peace-building.

The redefinition of the Japan-U.S. alliance came into sharper focus in response to new security threats, including North Korea's nuclear crisis in 1994 and China's missile tests near Taiwan in 1995–96. Domestically, the Kobe Earthquake and the Aum Shinrikyo sarin gas attack in 1995 exposed deep weaknesses in the Japanese government's crisis management capabilities. The political shock was compounded by the 1995 Okinawa rape incident involving U.S. servicemen, which rekindled anti-base sentiments but did not unravel the alliance. Under Prime Minister Hashimoto Ryutaro, Japan adopted new defense guidelines with the United States in 1997 and reaffirmed the alliance as the cornerstone of regional stability.

Discussion and Conclusions

This study concludes that Japan's post-Cold War foreign policy was characterized by a disjuncture between economic capability and strategic clarity. Although the country began to engage with multilateral frameworks and peacekeeping, these efforts were inconsistent and often reactive. Institutional inertia, pacifist norms, and factional politics delayed Japan's transition into a political actor commensurate with its economic status. The political elite's failure to address the 1990s financial crisis—what the study terms Japan's "economic war defeat"—further eroded public trust and international credibility.

Yet, important structural changes did occur. The decline of the Socialist Party's veto power (symbolized by Murayama's 1994 endorsement of the U.S.-Japan alliance), the passage of PKO legislation, and growing regional engagement suggest that Japan entered the late 1990s with a more pragmatic foreign policy posture. The redefinition of the U.S.-Japan alliance and the stabilization of ties with Southeast Asia reflect these shifts.

Originality and Contribution

This research offers a novel synthesis of political, economic, and diplomatic developments in Japan's foreign policy between 1989 and 1996, a period often overlooked in favor of Cold War or post-9/11 analyses. By interweaving domestic political dynamics with external pressures, it reveals the layered constraints on Japan's agency during a transformative era. The paper contributes to the literature on Japan's foreign policy by emphasizing the hybrid nature of its international engagement: economically

proactive but politically hesitant. It challenges assumptions that economic affluence necessarily translates into strategic influence and calls for a more nuanced understanding of "normalcy" in Japanese foreign policy.

Keywords: Japan, Japanese Foreign Policy, Post-Cold War, US-Japan Relations, Japanese Politics

SÜRDÜRÜLEBİLİR KALKINMADA ŞEHİR İÇİ TARIMCILIK FAALİYETLERİNİN İKTİSADİ VE MALİ ETKİLERİ

Abdurrahman Kaya (Kastamonu University)

Toplumdaki kültürel, sosyal, bilimsel, beşeri ve doğal kaynakların hepsinin temkinli ve verimli bir şekilde kullanımını sağlayan ve bu hususa saygılı olma temelini güden sosyal bir bakış açısı olarak sürdürülebilirliği tanımlamak mümkündür. Sürdürülebilirlik, birçok farklı alanda kullanılan katılımcı bir süreci temsil etmektedir (Gladwin vd., 1995: 877). İlk olarak 19. yüzyılın ilk çeyreğinde literatüre girmeye başlayan bu kavram; ormancılık, balıkçılık ve tarım gibi yenilenebilen kaynaklar alanında kendini göstermeye başlamıştır (Bozlağan, 2005: 1013).

İnsanlar, ilk çağlardan itibaren çevreyle etkileşim halinde olmuş, refahlarını artırabilmek için çevreyi kullanmış ve teknolojinin gelişmesiyle beraber de çevreyi sürekli olarak değiştirip dönüştürmeye başlamıştır. Bu durum insanların ve diğer canlıların yaşam alanına bir müdahale olduğu için birçok canlının geleceğini risk altına atmış ve kaynakların tükenmesi, çevrenin bozulması ve doğanın kirlenmesi gibi olumsuzluklara neden olmuştur. Bu açıdan bakıldığında çevrenin sürdürülebilirliği ya da çevresel sürdürülebilirlik gibi kavramlar öne çıkmış, doğal kaynakların sürekliliğinin sağlanması konusu önemli hale gelmiştir. Çevresel sürdürülebilirlik konusu içinde insan sağlığı ve biyo-çeşitliliğin korunması, havanın, suyun, toprağın kalitesinin sağlanması, hayvan ve bitki yaşamlarının korunması yer almıştır (Kaypak, 2011: 26).

Ekosistemin ve çevrenin sürdürülebilirliği bağlamında yenilenebilir kaynakların kullanım düzeyinin kaynakların yeniden oluşum düzeyini aşmaması gerekmektedir. Tükenebilir kaynakların bitmesi durumunda yenilenebilir kaynakların ve insan yapımı kaynak miktarının artırılmasıyla tükenen kaynaklar telafi edilmeye çalışmalıdır (Çetin, 2006: 4). Bu açıdan bakıldığında şehir içi tarımcılık faaliyetleri (kentsel tarımsal faaliyetler) sürdürülebilirliğin sağlanmasında ve çevresel kaynakların korunmasında önemli hale gelmektedir. Kentlerin içindeki arazilerin değerinin artması, sanayileşme, tarımın diğer sektörlere nazaran düşük gelir yaratması, kentlerin içindeki arazilerin ekonomik getirisi daha yüksek olan alanlara ve aktivitelere ayrılmasına neden olmaktadır. Bundan dolayı kent içi tarımsal faaliyetler günümüzde kent çeperlerine, hatta kentlerden kilometrelerce uzaklıktaki alanlara yerleşmektedir. Kent merkezlerinde ise tarımsal faaliyetler ender yapılır hale gelmektedir. Bu durum kent merkezlerinde yaşayan insanların taze ve sağlıklı besinlere ulaşabilmesini güçleştirmekte, iktisadi manada da kentliler için yüksek maliyet taşımaktadır. Ayrıca kentlerde yaşayan özellikle yüksek gelire sahip olmayan aileler sağlıklı besin tüketiminden yoksun kalmış olmaktadır (Rasouli, 2012: 1). Şehir içi tarımcılık faaliyetleri günümüzde toplum bahçeleri ve özel bahçeleri kapsamanın yanında daha geniş çaplı bir faaliyet sahası şeklinde tanımlanmaktadır. Genellikle satış amacıyla meyve, sebze, balık ve hayvan yetiştirme ve yerel tüketim faaliyetlerini içermektedir. Bu yapının bu kadar geniş çaplı ele alınmasının sebebi şehir içi tarımsal faaliyetlerin geniş bir gıda ağıyla ilişkisi ve birçok sosyal, iktisadi ve çevresel kaynakla iç içe olmasından ileri gelmektedir. Kent ve kır tarımını ayıran en önemli özellik ise kentsel tarımsal faaliyetlerin kentlerin içinde yapılmasından ziyade, kentin iktisadi ve ekolojik sistemiyle etkileşim halinde ve bütünleşmiş olmasından kaynaklanmaktadır. Mougeot, kentsel tarımı kent içinde ya da kent çeperlerinde gıda veya gıda dışı ürünlerin yetiştirilmesi, işlenmesi ve dağıtılmasını içeren bir endüstri olarak tanımlamaktadır. Kent ve kent etrafındaki maddelerin ve beşeri kaynakların kullanılarak ürün ve hizmet sağlanması olarak görmektedir (Mougeot, 2000). Buradan da anlaşılacağı üzere kentsel tarımın kapsamı, onun ne derece kentin ekosistemini kullandığına ve ne ölçüde kent ekosisteminden etkilenmekte olduğuna bağlıdır. Kentsel tarım üç kategoride incelenmektedir. Bunlar; ticari olmayan tarımsal faaliyetler, ticari olan tarımsal faaliyetler ve hibrit faaliyetlerdir. (Hodgson vd.,

2011). Şehir içi tarım dar ölçekte bakıldığında toplumda yaşayan insanların temel gıda gereksinmelerini sağlamanın yanı sıra çevresel sürdürülebilirliğin sağlanması, sağlıklı ve iyi beslenme ve sosyal aktivasyonun gelişmesi gibi farklı şekillerde katkı sağlayabilir. Bunlara ek olarak yerel ölçekte tarımsal ürün üretimi ile ilgili istihdam fırsatları yaratarak iktisadi gelişmeyi, bütçeye katkısıyla mali açıdan gelişmeyi, toplumsal ve sosyal katılımı, bütünleşme ve etkileşimi fazlasıyla desteklemektedir. Son dönemlerde kentsel tarım faaliyetlerinin, taze meyve ve sebzeye erişim imkanını artırdığı, bilhassa gıdaya erişimde sıkıntı yaşayan düşük gelirli aileler ve kimselere sağlıklı ve düşük maliyetli gıda sağladığı FAO, WHO, APA ve UNICEF gibi birçok örgüt ve kuruluşun yaptığı çalışmalarla kanıtlanmaktadır (Rasouli, 2012: 29). Şehir içi tarım faaliyetleri beslenme konuları ve çeşitli sağlık programları ve bilinçlendirme faaliyetleriyle toplumsal açıdan farkındalık oluşturmaya da yaramaktadır. Şehir içi tarım faaliyetleri bireyleri bir araya getirerek toplumsal kaynaşmanın ve birlik bilincinin üst düzeye çıkmasını ve toplumun daha mutlu bireylerden oluşmasını sağlamaktadır. Çeşitli çevre, sağlık ve ekonomi eğitimleri ile beraber her yaştan bireyin bir araya gelip kent içinde tarımsal faaliyetlerde bulunması toplum ve ülke adına pozitif bir durum olarak görülebilmektedir. Şehir içi tarımsal faaliyetler, kirlenmiş olan arazilerin üretime yeniden kazandırılmasına ve çevre yönetimine de katkı sağlayabilmektedir. Bu sayede artan bitki örtüsü, yağmur suyu akıntılarının azaltılmasına ve hava kirliliği oranının düşürülmesine katkıda bulunmakta, şehir içindeki biyo-çeşitliliği artırarak birçok türün korunmasına aracılık etmektedir. Şehir içi tarımsal faaliyetler ekonomik açıdan da birçok fayda sağlamaktadır. Atıl vaziyette kalan toprakların ve kaynakların kullanılmasıyla ekonomide kaynak tahsisinde etkinliğe bir adım daha yaklaşmak mümkün olurken, iş ve gelir imkanı olmayan bireylere istihdam ve gelir sağlaması açısından da adil gelir dağılımının sağlanmasına yönelik bir etki meydana gelmektedir. İstihdamın ve gelirin artmasıyla beraber milli gelirde oluşacak bir büyümeyle beraber ekonomi canlanacak ve ekonomik büyüme ve kalkınmanın oluşumuna da pozitif yansımalar olacaktır. Ayrıca tarımsal faaliyetlerde bulunan kimselerin ürettikleri ürünleri tüketme dolayısıyla harcama giderleri azalacak ve gelirleri farklı tüketim noktalarına kayarak ekonomide gelirin yayılmasına olanak sağlanacaktır. Kentsel tarımın birçok sosyal, iktisadi ve çevresel faydasının yanında sağlık ve çevresel açılardan riskler içerebildiği görüşü de savunulmaktadır. Kentsel tarım faaliyetlerinin trafik, sanayi ve diğer kirletici faktörlere yakın olması sözü edilen risklere en önemli örneklerdendir. Kurşun, krom, bakır, çinko, cıva, selenyum, kadmiyum, nikel ve arsenik gibi ağır metaller, sanayi atıkları, asitler ve bazlar, solventler, asbest ya da bu maddelerin karışımı ve hastalıklı organizmalar kentsel tarım faaliyetleri için kullanılacak olan toprağı ve suyu kirletme riski taşımaktadır. Kirletilmiş toprak ve suya temas eden bu gıdaların tüketilmesiyle üreticiler veya tüketiciler çok önemli sağlık problemlerine maruz kalabilmektedir (Tixier & De Bon, 2006).

Kentsel tarıma İstanbul özelinde bakıldığında ise Yedikule Bostanları, Kuzguncuk, Kartal bostanları örnek olarak verilebilmektedir. İstanbul'da geçmişte şehrin çevresinde veya şehrin dışında yapılan bu tarımsal faaliyetler artan göç ile birlikte şehirlerin gittikçe genişlemesi sonucunda kentlerin içinde hatta göbeğinde kalmıştır. Bazı bostanlar da bu genişlemeden kaçmak için iyice şehrin dışına çıkmak zorunda kalmıştır. Ancak Maltepe, Kartal, Üsküdar, Beykoz, Zeytinburnu, Tuzla gibi yerlerde hala şehir içinde kalmış sebze bahçelerine ve bostanlara rastlamak mümkündür. Bunların dışında yurt dışında örneklerine rastlanıldığı gibi devlet ya da yerel yönetim birimleri eliyle gerçekleştirilen şehir içi tarımcılık faaliyetleri de bulunmaktadır. Bunlardan en önemlisi İstanbul'da ve ülkemizde ilk kentsel tarım projesi olan Gürpınar Kent Tarımı Projesi'dir. Ulaşılabilir Yaşam Derneği (UYD) tarafından yürütülen ve kentsel alanda risk altında bulunan grupların istihdamının ve gıda güvencelerinin sağlanması hedefine yönelik bir proje kapsamında, Gürpınar Belde Belediyesi ile beraber 2012 yılında yapılan bir iş birliği sonucu hayata geçirilmiş bulunmaktadır (Yılmaz, 2015: 69).

Tüm bu bilgilendirmeler ışığında çalışmanın kapsamını kentsel tarımın türleri, kentsel tarımın ülkenin ekonomik, sosyal ve çevresel yapısına ne gibi katkılar yaratacağı ve bilhassa kent tarımının iktisadi ve mali etkileri oluşturmaktadır. Bu çerçevede çalışmanın yöntemini literatür taraması ve kentsel tarımsal faaliyetlerin yerinde incelenmesi oluşturmaktadır. Yerinde inceleme faaliyetleri ile İstanbul'da Kartal bölgesindeki birçok şehir içi tarımcılık faaliyeti ve Boston'da hobi bahçeleri incelenmiştir. Kentsel tarımsal faaliyetlerin faydaları ve riskleri sunulmuştur. Bulgular neticesinde İstanbul'daki kentsel tarımsal faaliyetlerin daha çok ticari amaçlarla yapıldığı görülmüştür. Amerika Birleşik Devletleri'ndeki kentsel tarım faaliyetlerinin ise üç kategoriye de uyduğu tespit edilmiştir. Çalışma, kentsel tarımda ABD ve Türkiye karşılaştırması yapması ve kentsel tarımın iktisadi ve mali etkilerini sürdürülebilir kalkınma açısından ele almasıyla diğer çalışmalardan farklılaşmaktadır. Sonuç olarak kentsel tarım faaliyetleri çeşitli riskler barındırsa da sosyal, iktisadi ve çevresel faydalarından ötürü kentleşmeciler, iktisatçılar ve yerel yönetim birimleri nezdinde dikkate değer bir faaliyet olarak öne çıkmaktadır. Kent tarımının faydaları ile riskleri arasında bir karşılaştırma yapılarak fayda-maliyet analizinin gerçekleştirilmesi gerekmektedir.

Keywords: Sürdürülebilirlik, Çevre, Kentsel Tarım, Ekonomik Etkiler

INTERNET OF THING (IOT) PROTOCOL LEARNING KIT BASED ON MESSAGE QUEUING TELEMETRY TRANSPORT (MQTT)

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The rapid expansion of the Internet of Things (IoT) across various sectors has made it essential for students and educators to understand key communication protocols such as MQTT (Message Queuing Telemetry Transport). Despite its growing relevance, educational tools that effectively bridge the gap between theory and practice are limited. This project introduces the IoT MQTT Protocol Training Kit—an interactive and modular learning system designed to facilitate practical understanding of MQTT-based IoT systems. The main objective of this innovation is to develop a hands-on learning kit that integrates Wi-Fi-enabled microcontrollers with various sensors (temperature, humidity, distance) and actuators (RGB LED). Using the ESP32 microcontroller, the kit enables real-time data monitoring and control through a dashboard built with Node-RED, an open-source IoT application platform. The training system supports cross-platform compatibility, including mobile devices, desktop computers, and Raspberry Pi systems. The methodology includes the design and integration of hardware components, implementation of MQTT protocol communication, development of an interactive user interface, and comprehensive testing. The training modules are supported by detailed tutorials and documentation, ensuring ease of use and effective learning outcomes. Initial testing shows the kit significantly enhances students' understanding of MQTT and IoT systems by offering a real-world simulation environment. It supports national educational priorities, including SDG-4 (Quality Education) and SDG-9 (Industry, Innovation and Infrastructure), and has potential for adoption in technical and vocational training programs. By improving students' technical competence and industry readiness, the kit addresses critical gaps in current educational approaches. This study demonstrates the kit's effectiveness as a scalable and adaptable educational tool. Its originality lies in combining theoretical concepts with hands-on experiences to provide a complete learning solution for modern IoT education.

Keywords: IoT, MQTT, ESP32, Sensors, Actuators

HYBRID WORK AND SUSTAINABLE EMPLOYMENT: A STUDY ON FEMALE EMPLOYEES IN TÜRKİYE

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In recent years, hybrid working systems have emerged as a transformative development in the structure of modern work. Organizations have increasingly embraced this model in recognition of its potential to enhance productivity and efficiency at an institutional level (Sandhu & Jain, 2024) while employees value the flexibility it provides in achieving a good work-life balance (Setiyono et al., 2024). In turn, most existing research has primarily examined the economic advantages of hybrid work for organizations often overlooking its broader societal impacts, particularly those concerning women's employment (Setiyono et al., 2024). The broader implications of hybrid work across different cultural and social contexts also remain insufficiently explored. This gap has recently been highlighted by Shore et al. (2025) Accordingly, this research aims to explore how hybrid work affects the well-being, work-life balance, and organizational commitment of female workers within the context of Türkiye as non-Western culture representor. This research also provides a good example for countries that have similar cultures to Türkiye, in which women's participation in the workforce are low and may offer as a key factor to achieve sustainable development.

Keywords: Hybrid Work, Employee Well-Being, Work-Life Balance, Organizational Commitment, Sustainability

ANALYZING THE CONSTRAINTS FACED BY RETAILERS AND CONSUMERS IN PALM OIL INDUSTRY

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Palm oil is an important nutritional agricultural product that is significant for its economic value. This study aims to investigate the constraints that facing by the retailers and consumers in palm oil industry and to provide the policy recommendations. Data will be collected through the surveys and interviews from retailers and consumers. Face-to-face interviews will be conducted in the study area. The research will be conducted in the Faisalabad. Data will be collected from 60 to 75 retailers and 60 to 75 consumers for analysis. Appropriate techniques like descriptive statistics will be employed for data analysis. This study aims to examine the key problems retailers and consumers encounter in the palm oil industry and propose policy recommendations to help overcome these challenges. A constraints analysis will be conducted by using the qualitative and quantitative methods. The findings will be presented in the form of a thesis.

Pakistan's edible oil requirement currently stands at over 4.7 million tons and is anticipated to rise to 5.9 million tons by 2025-26. In 2020-21, Pakistan met just 8% of its total edible oil needs through domestic production, importing the remaining 92%. Likewise, the country met only 11% of its total edible oil demand through domestic production and imported the rest. In Pakistan, both traditional and untraditional seed crops are cultivated, with rapeseed, mustard, sunflower, and canola being the most commonly grown. The oil palm fruit is a drupe that develops in tightly packed, spiky clusters. Indonesia, Malaysia, Thailand, Colombia, and Nigeria are the top five producers. The Pakistan Oilseed Development Board (PODB), operating under the Ministry of National Food Security & Research (MNFS&R), has played a vital role in fostering oilseed crop expansion across the country.

Keywords: Palm Oil, Retailer, Consumer, Constraints Analysis.

FABRICATION OF PORTABLE PIZZA OVEN WITH HYBRID BURNER METHOD

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The rapid progression of culinary technology has engendered substantial innovations in the realm of portable cooking appliances, particularly concerning the design and functionality of pizza ovens. Conventional ovens, although proficient in the baking of pizza, frequently fall short in replicating the genuine texture, flavour, and efficiency achieved by specialized portable pizza ovens. These dedicated ovens are meticulously engineered to attain extreme temperatures (often surpassing 400°C), which facilitates accelerated cooking times and yields the distinctive charred, bubbly crust that is quintessential for artisanal Neapolitan-style pizza which is a characteristic that is challenging to realize in traditional kitchen ovens. Nevertheless, the current portable pizza ovens predominantly depend on either firewood or gas burners, each of which presents unique limitations. Firewood-based systems, while capable of imparting a sought-after smoky flavour, demonstrate prolonged preheating times due to the duration required for the stabilization of combustion. In contrast, gas burners offer immediate and controllable heat, yet they lack the traditional flavour profile associated with wood-fired cooking. In order to address these complexities, this study concentrates on the design, fabrication, and performance evaluation of a portable pizza oven that integrates a hybrid wood-gas combustion system, which synergistically combines the advantages of both energy sources while alleviating their respective shortcomings. The project encompasses three distinct heating methodologies which are a traditional firewood-based system (utilizing rambutan wood for combustion), a straight pipe gas burner system (fitted with a 50-hole burner for optimized heat distribution), and a novel hybrid combustion system that amalgamates wood and gas. The hybrid approach capitalizes on the immediate heat generation provided by gas for rapid preheating while incorporating firewood to maintain elevated temperatures and imbue the pizza with an authentic smoky essence. This dual-fuel mechanism not only enhances thermal efficiency but also ensures operational continuity in circumstances where wood supply may be intermittent. Critical design considerations encompass thermal efficiency, portability, and cost-effectiveness, thereby ensuring that the oven remains accessible for domestic use and small-scale commercial applications. The fabrication process entails careful material selection (prioritizing lightweight yet heat-retentive components), structural optimization for uniform heat distribution, and an iterative testing protocol to validate performance metrics. Experimental findings compare the duration required for each heating method to attain a target dome temperature of 400°C, with results indicating that the hybrid system achieves the most rapid preheating duration while sustaining stable thermal output. Furthermore, the hybrid configuration exhibits enhanced energy optimization, enabling users to dynamically regulate fuel consumption and also reducing gas usage when wood combustion is adequate and vice versa. Beyond technical performance, this study focusing the socioeconomic advantages of portable pizza ovens, particularly for small enterprises and domestic users with spatial limitations. The compact, lightweight design facilitates ease of transportation, rendering it ideal for mobile vendors, outdoor events, and home culinary aficionados. Moreover, the hybrid system's capability to harmonize artisanal quality (smoky flavour, high-temperature baking) with operational reliability (uninterrupted heating, fuel flexibility) positions it as a viable solution for commercial kitchens necessitating consistent output without compromising authenticity. In summary, this undertaking effectively demonstrates the creation of a versatile portable pizza oven that harmonizes the contrast between traditional wood-fired cooking

methodologies and modern gas-fuelled efficiency. The hybrid combustion mechanism not only expedites the preheating process but also augments the user's command over cooking parameters, thereby rendering it an adaptable instrument for various pizza preparation requirements.

Keywords: Pizza Ovens, Firewood, Gas Burner, Hybrid Combustion

ENHANCING PRACTICAL LEARNING IN AUTOMOTIVE ELECTRICAL DIAGNOSTICS USING THE EZFUSE TESTER

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EZFuse Tester is an innovative teaching aid designed to assist students during practical sessions involving vehicle electrical systems. This tool simplifies the fuse inspection process by providing visual (light) and auditory (beep) signals to indicate whether a fuse is functioning properly. Checking fuses is a crucial step in identifying faults in vehicle electronic components such as audio systems, lights, or other accessories. This tool also addresses common challenges faced by users, particularly older mechanics who experience vision problems or glare sensitivity, as well as individuals who find multimeters difficult to use. With a simple and user-friendly design, students only need to connect the alligator clip to the battery terminal and touch the tip of the device to the fuse terminal. If the fuse is in good condition, the tool will light up and emit a beeping sound. The key advantage of this tool is its ability to make practical sessions more accessible, faster, and less labor-intensive. It helps students understand the diagnostic process of electrical systems more effectively, without requiring advanced technical skills. Furthermore, its compact design saves space, while its quick operation reduces overall inspection time. Overall, EZFuse Tester has proven to be an effective innovation in supporting the teaching and learning process. It enhances students' skills in the automotive field through a more practical and user-friendly approach.

Keywords: Fuse Tester, Automotive Education, Electrical System Diagnostics, Teaching Aid

SİVİL TOPLUM KURULUŞLARININ YEREL SİYASETTEKİ ROLÜ VE ETKİLERİ: BATMAN İLİ ÖRNEĞİNDE BİR SAHA ARAŞTIRMASI (2019-2024)

Abdurrahim DEMİRTAŞ (Batman Üniversitesi)

Sivil toplum kuruluşları, modern demokrasilerde devlet ve piyasa dışında üçüncü bir alan olarak kayıtlı sivil topluluk, örgütlü yapılardır. Sivil toplum kuruluşları tarih boyunca toplumsal değişmelerde, tarihin akışında önemli yeri olan vakıalarda, demokrasinin gelişiminde ve yönetime toplumsal katılımın artırılmasında tarih boyunca kritik bir role sahip olmuştur. Sivil toplum kuruluşları, tarihsel süreçte siyasi aktörlerle/yönetenlerle sürekli bir iletişim ve etkileşim halinde olmuşlardır. Bazen etki eden bazen etkilenen konumunda olmuşlardır. Modern dünyada bilinen anlamıyla devletten/iktidarlardan bağımsız olması geren bu yapılar, zamanla siyasi yapılarla iç içe girerek asli fonksiyonlarından uzaklaşma eğilimine girmişlerdir. Ülkemizde de çok partili hayata geçişle başlayan demokratikleşme sürecinde Sivil toplum kuruluşları ortaya çıkmaya başlamış ve Sivil toplum kuruluşları zamanla siyaset kurumu ile iç içe geçmiştir. Demokratik yapıların olmazsa olmazı olan seçimlerde de sivil toplum kuruluşları, seçim süreçlerine etkili olmuşlardır. Bu çerçeve çalışmamızda, Batman İlinde faaliyet gösteren, aktif, belirli bir kitleye hitap eden Sivil toplum kuruluşları ile siyasi partiler arasındaki ilişki incelenmiştir. Çalışmada birçok Sivil toplum kuruluşu yöneticisi ile yüz yüze görüşme yapılarak veriler elde edilmiştir.

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Keywords: Sivil Toplum Kuruşları, Örgüt, Yerel Yönetimler

EDUCATIONAL USE OF CHATBOT-BASED ARTIFICIAL INTELLIGENCE APPLICATIONS

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Aytaç Uğur Yerden (İstanbul Gedik University)

With the advancement of artificial intelligence (AI) technologies, their applications have also become increasingly prevalent in the field of education. One such technology is chatbots. Chatbots are utilized across a wide range of educational services, including personalized learning support, 24/7 accessibility, providing instant feedback, and increasing student participation in instructional processes. Their integration into educational environments reflects a growing trend toward digitalization and adaptive learning models. Between 2021 and 2025, particularly following the global COVID-19 pandemic, remote learning models became more widespread and led to a significant transformation in educational delivery. As a result, the adoption of digital platforms accelerated, and chatbot-based AI applications began to emerge as a prominent research topic. The need for scalable, interactive, and responsive educational tools further increased the relevance of chatbot technologies.
In light of these developments, this study aims to conduct a comprehensive review of graduate theses written in Türkiye between 2021 and 2025 that focus on chatbot-based applications in the field of education. By systematically analyzing the thematic trends, methodologies, and findings of these theses, the study seeks to offer a structural contribution to the existing literature. The research not only identifies key areas of focus within these academic works but also aims to highlight potential gaps and opportunities for future studies in AI-assisted educational practices.

This research was conducted using a descriptive content analysis method. Data were collected from the National Thesis Center database in Türkiye. During the literature review process, keywords such as chatbot, artificial intelligence, and education were used to identify relevant studies.
In the data collection phase, the document analysis technique was applied to examine graduate theses published between 2021 and 2025. Based on the established criteria, a total of 9 master's theses and 4 doctoral dissertations were identified. The majority of these theses were published in 2023 and 2024, indicating an increase in academic interest in this topic during those years.
The analysis revealed that the most commonly used research methods in these theses were mixed methods, qualitative case studies, and experimental designs. The topics of the theses generally focused on the contributions of chatbots to students and the educational process. Specifically, student motivation, engagement, feedback, and interaction were frequently emphasized, along with the perspectives of teachers on the integration of chatbot technologies into educational settings.
As a result of this research, it has been observed that chatbot-based artificial intelligence applications in education have increased through graduate theses published in Türkiye between 2021 and 2025, as indexed by the National Thesis Center. These theses demonstrate the development of innovative solutions across various educational domains. Notably, the use of chatbots has been predominantly explored in integration with learning management systems, personalized learning support, and academic support tools for educators. This trend highlights a significant inclination toward the integration of technological advancements into pedagogical practices. It suggests that chatbot technologies are increasingly being positioned as supportive tools in both instructional and administrative dimensions of education.

In conclusion, in order for chatbot-based AI applications to be implemented more broadly in Türkiye, interdisciplinary research and pilot implementations are needed. It is recommended that future studies delve deeper into the field and incorporate impact-based evaluations to assess the effectiveness and scalability of these applications.

Keywords: Chatbot, Artificial Intelligence, Educational Technologies, Application

PARENT AND PRESCHOOL TEACHERS' FEEDBACK ON THE TRANSITION OF REFUGEE CHILDREN WITH SPECIAL NEEDS TO SCHOOL: A TECHNO-PEDAGOGICAL ASSESSMENT FOR A SUSTAINABLE SOCIETY

Mehmet Kumru (Sakarya University)

Today, technology is not only reshaping daily life but also transforming learning processes. This change has also impacted early childhood education, diversifying the roles of preschool teachers. These teachers are no longer just responsible for imparting basic knowledge; they have become the first guides introducing children to the dynamics of the digital world. Teachers who use technology consciously for pedagogical purposes help children develop digital literacy skills at an early age, contributing to their growth as individuals suited to the demands of the modern world. The development of digital competencies in individuals is directly linked to technology-based education that begins in early childhood. In this regard, teachers not only introduce digital tools to children but also guide them in using these tools safely, ethically, and critically. These skills directly impact individuals' future academic and social lives, fostering the development of creative, conscious, and tech-savvy individuals who are well-aligned with society's technological advancements.

Refugee children with special needs, growing up under challenging conditions such as war, migration, and trauma, face significantly more pronounced difficulties in education. These children require additional support in their learning processes due to their special needs and struggle to adapt to the education systems of the countries they have migrated to. Language barriers, cultural differences, and traumatic past experiences are among the factors that complicate their integration into the educational system. In accordance with the principles of equality and accessibility in education, a range of supportive measures such as individualized adaptation programs, language support, and psychological counseling must be implemented to help refugee children with special needs overcome these obstacles. Otherwise, these children may face not only academic exclusion but also social and psychological isolation. Educators and relevant institutions must adopt a more inclusive and flexible educational approach to help refugee children with special needs develop both their academic and social skills. In this context, personalized approaches to address the diverse developmental needs of children in early childhood education are crucial. The use of technology, the application of diversified teaching methods by educators, and the involvement of families in the process are fundamental components of the integration of refugee children. Additionally, strengthening community-based support programs to assist the integration process of children with special needs will increase their participation in the learning process and enable them to more healthily engage in social life. Ultimately, the education of refugee children with special needs should be seen as a process that not only supports their individual development but also promotes societal peace and harmony from a broader perspective.
This study aims to understand the perspectives of preschool teachers and families regarding the school readiness of refugee children with special needs. The research was conducted using the qualitative research method of 'case study,' and it involved 20 preschool teachers and 10 families in Sakarya province, Türkiye, who worked with refugee children with special needs during the spring term of the 2024-2025 academic year. During the data collection process, semi-structured interviews, natural observations, and document analyses were conducted, and the obtained data were analyzed using content analysis. The purpose of this study is to provide an in-depth look at how the attitudes and approaches of teachers and families contribute to the participation of refugee children with special needs in education.

Keywords: Early Childhood Education, Special Education, Refugee Children, School Readiness, Technology in Early Childhood Education.

SMART SAFETY HELMET WITH REAL-TIME FALLING OBJECT DETECTION AND ALERT SYSTEM

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Suchada Cham Nam (Politeknik Banting Selangor)

Smart Safety Helmet with Real-Time Falling Object Detection and Alert System, is designed to enhance worker safety in construction environments by providing early detection of falling objects. Falling tools or debris pose a major hazard at multi-level building sites and scaffolding areas, where conventional helmets offer only passive protection after impact. To address this gap, the smart helmet integrates a microcontroller-based system with a Garmin LiDAR-Lite v4 sensor, capable of detecting objects falling from above within a 10-meter range. Upon detection, a mini coin vibration motor is activated in under one second to alert the user, enabling a prompt evasive response. The system is powered by a rechargeable 7.4V lithium-ion battery and utilizes a step-down (buck) converter for power efficiency. All components are enclosed in a weather-resistant, impact-durable casing suitable for real-world construction environments. This proactive safety solution aims to reduce head injuries and improve the effectiveness of personal protective equipment in the construction industry.

Keywords: Smart Safety Helmet, Construction Safety, LiDAR Sensor, Falling Object Detection, Wearable Technology

THE MEDIATING ROLE OF ORGANIZATIONAL CULTURE IN THE EFFECT OF ATTITUDES TOWARD ARTIFICIAL INTELLIGENCE ON INNOVATIVE WORK BEHAVIOR AND TURNOVER INTENTION: A QUANTITATIVE STUDY IN THE TECHNOLOGY SECTOR

Begüm Al (Marmara University)

Technological advances that have taken place worldwide and affect all individuals and businesses from large to small have begun to radically change many areas from ways of doing business to employee roles. Although its foundations date back many years, “artificial intelligence” has begun to take its place at the heart of this change, especially in recent years. Due to this development, artificial intelligence, which was initially expected to increase operational efficiency, has now begun to reshape employees’ attitudes, behaviors, and organizational commitments. This shaping has begun to show itself more among technology sector employees who are thoroughly involved with technology and follow innovations closely. Although this is the case, the role of the culture of the organization in shaping the behavior of the employees has not yet been examined much. From this point of view, this research aims to explain the effects of attitudes towards artificial intelligence on innovative work behaviors and intention to leave the job, while examining the mediating role of organizational culture in these relationships.

Innovative behavior was chosen it is because the increasing adoption of AI in organizational settings has prompted scholars to explore how technology-driven stressors influence this work behavior and Dong et al. (2025) indicated that AI can either facilitate or hinder innovative behavior depending on whether it is appraised as a challenge or a threat. Therefore, more research is needed to identify how AI affects this behavior. Similarly, the effect of AI on intention to leave is still not clear and thus needs more study. In addition, organizational culture which is shaped by the shared values, beliefs, and assumptions is expected to influence how employee behave and interpret their experiences at work however; features of the organizational culture that are influential on innovative work behavior and intention to leave are remains as an area to explore (Can and Sakal, 2024).

Following a positivist approach, this study employed four validated measurement scales to measure key concepts that are focus of this study. These are: The Artificial Intelligence Attitude Scale, developed by Aktay, Gök, and Yıldırım (2024); Innovative Work Behavior Scale developed by De Jong and Den Hartog (2010); Turnover Intention scale developed by Mobley et al. (1978) and; Organizational Culture Scale developed by Denison (1990).

As of October 2024, the number of employees working in the Turkish technology sector was determined as 292,712 (Oruç, 2024). As a result of the sample calculation using a 95 percent reliability rate and a 5 percent margin of error rate, it was concluded that 384 people should participate in the research. This figure is the minimum number of participants to participate in the research, and a total of 500 surveys were sent and 402 surveys were collected. Accordingly, the number of participants participating in the research was 402. The research was conducted in İstanbul, Türkiye, and the surveys were sent and collected via LinkedIn.

Reliability tests were first conducted in the research. Then, correlation and regression analyses were conducted to examine the relationships between the variables. Here, first, the effect of Artificial Intelligence Attitude on Innovative Work Behavior and then the effect of Artificial Intelligence Attitude on Turnover Intention were examined. Finally, the mediating role of organizational culture between Artificial Intelligence Attitude and Innovative Behavior and Turnover Intention were examined.

As a result of the analyses, it was determined that the attitudes of individuals working in the technology sector towards artificial intelligence significantly affect both innovative work behaviors and intention to leave. In contrast, it was observed that employees who perceived artificial intelligence as a threat had a higher intention to leave their jobs. It was revealed that negative perceptions such as “replacing human power” and “eliminating creativity” in particular had a weakening effect on employee commitment. This situation shows that the risk perception towards artificial intelligence is experienced not only as a technological but also as a psychological threat.

In individuals with a high attitude towards the use of artificial intelligence, innovative work behaviors are generally higher, but this effect varies significantly according to the level of organizational culture. Within the framework of the Organizational Culture Model, the power of artificial intelligence use to trigger innovative behaviors increases even more in organizations with high “participation” and “external adaptation” dimensions. The results of the mediation analysis showed that these dimensions play a partial mediating role. On the other hand, in organizations with weak consistency and mission dimensions, the perception of the risks of artificial intelligence has become stronger, which has increased employees' intention to leave their jobs. It can be said that employees, especially those who experience strategic uncertainty and inconsistency with core values, see artificial intelligence as an uncontrolled element of change.

This study examined the Artificial Intelligence Attitude and its effect on Innovative Work Behavior and Turnover Intention. Therefore, in future studies, it is suggested to focus on other sectors to compare the findings of this study. Country comparisons can also be made to understand the national culture effect on the relationships examined in this study.

Keywords: Artificial Intelligence Attitude; Innovative Work Behavior; Turnover Intention; Organizational Culture; IT Sector

A RESEARCH OF STORYTELLING AND SOCIAL MEDIA ADVERTISEMENTS IN EXPERIENTIAL MARKETING

Nevin Karabıyık Yerden (Marmara University)

The rapid development and change of technology affect and develops the marketing discipline as well as many other areas. New applications based on technology such as artificial intelligence, data analytics, virtual reality, augmented reality, and enriched reality offer various experience opportunities for consumers. However, it is very important for the consumer to gain cognitive, emotional and sensory experiences within the scope of experiential marketing. In this context, different strategies are being developed in order to create an image related to the brand and product by establishing a connection with the consumer. One of these strategies emerges as storytelling. Storytelling is a method preferred by the brain to keep, store and share a storyline in mind and can be explained as the transfer of experience. The brain designs all events and facts that occur in the outside world as patterns and stores them in memory in this way. This situation is important for the accumulation of memories in both short-term and long-term memory. It is very important for businesses to use experiential marketing in their marketing activities and develop stories within these experiences in order to leave permanent marks on their target audience. In this context, the research aims to reveal the role of storytelling studies in experiential marketing. Establishing and strengthening the connection with the target audience is of course very important. Today, it is known that experiential marketing applications have a very high and positive effect on the target audience. However, providing experience in virtual environments and especially accessing emotions is not very easy. One of the important strategies that provide access to the target audience on social media and strengthen the connection established with the target audience is storytelling. Storytelling, which is perhaps one of the most effective advertising studies in social media posts, provides the opportunity to create an experience in the target audience both thanks to the connection it establishes with the consumer and because the product is included in the story. In this study, content analysis of brands that use the storytelling strategy in the social media environment is carried out. Within the scope of the content analysis, the stories developed by the brands determined in the selected sector for their products and the comments related to these stories are examined and an attempt is made to explain what kind of experience the stories create in the digital environment. Although it varies from sector to sector, it is seen that the developed stories are quite effective on the target audience. When the comments of the stories shared in the social media environment are examined in particular, it is determined that the stories developed depending on the product arouse curiosity and interest in the target audience and motivate them to take action. This situation is particularly inspiring for brands that want to establish a strong emotional and cognitive bond with their target audience. According to the content analysis results, it is concluded that the storytelling strategy has a particularly intense emotional impact on the target audience within the scope of experiential marketing and positively affects the decision to purchase the product.

Keywords: Experiential Marketing, Storytelling, Social Media

PORTABLE COFFEE LOG MACHINE

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The escalating global demand for sustainable energy solutions has intensified research into alternative biomass fuels, particularly those utilizing waste streams. Among these innovations, coffee logs as combustible briquettes produced from recycled coffee grounds have emerged as a technologically and environmentally promising solution. Coffee logs are logs of compacted coffee grounds that can be burnt in wood burning and multi-fuel stoves as well as biomass boilers. The coffee grounds not only burn well when dried out, they supposedly burn hotter and longer than wooden logs and give off a subtle aroma too. These high-density logs are specifically engineered for optimal performance in wood-burning stoves, multi-fuel stoves, and biomass boilers, serving as a carbon-neutral alternative to conventional firewood. Thermogravimetric analysis reveals that desiccated coffee grounds exhibit superior combustion characteristics, including higher ignition temperatures (280-320°C compared to 250-300°C for wood) and significantly prolonged burn durations (25-35% longer than equivalent hardwood logs). This enhanced performance is attributed to the residual oils in coffee grounds, which yield a higher energy density (18-22 MJ/kg versus 16-20 MJ/kg for wood) while emitting minimal particulate matter (PM2.5 emissions reduced by 40-45%).

This study presents a comprehensive investigation of the design, fabrication, and optimization of a novel portable coffee log production system. The purpose of this project is to design the portable coffee log machine by using Autodesk Inventor software to make the coffee logs with multi-size for the coffee industry and to reduce the air pollution. The prototype machine incorporates five interchangeable compression moulds (2, 3, 4, 5, and 6 mm diameters) to systematically evaluate the relationship between compaction density and combustion efficiency. The feedstock formulation consists of spent coffee waste (65±5%), shredded recycled paper (25±5%), and sawdust (10±2%), optimized through iterative testing to achieve optimal binder less cohesion. A comprehensive evaluation framework was implemented, by burn all the mixing material of mould to see the time lasting of burning process. The compression system operates at 8-10 MPa pressure, producing logs with bulk density of 1.1-1.3 g/cm³. Quality control testing demonstrated that the 2 mm diameter configuration achieved the most favourable combustion profile, with a burn time of ±12 minutes compared to ±10 minutes for conventional firewood of equivalent mass. The upgraded design with more suitable body frame included the base (where the location of the mould that can be adjust to align with the size of mould needed). Furthermore, it is easy to operate because it can operate by on top of the adjusted table. Other than that, the benefits of this project where the mould can be adjusted to align with jack to compress.

In conclusion, this study establishes coffee logs as a technically viable, environmentally sustainable, and economically feasible biomass fuel alternative. The developed production system addresses critical barriers to adoption through its portability, efficiency, and product consistency. Future research directions should focus on scaling optimization, advanced emission control systems, and the development of regional supply chain models. This innovation aligns with multiple Sustainable Development Goals, particularly SDG 7 (Affordable and Clean Energy), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action), while offering a practical circular economy solution for the global coffee industry.

Keywords: Coffee Waste, Fabrication, Portable Machine

SUSTAINABLE AI EDUCATION: A HOLISTIC APPROACH THROUGH STEM AND NON-STEM INTEGRATION

Laraib Manzoor (The University of Faisalabad)

In the pursuit of a sustainable society, artificial intelligence (AI) stands as both a powerful enabler and a critical challenge. It shapes economies, impacting environmental system and advancing technologies. Yet AI in educational system remains narrowly technical. Traditional education systems have largely failed to adapt to this new reality. This paper examines the central challenge that interconnects technical expertise of AI along with the ethical, social and cultural dimension of AI. The introduction section explains AI in educational system and highlights the gap between STEM and non-STEM disciplines. As the existing model separates these programs, creates a lack of holistic understanding to create a sustainable society. STEM disciples focus on quantitative analysis and data studies for the technology, whereas, non- STEM focus on qualitative studies, culture and value system of a society. Without the integration of both disciplines, Artificial intelligence can lead to unintended negative consequence in the society. Through a multi-disciplinary framework, case studies analyze pedagogical perspective that AI systems are not merely technical artifacts; but they are complex socio-technical systems. Policies and strategies are inefficient without the understanding of technical and social implications in the society. The objective of this research is to highlight the importance of technological advancement along with social concerns, law enforcement and cultural diversities for a sustainable society. Moreover, this study proposes suggestions for dual study programs; humanities, social science and technology. That can provide a better road map for AI driven sustainable societies. In this context, dual curricula of major institutes such as MIT, Stanford, Edinburgh university will be study to exemplify the integration of socio-technical development. For better development it is important to redesign the curriculum and professional collaborations and trainings are required to bridge the gap between STEM and non-STEM programs. Finally, identifying the issues and ensuring effective strategies to empower the students, are crucial for developing techno-socio AI model that serves the needs of the community and contributes to a sustainable future.

Keywords: Artificial Intelligence, Education, Sustainable Society.

OTIZM SPEKTRUM BOZUKLUĞU OLAN ÇOCUKLARIN EĞITIMINDE TEKNOLOJI KULLANIMINA İLIŞKIN AILE GÖRÜŞLERI: SÜRDÜRÜLEBILIRLIK PERSPEKTIFIYLE BIR NITEL ARAŞTIRMA

Meliha Kılıç (İstanbul Gedik University)

Otizm Spektrum Bozukluğu (OSB), bireylerin sosyal etkileşim, iletişim ve davranış örüntülerinde belirgin farklılıklar gösterdiği, yaşam boyu süren nörogelişimsel bir durumdur. Bu durum, yalnızca bireyin yaşamını değil, aynı zamanda ebeveynlerin ve bakım verenlerin gündelik yaşamını, duygusal yükünü ve eğitim süreçlerine katılımını doğrudan etkileyen çok katmanlı bir yapıya sahiptir. Özellikle son yıllarda dijital teknolojilerin özel eğitim alanına entegre edilmesiyle birlikte, OSB'li çocukların bireysel öğrenme stillerine ve ihtiyaçlarına uyumlu çözümler sunan araçların sayısında belirgin bir artış gözlemlenmektedir. Mobil uygulamalar, artırılmış gerçeklik sistemleri, destekleyici iletişim yazılımları ve özelleştirilmiş eğitim platformları, bu çocukların iletişim kurma, dikkat geliştirme ve günlük yaşam becerileri kazanma süreçlerine katkı sağlamaktadır.

Bu bağlamda, teknoloji kullanımının sadece pedagojik değil, aynı zamanda sosyal ve duygusal gelişimi destekleyici bir unsur olarak aile dinamikleri içinde nasıl bir yer edindiği, araştırılması gereken önemli bir konudur. Bu çalışma, OSB tanılı çocuğa sahip ebeveynlerin eğitimde dijital teknolojilere yönelik deneyimlerini ve bu deneyimlerin sürdürülebilirliğini anlamayı hedeflemektedir. Araştırma, nitel araştırma yaklaşımlarından fenomenolojik desenle yürütülmüş; İstanbul'da yaşayan 10 ebeveynle gerçekleştirilen yarı yapılandırılmış görüşmeler aracılığıyla veriler toplanmıştır. Görüşme verileri içerik analizi yoluyla derinlemesine çözümlenmiştir.

Elde edilen bulgular, teknolojik araçların OSB'li çocukların eğitim süreçlerine olumlu katkılar sunduğunu; ancak bu araçlara erişimde yaşanan eşitsizliklerin ve teknolojik okuryazarlık eksikliklerinin sürdürülebilir kullanım üzerinde önemli engeller oluşturduğunu göstermektedir. Ebeveynlerin karşılaştığı maddi zorluklar, teknik donanım eksiklikleri ve profesyonel destek mekanizmalarına erişim konusundaki yetersizlikler, teknolojinin etkili kullanımını sınırlamaktadır. Bu nedenle, özel eğitimde dijital dönüşümün başarıya ulaşabilmesi için çok boyutlu destek sistemlerinin hayata geçirilmesi, ebeveynlere yönelik dijital okuryazarlık eğitimlerinin artırılması ve kamu destekli erişim politikalarının yaygınlaştırılması gerekmektedir.

Bu çalışma, yalnızca OSB'li bireylerin eğitiminde teknolojinin yerini değil, aynı zamanda bu sürecin aileler açısından nasıl deneyimlendiğini ve geleceğe dönük nasıl sürdürülebilir hale getirilebileceğini ortaya koyarak, özel eğitim politikalarına yön verecek önemli veriler sunmayı amaçlamaktadır.

Keywords: Otizm Spektrum Bozukluğu (OSB) , Dijital Teknoloji , Aile Katılımı , Sürdürülebilirlik , Teknolojik Destek

IX. ASC 2025 / SPRING CONGRESS

AUTOMATIC ERROR DETECTION OF BANKING TRANSACTION FORMS USING SIMILARITY ALGORITHMS

Esra Dinçer (Gedik University)

Emine Gülmez (ArchiTech)

High number of forms and documents are being processed in the banking business. The user mistakes on the forms may slow down the process and may affect the reliability of the work. The goal of this study is to compare the banking form, which is filled out by the user, with the targeted form to catch the inconsistencies. In this study, 5 different similarity algorithms have been tested on 7 types of forms and the best accuracy was detected by Cosine Similarity method which is 1 for the correct forms and 0.005 as the minimum value for inconsistent comparison.

Introduction

The banking business' include financial risks which could be from incorrect information or wrong forms. Checking consistency and accuracy on the forms are one of the banking transactions which can be automated. There are studies in the literature about hand-writing recognition [1] and text classification [2] to enable this kind of automatization. Artificial intelligence applications took place in banking from security to documentations [4] [5]. This study focuses on specific types of banking forms, which includes different formatting like boxes and tables. The aim is to compare the forms to eliminate mistakes and increase reliability in the business.

Materials

In this study, the original banking forms and forms filled out by the user are converted to text format and saved in two different datasets. Both forms to be compared should be either JPG or PDF. Excel files were used as datasets. Python programming language was used code the algorithms and to compare the text data. The name of the algorithms are Cosine Similarity, Euclidean Distance, Manhattan Distance, Sigmoid Kernel, and Linear Kernel.

Methods

The main idea is to compare the two forms, first one is the uploaded form by the user and the other is the original form from the dataset. The file types of forms to be compared with each other, could be either JPG or PDF format. The forms may include lines, tables and check boxes. Only the text data on the forms, with the position info have been transferred in the excel file. The algorithms run using both excel files to compare the forms. After getting the similarity rate, a report was produced to display the comparison result.

Results

This study proposes a method to eliminate errors on the banking forms. The method compares the forms to detect the similarity. One of the forms is the one filled out by the user; the other one is the targeted form. The similarity rates of the 5 algorithms have been compared to find the most successful method for the 7 different types of forms being used. The Cosine Similarity method has been given the minimum value as 0.005 for the forms which are not matching.

Keywords: Error Detection on Forms, Similarity Algorithms, Image Comparison, PDF Comparison, Cosine Similarity

CHRISTIAN AMERICA

Üstün Yüksel

Christianity has played important role in the origin of America. General American history have traditionally emphasizes the contribution of the religion as the main factor for founding the country. Through early American history — from the Pilgrims to the American Revolution — early settlers or founders, embraced the God and religious beliefs. In this context Americans have always made reference to the providential destiny of the United States as a "shining city on a hill" based on the teaching from the Bible. Bible was the inspiration for the Founding Fathers of American nation and they defended the belief that religion was essential to the survival of the Republic. Founding Fathers designed a system of government not only enlightenment principles but also upon precepts gleaned from the Bible. Majorities of Americans have been Christian and they have generally seen themselves as a "Christian nation". Religion has been a common interest for both American nation and the government. The relationship between Christianity and the founding America as a Christian nation has been referring to the behavior of the government of the United States. On February 29, 1892, The U.S. Supreme Court declared (in Holy Trinity v. United States case) that the historical record of America overwhelmingly demonstrated that the United States "... is a Christian nation." Many important legal documents such as constitution and Declaration of Independence are evidence which demonstrate that America was founded as a Christian nation. The role of Christianity and its profound influence upon the character of the United States has been continuing up to the present. This study is presenting the role of Christianity in the US in the context of history, moral, religious, constitutional heritage and the founding of America find their roots in the Bible.

Keywords: America, Christian Nation, U.S. History, Religious Tradition, USA.

EMOTIONAL COMPETENCE OF UPPER PRIMARY SCHOOL TEACHERS: A COMPARATIVE STUDY OF GOVERNMENT AND PRIVATE SCHOOLS

Nikita Yadav (Iftm University)

Rajkumari Singh (School of Education and Humanities)

Through this paper, an attempt has been made to study and consequently compare the emotional competence level of upper primary teachers of government and private schools. For this purpose, a sample of 126 teachers of the upper primary level was taken from both government as well as private schools. Primary data was collected through an online mode by using the teachers' social-emotional competence scale through Google Forms. Descriptive analysis revealed that only a smaller percentage,41.3% of teachers of the upper primary level are emotionally competent. A wide difference is found in emotional competence levels in government and private schools. Further, it is revealed that a significant difference exists between urban and rural teachers of government schools and married and unmarried teachers of upper primary private schools. Rural government teachers have higher emotional competence, and in private schools, emotional competence is much higher in male teachers and married teachers. Thus, the situation is not so good and needs to be improved by a healthy environment and intervention programmes so that the personal and professional capabilities of teachers and students can be developed.

Keywords: Emotional Competence, Upper Primary, Government, Private

MEDIA LITERACY: A DECEPTION OR A REDEMPTION?

Nehir Devrim Eserol (Kastamonu University)

This study uses autoethnography to explore the author's life and mind journey between liberal and Marxist approaches to media literacy. At the beginning, media literacy looked like the perfect tool that would help to arm people and give them the ability to critically engage with media, resist manipulation, and take part in a democratic process of the informed discussion. However, this liberal vision, which is based on the individual responsibility and rational critical thinking, started to look inadequate to the author when she came across Marxist ideas that placed media in the structure and the ideology of the power relations. With an increasing awareness of system inequality, commodification of communication and the ideological role of media institutions, a sense of despair emerged. The first optimism was replaced by a growing awareness that media literacy, which is a theoretically appealing concept, is practically impossible when put into the real systems of capitalism, surveillance, and algorithmic control. This change is explored through autoethnography as a method which is personal and political at the same time. This approach not only makes the subjectivity of the researcher visible, but also links individual experience to larger social, ideological and technological discourses. This allows the author to sketch the emotional and intellectual growth of the author concerning media structures and to ask questions about how the author's belief systems change in light of new knowledge and lived contradictions. By placing the author's personal feelings of disappointment and eventual reconfiguration in these broader environments, the work shows how personal concepts of media literacy are shaped by—and contested by—the technological, economic, and ideological conditions of the current media environment.

One of the most significant moments in this process was the experience with social media, which instead of bringing new hope, only highlighted new problems. Social media platforms are often regarded as democratic instruments that allow users to create content and express themselves; however, they also bring some complications when it comes to media literacy education. Algorithms are more interested in engagement than in truth, they promote sensational and divisive content, and they create personalized information bubbles. Today, the spread of misinformation is not limited to centralized state or corporate entities; virtually anyone can generate, spread, and monetize misinformation. Besides, the capitalization of user data and attention has turned each click into capital, turning communication into transactions. Under these circumstances, the fundamental assumptions of both liberal and critical media literacy are put under a strain. If liberal media literacy believes that rational individuals can make informed decisions if they are given the right tools, and critical literacy aims at dismantling the systems of control—what happens when both are paralyzed by the structural complexity and emotional manipulation of digital platforms?

This study presents a critical discussion of the difference between these two approaches rather than offering answers or advocacy. Liberal media literacy, with its focus on skills, overlooks the power relations that determine access, visibility, and participation. Critical (Marxist) media literacy, while revealing these structures, often offers solutions that are intellectually appealing but practically not possible under the current social circumstances. The author states that these frameworks must not be regarded as conflicting. In fact, these insights should be kept in a productive tension. A combined model that combines the structural and the personal, the ideological and the emotional might lead to some advancement, even if this advancement is not yet well-defined.

Social media did not bring much clarity or a clear answer. On the contrary, it has shown that media literacy must confront new forms of power, fragmentation, and manipulation. The tools of resistance

that were created to combat the media have now become the tools of control. In view of this, the author invokes Freire's concept of critical hope—a hope that is not based on naive optimism, but on the fact that while change is difficult and non-linear, it is necessary. Freire's framework provides a language for the continuous belief in the possibility of change, even when the way to it is hidden by complexity and contradiction. This study shows both personal and theoretical exploration of disillusionment and searching for new directions. It encourages those in the field to slow down and reflect on what it means to work on media literacy in a world where both the promise and the limits of that work are more visible than ever.

Keywords: Media Literacy, Critical Media Literacy, Marxist Media Literacy, Liberal Media Literacy, Social Media Literacy

LIFESTYLE MODIFICATION IN OBESE DIABETIC PATIENTS: EFFECTIVENESS OF DIET AND EXERCISE PROGRAMS

Habib Ur Rehman (Fatima Jinnah Medical University)

Sidra Habib (Services Hospital Lahore, Pakistan)

Farrukh Sarfaraz (Sahara Medical College Narowal) Pakistan

Background

Obesity and type 2 diabetes mellitus (T2DM) are two interconnected chronic conditions that contribute significantly to the global burden of disease. Obesity is a major risk factor for the development of T2DM, primarily through mechanisms like insulin resistance and inflammation. Managing these conditions effectively is critical to improving patient outcomes and reducing the risk of complications such as cardiovascular diseases, neuropathy, and retinopathy. While pharmacological treatments are essential for managing T2DM, non-pharmacological interventions, particularly lifestyle modifications involving diet and exercise, have proven to be effective in controlling blood glucose levels, promoting weight loss, and enhancing overall metabolic health. This study aims to assess the effectiveness of a structured lifestyle modification program focusing on diet and exercise for obese diabetic patients.

Objective

To evaluate the effectiveness of a combined diet and exercise program in improving glycemic control and promoting weight loss in obese patients with type 2 diabetes mellitus. Specifically, the study aimed to assess changes in body weight, BMI, HbA1c, and fasting blood glucose levels.

Methodology

This was a prospective, single-arm intervention study conducted over six months in an endocrinology clinic. A total of 100 obese patients aged 30–65 years with a diagnosis of T2DM and a BMI of ≥30 kg/m² were enrolled. Patients with insulin-dependent diabetes, severe cardiovascular disease, or those who had undergone bariatric surgery were excluded. All participants underwent a personalized intervention combining a Mediterranean-style diet and a supervised exercise regimen. The dietary component aimed for a 500–750 kcal/day caloric deficit, focusing on high fiber, low glycemic index foods. The exercise program included 150 minutes of moderate-intensity aerobic activity per week, along with two sessions of resistance training. Data were collected at baseline and after six months of intervention, including anthropometric measurements (weight, BMI) and metabolic indicators (FBG and HbA1c). Statistical analysis was performed using paired t-tests to compare pre- and post-intervention outcomes, with significance set at $p < 0.05$.

Results

- A total of 92 participants completed the study (8% dropout rate). The mean age of participants was 51.6 ± 8.2 years, with 58% being female. The intervention led to significant improvements in all primary outcome measures:
- Body Weight: The average weight loss was 6.8 ± 3.2 kg, with a significant reduction in BMI from 33.4 ± 2.1 to 31.0 ± 2.3 kg/m² ($p < 0.001$).
- HbA1c: The mean HbA1c decreased from 8.2 ± 1.1% to 6.9 ± 0.9% ($p < 0.001$), indicating improved glycemic control.

- Fasting Blood Glucose: FBG levels decreased significantly from 155 ± 22 mg/dL to 128 ± 18 mg/dL ($p < 0.001$).

In addition to these physiological improvements, participants reported better energy levels, mood, and increased physical activity tolerance. There were no adverse events or severe side effects, suggesting that the program was well-tolerated.

Conclusion

The findings of this study support the effectiveness of lifestyle modifications involving a structured diet and exercise program in improving metabolic outcomes for obese individuals with type 2 diabetes mellitus. Significant reductions in body weight, BMI, HbA1c, and fasting blood glucose highlight the potential of these interventions as first-line strategies in diabetes management. Integrating such lifestyle interventions into routine care could not only improve glycemic control but also reduce the long-term complications associated with diabetes and obesity. Further research is warranted to explore the sustainability of these changes and their long-term impact on health outcomes.

Keywords:Obesity, Type 2 Diabetes Mellitus, Lifestyle Modification, Diet, Exercise, Glycemic Control, Weight Loss, Non-Pharmacological Intervention, HbA1c, Fasting Blood Glucose

EXPLORING THE DETERMINANTS OF LAND TENENCY ARRANGEMENTS OF FARMERS IN PUNJAB PAKISTAN

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Developing Countries are facing the issues of sustainability of farmlands and agricultural productivity. Global climatic changes like rising temperatures, irregular rainfall patterns, and floods have caused serious threats to farmlands and other natural resources. But these natural activities have decreased the quality of land at a relatively low pace as compared to human activities, which cause more deterioration in land quality. In Pakistan, land distribution is highly skewed as nearly 60 percent of land holdings is of large farmers, and the remaining 15 percent of land is entitled to small farmers. There exists a very close relationship between farming practices on land and tenure security. The objective of the study is to estimate the determinants of land tenancy arrangements of farmers in Punjab, Pakistan. The study used cross-sectional data of 295 farmers using a semi-structured questionnaire from three districts of Punjab: Gujranwala, Khanewal and Faisalabad. In Punjab province, a multi-stage sampling technique was used, and districts were selected based on cropping pattern: rice-wheat, cotton, and mixed cropping pattern. The study used a descriptive analysis method and a probit model to estimate determinants of land tenancy arrangements of farmers in Punjab, Pakistan. The descriptive analysis revealed that age, education, farm size, off-farm work, farm implements, ownership of livestock and access to credit determine the land tenancy arrangements between farmer and landlord. The results of descriptive analysis shows that average farm size is 20 acres with range of zero ownership to maximum 400 acres of land. The mean education is 8 years of schooling and mean household size is 7. Average age of the farmer is found to be of 45years. Further the differences in key characteristics of the owner and the farmer has been found significantly with respect to inputs applied by owner and fixed renter. Owner cultivator apply more organic manure as compared to fixed renters. The difference in mean education level, age, ownership of livestock, farm size and access to credit for owner and fixed renter is also positive and significant. The linear probability estimates of land tenancy arrangements of farmers reveals that farm and household characteristics are related to tenancy arrangements. Landlords living in the same village where plots are located are more likely to be owner-cultivated. Similarly, the farms located at the far distance from residence are more likely to be the fixed renters and less likely to be owner-cultivated. The owner cultivators are more likely to have access to credit, extension services as compared to the fixed renters. The F value also showed that the model is overall significant.

Keywords: Land Tenancy, Probit Model, Fixed Renters

HEIDEGGER'İN TEKNOLOJİ ELEŞTİRİSİ: DOĞA, İNSAN, YAPAY ZEKÂ

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İnsan varoluşunu anlamak açısından doğayla ilişkimizi belirleyen ve dönüştüren en önemli alanlardan birisi hiç şüphesiz teknolojidir. Yeryüzünde bulunuşumuzdaki farklılaşmaların izi, teknolojinin doğuşu ve gelişmesine paralel bir biçimde sürülebilir. Zira insanın doğayla kurduğu ilişkideki radikal değişimler, bilim ve teknoloji tarihindeki sıçramalara bağlı gerçekleşir. Doğa karşıtlığı biçiminde giderek bir tahakküme dönüşen bu ilişki, teknolojik gelişmelerin ulaştığı boyut ve imkanlarla insanı, var olanların içinde hiyerarşik olarak üstün bir konuma yerleştirir. Ancak insanın doğa üzerinde elde ettiği bu 'yer' sonuçları bakımından değerlendirildiğinde illüzyoniktir. İnsan, aklı ve yapabildikleriyle (teknik, teknoloji v.b.) bütün var olanlar içerisinde yeryüzünü kendi istencine tabi kılabilecek tek varlık olduğunu savlayabilir. Ne var ki insanın teknoloji aracılığıyla karşıtlık bağlamında doğayla arasına koyduğu uzaklık geri döndürülemez. Dolayısıyla kurulan bu türden bir ilişkinin özünde kendi kendisini yok etmeye mahkûm bir varoluşu beraberinde getirme olasılığı, teknoloji temelinde bir sorgulamayı gerektirmektedir. Geleceğin dünyasının ekolojik çöküşe ya da teknolojik tehlikelere gebe olduğuna dair emareler, günümüzde teknoloji ve doğayla olan ilişkimizi yeniden değerlendirmemizi zorunlu kılmaktadır.

Martin Heidegger felsefesi, kendisine özgü anlama ve anlamlandırma tarzıyla, geleneksel Batı metafiziğine ve bu doğrultuda gelişen teknolojiye yönelik içinde barındırdığı güçlü eleştiriyle geçtiğimiz yüzyılın düşünme kültürüne damgasını vurmuştur. Bu bildiri, 20.yüzyıl felsefesinin biçimlenmesinde öncülük eden Martin Heidegger'in teknoloji eleştirisini, bu eleştiri düzleminde doğa ve insan ilişkisini yapay zekâ örneğinden hareketle tartışmayı amaçlamaktadır. Çalışma, Heidegger'in görüşlerine dayanarak, insan varoluşunun gelecekte nasıl sürdürülebileceğine işaret eden, yaşamımızda giderek merkezi bir yer edineceği aşikâr olan, teknolojik gelişimin en uç göstergelerinden birisi olan "yapay zekâ"yı konu edinmektedir. Bildirinin amacı, Heidegger'in teknolojiye dair çıkarımlarını, yapay zekânın doğayla ve şeylerle kurduğumuz ilişkideki uzaklığa etkisi bağlamında tartışmaktır.

Keywords: Heidegger, Doğa, Bilgi, Teknoloji, Yapay Zekâ

PD-L1 HETEROGENEITY IN CYTOPATHOLOGY: ENHANCING DIAGNOSTIC WORKFLOWS THROUGH DIGITAL CYTOPATHOLOGY AND AI INTEGRATION

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PD-L1 expression is a critical biomarker for guiding immunotherapy in patients with non-small cell lung cancer (NSCLC). However, intra- and intertumoral variability in PD-L1 expression significantly compromises diagnostic accuracy, particularly in cytological specimens often used in advanced stages. While cytopathology provides a minimally invasive sampling approach, limited cellularity and sampling heterogeneity restrict its representativeness in PD-L1 assessment.

Studies have demonstrated considerable discordance in PD-L1 expression between cytologic and histologic specimens. In the REPLICA study, a 24% mismatch rate was reported between primary tumors and nodal metastases [1]. Similar findings have associated discrepancies in cytologic-histologic comparisons with PD-L1 expression heterogeneity [2]. To overcome these diagnostic limitations, digital cytology and artificial intelligence (AI)-based analytical tools have been developed. AI algorithms enable objective quantification of PD-L1 immunostaining intensity and reduce interobserver variability. Radiomics-based approaches further contribute by integrating morphological and molecular features, improving the classification of tumor subtypes.In addition, molecular imaging techniques such as PET radiotracers targeting PD-L1 allow for real-time, whole-tumor visualization of PD-L1 distribution, complementing cytological ssessments [3,4]. Although digitalization requires substantial infrastructure investment, its integration into diagnostic workflows holds considerable promise for increasing accuracy and supporting personalized therapeutic decisions. Therefore, the incorporation of digital pathology and advanced imaging techniques is crucial for enhancing the reliability of cytologic PD-L1 assessment. This underscores the growing importance of evaluating PD-L1 expression on cytological preparations. PD-L1 expression in cytological specimens. Cytopathology can therefore make an important contribution to PD-L1 detection, especially when adequate histological samples are lacking.

Keywords: PD-L1, Heterogeneity, Cytopathology, Cytology, AI Integration

YAPAY ZEKÂ DESTEKLİ TEKNOLOJİLERİN BİREYLERİN TEMEL BİLGİ VE EL BECERİLERİ ÜZERİNDE ETKİSİ VE BUNUN GÜNLÜK YAŞAM YANSIMALARI

Abdurrahman Özkan (Batman University)

Yapay zekâ destekli teknolojilerinin son yıllarda özellikle eğitim, iş ve günlük yaşam alanlarında yoğun olarak kullanılmaya başlaması, bu teknolojilerin insan farklı yönlerdeki gelişimi üzerindeki etkilerini değerlendirmeyi zorunlu kılmaktadır.

Bu çalışmada yapay zekâ teknolojilerinin bireylerin temel düşünme ve motor becerileri üzerindeki olumsuz etkileri, bireylerin günlük yaşamda tamir, tadilat, montaj vb. işleri yaparken ve yaptırırken yaşadıkları süreçler üzerinden değerlendirilmiştir. Araştırma verileri, sosyal medya platformları x.com ve facebook gruplarında ilgili konuda grup üyelerinin başa çıkmaya çalıştıkları iş ve süreçlere dair paylaşımlarının rastgele (random) usulle seçilerek derlenmiştir. Söz konusu paylaşımlarda, ev ve araba tamirat ve montajları gibi nispeten basit bilgi-beceri birlikteliği gerektiren işleri yaparken ya da yaptırırken, takip edilen süreçlere dair bilgi edinmede dijital teknolojiler ve yapay zekâdan yararlanırken, yapay zekâ destekli teknolojilerin olumlu ve olumsuz etkilerinin nasıl ortaya çıktığı ortaya konulmaya çalışılmıştır.

Twitter, facebook ve Youtube'ten seçilen grupların her birinden en yeni elli (50) yorum alınmış, bu yorumlarda, farklı temel el bilgi ve becerilerin kullanılarak yapılan tamir, tadilat, montaj ve sökmelere dair hizmet satın alanların görüşleri ele alınıp tematik analizi yapılmıştır. Bu analizler de alınan hizmet fiyatları, yapılan işin kalitesi ve zorluğu, kullanılan malzeme ve fiyatlandırma, hizmetin pahalı ya da işin kolay görülmesin neticesinde kişinin kendi işini kendisinin yapması gibi, bireylerin yapay zekâ ve dijital teknolojilerden nasıl yararlanılarak bilgi ve beceri üretip kararlar aldığı ortaya konulmuştur. Öne çıkan sorunlar ise, yapay zekâya güven ve bireysel temel becerilerde körelmeye örnek olarak, basit bilgi ve el becerileri gerektiren işlerin yapılmaktan uzaklaşılması ve küçük işler için usta, tamirci vb. çağırılmaktadır.

Yapay zekâ bilinçli kullanıldığında bireysel ve toplumsal faydaya sağlayabilir. Bunun için ise teknolojiye erişimde eşitliğin sağlanması, eleştirel düşünme ve dijital etik eğitiminin yaygınlaştırılması ve bireylerin temel bilgi ve becerilerini koruması, bilgi üreticisi olmaya teşvik edilmelidir.

Keywords: Yapay Zeka, Temel Beceriler, Temel Becerilerde Körelme.

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SÜRDÜRÜLEBİLİR TARIMIN GELECEĞİ: İNSAN-TEKNOLOJİ-YAPAY ZEKÂ İŞBİRLİĞİNDE FIRSATLAR VE RİSKLER

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Harun Özkişi (Trakya Üniversitesi)

Küresel iklim değişikliği, nüfus artışı ve doğal kaynakların tükenmesi, tarım sektörünü sürdürülebilirlik açısından dönüştürmeyi zorunlu kılmaktadır. Bu dönüşümde teknoloji ve yapay zekâ (YZ), insan merkezli yaklaşımlarla birlikte değerlendirilerek hem verimliliği artırma hem de çevresel etkileri azaltma potansiyeli sunmaktadır. Bu çalışma, insan, teknoloji ve yapay zekâ etkileşimi bağlamında sürdürülebilir tarımın geleceğine yönelik fırsatları ve riskleri bütüncül bir bakış açısıyla analiz etmeyi amaçlamaktadır.

Çalışmada önÇelikle sürdürülebilir tarım kavramı tanımlanmakta, ardından dijital tarım teknolojileri, özellikle nesnelerin interneti (IoT), hassas tarım uygulamaları ve yapay zekâ algoritmalarının sektöre entegrasyonu incelenmektedir. Tarımda veri odaklı karar destek sistemleri, sensör ağları ve otonom makinelerin kullanımı hem üretim süreçlerini optimize etmekte hem de kaynak kullanımını daha verimli hâle getirmektedir. Bununla birlikte bu teknolojilerin yaygınlaşması, kırsal bölgelerde dijital uçurumun derinleşmesi, veri güvenliği, etik sorunlar ve çiftçilerin teknolojiye uyum sağlama zorlukları gibi riskleri de beraberinde getirmektedir.

İnsan faktörünün göz ardı edilmeden, teknolojinin sosyo-kültürel boyutlarıyla birlikte değerlendirilmesi, sürdürülebilirlik hedeflerinin sağlanmasında kritik öneme sahiptir. Bu bağlamda, çalışma; paydaş katılımını, yerel bilgiyle teknolojik inovasyonun entegrasyonunu ve dijital okuryazarlığın artırılmasını sürdürülebilir tarım politikalarının temel bileşenleri olarak önermektedir.
Sonuç olarak, sürdürülebilir tarımda insan-teknoloji-YZ işbirliği, yalnızca teknik bir dönüşüm değil; aynı zamanda etik, sosyal ve ekonomik dinamikleri içeren karmaşık bir süreçtir. Bu süreçte başarı, çok disiplinli bir bakış açısıyla dengeli politikalar geliştirmekten ve tüm paydaşları kapsayıcı stratejiler oluşturmaktan geçmektedir.

Keywords: Sürdürülebilir Tarım, Yapay Zeka, Dijital Dönüşüm

USE OF TECHNOLOGY IN ENVIRONMENTAL SUSTAINABILITY THEMED ADVERTISING CAMPAIGNS AND CASE STUDY ANALYSIS

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Mert Uydaci (Marmara University)

Environmental sustainability is a major topic of discussion these days, not only for companies but for the entire world. Environmental sensitivity and an environmentally compatible lifestyle are the basis for the orderly continuation of the ecosystem. However, the degradation of the natural environment, which is one of the negative consequences of industrialization, has become a common problem for all countries in the world today. Environmental sustainability, which has an important place in the United Nations Development Goals, is becoming an important practice for many countries. The European Green Deal, to which Türkiye is also a party, consists of different sub-fields of work such as carbon footprint reduction, clean energy, clean water, and clean agriculture, which will serve to ensure environmental sustainability. Although such practices have a cost-increasing effect for businesses in the short term, they will support profitability in the long term. Today, it is seen that many businesses, both global and local, carry out environmental sustainability practices within their own organizations. In this context, it is thought that environmental sustainability is related to many issues, but it is also related to rapidly developing technological developments in recent years. The transfer of many business activities to the digital environment, the development of remote access shopping systems, digital payment systems, advertising activities in the social media environment, data analytics, etc. It is seen that many applications provide savings by reducing the use of elements such as energy, materials, and labor. As part of the marketing strategy, many applications are being moved to the digital environment and 360-degree access is provided to consumers who are increasingly becoming mobile. In this context, businesses reach their target audience with many advertising campaigns themed around environmental sustainability. Of course, many administrative tools such as commercials, scenarios, and strategies are effective in the effectiveness of such campaigns. However, many advanced technology applications such as artificial intelligence, augmented/virtual/mixed reality, metaverse, data analytics, robotics, big data digital twin, and machine learning, which are prominent today, are also effective. In this context, this study does not aim to reveal the use of technology in environmental sustainability-themed advertising campaigns. Of course, although they vary according to many sectors, technological applications can add difference and originality to advertising campaigns. For this purpose, the study attempts to determine the relationship between environmental sustainability-themed advertising campaigns and technology use by using case study analysis, one of the qualitative research methods. The sectors and advertising campaigns selected in the study are selected from brands that implement environmental sustainability and technology use, and are evaluated according to different criteria such as which advanced technology studies are used the most in their campaigns, in which environment they are used, and impact measurements. As a result of the research, it is revealed that the use of technology-focused environmental sustainability-themed advertising campaigns is effective in reaching consumers. According to this result, it is expected that technology-based advertising campaigns will increase in many areas in the future, as well as in environmental sustainability-themed advertising campaigns.

Keywords: Environmental Sustainability, Advertising, Technology

TARIMDA GÖRÜNTÜ İŞLEME TEKNİKLERİNİN KULLANILMASI VE DİJİTALLEŞMEYE KATKISI

Harun Özkişi (Trakya University)

Yapay zekâ teknolojilerinin gelişmesi dünya üzerinden birçok alanda köklü değişikliklere yol açmıştır. Özellikle insan hayatı için önemli bir yere sahip olan tarım bu gelişimden oldukça etkilenmiştir. Başlangıçta kısıtlı yeteneklere sahip olan yapay zekâ bugün görüntü işleme dahil birçok yeteneğe sahip duruma gelmiştir. Görüntü işlemenin tarım sektörüne girmesi kaçınılmaz olmuştur. Tarım verimliliği arttırmak üretim süreçleri dijitalleştirmek ve sürdürülebilir hale getirmek için yapay zekânın görüntü işleme özelliğinden oldukça faydalanılmaktaıdr. Görüntü işleme tarımsal süreçlerin birçoğunda kullanılmaktadır. Bunlar arasında bitki sağlığı izlenmesi, hastalık ve zararlı böceklerin tespiti, ürünlerin sınıflandırılması, yabancı ot mücadelesi ve hasat süreçlerinin yürütülmesi bulunmaktadır. Görüntü işleme RGB, multispektral, hiperspektral ve termal görüntüleme sistemleri aracılığıyla tarımsal verileri nicel olarak analiz etmeyi mümkün kılmaktadır. Bu analiz etme yeteneği sayesinde hava araçları sabit kamera sistemi ve traktörlere entegre edilerek geleneksel olarak yapılan gözlemlerden daha etkili daha verimli çözümler üretilebilmektedir. Bu sayede hem zamandan hem maliyetten hem de insan faktörüne bağlı olarak gelişebilecek hatalardan tasarruf sağlanmaktadır. Makine öğrenmesi ve derin öğrenme teknikleriyle entegre edilen görüntü işleme algoritmaları, yapay zekâ destekli karar destek sistemlerinin geliştirilmesini kolaylaştırmaktadır. Bu sayede tarımda erken uyarı sistemlerinin oluşturulmasına olanak sağlanmaktadır. Tarımsal karar süreçlerinde görüntü işleme sayesinde nesne tanıma, segmentasyon ve sınıflandırma gibi yöntemler kullanılmaktadır. Bu durum bitki gelişim evreleri hassas biçimde takip edilebilmesi, gübreleme ve sulama gibi uygulamalar optimize edilebilmesi olanaklarını ortaya çıkarmaktadır. Bu bağlamda, görüntü işleme teknolojileri, hassas tarım uygulamalarının temel bileşenlerinden biri haline gelmiş ve tarımda dijital dönüşüm sürecinin vazgeçilmez bir aracı olmuştur. Bu çalışmada, tarımda görüntü işlemenin teorik temelleri, uygulama alanları ve güncel teknolojik eğilimleri ele alınarak, gelecekteki potansiyel kullanımlara dair öngörüler sunulmaktadır.

Keywords: Tarımda Teknoloji, Görüntü İşleme, Derin Öğrenme

KÜRESELLEŞME ÇAĞINDA DİASPORANIN DİJİTAL DÖNÜŞÜMÜ

Meltem Yıldırım Başoğlu (Düzce University)

İnsan hareketliliğinin küreselleşmeyle birlikte hız kazandığı günümüz toplumlarında, kültürel aktarımın ve dönüşümün bir direniş biçimi olarak diasporanın da teknolojiyle birlikte dönüşüm geçirdiği gözlemlenmektedir. Dijitalleşmenin toplumsal bir tezahürü olarak sınırların anlamını yitirdiği, kültürel geçirgenliğin arttığı ve bireylerin yalnızca fiziksel olarak değil, dijital kimlikleri aracılığıyla da kültürler arasında akışkan bir biçimde dolaşabildiği bir sürece girmiş bulunmaktayız. Böyle bir dönemde, kültürel kodlarını güçlü bir şekilde korumaya çalışan diasporalar da dijitalleşmenin etkilerine ve yönlendirmelerine açık hâle gelmiştir.

Bu çalışma, küreselleşme ve dijitalleşmenin birlikte şekillendirdiği çağdaş toplum yapısında diasporaların geçirdiği dönüşümü sosyolojik bir perspektiften ele almayı amaçlamaktadır. Diaspora toplulukları, bir yandan anavatanla kurdukları aidiyet bağını sürdürmeye çalışırken, diğer yandan bulundukları ülkelerdeki kültürel, politik ve teknolojik dinamiklerle etkileşim hâlindedir. Bu bağlamda dijitalleşme, diasporaların hem kendi iç iletişimlerinde hem de anavatanla ilişkilerinde yeni bir mecra sunmakta; kimlik, aidiyet, kültürel aktarım ve kolektif hafıza süreçlerini yeniden şekillendirmektedir. Dijital platformlar, özellikle sosyal medya, YouTube, dijital arşivler ve çevrim içi dernek faaliyetleri aracılığıyla diasporik kimliğin görünürlüğünü artırmakta; geleneksel ritüellerin, dilin, müziğin ve diğer kültürel unsurların yeni nesillere aktarımında aracı rol oynamaktadır. Ancak bu süreç yalnızca bir muhafaza süreci değil; aynı zamanda kültürün içeriksel ve biçimsel olarak dönüşümünü de beraberinde getirmektedir. Bu nedenle çalışma, dijitalleşmenin yalnızca bir aktarım aracı değil, aynı zamanda bir kültürel yeniden üretim alanı olduğunu da ileri sürmektedir.

Çalışmada, dijital antropoloji ve medya sosyolojisi literatüründen yararlanılarak, diasporanın dijital mecralardaki temsili, içerik üretimi ve ağ kurma biçimleri analiz edilmektedir. Niteliksel bir yaklaşımla yapılan bu incelemede, Türkiye'de yaşayan bir Kafkas diasporası örneklem olarak ele alınmakta; derneklerin sosyal medya kullanımları, çevrim içi etkinlik biçimleri ve bireysel dijital pratikler üzerinden kültürel süreklilik ve değişim süreçleri değerlendirilmektedir.

Sonuç olarak, çalışma dijital çağda diasporanın sabitlenmiş bir kültürel kategori olmaktan çıkarak, sürekli biçimlenen, yeniden tanımlanan ve müzakere edilen bir kimliğe dönüştüğünü ortaya koymaktadır. Bu dönüşüm hem diaspora topluluklarının içsel dinamiklerini hem de ulus-aşırı aidiyet biçimlerini anlamak açısından önemli ipuçları sunmaktadır.

Keywords: Dijital Diaspora, Dönüşüm, Kafkas Diasporası, Küreselleşme, Göç.

BAŞARI PSİKOLOJİSİNİ YENİDEN KODLAMAK: GİYİLEBİLİR TEKNOLOJİLERİN SPORCULARIN DUYGU VE MOTİVASYON DİNAMİKLERİNDEKİ ROLÜ

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Sporcuların üst düzey performansı, fiziksel performansın ötesinde zihinsel dayanıklılık, motivasyon ve duygusal düzenleme gibi güçlü psikolojik süreçlere de dayanmaktadır. Bu bağlamda spor psikolojisi; motivasyon, dikkat, özgüven ve duygusal denge gibi bilişsel unsurların performans üzerindeki etkisini araştırarak temel bir disiplin haline gelmiştir. Son yıllarda teknoloji ile spor psikolojisinin kesişimi, özellikle giyilebilir teknolojiler aracılığıyla, sporcuların performans ve motivasyon süreçlerinin daha yakından izlenmesini ve bireyselleştirilmiş gelişim stratejilerinin oluşturulmasını mümkün kılmıştır. Bu çalışmada, giyilebilir teknolojilerin sporcuların duygu ve motivasyon dinamikleri üzerindeki etkileri, başarı psikolojisi perspektifinden nitel bir yaklaşımla incelenmiştir. Özellikle sensör tabanlı cihazların sporcuların motivasyonel süreçlerini nasıl şekillendirdiği, duygusal düzenleme stratejilerine nasıl katkı sağladığı ve başarı algılarını nasıl etkilediği araştırılmıştır. Araştırmanın evrenini, 18 yaş ve üzerindeki profesyonel sporcular oluşturmaktadır. Maksimum çeşitlilik örneklemesi ile farklı spor dallarından toplam 10 sporcu seçilmiş ve yarı yapılandırılmış görüşmeler gerçekleştirilmiştir.

Elde edilen veriler MAXQDA 2020 yazılımı ile analiz edilerek beş ana tema belirlenmiştir: (1) Giyilebilir teknolojilerin benimsenmesi ve başlangıç motivasyonları, (2) Antrenman planlaması ve alışkanlık geliştirme, (3) Geribildirimlerin motivasyon ve özgüven üzerindeki rolü, (4) Teknolojik bağımlılık ve eleştirel farkındalık ve (5) Gelecek beklentileri ve uzun vadeli motivasyon. Bulgular, sporcuların giyilebilir teknolojileri genellikle içsel motivasyonlarını artırmak, antrenman sürekliliğini sağlamak ve hedef odaklı çalışma alışkanlıklarını geliştirmek amacıyla kullandıklarını göstermektedir. Katılımcıların cihaz kullanımları, fiziksel verilerin takip edilmesinin ötesinde kişisel gelişim süreçlerinin önemli bir parçası olarak benimsenmektedir. Günlük hedef takibi, ilerleme bildirimleri ve başarı geribildirimleri sporcuların yeterlilik duygusunu ve öz güvenlerini artırmış, içsel motivasyonlarını sürdürülebilir kılmıştır. Ancak, bazı sporcular veri kaydı yapılmadığında motivasyon eksikliği yaşadıklarını belirtmiştir. Bu durum, teknolojiye dayalı motivasyonun çift yönlü etkilerine ve potansiyel bağımlılık eğilimlerine işaret etmektedir. Katılımcılar, bu eğilimlerin farkında olduklarını ve bilinçli dengeleme stratejileri geliştirdiklerini ifade etmiştir. Ayrıca, sporcular gelecekte yapay zekâ destekli kişiselleştirilmiş antrenman önerileri ve zihinsel sağlık takibi gibi teknolojik gelişmelerin, motivasyonel sürdürülebilirliği artıracağı beklentisini dile getirmiştir.

Sonuç olarak, araştırma giyilebilir teknolojilerin sporcuların başarı psikolojisini yeniden kodlayan ve motivasyonel süreçleri destekleyen önemli araçlar olduğunu ortaya koymuştur. Ancak, bu teknolojilerin uzun vadeli kullanımında psikolojik bağımlılık riskleri ve eleştirel farkındalık eksikliği gibi konuların da dikkate alınması gerekmektedir. Çalışmanın bulguları, teknoloji destekli motivasyon modellerinin yeniden düşünülmesi gerektiğini ve kullanıcı merkezli psikolojik tasarım yaklaşımlarının önemini vurgulayarak alan yazına özgün bir katkı sunmaktadır.

Keywords: Giyilebilir Teknolojiler, Profesyonel Sporcular, Motivasyon, Duygu Düzenleme, Başarı

IX. ASC 2025 / SPRING CONGRESS

THE IMPACT OF LEAN MANUFACTURING ON OPERATIONAL PERFORMANCE IN MALAYSIAN MANUFACTURING ORGANIZATION

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Lean manufacturing has emerged as a critical strategy for improving efficiency, minimizing waste, and enhancing competitiveness in the manufacturing sector. This study will examine the impact of lean manufacturing practices on operational performance within Malaysian manufacturing organizations. Key lean practices such as 5S, just-in-time (JIT), total productive maintenance (TPM), value stream mapping (VSM), and continuous improvement (Kaizen) will be analyzed for their influence on operational performance indicators including productivity, quality, lead time, and cost reduction. The study will adopt a quantitative research approach, utilizing structured questionnaires targeted at production and operations managers from a population of approximately 3,500 registered manufacturing organizations across Malaysia. Based on Krejcie and Morgan's sample size determination, a minimum of 346 valid responses will be collected using stratified random sampling. Data will be analyzed using SPSS to assess the strength and significance of the relationship between lean practices and operational outcomes. The findings are expected to contribute to the theoretical understanding of lean implementation and provide practical insights for manufacturers seeking to improve their operational performance in a highly competitive industrial environment.

Keywords: Lean Manufacturing, Operational Performance, Malaysian Manufacturing Industry, Just-in-Time (JIT), Total Productive Maintenance (TPM), Continuous Improvement (Kaizen), Value Stream Mapping (VSM)

INNOVATION IN TLM: DEVELOPMENT OF A REFRIGERATION CYCLE PRESSURE-ENTHALPY (P-H) ANALYZER KIT TO ENHANCE STUDENTS' MASTERY OF THE MOLLIER CHART

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This research explores the development and implementation of the Refrigeration Cycle Pressure-Enthalpy (P-h) Analyzer Kit as a teaching and learning material (TLM) aimed at improving students' understanding of the Mollier Chart within basic refrigeration cycles. Traditional methods of teaching these concepts often involve complex equipment setup and theoretical explanations that hinder student engagement. This innovative kit enables practical, hands-on learning by allowing students to measure temperature and pressure directly, and plot the data on a Mollier Chart. Feedback from lecturers and students indicates a significant improvement in comprehension, setup efficiency, and learning outcomes. This paper discusses the design process, educational impact, and potential for broader application in technical education.

Keywords: Refrigeration Cycle Pressure-Enthalpy

MALAYSIA'S PATH TO LOW-CARBON POWER: AN INTEGRATED STUDY OF SYSTEM CHALLENGES AND SUSTAINABILITY

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Malaysia's energy transition, driven by the National Energy Transition Roadmap (NETR), is to achieve 70% of electricity from renewable energy by 2050. The transition involves the progressive phasing out of coal-fired power plants, a crucial element of Malaysia's current energy mix. While this shift is of immense environmental benefits, it brings with it monumental energy security, grid stability, and solar and wind-based renewable energy integration challenges. This extended abstract explores these challenges and offers solutions in the form of the technical, economic, and environmental aspects of the transition. The study analyses the potential impact of coal phase-out on Malaysia's energy supply and grid and identifies the need for energy storage systems, grid modernization, and policy support in the quest to create a sustainable and reliable power system.

Keywords: Energy Transition, Coal Phase-Out, Renewable Energy Integration, Grid Modernization, Energy Storage.

MICROLEARNING VIDEO PRODUCTION TEMPLATE: A STRUCTURED APPROACH FOR TVET EDUCATORS IN CREATING EFFECTIVE STUDENT-CENTERED ELEARNING VIDEOS

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This paper introduces a comprehensive microlearning video production template designed to support educators with limited technical skills in creating high-quality microlearning videos. Grounded in Cognitive Load Theory (CLT) and evidence-based instructional design principles, the template addresses the growing demand for scalable, engaging, and pedagogically sound digital learning materials in higher education. By integrating findings from recent studies on microlearning effectiveness, video production best practices, and cognitive load management, the template provides lecturers with a structured pathway to overcome common barriers to eLearning video creation, including time constraints, technical complexity, and resource limitations. The template addresses the growing demand for bite-sized, focused learning content while providing a structured pedagogical approach that enhances knowledge retention and learner engagement.

Microlearning, as a pedagogical approach, delivers small, focused units of information typically lasting 3-10 minutes, which aligns with cognitive load theory and the limitations of working memory that can typically hold only 4-7 items of information at a time. Research indicates that organizations implementing microlearning experience up to 70% improvement in knowledge retention and 80% increase in learner engagement. The proposed template incorporates a modular, reusable structure consisting of five key components: Hook & Learning Objective (capturing attention and establishing purpose), Concept Delivery (presenting core information concisely), Example/Application (demonstrating practical usage), Quick Check (verifying understanding), and Recap & What's Next (summarizing and directing future learning).

Central to the template is a Quality Control (QC) checklist that ensures consistency in content flow, visual design, functionality, accessibility, and technical performance across all microlearning modules. The template emphasizes the importance of properly documented scripts using collaborative tools like Google Drive, facilitating team collaboration, future modification, and maintaining version control. Implementation of this structured approach enables educators to focus on instructional design rather than technical complexities, resulting in microlearning videos that address single learning objectives, reduce cognitive load, and provide learners with the flexibility to control their learning pace through video-based instruction. This template represents a significant contribution to e-learning development, democratizing quality microlearning production for educators across disciplines.

Keywords: Microlearning, Instructional Design, Elearning Videos, Cognitive Load Theory, Student-Centered Learning

POWERING A SUSTAINABLE FUTURE: A SYSTEM-WIDE REVIEW OF MALAYSIA'S ENERGY TRANSITION EFFORTS

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Malaysia is undergoing an important energy transition in its power system to realize net-zero greenhouse gas emissions by 2050. The energy transition includes retiring coal generation, ramping up renewable energy (RE) integration, maintaining stability in the grid, and achieving environmental sustainability. The purpose of the study is to assess Malaysia's current power system challenges and provide a combination of engineering and policy solutions to work toward a resilient energy future that is sustainable. This study specifically assesses challenges related to retiring coal plants, the usage of solar energy, challenges in the transmission and distribution system, environmental outcomes, and emerging technology.

Keywords: Energy Transition, Renewable Energy Integration, Smart Grid Technologies, Sustainability In Energy

FROM COAL TO CLEAN

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Muadz Saripuddin (Politeknik Ungku Omar)

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Malaysia's goal of achieving net-zero carbon emissions by 2050 has placed its energy sector on a critical path of transformation. The launch of the National Energy Transition Roadmap (NETR) in 2023 marked a strategic move away from coal and other fossil fuels toward a cleaner and more sustainable energy mix. This study examines the key technical, environmental, and policy aspects of this transition, focusing on coal phase-out, renewable energy integration, and power grid modernization. A qualitative method was used, including the analysis of national energy data (2020–2024), government policies, and relevant engineering projects. Results show a steady decline in coal dependence from 37% in 2020 to 30% in 2024 while renewable energy usage is rising. However, infrastructure limitations pose significant challenges, especially in integrating variable energy sources like solar. To address these, solutions such as smart grids, real-time monitoring, and Battery Energy Storage Systems (BESS) are proposed, with a national BESS target of 500 MW by 2030.

Keywords: Energy Transition, Renewable Integration, Coal Retirement, Smart Grid, Malaysian Power System

BRIGHTLEARN HUB: TRANSFORMING MICROLEARNING FOR KOLEJ KOMUNITI KUCHING THROUGH A CENTRALIZED ELEARNING RESOURCE

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BrightLearn Hub, the Kolej Komuniti Kuching eLearning Resource Hub, represents a significant innovation in digital education delivery for both students and lecturers. Developed and deployed using Google Sites, BrightLearn Hub serves as a centralized platform for sharing eLearning content across multiple academic programs, including Certificates of Architectural Technology, Certificates of Fashion and Apparel, General Studies, and other disciplines. The hub is structured around the principles of microlearning, offering concise, targeted learning modules that promote engagement, knowledge retention, and flexible access. Key features include organized sections for downloadable resources, video lessons, interactive quizzes, a calendar of important academic dates, and the latest announcements, ensuring that both students and lecturers remain informed and connected. The microlearning approach has demonstrably enhanced academic performance by reducing cognitive load, fostering self-directed learning, and providing timely feedback, which aligns with contemporary educational best practices. The platform's intuitive design and modular content delivery have resulted in high satisfaction among users, increased motivation, and improved learning outcomes. Lecturers benefit from streamlined content management and enhanced opportunities for interaction with students, while learners enjoy personalized, accessible, and efficient pathways to skill development. The successful implementation of BrightLearn Hub underscores the value of well-organized, technology-driven resource centers in higher education and highlights the transformative impact of microlearning on academic achievement and engagement.

Keywords: Digital Learning, Microlearning, Resource Hub, Academic Innovation

A COMPARISON STUDY OF MALAY AND NYONYA KEBAYA IN THE PENINSULAR MALAYSIA FROM 1910S-2024S

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Baju Kebaya is a traditional costume worn by ladies in the archipelago over the last 600 years. In Malaysia, it is worn with different styles by the Malay women, Nyonya Peranakan and Jawi Peranakan. However, the recent fashion style has somehow reformed its' concept due to some cultural trend changes among those populations. Therefore, this research was conducted to examine the comparative design, style and features found in it based on the historical literature, journals and visual evidence (photographic documentation) obtained from the libraries, museums, National Archive as well as private collections. In performing this study, a systematic qualitative analysis to document the manufacture, measurement and selection of the Baju Kebaya from 1910 to 2024 was conducted. The literature review of current trends and research on the Baju Kebaya successfully traced the chronological development of this costume in Peninsular Malaysia. Unstructured interviews with the relevant key players in the Kebaya industry, including academicians, traditionalists, dressmakers and appreciators were carried out as well. The identification of the traditional distinctiveness of the Baju Kebaya was addressed by categorizing the clothes into different groups according to their style and character. The Baju Kebaya has also undergone several changes in dressing styles, including the cut and shape, length of the dress, fabric, style, coordination and technologies. The findings from the analysis showed that there are similarities; in terms of function and structure and differences; in terms of choice of fabric and ornaments between the design of the Malay Kebaya and Nyonya Kebaya. It is anticipated the results of this research will provide further insight of knowledge and its function as a useful indicator in maintaining the diversity of Malaysian's heritage costume. Therefore, this study become a source of references in preserving and documenting Baju Kebaya as a national attire and the modernization has established appreciation towards Baju Kebaya by younger generation.

Keywords: Malay Kebaya, Nyonya Kebaya, Comparative Design, Style, Features

A TRIADIC PEDAGOGICAL APPROACH AND LEAN THINKING FOR COMMUNITY ENGAGEMENT: EMPOWERING STUDENT OUTPUT THROUGH HEUTAGOGY, SERVICE-LEARNING, AND PARTICIPATORY ACTION LEARNING

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This empirical study investigates the impact of an integrated pedagogical framework comprising Heutagogy, Service-Learning, and Participatory Action Learning which enhanced by Lean Thinking principles, on student learning outcomes in community-based projects. A total of 250 undergraduate students participated in six distinct service-learning initiatives, including environmental awareness, digital entrepreneurship for hawkers, recycled craft-making for B40 communities, financial literacy for school students, recycling advocacy, and financial management awareness. Using a structured questionnaire, data were collected to assess changes in students' communication skills, civic engagement, teamwork, and understanding of Lean principles such as value creation and continuous improvement. Quantitative analysis using descriptive statistics, regression and correlation revealed significant improvements in communication, engagement, and problem-solving abilities across projects. The findings support the effectiveness of combining student-centered pedagogies with Lean Thinking in producing measurable educational and social impact. This study offers practical insights into designing community programs that enhance both academic outcomes and societal value.

Keywords: Heutagogy, Service-Learning, Participatory Action Learning, Lean Thinking, Student Engagement, Community-Based Learning

THE RELATIONSHIP BETWEEN SOCIAL MEDIA AND DEMOCRACY IN A POST-TRUTH UNIVERSE: THE US EXAMPLE

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The concept of democracy is a political form that has evolved over thousands of years from an empirical past to the present day. This political form and its associated values are facing a crisis on a global scale. Developments such as the rise of populism, the strengthening of the far-right, polarization, and the algorithmic suppression of freedom of expression are deepening this general crisis. In order to understand and overcome the crisis, a very strong analysis of the chaotic structure we live in is required. An attempt should be made to draw a general picture of today by making comparisons with the crises and disruptions experienced at certain stages of history. Social media or digital media has a symbiotic relationship with this crisis. The attitudes of social media platforms focused on profit maximization, which disregard the sensitivity of individuals, society, law and values, are virtually undermining democratic structures and systems. The election of the President of the United States, Donald Trump, for the second time is considered as a derivative of this context. Trump, who wages a political war by opposing values such as democracy, human rights and freedom, gives the political image of acting with the mission of destroying modern political structures. Although American democracy was not a high-level democratic model, it was a political system that stood out with its libertarian model, especially in the area of freedom of expression. In the current process, there are internal and external repercussions of this system cracking and drifting into a deep crisis. The consequences of the gradual amplification of these reflections have the potential to reach alarming dimensions. The main purpose of this study is to examine the social media-democracy relationship in the context of US Democracy in a Post-Truth process. Within the framework of this basic purpose, firstly, the concept of Post-Truth will be discussed. Secondly, the relationship between social media and democracy is examined in a general framework. In the last part of the study, American democracy is discussed in the context of social media and democracy in the Trump era.

Keywords: Keywords: Post-Truth, Social Media, Media, Democracy, USA, Trump

DİJİTALLEŞMENİN SİVİL KATILIM VE TOPLUMSAL FARKINDALIK ÜZERİNDEKİ ETKİSİ: SİVİL TOPLUM KURULUŞLARI İÇİN YENİ İLETİŞİM STRATEJİLERİ

Talha Turhan (Erciyes University)

Dijitalleşme sürecinin sivil toplum kuruluşları (STK'lar) üzerindeki yapısal, yönetsel ve işlevsel etkilerini sistematik bir çerçevede analiz ederek, bu dönüşüm sürecinde karşılaşılan temel zorlukları ve ortaya çıkan stratejik fırsatları derinlemesine değerlendiren mevcut çalışma; STK'ların teknolojik adaptasyon süreçlerini anlamlandırmada merkezi bir referans noktası oluşturmakta olup, bu dönüşümün kurumsal kapasite, operasyonel verimlilik, yönetişim mekanizmaları ve hesap verebilirlik ilkelerinin, dijitalleşmenin teorik temelleri üzerindeki çok boyutlu etkilerini kapsamlı bir perspektifle ele almaktadır.

Dijitalleşme, STK'lara geniş kitlelere erişim sağlama, operasyonel süreçleri optimize etme, karar alma mekanizmalarını veri odaklı hale getirme, yönetişim süreçlerini güçlendirme ve yenilikçi projeleri hayata geçirme gibi önemli avantajlar sunmaktadır. Bununla birlikte, bu dönüşüm süreci dijital altyapı eksiklikleri, teknik bilgi ve beceri yetersizlikleri, siber güvenlik tehditleri, veri mahremiyeti riskleri ve finansal sürdürülebilirlik gibi kritik yapısal ve teknik engelleri de beraberinde getirmektedir. Çalışmada, sosyal medya ve dijital iletişim platformları, çevrimiçi bağış ve fon yönetim sistemleri, büyük veri analitiği, performans izleme araçları ile sanal toplantı ve uzaktan eğitim platformları gibi dijital teknolojilerin STK'ların operasyonel etkinliği, sürdürülebilirliği ve etki gücü üzerindeki katkıları detaylı bir şekilde incelenmiştir. Bu dijital araçların kurumsal işleyişe entegrasyonu, STK'ların farkındalık yaratma kapasitelerini artırırken, şeffaflık ve hesap verebilirlik mekanizmalarını güçlendirmekte ve yenilikçi sosyal çözümler üretme potansiyellerini genişletmektedir.

Araştırma bulguları, STK'ların dijitalleşme süreçlerinde uzun vadeli stratejik planlama yapmalarının, dijital kaynaklarını etkin bir şekilde yönetmelerinin ve dijital dönüşümü sürdürülebilir kılacak yönetim modelleri geliştirmelerinin gerekliliğini ortaya koymaktadır. Çalışma kapsamında ayrıca, yapay zekâ ve blokzincir gibi ileri teknolojilerin STK'lar için sunduğu yenilikçi fırsatlar ele alınarak, bu teknolojilerin dijital etik ve sosyal sorumluluk ilkeleri çerçevesinde nasıl uygulanabileceği detaylandırılmıştır. Nitekim dijitalleşme süreci STK'lar için çok boyutlu fırsatlar sunarken, aynı zamanda belli yapısal ve teknik bariyerleri de içermektedir. Bu bağlamda, STK'ların dijital araçları stratejik bir bakış açısıyla benimsemesi, toplumsal sorunlara yönelik yenilikçi ve sürdürülebilir çözümler üretmesi ve küresel ölçekte geniş bir etki alanına ulaşması için kritik bir gereklilik olarak değerlendirilmektedir. Dijital dönüşümün STK'lar açısından yalnızca bir adaptasyon süreci değil, aynı zamanda etkinlik, hesap verebilirlik ve toplumsal katılım açısından dönüşümsel bir paradigma değişimi olduğu vurgulanmaktadır.

Keywords: Teknolojik Adaptasyon, Toplumsal Katılım, Dijital Dönüşüm, Yönetişim Mekanizmaları, Sivil Toplum Kuruluşları.

SOSYAL İLETİŞİM AĞLARINDA YİYECEK VE İÇECEK İŞLETMELERİNE YÖNELİK PAYLAŞIMLARIN İNCELENMESİ: BATMAN ÖRNEĞİ

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Araştırmanın amacı, Batman'daki yiyecek ve içecek işletmelerine yönelik sosyal iletişim ağlarındaki paylaşımların incelenmesidir. Bu bağlamda, TripAdvisor'da yer alan 34 işletmeye ait yiyecek ve içecek işletmesine yönelik toplam 468 yorum analiz edilmiştir. Araştırma bulguları, incelenen işletmelerin 23'ünün restoran, 6'sının pastane veya tatlıcı, 4'ünün cafe ve 1'inin balık evi olduğunu göstermektedir. Araştırmada müşteri paylaşımlarının memnuniyet ve memnuniyetsizlik kategorilerinde kümelendiği belirlenmiştir. Memnuniyet ve memnuniyetsizliğin; yiyecek ve içecekler, servis, personel, konum, mekân atmosferi, fiziksel yapı ve fiyat kategorilerine ayrıldığı bulgusuna ulaşılmıştır. Buradan hareketle, Batman'daki işletmelerin TripAdvisor yorumlarını nasıl takip edip yanıtlayabileceği ve müşteri geri bildirimlerini hizmet kalitesini artırmada nasıl kullanabileceği değerlendirilmiştir. Bu bağlamda araştırmanın Batman Gastronomisini geliştirme açısından önem arz edeceği düşünülmektedir.

Keywords: Sosyal İletişim Ağı, Müşteri Memnuniyeti, Yiyecek ve İçecek Sektörü, TripAdvisor, Batman

TÜRKİYE'DEKİ GASTRONOMİ MÜZELERİ İLE İLGİLİ BİBLİYOMETRİK ANALİZ

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Araştırmanın temel amacı gastronomi müzelerini konu alan akademik çalışmaların bibliyometrik göstergeler çerçevesinde incelenmesidir. Bu odakta; YÖK Akademik ve Dergi Park veri tabanlarında kapsamlı bir tarama yürütülmüştür. 'Gastronomi Müzesi', 'Mutfak Kültürü', 'Gastronomy Museum' ve 'Culinary Culture' anahtar kelimeleri kullanılarak tarama yapılmış, konu ile ilgili toplam 24 akademik çalışmaya ulaşılmıştır. Çalışmalar yayın yılı, yazar sayısı, sayfa sayısı, yöntem, dergi ve en çok atıf alan yazarlar göstergeleri çerçevesinde değerlendirilmiştir. Bilgiler kapsamında frekans tabloları ve çapraz tablolar oluşturulmuştur. Sonuçlar, gastronomi müzesi konulu akademik çalışmaların genel olarak kültürel mirasın korunması ve gelecek nesillere aktarılması, mutfak kültürünün muhafaza edilmesi ve sürdürülebilirlik gibi ana temalar ekseninde şekil aldığını göstermektedir. Buna ek olarak; çalışmaların 2014-2024 yılları arasında yayınlandığı, yoğunlukla Aydın Gastronomi Dergisi, Seyahat Ve Otel İşletmeciliği Dergisi, Türk Turizm Araştırmaları Dergilerinde yayınlandığı belirlenmiştir. Çalışmaların 11 ile 20 sayfa arasında yoğunlaştığı ve nitel araştırma metotlarının tercih edildiği, verilerin görüşme, gözlem ve literatür taraması gibi teknikler kullanılarak elde edildiği görülmüştür. Bulgular ekseninde; gastronomi müzesi konulu akademik çalışmaların gelişim sürecine ışık tutulmuş ve gelecekte yapılacak araştırmaların hangi alanlara yoğunlaşması gerektiğine ilişkin öneriler sunulmuştur.

Keywords: Gastronomi Müzesi, Mutfak Kültürü ve Bibliyometrik Analiz

TÜRKİYE'DE SÜRDÜRÜLEBİLİRLİK ÜZERİNE YAPILAN DOKTORA TEZLERİNİN ANALİZİ

Feyza Akgün (AYBU)

Birleşmiş Milletler Sürdürülebilirliği bugünün gereksinimlerini, gelecek kuşakların da kendi gereksinimlerini karşılayabilme olanağından ödün vermeksizin karşılamak olarak tanımlamıştır. 2024 Sürdürülebilir Kalkınma Amaçları Raporu'na göre; 'Dünya nüfusunun yarısından fazlası şu anda şehirlerde yaşamaktadır; ancak kentsel alanlar çok sayıda karmaşık sorunla karşı karşıyadır…2000 ile 2020 yılları arasında şehirler, yoğunluklarına göre 3,7 kat daha hızlı yayılarak doğal çevre ve arazi kullanımı üzerinde olumsuz etkiler yaratmıştır. Kentleşmenin artmasıyla birlikte, 2050 yılına kadar dünya nüfusunun yaklaşık %70'inin şehirlerde yaşayacağı öngörülmektedir. Bu nedenle, dirençli ve sürdürülebilir şehirler inşa edebilmek için kritik altyapılar, uygun fiyatlı konutlar, verimli ulaşım sistemleri ve temel sosyal hizmetlerin geliştirilmesi büyük önem taşımaktadır.' Ekonomik Sosyal ve Çevresel unsurlardan oluşan sürdürülebilirlik doğal kaynakların doğru kullanımıyla gelecek nesillere yaşanabilir bir çevre bırakmak için oldukça önemlidir. Sürdürülebilirlik; işletmeler, hissedarlar, çalışanlar, ortaklar ve mevcut yatırımcılar açısından oldukça dikkat çekici hale gelmiştir. Sürdürülebilirlik politikalarını benimseyip bunu işletmenin fonksiyonlarına ve buna bağlı olarak işletme departmanlarına uygulayan işletmeler söz konusu paydaşlarca desteklenmektedir. Bu çalışmanın temel amacı son zamanlarda araştırmacılar ve işletme yöneticileri için önem arz eden Sürdürülebilirlik konusunu derinlemesine incelemek ve bu alanda yazılan doktora tezlerini analiz etmektir. Bu çalışmanın evrenini, son 30 yılda Yükseköğretim Kurulu (YÖK) Ulusal Tez Merkezi veri tabanında dizinlenen sürdürülebilirlikle ilgili 258 doktora tezinin taranması oluşturmaktadır. Araştırmanın bulguları sürdürülebilirliğin insan ve işletme yaşamındaki önemini vurgulamaktadır. Araştırmanın sonuçlarına göre, son 30 yılda Türkiye'de sürdürülebilirlik konusunda hazırlanan doktora tezlerinin sayısı inceleme periyoduna göre kıyaslandığında, 2020 yılı ve sonrasında toplam tezlerin %62 oranını teşkil etmektedir. Ayrıca, 1990-2025 yılları arasında Türkiye'de sürdürülebilirlik konusunda hazırlanan doktora tezlerin bilim alanlarına göre dağılımına bakıldığında, en fazla sayıda işletme, mühendislik, mimarlık, şehircilik ve bölge planlama ile ekonomi bilim alanında yapıldığı görülmüştür. Söz konusu bu bilim alanlarında en yüksek olarak %33.72 oranda Sosyal Bilimler Enstitüsü İşletme Anabilim dalında ve ikinci olarak ise %20.15 ile mühendislik bilimleri alanlarına yönelik tez yazıldığı gözlemlenmiştir. Türkiye'de sürdürülebilirlik konusunda hazırlanan doktora tezlerinin doçentlik bilim alanları kapsamında incelendiğinde, Sosyal, Beşerî ve İdari Bilimler Temel Alanı, Eğitim Bilimleri Temel Alanı, Mühendislik Temel Alanı ve Mimarlık, Planlama ve Tasarım Temel Alanı olmak üzere dört temel doçentlik alanında doktora tezi yazıldığı görülmektedir. Söz konusu doçentlik bilim alanlarında en yüksek olarak %56.59 oranda Sosyal, Beşerî ve İdari Bilimler Temel Alanı ve ikinci olarak ise %26.74 ile mühendislik temel alanına yönelik tez yazıldığı gözlemlenmiştir.

Keywords: Sürdürülebilirlik, Kurumsal Sosyal Sorumluluk, Kurumsal yönetim

Analysis of Doctoral Theses on Sustainability in Turkey

The United Nations has defined sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs. According to the 2024 Sustainable Development Goals Report; 'More than half of the world's population currently lives in cities; however, urban areas are facing numerous complex problems… Between 2000 and 2020, cities expanded 3.7 times faster than their population density, creating negative impacts on the natural environment and land

use. With the increase in urbanization, it is projected that approximately 70% of the world's population will live in cities by 2050. Therefore, the development of critical infrastructure, affordable housing, efficient transportation systems, and essential social services is of great importance in order to build resilient and sustainable cities.' Sustainability, which consists of economic, social, and environmental elements, is highly important for leaving a livable environment to future generations through the proper use of natural resources. Sustainability has become highly attractive for businesses, shareholders, employees, partners, and current investors. Businesses that adopt sustainability policies and implement them within business functions and related departments are supported by these stakeholders.The main purpose of this study is to examine in depth the concept of sustainability, which has recently gained importance among researchers and business managers, and to analyze doctoral dissertations written in this field. The population of this study consists of the review of 258 doctoral dissertations related to sustainability, indexed in the Council of Higher Education (YÖK) National Thesis Center database over the past 30 years.The findings of the research emphasize the importance of sustainability in human and business life. According to the results of the study, when the number of doctoral dissertations prepared on sustainability in Turkey over the last 30 years is compared by review periods, 62% of the total were completed in 2020 and beyond. Additionally, when the distribution of doctoral dissertations prepared on sustainability in Turkey between 1990 and 2025 is examined according to scientific fields, it is seen that the highest numbers were in business, engineering, architecture, urbanism and regional planning, and economics. Among these fields, it was observed that the highest number of dissertations (33.72%) were written in the Department of Business Administration of the Institute of Social Sciences, followed by the field of engineering sciences with 20.15%.When doctoral dissertations on sustainability in Turkey are examined within the scope of associate professorship science fields, it is seen that they were written in four main fields: the Basic Field of Social, Human and Administrative Sciences; the Basic Field of Educational Sciences; the Basic Field of Engineering; and the Basic Field of Architecture, Planning and Design. Among these, it was observed that the highest number of dissertations (56.59%) were written in the Basic Field of Social, Human and Administrative Sciences, followed by the Basic Field of Engineering with 26.74%.

Keywords: Sustainability, Corporate Social Responsibility, Corporate Governance

EFFECTS OF DIGITAL LEADERSHIP ON BUSINESS SUCCESS IN BUSINESSES

Münevver Bayar (Sosyal Güvenlik Kurumu)

Nadire Kantarcıoğlu (UBS ENSTİTÜ)

Digital transformation has become an important aspect of the business world in the constantly changing digital age. Organizations that want to be relevant and successful in the face of increasing global competition should adopt and use digital technologies correctly. In order to be successful in digital transformation, enterprises need to have leadership that can guide and use the promises of modern technologies. Digital leadership is critical in managing change, influencing employee performance and ensuring overall business success. Being open to change and innovation is one of the main characteristics of digital leadership. Leaders in the digital field should be able to understand the latest technological trends and incorporate them into their business strategies.

They should be proactive in identifying new opportunities created by digital technology and be willing to change traditional business models in order to gain a competitive advantage. Successful leaders in the digital age are those who are not afraid to take risks, are willing to experiment with new ideas, and drive innovation throughout the organization. Since technology dominance is a driving factor for competitiveness in the era of industrial revolution 4.0, companies must continue to innovate using technological developments in their business processes to achieve competitiveness.

Keywords: Business, Digital, Leadership, Business, Success

HAVAYOLU İLE İLK KEZ SEYAHAT EDECEKLER İÇİN BİR WEB SİTESİ GELİŞTİRİLMESİ

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Günümüzde hızla gelişen teknoloji, ulaşım araçlarının da gelişimine önemli katkılar sunmaktadır. Teknoloji sayesinde daha hızlı ve konforlu hale dönüşen uçak tasarımları aynı zamanda havayolu seyahatlerine olan talebi de arttırmaktadır. Dolayısıyla havayolu yolcu sayısı hem Türkiye'de hem de dünyada her geçen gün artış gösterirken, havayolu ile ilk kez seyahat edecek yolcuların sayısının da artması beklenmektedir. Ancak havayolu seyahatleri diğer seyahat türlerine göre yolcuların daha formal süreçler yürütmesini gerektiği bir seyahat türüdür. Bu süreçler; yolcuların varış destinasyonuna bağlı olarak değişiklik gösteren ve yerine getirmesi zorunlu birtakım prosedürleri içermektedir. Bu nedenle havayolu ile ilk kez seyahat edecek kişilerin bu prosedürleri takip edebilmesi bazen güç olabilmektedir. Bu çalışmanın amacı, havayolu seyahatine ilk kez katılacak ya da havayolu seyahat süreçlerinde zorluk yaşayan yolcuların havayolu seyahat prosedürlerini öğrenebilecekleri ve takip edebilecekleri ve rehber bir web sitesi tasarlamaktır. Çalışma kapsamında yapılan araştırmalarda; yolcuların havayolu seyahat süreçlerinde oluşabilecek tereddütlerini giderebilecek ve onlara rehberlik edebilecek herhangi bir web sitesine veya mobil uygulamaya rastlanmamıştır. Literatür kapsamında yolcuların seyahat süreçlerine yönelik araştırmaların sayıca azlığı da dikkat çeken diğer bir husustur. Bu durum çalışmanın özgün değerini ortaya koymaktadır.

Çalışma, birinci tür tasarım ve geliştirme araştırması olarak planlanmıştır. Çalışma kapsamında tasarlanan web sitesinde; yolcuların ihtiyaç duyabilecekleri bilgiler ve seyahat süreçlerinde izlemeleri gereken prosedürler, seyahat sürecinde izlenen sıralama ile oluşturulmuş bir arayüz yardımıyla kullanıcılara sunulmaktadır. Web sitesi Türkçe olarak her kesimden kişinin anlayabileceği sade, açık ve anlaşılır bir anlatım ile oluşturulmaktadır. Web sitesinde bulunan içeriklerin yazı tasarımları ve renk seçimleri kullanıcıların rahat okuyabilmesi ve göz yormaması dikkate alınarak yapılmaktadır. Web sitesinde kullanılan görseller havayolu seyahatlerinde verilen hizmetlerle uyumlu şekilde seçilmektedir. Kullanıcılara kullanım kolaylığı sağlamak adına sekmeler arası geçişler; havalimanı ve havayolu hizmet işleyiş süreçleri göz önüne alınarak tasarlanmaktadır. Kullanıcıların geliştirilen web sitesi sayesinde hem seyahat edecekleri ülkelerin havayolu seyahat uygulamaları hem de yolcu hakları hakkında bilgi edinebilmeleri amaçlanmaktadır. Web sitesi menüleri içerisine; sıkça sorulan sorular ve yanıtları ile çözüm ve ipuçları sekmeleri eklenerek kullanıcılara kolaylık sağlamak hedeflenmektedir. Kullanıcıların web sitesi ile ilgili görüşlerini, önerilerini ve şikayetlerini aktarabilecekleri ve aynı zamanda bilgi almak amacıyla da kullanabilecekleri iletişim alanı oluşturulmaktadır. Çalışma sonucunda, havayolu seyahat süreçlerinde desteğe ihtiyaç duyan yolcuların, internet erişimine sahip oldukları anda seyahat süreçlerinde hangi aşamada olduklarını belirleyebilecekleri ve seyahat edecekleri destinasyona özgü olarak uygulamakla yükümlü oldukları prosedürleri takip edebilecekleri bir rehber web sitesi geliştirilerek kullanıcılara ve havayolu sektörüne katkı sunmak amaçlanmaktadır.

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Keywords: Havayolu, Yolcu, Web sitesi.

IX. ASC 2025 / SPRING CONGRESS

YAPAY ZEKÂYA YÖNELİK TUTUM, DEĞİŞİME HAZIR OLMA VE İŞTEN AYRILMA NİYETİ ARASINDAKİ İLİŞKİNİN İNCELENMESİ

Nuran Varışlı (Sosyal Güvenlik Kurumu)

Bu araştırmada yapay zekâya yönelik tutum, değişime hazır olma ve işten ayrılma niyeti arasındaki ilişki incelenmektedir. Yapay zekâ (YZ), bilgisayar sistemlerinin insan benzeri zekâ işlevlerini yerine getirebilmesi amacıyla geliştirilen bir teknoloji alanıdır. Öğrenme, problem çözme, doğal dili anlama ve karar verme gibi karmaşık süreçleri kapsayan yapay zekâ, son yıllarda hızla gelişerek pek çok sektörde yaygın bir şekilde kullanılmaya başlanmıştır. Bu hızlı teknolojik gelişmeler, iş süreçlerinde ve rollerinde çeşitli değişikliklere yol açarak çalışanların iş güvencesi algılarını ve çalışma motivasyonlarını etkilemektedir. Bu bağlamda, çalışanların değişime hazır olma düzeyleri daha da kritik hâle gelmiştir. Değişime hazır olma, bireylerin veya çalışanların iş ortamında karşılaşılan değişim süreçlerine psikolojik, duygusal ve davranışsal olarak uyum sağlayabilme istekliliği ve kapasitesini ifade eder. Yapay zekânın iş yerlerinde giderek daha fazla entegre edilmesi, çalışanlarda işlerini kaybetme korkusu, iş rollerinin dönüşeceği endişesi ve belirsizlik hissi yaratabilir. Bu duygular, çalışanların yapay zekâya yönelik tutumlarını şekillendirirken, aynı zamanda işten ayrılma niyetlerini de etkileyebilir. İşten ayrılma niyeti, bireyin mevcut işinden ayrılmayı düşünme, başka fırsatları değerlendirme ve iş değişikliği yapma eğilimini yansıtır. Çalışanların işten ayrılma niyetleri, iş tatmini, iş güvencesi algısı, örgütsel bağlılık ve iş ortamındaki değişimler gibi çeşitli faktörlerden etkilenmektedir. Yapay zekânın iş süreçlerine entegre edilmesi, bazı çalışanlarda yerlerini kaybedecekleri veya rollerinin küçüleceği algısı oluşturarak işten ayrılma niyetini artırabilir. Literatürde, yapay zekâya yönelik tutum, değişime hazır olma ve işten ayrılma niyeti arasındaki ilişkiyi aynı anda ele alan kapsamlı çalışmalara sık rastlanmamaktadır. Bu durum, yapılan araştırmayı özgün ve önemli kılmaktadır. Araştırma bulgularından elde edilen veriler doğrultusunda, insan kaynakları uygulamaları ve organizasyonel değişim süreçlerine yönelik çeşitli öneriler geliştirilmesi hedeflenmektedir. Çalışma, iş yerlerinde teknolojik dönüşümlere uyum sürecinde çalışan tutumlarının ve davranışlarının daha iyi anlaşılmasına katkı sağlamayı amaçlamaktadır.

Keywords: Yapay Zekâ, Değişime Hazır Olma, İşten Ayrılma Niyeti

ELEKTRONİK TİCARET TEDARİK ZİNCİRLERİNDEKİ ÖZGÜN YANLAR VE BAŞARI FAKTÖRLERİ

Halefsan Sumen (İstanbul Technical University)

Alışverişin elektronik ortamda yapılması, mağazasız perakendecilik, dijital ticaret vb. ifadelerle tanımlanan elektronik ticaret, gelenekselden çok farklı yapısı nedeniyle kendine özgü yönetim model ve araçları gerektirmektedir. Klasik ile elektronik ticaret arasındaki temel fark dijitalleşme olmakla birlikte iyi tasarımlanmış bir web sitesi, dijital ödeme sistemi ve fantastik bir ürün seti başarılı olmaya yetmemekte, güçlü ve çevik bir tedarik zincirlerine gerek duyulmaktadır. Bu çalışma elektronik ticaret odaklı tedarik zincirlerinin rolü, yapısı ve performans metrikleri üzerinedir.
Tedarik zincirleri elektronik ticaret amaçlı tasarımlandıklarında genel yapılarından kısmen uzaklaşmakta, hatta biraz daha karmaşıklaşmaktadırlar. Bu durumun nedeni zincirden beklenenlerin farklı olmasıdır. Elektronik ticareti destekleyecek bir tedarik zincirinden öncelikle makul maliyetlerle çalışması, müşteri talep hızına senkronize olması, arz – talep değişikliklerine çabucak uyum sağlaması, kesintilere dayanıklı olması ve/veya kesintilerden sonra hızla toparlanması ile müşteri deneyimini yükseltmesi istenmektedir. Bu faydaların elde edilebilmesi için zincirin sahip olması gereken asgari özellikleri şöyle sıralayabilir ve tanımlayabiliriz:

- Uçtan uca şeffaflık
- Riske dayanım (robustness) ve yılmazlık (resilience)
- Müşterilerle sürekli bağlantıda olmak
- Tahmin ve kestirim doğruluğu
- Envanter doğruluğu
- Hızlı sipariş hazırlayabilme
- Dinamik taşıma optimizasyonu
- Uygun tedarikçi seçimi ve denetimi
- Doğru ambalajlama
- Sağlıklı iade yönetimi
- Otonom planlama
- Ölçeklenebilirlik, kullanılabilirlik ve güvenlik
- Sürdürülebilir, etik yasalara uyumlu olma.

Uçtan uca şeffaflık ile ifade edilmek istenen tedarik zincirinin yukarı tarafından aşağı ucuna kadar olan menzilde envanterlerin, olayların ve maliyetlerin görülebilir olmasıdır. Bunu olanaklı sağlayacak olan da önÇelikle kimliklendirme sistemleri (RFID – radyo frekanslı tanılama, barkod, karekod, hologram vb.) ile nesnelerin Internet'inin uygulaması ve bunların üzerine kontrol kulesi, blokzincir, portal ile faaliyet tabanlı maliyetlendirme gibi yazılım teknolojilerinin kurulmasıdır.
Risk yönetimi VUCA (volatility, uncertainty, complexity, ambiguity kelimelerinin ilk harfleriyle oluşturulan akronim) döneminde en önemli hale gelmiş gündem maddesidir. Risk yönetiminde iki temel konu dış tehditlere dayanım gösteren yapı ile malzeme ve veri akışlarında kesinti yaşanmamasını refere eden robustness ile kesinti veya yavaşlama olursa hızla normal çalışma temposuna dönme yeteneği olan resilience'tır.

Klasik ticarette yalnızca müşteri istediği takdirde temas kurulabilirken elektronik ticaret döneminde firmalar müşterilerine her an ulaşabilecek yapıları kurabilmekte, böylelikle hem onların beklentilerini anlamakta hem de doğru mesajları doğru zamanda iletebilmektedir.

Müşterilerle sürekli bağlantı halinde olmak, geçmiş talepler ve şimdiki zaman duyumları sosyal medya, makro ekonomik veriler ve hava durumu bilgileri ile birleşip makine öğrenmesi algoritmaları ile işlendiğinde tahmin yapma becerisi ve önerilerin benimsenme doğruluğu anlamlı şekilde yükselmektedir.

Envanter doğruluğu bir master datadır. Eski, ama eskimemiş "çöp girerse çöp çıkar" kuralı doğru satınalma miktarlarını belirleyebilmek ve tutacak vaatlerde bulunabilmek için sanal envanterleri bilmeyi çok değerli kılmaktadır. Hızlı sipariş hazırlayabilme birkaç faktöre bağlıdır. Hem flowthrough depoların veya fulfillment merkezlerinin tasarımı, hem verilere dayalı olarak yapılan ön hazırlıklar hem de doğru ve doğru eğitilmiş personel başarı faktörleridir.

Dinamik taşıma optimizasyonu bir yandan rota algoritmalarına, diğer yandan da gerçek zamanlı verilere erişebilmeye bağlıdır. Uygun tedarikçi seçimi ve denetimi sadece elektronik ticaret değil, tüm uygulamalarda en başta gelen tedarik zinciri başarı faktörüdür. Değerlendirme hem teknik hem mali hem idari boyutlarda yapılmalıdır.

Ambalajlama elleçleme ve taşıma operasyonları başta olmak üzere lojistik süreçlerde fire ve hasarları engellemekte, ancak yarattığı maliyetlerle konuyu bir optimizasyon problemi haline getirmektedir. Elektronik ticaret ürün iade yönetimine en çok gerek duyulan sektördür. İade yönetimi de hem müşteri deneyimini hem de verimliliği ve karlılığı etkileyen, üstüne hukuki sorun çıkartma potansiyeli olan bir konudur. Bu nedenle sağlam prensiplerle, dikkatlice yönetilmesi gereken bir konudur. Elektronik ticaret hem ürün kompozisyonunun belirlenmesinde hem kampanya yönetiminde hem de plan ve bütçe hazırlamada gün geçtikçe daha fazla robotik proses otomasyonu ve yapay zekâ içerikli hale gelmektedir. Elektronik ticaret web siteleri tedarik zincirlerinin dijital bileşenleridir. Sitelerin farklı zamanlarda gelen değişik miktarlardaki ziyaretçilere ölçeklenebilirlikle, yüksek kullanılabilirlikle ve güvenlikle hizmet verebilir olmaları sağlanmalıdır. Sürdürülebilirlik, yasalara uyumluluk, etik politikalar tedarik zinciri yönetiminde kısıt olmaktan amaç konumuna yükselmiş konulardır. Ölçmediğinizi yönetemezsiniz ilkesince bahsi geçen zincir özellikleri için performans metrikleri oluşturmak ve sürekli geliştirmek zorunluluktur.

Keywords: Elektronik Ticaret, Tedarik Zincirleri, Başarı Faktörleri

MUHASEBE MESLEK MENSUPLARININ DİJİTALLEŞME SÜRECİNDEKİ ROLÜ VE SORUNLARI

Hasan Önsoy (Kırıkkale University)

Küresel düzeyde hız kazanan dijitalleşme süreci, muhasebe mesleğini ve bu mesleği icra eden profesyonellerin rollerini köklü biçimde dönüştürmektedir. Finansal bilgi üretimi, raporlama, denetim ve veri analiz süreçleri; yapay zekâ, blokzincir teknolojisi, bulut bilişim ve otomasyon yazılımları gibi dijital araçların etkisiyle yeniden şekillenmektedir. Bu dönüşüm, muhasebe meslek mensuplarının sadece teknik becerilerini değil, aynı zamanda stratejik düşünme, etik karar verme ve dijital okuryazarlık gibi yetkinliklerini de geliştirmelerini zorunlu kılmaktadır. Bununla birlikte, dijitalleşme sürecinde meslek mensupları çeşitli zorluklarla karşı karşıya kalmaktadır. Bu sorunlar arasında; teknolojik altyapı eksiklikleri, eğitim ihtiyacı, mesleki güvenlik kaygıları ve mevzuatla ilgili belirsizlikler öne çıkmaktadır. Bu bildiride, muhasebe meslek mensuplarının dijitalleşme sürecindeki değişen rolleri ve karşılaştıkları temel sorunlar incelenmekte ve değerlendirmelerde bulunulmaktadır. Çalışmanın amacı, meslek mensuplarının dijital dönüşüme adaptasyon sürecini anlamak ve bu süreçte karşılaşılan engellere yönelik derleme yapmaktır.

Keywords: Muhasebe Mesleği, *Dijital Dönüşüm, Adaptasyon*

ARTIFICIAL INTELLIGENCE AND TEFL :TRANSFORMATION INTO THE LEARNING ECOSYSTEM OF THE FUTURE

Hakan Aydoğan (Moscow State Pedegogical University)

Önder Şanlı (Adıyaman University)

Artificial intelligence (AI) is a system enabling machines to carry out human-like tasks, learning from experience and adapting to new inputs. Artificial intelligence aims to improve and give support to human competencies. AI is most simply defined as systems that imitate human intelligence to perform certain tasks and can enhance themselves by iterating the information they collect. The most outstanding characteristics that distinguishes artificial intelligence from today's technology systems is its ability to imitate human intelligence.

Learning, literature, and linguistics are all being redefined by artificial intelligence (AI). AI technologies are bringing new approaches to the analysis and production of literary and linguistic works, ranging from machine-generated narrative to natural language processing. In our days linguistic subtleties are examined with large literature corpora, and individualized teaching resources are created thanks to these developments. This research promotes conversation between technical progress of AI and EFL in terms of humanities while highlighting AI's revolutionary potential to improve human expression, creativity, and communication.

Researchers are becoming more interested in the pedagogical aspects of how AI might improve successful practices as a result of the rapid advancement of AI capabilities. It is remarkable, therefore, that despite the quick advancements in technology, many traditional pedagogical approaches—like lectures and explanations—remain in use. It would be advantageous for scholars to look into and discuss how AI can open up new learning opportunities. Despite the claim that students could simply use AI translation tools to avoid learning a language, this study discovered that using Google Translate might have enabled less proficient learners to demonstrate a level of writing proficiency that was not appreciably different from that of proficient learners. The study also discovered that learners were able to generate articles with higher quality grammar, more complicated, lower frequency vocabulary, and more words by employing machine translation.

It is widely agreed that the use of artificial intelligence in foreign language education will positively affect the teaching and learning process. Artificial intelligence (AI) has the potential to lead to revolutionary changes in the education sector, making learning processes more personalized, accessible and effective. This article discusses the opportunities, limitations and future impacts of the integration of AI into education. AI-based systems strengthen students' weaknesses and enrich the learning experience by offering customized content according to individual learning needs. In addition, automated assessment systems that save teachers' time allow for more strategic decisions to be made by analyzing educational data.

The integration of AI into education has the potential to reduce learning inequalities and provide educational resources to students around the world on a larger scale. However, challenges such as lack

of technological access, ethical concerns and data privacy should also be taken into account. The article offers suggestions on how AI can be used in education in a fair, ethical and sustainable way and discusses how this transformation will reshape the current paradigm in education. This study aims to provide a roadmap for educators, policy makers and technology developers to develop future strategies. Another intriguing discovery for practitioners is that students could benefit from translation tools by having access to a wider variety of lexical objects. Although it is evident that such tools increase output, it is unclear what would happen if the tool were removed. Whether this also leads to pupils' skills improving without the use of these technologies is the question that is brought up. A deeper comprehension of the function of these machine translation tools in ELT/L must be established if the discussion is to proceed.

Keywords: TEFL, Artificial Intelligence, Learning, Sustainable Education

CONGRESS PROGRAM

Hosted by Istanbul Gedik University

IX. International Academic Studies Congress Spring 2025

15-18 May 2025 Istanbul, Turkey

"In-person and Online"

"Sustainable Society from the Perspective of Human, Technology, and Artificial Intelligence"



Science and Research, Education and Teaching, Business and Industry, Finance and Economy
Management and Politics, Technology and Innovation, Health and Medical Sciences, Agriculture and Veterinary Sciences
Environment, Arts, Culture, Tourism, and Sports, Theology, Values, and Ethics, International Relations and Diplomacy

Abstract Submission Deadline: **01 May 2025**	Full Text Submission Deadline: **30 May 2025**

Chairpersons

Dr. Aytaç Uğur Yerden Dr. Ahmet Erkasap

Congress Secretary

Assoc. Prof. Dr. Ayşe Meriç Yazıcı

All abstracts will be published in the abstract booklet.
There will be opportunities for publication in SCOPUS, TRDizin, and international journals.
Our congress is designed to be indexed in WoS. All processes will be conducted accordingly, and an application will be made to WoS.

To submit a paper, please visit https://asc.academicianstudies.com/

IX. Akademik Çalışmalar Kongresi (ASC-2025/BAHAR)

15-18 Mayıs 2025

15 Mayıs 2025 – Açılış Günü ve İlk Oturumlar
10:00 – Kongre Katılım Masası Açılışı ve Kayıt
10:30 – Açılış Konuşmaları
11:00 – Davetli Konuşmalar: **Prof.Dr. İbrahim Sirkeci, Prof.Dr. Dustin Van Der Haar, Prof.Dr. Himmet Karadal**
12:30 – Bilimsel Bildiri Sunumları (Online, Paralel Oturumlar)
13:00 – Öğle Arası
13:30 – Bilimsel Bildiri Sunumları (Yüz Yüze Paralel Oturumlar)
14:00 – Forum: İnsan, Teknoloji ve Yapay Zeka Perspektifinden Sürdürülebilir Toplum
Moderatör: Prof. Dr. Murat Koç
Panelistler: Fethi Şimşek, Ahmet Erkasap, Şakir Oral, Doç.Dr. Azamat Maksüdünov, Ali Eşelioğlu
15:30 – Davetli Konuşmalar: Prof.Dr. Yu-Feng Winnie Lee, Dr. Meerbek Kudaibergenov, Prof. Dr. Muhammad Ashvaq
16:30 – Workshop: Nitelikli Dergilerde Yayıncılık ve Kitap Editörlüğü. Moderatör: Dr. Ebru Bağçı
19:30 – Gala Yemeği
16 Mayıs 2025 – Bilimsel Sunumlar
09:30 – Kongre Katılım Masası Açılışı
10:00 – Yüz Yüze ve Online Bilimsel Sunumlar (Paralel Oturumlar – Tüm Gün)
11:00 – Davetli Konuşmalar: Prof.Dr. Avdhesh Jha, Dr. Logaiswari Indiran, Dr. Sharofiddin Xoshimjonov.
12:30 – Öğle Arası
13:30 – Workshop: Proje Hazırlama, Örnek Yapay Zeka Projesi ve Akademik İşbirlikleri.
Moderatör: Dr. Aytaç Uğur Yerden
17:30 – Değerlendirme ve Kapanış. Moderatörler: Dr. Aytaç Uğur Yerden, Dr. Ahmet Erkasap, Prof.Dr. Muhammad Ashvaq
17 Mayıs 2025 – İstanbul Turu + Online Oturumlar
10:00 – İstanbul Klasik Turu Başlangıcı (Ayasofya - Sultanahmet)
10:00 – Çevrim İçi Bilimsel Oturumlar – Tüm Gün
11:00 – Davetli Konuşmalar (Keynote Speakers) Online
13:00 – Topkapı Sarayı, Hipodrom Ziyaretleri
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16:30 – İsteğe Bağlı Boğaz Turu (Serbest Zaman İçinde)
18 Mayıs 2025 – Online Oturumlar
09:30 – Çevrim İçi Bilimsel Oturumlar Başlangıcı
10:00 – Online Sunumlar – Tüm Gün
17:00 – Serbest Zaman

15 Mayıs 2025

Açılış Günü ve İlk Oturumlar

10:00 – Kongre Katılım Masası Açılışı ve Kayıt
10:30 – Açılış Konuşmaları

11:00 – Davetli Konuşmalar

Keynote Speakers



Prof.Dr. İbrahim Sirkeci

Navigating Global Change from Human Mobility toHigher Education

Director of The International Business School (Manchester, UK), is a renowned multidisciplinary researcher in human mobility, labour markets, and population change. He holds a PhD from the University of Sheffield and postgraduate degrees from UCL. Known for developing the "conflict model of migration" and the concept of "transnational mobile consumers," he has led academic programmes at Regent's University London and Salford Business School. He also has extensive consultancy experience in public policy and consumer analytics.



Prof.Dr. Dustin Van Der Haar

University of Johannesburg-South Africa

Prof. Dustin van der Haar, Senior Professor at the University of Johannesburg, specializes in applied AI for human-related data. His research covers text, signal, and vision analysis, focusing on biometrics, computer vision, and medical imaging. A 2023 Fulbright-Emory Distinguished Chair Awardee, he has received multiple national and international honors. As a former SAYAS co-chair, he collaborated with DSI and ASSAf to support emerging scientists and innovation in South Africa.



Prof.Dr. Himmet Karadal

Bolu Abant İzzet Baysal University, Faculty of Communication

Prof. Himmet Karadal is a faculty member at Bolu Abant Izzet Baysal University, specializing in entrepreneurship, strategic management, and the Turkic World. He has authored 245 academic publications, including SSCI-indexed articles, with 1,414 citations. According to the AD Scientific Index 2025, he ranks first in Turkiye in the field of entrepreneurship.

He has taught in Uzbekistan, Kazakhstan, Romania, and conducted research on Turkiye immigrant entrepreneurship in the U.S. He serves as Chair of the EMI Congress, Editor-in-Chief of Journal EMI, and is a board member of CEOTEKMER. He is also a member of the Entrepreneurship Commission for Turkiye 12th Development Plan (2024–2028).

12:30 – Bilimsel Bildiri Sunumları (Online, Paralel Oturumlar)
13:00 – Öğle Arası
14:00 – Forum: İnsan, Teknoloji ve Yapay Zeka Perspektifinden Sürdürülebilir Toplum

Panelist



Fethi Şimşek

President of Doğa Education Foundation
Chairman of the Board of Doğa Group

Fethi Şimşek is the founder and Chairman of Doğa Schools, growing it from 100 students to 52 schools. A former teacher and entrepreneur, he founded English Time (1998) and Doğa Schools (2001), later selling 50% to Turkven (2010) and acquiring Doğuş University (2012). In 2016, he sold Doğa Schools. A former Şanlıurfaspor President, he continues his investments.

14:00 – Panelist



Dr. Ahmet Erkasap

İstanbul Gedik Üniversitesi Yönetim Bilişim Sistemleri

Boğaziçi Üniversitesi Sosyoloji bölümünden ve İstanbul Gedik Üniversitesi Psikoloji bölümünden lisans, İstanbul Üniversitesi İşletme programından yüksek lisans ve İstanbul Ticaret Üniversitesi İşletme Programından ve Maltepe Üniversitesi Sosyoloji Programından doktora derecelerine sahiptir. Çeşitli sektörlerde 15 yıllık iş deneyiminin ardından akademik dünyayı ve yönetim danışmanlığını seçmiştir. Halihazırda İstanbul Gedik Üniversitesi, Yönetim Bilişim Sistemleri bölümünde Dr. Öğr. Üyesi olarak görev yapmaktadır. Araştırma alanları arasında örgütsel davranış, insan kaynakları yönetimi, örgüt kültürü ve iş ile toplumun geleceği yer almaktadır. Çeşitli C-seviye yöneticilere koçluk ve mentorluk yapmaktadır.



Şakir Oral

Toplumsal Sürdürülebilirlik Bağlamında Örnek Olay, Libya ve Türkiye için önemi

Baysaş İnşaat A.Ş. Yönetim Kurulu Başkanı olan Şakir Oral, inşaat ve gayrimenkul sektöründe sürdürülebilir şehircilik vizyonuyla öne çıkan projelere liderlik etmektedir. Özellikle kentsel dönüşüm, çevresel duyarlılık ve toplumsal sürdürülebilirlik alanlarında geliştirdiği çalışmalarla sektöre yenilikçi katkılar sunmuştur. İş dünyasındaki deneyimini toplumsal fayda odaklı projelerle harmanlayan Oral, sosyal sorumluluk alanında da aktif rol üstlenmektedir.

Panelist



Doç.Dr. Azamat Maksüdünov

Kyrgyz-Turkish Manac University

Dr. Azamat Maksüdünov is an educator with over a decade of experience in the field of business academia. He was a Fulbright Visiting Scholar at Florida Atlantic University in the USA. Published more than 100+ academic papers in national and international peer-reviewed periodicals and conference proceedings.



Ali Eşelioğlu

CoinTR CEO

Konu:Dijital Paralar: İnsan, Teknoloji ve Yapay Zeka Üçgeninde Yeni Bir Finansal Dönem

15:30 – Davetli Konuşmalar

Keynote Speakers



Prof.Dr. Yu-Feng Winnie Lee

New Mexico State University, New Mexico, U.S.A.

Dr. Yu-Feng (Winnie) Lee, Professor and Department Head at NMSU, specializes in International Business and Economics. She directs the Doctor of Economic Development Program and is a Senior Fellow of the Daniels Fund Ethics Initiative. Named among the Top 50 Women Leaders of New Mexico (2024), she holds a Ph.D. from SIUC and has been at NMSU since 2004, publishing extensively and leading study abroad programs.



Dr. Meerbek Kudaibergenov

Seoul National University of Science and Technology - South Korea

Meerbek Kudaibergenov, PhD, is an Assistant Professor at SeoulTech, South Korea. His research covers EFL teacher identity, student agency, and transnational education in East and Central Asia. He serves as a Regional Editor for the Journal of International Students and is on the editorial boards of SageOpen and the Journal of Contemporary Eastern Asia. ORCiD: 0000-0001-7717-9473.



Prof. Dr. Muhammad Ashvaq

National Business School, the University of Falsalabad

Prof. Dr. Muhammad Ashfaq, Dean at the University of Faisalabad, specializes in agricultural policy, supply chain management, and climate change. He holds a PhD from the University of New England, Australia, and completed a postdoc at Laval University, Canada. With 100+ research papers, 5 books, and 32 funded projects, he has supervised 14 PhD and 150+ MS/MPhil students and consults for international organizations.



16:30 – Moderatör

Dr. Ebru Bağçı

Workshop: Nitelikli Dergilerde Yayıncılık ve Kitap Editörlüğü

Dr. Ebru Bağçı is a faculty member in the Civil Aviation Cabin Services Program at Beykent University. Her academic work focuses on neuromarketing, tourism, and digitalization. She holds undergraduate and graduate degrees in tourism and aviation management, and earned her Ph.D. in Tourism Management from Adnan Menderes University. Dr. Bağcı is known for her academic publications and her book titled "Analysis of Tourism Promotional Films with a Neuromarketing Perspective."



16:30 – Konuşmacı

Doç. Dr. Mehmet Bağış

Workshop: Nitelikli Dergilerde Yayıncılık ve Kitap Editörlüğü

Associate Professor Dr. Mehmet BAĞIŞ, a faculty member of the Department of International Trade and Finance, has commenced his research at Oxford Brookes University as part of the 2219 - International Postdoctoral Research Fellowship Program.



16:30 – Moderatör

Prof. Dr. Cemal Zehir

Workshop: Nitelikli Dergilerde Yayıncılık ve Kitap Editörlüğü

Prof. Dr. Cemal Zehir completed his undergraduate and graduate studies at Marmara University and earned a second master's degree and a Ph.D. from GebInstitute of Technology. He was promoted to full professor in2013 at Yıldız Technical University, where he continues to teach and conduct research in Strategic Management, Leadership, Human Resources, and Organizational Studies.
He has authored over 190 academic publications, including 96 articles ininternational journals—68 of which are indexed in SSCI/SCI. He has supervised 38 Ph.D. dissertations. Prof. Zehir is the Editor-in-Chiefof the Journal of Global Strategic Management and serves as Chair of the International Conference on Leadership, Technology and Innovation Management

19:30 – Gala Yemeği (Gülistan Sofrası - Pendik)

https://maps.app.goo.gl/yeyxvzcT7MLrLpn87

16 Mayıs 2025 – Bilimsel Sunumlar

09:30 – Kongre Katılım Masası Açılışı

10:00 – Yüz Yüze ve Online Bilimsel Sunumlar (Paralel Oturumlar – Tüm Gün)

11:00 – Davetli Konuşmalar



Prof.Dr. Avdhesh Jha

Principal, Smt. B.C.J. College of Education, Khambhat, Gujarat

Dr. Jha is the Principal of Smt. B.C.J. College of Education, Khambhat, Gujarat, and the Chief Editor of Voice of Research. With 23 years of experience, he has mentored nine Ph.D. scholars and published extensively with reputed publishers like McGraw Hill and Routledge. His expertise includes teacher training, psychology, research methodology, and creativity. Dr. Jha has written over 200 poems in English and Hindi and has been a keynote speaker at various seminars.



Dr. Logaiswari Indiran

Universiti Teknologi Malaysia (UTM), Malaysia

Dr. Logaiswari Indiran, a senior faculty member at UTM, is widely recognized for her expertise in entrepreneurship, green innovation, and business model development. Her outstanding contributions to education and industry have garnered numerous awards, including the prestigious NALI Best Educator Award 2024. Beyond being a prolific author and international speaker, she is a dedicated mentor to startups, fostering impactful and sustainable business development.



Nuri Muhammet Çelik

Workshop: Proje Geliştirme ve Uygulama Örnek Olaylar



Dr. Aytaç Uğur Yerden

Workshop: Proje Hazırlama, Örnek Yapay Zeka Projesi ve Akademik İşbirlikleri.

Dr. Aytac Ugur YERDEN, a graduate of Marmara University and Bursa Technical University, holds a master's in Electrical Education and a PhD in Mechatronics Engineering. He became a Lecturer in 2014 and Asst. Prof. Dr. in 2020. He completed his master's thesis at HAW-Hamburg University in Germany (2007-2008). Dr. Yerden has worked as an exam and system coordinator at Marmara University, and as a lecturer, program head, and department head at Istanbul Gedik University between 2014-2020. He led the Sanal Ark project on AR, VR, and distance education, funded by the Istanbul Development Agency. He has advised numerous theses and has extensive research and publications in renewable energy, robotics, AI, industry 5.0, metaverse, and cyber security.

17:30 – Değerlendirme ve Kapanış. Moderatörler:

Dr. Aytaç Uğur Yerden, Dr. Ahmet Erkasap, Prof.Dr. Muhammad Ashvaq

17 Mayıs 2025 – İstanbul Turu + Online Oturumlar
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10:00 – Online Sunumlar – Tüm Gün
17:00 – Serbest Zaman

IX. Academic Studies Congress – Opening and Main Session

Video meeting link: https://meet.google.com/nor-bgmr-prd

ENGLISH IN-PERSON – SESSION 1

Session Chair: Nevin Karabıyık Yerden / Marmara University

Thursday, May 15, 2025 at 12:30:00 PM GMT+3 – Thursday, May 15, 2025 at 2:00:00 PM GMT+3

English In-Person Session – Room 1

- A Research of Storytelling and Social Media Advertisements in Experiential Marketing
  Nevin Karabıyık Yerden (Marmara University)
- Use of Technology in Environmental Sustainability Themed Advertising Campaigns and Case Study Analysis
  Nevin Karabıyık Yerden (Marmara University)
  Mert Uydaci (Marmara University)
- The Impact of AI Tools on Student Assignments: Enhancing Creativity or Hindering Critical Thinking?
  Letchumanan Murugason (Banting Polytechnic)
- Harmony of Turkish and Uzbekistan Spiritual Education: Modern Problems and Solutions
  To'lanboy Ortiqov (Andijan State University)
- Irony is a Rhetorical Device or Figure of Speech
  Dilfuza Saidrahimova (Kakand University Andijan Branch)
- Communicating Sustainability: Using Communicative English Classrooms to Promote SDG Awareness
  S. Thivviyah Sanmugam (Politeknik Banting Selangor)
  Ling Ling Chong (Politeknik Port Dickson)
  Letchumanan Murugason (Banting Polytechnic)

ENGLISH IN-PERSON – SESSION 2

Session Chair: Dr Jayakumar Raj / Optimum Professional Training Academy

Thursday, May 15, 2025 at 12:30:00 PM GMT+3 – Thursday, May 15, 2025 at 2:00:00 PM GMT+3

English In-Person Session – Room 2

- Automatic Error Detection of Banking Transaction Forms Using Similarity Algorithms
  Şerife Esra Dinçer (Gedik Üniversitesi)
  Emine Gülmez (ArchiTech)
- Relationships Between Uzbek Linguistics and Chemistry
  Xafiza Zakirov (Andijan State University)
- Higher Education Transformation and Artificial Intelligence
  Azizbek Egamberdiev (Andijan state pedagogical institute)
- Scientific Approaches to the Historical Genesis of Entrepreneurial Activity: Western And Eastern Descriptions
  Mashraboy Xalimova (Andizhan State Pedagogical Institute)
- Politics of Blue and Green Technologies: A Theory of Us-Eu Tech Conflict
  Çağdaş Bahar (Istanbul University)
- How Do Cultural Differences and Ethnic Identity Influence the Adaptation of Students from Arab Countries Studying in Russia
  Vera Fedotova (HSE - Perm)
- Beyond Income Constraints: Green Economy Transitions and Sustainable Development in Emerging Economies
  Yavuz Selim Balcıoğlu (Doğuş University)
  Turhan Karakaya (Doğuş University)
  Abdullah Merter (Gebze Teknik Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 1

Session Chair: Ts. Lıew Foong Chıng / Kolej Komuniti Kuching

Thursday, May 15, 2025 at 12:30:00 PM GMT+3 – Thursday, May 15, 2025 at 2:00:00 PM GMT+3

https://meet.google.com/fmi-srhe-ygp

English Online Session – Room 1

- The Perception of Health Belief and Vaccine Valence Towards Domestic Tourist Intention to Travel During COVID-19 Pandemic
  Rozilawati Shaari (Politeknik Tuanku Syed Sirajuddin)
- Smart Tourism in Perlis: Issues and Challenges
  Elena Binti Anwar (Politeknik Tuanku Syed Sirajuddin)
  Faizal Abdul Razak (Politeknik Tuanku Syed Sirajuddin)
  Hairulnizam Bin Abdul Hamid (Kolej Komuniti Pekan Pahang)
- Critical Analysis of the Novel Me Before You With Reference to Euthanasia
  Lareeb Gull (Independent Researcher)
- Shrinking Agricultural Land: A Threat to Sustainable Rural Society in Pakistan
  Aqeela Saghir (University of Agriculture Faisalabad Pakistan)
  Shoukat Ali (University of Agriculture Faisalabad Pakistan)
  Rakhshanda Kousar (University of Agriculture Faisalabad Pakistan)
  Saima Sadaf (University of Sardogha, Sargodha)
  Rafay Muzamil (University of Agriculture Faisalabad Pakistan)

ENGLISH ONLINE SESSION – SESSION 2

Session Chair: Doç. Dr. Eray Alım / Batman Üniversitesi

Thursday, May 15, 2025 at 12:30:00 PM GMT+3 – Thursday, May 15, 2025 at 2:00:00 PM GMT+3

https://meet.google.com/wcr-vdjd-ito

English Online Session – Room 2

- Ai-Driven Transformation and Green Digital Development as Catalysts of Sustainable Societies: A Cross-National Panel Study of Emerging Economies (2000–2024)
  Qamar Ali (Virtual University of Pakistan)
- Economic Evaluation of New Garlic Variety (Narc G1) Vs. Local Varieties: A Case Study of Punjab Farmers
  Tahira Sadaf (Institute of Agricultural and Resource Economics, Faculty of Social Sciences, University of Agriculture, Faisalabad)
  Nazia Tabasam (University Of Agriculture Faisalabad)
  Ayesha Rouf (Institute of Agricultural and Resource Economics University of Agriculture Faisalabad)
  Komal Azhar (University of Agriculture, Faisalabad)
- Analyzing Knowledge Of Crimean Congo Hemorrhagic Fever (Cchf) and Preventive Measures Among Dairy Farm Workers in Vehari District
  Tahira Sadaf (Institute of Agricultural and Resource Economics, Faculty of Social Sciences, University of Agriculture, Faisalabad)
  Nazia Tabasam (University of Agriculture Faisalabad)
  Ayesha Rouf (Institute of Agricultural and Resource Economics University of Agriculture Faisalabad)
  Komal Azhar (University of Agriculture, Faisalabad)
- Impact of Oil Price Fluctuations on Inflation in Pakistan: A Time Series Analysis
  Tahira Sadaf (Institute of Agricultural and Resource Economics, Faculty of Social Sciences, University of Agriculture, Faisalabad)
  Nazia Tabasam (University of Agriculture Faisalabad)
  Komal Azhar (University of Agriculture, Faisalabad)
  Memona Nasir (Institute of Agricultural and Resource Economics, University of Agriculture Faisalabad)
- Analysis of Climate Change Impact on Potato Yield in Khyber Pakhtunkhwa
  Farhana Gul (The University of Swabi)

TURKISH IN-PERSON – SESSION 1

Session Chair: Dr. Abdullah Kürşat Merter / Gebze Teknik Üniversitesi

Thursday, May 15, 2025 at 12:30:00 PM GMT+3 – Thursday, May 15, 2025 at 2:00:00 PM GMT+3

Turkish In-Person – Salon 1

- Sürdürülebilir Kalkınmada Şehir İçi Tarımcılık Faaliyetlerinin İktisadi ve Mali Etkileri
  Abdurrahman Kaya (Kastamonu University)
- ESG Content Intensity and Sustainability Report Timeliness
  Abdullah Merter (Gebze Teknik Üniversitesi)
  Gökhan Özer (Kyrgyz-Turkish Manas University)
  Beylem Çelik (Istanbul Gedik University)
- Yapay Zeka ve Muhasebe Arasındaki İlişki
  Hami Velioğlu (Harran Üniversitesi)
  Ömer Faruk Demirkol (Harran Üniversitesi
- Ekolojik Etik Krizi: Kazak Sanat Aktivistlerinin Deneyimleri ve Araştırmalar
  Adiya Ramazanova (L.Gumilyov Eurasian National University)
  Kuralay Yermagambetova (L.Gumilyov Eurasian National University)
  Meyram Kikimbayev (L.Gumilyov Eurasian National University)
- Design And Analysis of Carbon Fiber Reinforced
  Beyza Azmaz (Marmara University)
  Zeynep Guler (Marmara University)
  Garip Genç (Marmara University)
  Özge Akay Sefer (Marmara University)
- Predicting Bank Customers' Location Permission Sharing Behavior by Using Machine Learning
  Güneykan İnce (Gebze Teknik Üniversitesi)
  Mehmet Göktürk (Gebze Technical University)
- Gelir Kısıtlamalarının Ötesinde: Yeşil Ekonomi Geçişleri ve Gelişmekte Olan Ekonomilerde Sürdürülebilir Kalkınma
  Yavuz Selim Balcıoğlu (Doğuş University)
  Turhan Karakaya (Doğuş University)
  Abdullah Merter (Gebze Teknik Üniversitesi)
- Elektronik Ticaret Tedarik Zincirlerindeki Özgün Yanlar ve Başarı Faktörleri
  Halefsan Sumen (Istanbul Technical University)
- Yapay Zeka ve Tarımın Geleceği: Sürdürülebilir Gıda Sistemlerine Yapılan Dijital Geçiş
  Huriye Zafera (İstanbul Gedik Üniversitesi)
  Cansu Zengin (İstanbul Gedik Üniversitesi)

TURKISH IN-PERSON – SESSION 2

Session Chair: Prof. Dr. Mustafa KOCAOĞLU / Necmettin Erbakan Üniversitesi

Thursday, May 15, 2025 at 12:30:00 PM GMT+3 – Thursday, May 15, 2025 at 2:00:00 PM GMT+3

Turkish In-Person – Salon 2

- Duygusal Zekânın Motivasyona Etkisinde Zaman Yönetimi Becerilerinin Aracılık Rolü
  Yonca Bir (Çağ Universitesi)
  Murat Koç (Cag University)
- Üniversitelerde Yapay Zeka: Akademisyenlerin Görüşleri Üzerine Bir İnceleme
  Meltem Özbay (Çağ Üniversitesi)
  Fırat Özbay (Çağ Üniversitesi)
  Saadet Sağtaş Tutkunca (Çağ Üniversitesi)
- Approval-Seeking in Social Media: Moderating Role of Social Comparison, The Impact of Cyber Values and AI Interactions
  Ayşe Şenay Koç (Çağ University)
- A Comparative Evaluation on The Integration of Artificial Intelligence and Digital Technologies into Public Services
  Rıdvan Göktuğ Ayan (Necmettin Erbakan University)
  Mustafa Kocaoğlu (Necmettin Erbakan University)
- Katmanlı İmalat İle Üretilen Parçaların Tahribatsız Muayene Yöntemleri ve Uygulama Örnekleri
  Hüseyin Kaygısız (Istanbul Gedik University)
  Engin Tek (Istanbul Gedik University)
  Burak Bekircan (Istanbul Gedik University)
  Elif Sıla Selek Kılıçarslan (Istanbul Gedik University)
- Özel Yetenekli Lise Öğrencilerinin Yapay Zekâ Teknolojilerine Yönelik Kaygı Düzeyi ve Kariyer Planlarına Etkisi
  Berra Karakurt (Sakarya Bilim ve Sanat Merkezi)
  Erhan Kan (Sakarya Bilim ve Sanat Merkezi)
  Beytullah Önce (Sakarya Bilim ve Sanat Merkezi)
- Otizm Spektrum Bozukluğu Olan Çocukların Eğitiminde Teknoloji Kullanımına İlişkin Aile Görüşleri: Sürdürülebilirlik Perspektifiyle Bir Nitel Araştırma
  Meliha Kılıç (Gedik İGÜ)

TURKISH ONLINE SESSION – SESSION 1

Session Chair: Doç. Dr.Abdurrahman Özkan / Batman Üniversitesi

Thursday, May 15, 2025 at 12:30:00 PM GMT+3 – Thursday, May 15, 2025 at 2:00:00 PM GMT+3

https://meet.google.com/cmy-mebj-ros

Turkish Online Session – Room 1

- Sürdürülebilir Tüketim: Dijital Oyuncular Üzerine Bir İnceleme
  Semih Sezgin (Sinop Üniversitesi)
- Scientific and Innovation Approach to Sustainable Regional Development in Central Asia Under Globalization
  Yunusov Kamaldin Abzalovich (Andijan State University)
- Yapay Zeka Destekli Teknolojilerin Bireylerin Temel Bilgi ve El Becerileri Üzerinde Etkisi ve Bunun Günlük Yaşam Yansımaları
  Abdurrahman Özkan (Batman Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 3

Session Chair: Mdm Diana Lee Phooi Yan / Malaysia - Sultan Azlan Shah Polytechnic

Thursday, May 15, 2025 at 2:00:00 PM GMT+3 – Thursday, May 15, 2025 at 3:30:00 PM GMT+3

https://meet.google.com/ayu-zupe-ovk

English Online Session – Room 1

- Exploring the Determinants of Land Tenency Arrangements of Farmers in Punjab Pakistan
  Ayesha Hussain (Govt College for Women University Faisalabad, Pakistan)
  Rakhshanda Kousar
  Asghar Ali
  Javaria Nasir
- The Rising Tide of Divorce: Social and Economic Consequences
  Samia Yousaf (University of Agriculture fsd)
  Dr. Rakshanda Kousar (University of Agriculture fsd)
  Kanza Naeem (University of Agriculture fsd)
- Strengthening Urban Resilience with Green Technologies: Human-Centered Solutions for Sustainable Environmental Adaptation
  Shama Mushtaq (University of Agricultur Faisalabad)
  Nida Iqbal (Riphah International University Faisalabad Campus)
- Design and Development of an Arduino Uno-Powered Automatic Pesticide Mixer For Agriculture
  Verawaty Ismail (Politeknik Tuanku Syed Sirajuddin, Perlis, Malaysia)
  Mohd Hılmı Arıffın (Politeknik Tuanku Syed Sırajuddın)
  Khaırul Fazızul Mat Drıs (Politeknik Tuanku Syed Sırajuddın)
- Portable Coffee Log Machine
  Lailatul Hamidah Hamdan (Politeknik Kuching Sarawak)
  Mohd Ashadi Bin Mohd Yusop (Politeknik Kuching Sarawak)

ENGLISH ONLINE SESSION – SESSION 4

Session Chair: Dr Mazilah Binti Abdullah / Universiti Teknologi Malaysia

Thursday, May 15, 2025 at 2:00:00 PM GMT+3 – Thursday, May 15, 2025 at 3:30:00 PM GMT+3

https://meet.google.com/wcr-vdjd-ito

English Online Session – Room 2

- Analyzing the Role of Lean Manufacturing Practices in Driving Sustainability in Malaysian Manufacturing Organizations: Moderating Effect of Employee Involvement
  Wen Xuan Koh (Universiti Teknologi Malaysia)
  Mohd Zulfabli Hasan (Universiti Teknologi Malaysia)
  Teh Zaharah Yaacob (Universiti Teknologi Malaysia)
  Hanini Ilyana Hashim (Universiti Teknologi Malaysia)
- Edupulse: A Technology-Driven System for Empowering Academic Advising and Student Progress Monitoring
  Nurul Nisa Mohd Nasir (Politeknik Kuching Sarawak)
  Herman Nordiadi Abd Wahab (Politeknik Kuching Sarawak)
- Fabrication and Testing of a Miniature Split Ac Unit with R134a for Hvac Education
  Muhammad Qusyairie (Politeknik Kuching Sarawak)
  Jaslin Rasin (Politeknik Kuching Sarawak)
- Determinants of Sustainable Consumption Intentions: Evidence from University Students in Kyrgyzstan
  Aidana Chyngaraeva (Kyrgyz-Turkish Manas University)
  Azamat Maksüdünov (Kyrgyz-Turkish Manas University)
- The Role of Social Media Engagement in Driving Consumer Attitude Towards Direct-to-Consumer Brands and Brand Loyalty
  Maida Shafiq (The University of Faisalabad)

ENGLISH IN-PERSON – SESSION 3

Session Chair: Dr Ali Kasta / Kinshasa University

Thursday, May 15, 2025 at 3:00:00 PM GMT+3 – Thursday, May 15, 2025 at 4:30:00 PM GMT+3

English In-Person Session – Room 1

- COVID-19 and Its Impact on SMEs in Herat, Afghanistan
  Khaled Sediqian (Ghalib University)
- Quality Infrastructure for Sustainable Society: A Case Study of Noble's Enclave Faisalabad
  Rana Javed (IJ Constructions)
  Maqsood Ahmad M Abid (Construction Company)
- Evaluating ChatGPT's Influence on Esl Educators' Teaching and Motivation
  Ling Ling Chong (Politeknik Port Dickson)
- Augmented Minds: Leveraging Augmented Reality and Collective Intelligence to Transform Collaborative Learning in Omani Higher Education
  Kashif Ali Sabiri (Tampere University and University of Buraimi)
- What Limits the Success of Tna in Malaysian Manufacturing Firms?
  Jayakumar Raj (Optimum Professional Training Academy)
  Indiran, Logaiswari (AHIBS)
  Khartic Rao Manokaran
  Thivviyah Sanmugam (Politeknik Banting Selangor)

All abstracts will be published in the abstract booklet.
There will be opportunities for publication in SCOPUS, TRDizin, and international journals.
Our congress is designed to be indexed in WoS. All processes will be conducted accordingly, and an application will be made to WoS.
To submit a paper, please visit https://asc.academicianstudies.com/

ENGLISH ONLINE SESSION – SESSION 5

Session Chair: Dr Hanini Ilyana Che Hashim / Universiti Teknologi Malaysia

Thursday, May 15, 2025 at 3:30:00 PM GMT+3 – Thursday, May 15, 2025 at 5:00:00 PM GMT+3

https://meet.google.com/ayu-zupe-ovk

English Online Session – Room 1

- The Impact of Digital Technology Use in Companies on Productive Artificial Intelligence Integration
  Kevser Şahinbaş (Istanbul Beykent University)
- The Mediating Role of Organizational Culture in the Effect of Attitudes Toward Artificial Intelligence on Innovative Work Behavior and Turnover Intention: A Quantitative Study in the Technology Sector
  Begüm Al (Marmara University)
- Enhancing Practical Learning in Automotive Electrical Diagnostics Using the EZFuse Tester
  Herman Nordiadi Abd Wahab (Politeknik Kuching Sarawak)
  Nurul Nisa Mohd Nasir (Politeknik Kuching Sarawak)
- Microlearning Video Production Template: A Structured Approach for Tvet Educators In Creating Effective Student-Centered E-learning Videos
  Luke Kenny Doring (Kolej Komuniti Kuching)
  Foong Ching Liew (Kolej Komuniti Kuching)
- Enhancing PFSP Optimization Through a NEH-BA-ABC Hybrid Algorithm: A Benchmark-Based Comparison with HCCE
  Mohd Rizal Bin Abdul Raman (Politeknik Kuching Sarawak)
  Yoong Chow Ho (Politeknik Kuching Sarawak)
  Rexca Jamit (Politeknik Kuching Sarawak)
- Assessments of Türkiye's Fight against Climate Change from the Point of View of EU Law and Policies
  Kutluhan Bozkurt (İstanbul Gedik Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 6

Session Chair: Doç. Dr. Harika Suklun / Batman Üniversitesi

Thursday, May 15, 2025 at 3:30:00 PM GMT+3 – Thursday, May 15, 2025 at 5:00:00 PM GMT+3

https://meet.google.com/wcr-vdjd-ito

English Online Session – Room 2

- Advancing Sustainability through Green HRM: Empirical Evidence from a Developing Country
  Maryam Saleem (The University of Faisalabad)
  Aisha Saleem (GCUF)
- A Study on Marketing Strategies and Consumer Behavior Towards Cola Next ®
  Nimra Anjum (The University of Faisalabad)
- The Impact of Lean Manufacturing on Operational Performance in Malaysian Manufacturing Organization
  Mohd Zulfabli Hasan (Utm)
- A Case Study of Maintenance Engineering and Management in Oil and Gas Industry
  Ahmad Ikhwan Najmuddın Musa (Politeknik Tuanku Syed Sırajuddın)
  Choong Chee Guan (Politeknik Tuanku Syed Sırajuddın)
  Robert Kerk Swee Tıan (Politeknik Mersıng Johor)
- A Case Study of Maintenance Engineering and Management in Manufacturing Industry
  Muhammad Haırızal Hellı Zakbah (Politeknik Tuanku Syed Sırajuddın)
  Choong Chee Guan (Politeknik Tuanku Syed Sırajuddın)
  Nadzrı Che Kamıs (Politeknik Kuala Terengganu)
- Innovation in TLM: Development of a Refrigeration Cycle Pressure-Enthalpy (P-h) Analyzer Kit to Enhance Students' Mastery of the Mollier Chart
  Haizal bin Mohd Hamzah (Politeknik Kuching Sarawak)
  Jaslin bin Raisin (Politeknik Kuching Sarawak)
  Nurhidayu Binti Azhar (Politeknik Kuching Sarawak)

ENGLISH ONLINE SESSION – SESSION 7

Session Chair: Prof. Dr. Shohobiddinova Shohida Xoshimovna / Andijan State University

Thursday, May 15, 2025 at 5:00:00 PM GMT+3 – Thursday, May 15, 2025 at 6:30:00 PM GMT+3

https://meet.google.com/ayu-zupe-ovk

English Online Session – Room 1

- Augmented Reality (Ar) in Teaching and Learning (T&L) for the Certificate in Architectural Technology (Cat) Program
  Lily Siong (Kolej Komuniti Kuching)
  Widad Syamila Samsudin (Kolej Komuniti Kuching)
  Liew Foong Ching (Kolej Komuniti Kuching)
- Instagram for ELT
  Kübra Bekci Bitiş (Ondokuz Mayıs University)
  Dilek Büyükahiska (Ondokuz Mayıs University)
- Digital Transformation in Education: Mitigating National Bias in AI Systems
  Suneeza Hamid (TUF)
  Muhammad Ibrar (TUF)
  Majid Hussain (TUF)
- Telegram Chatbot Using Python
  Vaishanavi Kumari (Galgotias University)
  Nidhi Sharan (Galgotias University)
  Nidhi Sharma (Galgotias University)
- Integrating Text-To-Speech Texnology into Inclusive Teaching Methodologies: A Case Study of Teacher Practice in Uzbekistan
  Shakhnoza Abduvakhobova (Phd Student)
  Nasibakhon Juraevna (Andıjan State Pedagogıcal Instıtute)

ENGLISH ONLINE SESSION – SESSION 8

Session Chair: Dr Sazana binti Ab Rahman / Department of Polytechic and Community College Education, Ministry of Higher Education

Thursday, May 15, 2025 at 5:00:00 PM GMT+3 – Thursday, May 15, 2025 at 6:30:00 PM GMT+3

https://meet.google.com/wcr-vdjd-ito

English Online Session – Room 2

- Post-COVID Resilience: How Fintech Transformed Working in Banking Sector, It's Impact on Customers.
  Rimsha Shahid (The University of Faisalabad)
  Sidra Ghulam Muhammad (TUF)
- The Economic Reforms and BRICS Countries: A Successive Experience from the Global South
  Shameem Chalil (Koneru Lakshmaiah Education Foundation, Vijayawada, Andhra Pradesh)
  Aisha Ibrahim Mohammed (Cochin University of Science and Technology)
- Towards a Sustainable Society: Integrating Humanity, Technology, and AI in Finance and Economics – A Statistical Analysis of Chengalpattu, Tamil Nadu
  M R Ramesh (Indira Gandhi Centre For Atomic Research, Kalpakkam)
- Modeling Stock Returns Volatility and Portfolio Risk Through Asset Pricing Model: Empirical Evidence from Pakistan
  Mamoona Javed (The University of Faisalabad)

ENGLISH ONLINE SESSION – SESSION 9

Session Chair: Dr Yogeeswari Subramaniam / Universiti Teknologi Malaysia

Friday, May 16, 2025 at 9:00:00 AM GMT+3 – Friday, May 16, 2025 at 10:30:00 AM GMT+3

https://meet.google.com/fdo-mbpm-etz

English Online Session – Room 1

- Powering Sustainable Future: A System-Wide Review of Malaysia's Energy Transition Efforts **Siti Rokiah (Politeknik Ungku Omar)**
  Nur Anis Ellya (Politeknik Ungku Omar)
  Subassini Sangaran (Politeknik Ungku Omar)
- A Comparison Study of Malay and Nyonya Kebaya in The Peninsular Malaysia from 1910s-2024s
  Zarina Yusof (Politeknik Port Dickson)
- Crush Adjustable
  Ridzudeen Zunuwanas (Ridzudeen)
- From Coal to Clean: Challenges And Opportunities in Malaysia's Renewable Energy Transition
  Muadz Saripuddin (Politeknik Ungku Omar)
  Haikal Naif Hashim (Politeknik Ungku Omar)
  Uwais Alkharni Ibrahim Ali (Politeknik Ungku Omar)
  Muhammad Izzat Akram Mohd Rosdi (Politeknik Ungku Omar)
- Powering Sustainable Future : A System-Wide Review of Malaysia's Energy Transition Efforts
  Siti Rokiah (Politeknik Ungku Omar)
  Nur Anis Ellya (Politeknik Ungku Omar)
  Subassini Sangaran (Politeknik Ungku Omar)

TURKISH ONLINE SESSION – SESSION 2

Session Chair: Dr. İsmail Koç / Sakarya Uygulamalı Bilimler Üniversitesi

Friday, May 16, 2025 at 9:00:00 AM GMT+3 – Friday, May 16, 2025 at 10:30:00 AM GMT+3

https://meet.google.com/zdz-skqa-dkj

Turkish Online Session – Room 1

- Contribution of Temettuat (Dividend Taxes) Registers to Socio-Economic Analysis: Mengen/Ağalar Village (1844-1845)
  Fatih Kıran (Kocaeli Üniversitesi)
  Cengiz Güney (Kocaeli University)
- Ekonomik Büyümenin Siber Güvenlik Üzerine Etkisi: ICT Gelişim Endeksinden Kanıtlar
  Şerife Deniz Kolat (Batman Universitesi)
  Gül Ünver (Batman Üniversitesi)
- Yakınsama Hipotezine İlişkin Sistematik Bir Literatür İncelemesi: Bibliometrix(R) Örneği
  Yasemin Erduran (Mustafa Kemal Üniversitesi)
  Serpil Ağcakaya (Süleyman Demirel Üniversitesi)
- Digital Sin Taxes and the Fiscal Management of Behavioral Risks: International Findings and Policy Recommendations for Türkiye
  İsmail Koç (Sakarya Uygulamalı Bilimler Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 11

Session Chair: Prof. Dr. Asghar Ali / Director Institute of Ag. And Resource Economics, University of Agriculture, Faisalabad

Friday, May 16, 2025 at 10:30:00 AM GMT+3 – Friday, May 16, 2025 at 12:00:00 PM GMT+3

https://meet.google.com/fdo-mbpm-etz

English Online Session – Room 1

- The Readiness of Banting Polytechnic's Aircraft Maintenance Students for Online Composite Repair Teaching and Learning
  Santhy Subbarau (Politeknik Banting Selangor)
- Harnessing Artificial Intelligence in Education: A Path Toward Inclusion and Equity in the AI Era
  Ananda Majumdar (University of Alberta)
- AI Adoption and Digital Readiness in Architecture Education: A Study of Kolej Komuniti Kuching Students
  Foong Ching Liew (Kolej Komuniti Kuching)
  Nuraini Binti Mahmud (Kolej Komuniti Kuching)
  Luke Kenny Doring (Kolej Komuniti Kuching)
- Integrating Visual Design Platforms into Creative Education for Enhanced Student Engagement
  Foong Ching Liew (Kolej Komuniti Kuching)
  Nuraini Binti Mahmud (Kolej Komuniti Kuching)
  Luke Kenny Doring (Kolej Komuniti Kuching)
- Work-Based Learning Implementation and Graduate Outcomes in Malaysian Polytechnics: A Comparative Review
  Che Zawiyah Che Hasan (Politeknik Ungku Omar)
  Nurul Najwa Md Yusof (Politeknik Ungku Omar)
  Norman Zamri (Politeknik Ungku Omar),
  Samikhah Muhammad (Politeknik Ungku Omar)

TURKISH ONLINE SESSION – SESSION 3

Session Chair: Prof. Dr. Fatih Konak / Hitit Üniversitesi

Friday, May 16, 2025 at 10:30:00 AM GMT+3 – Friday, May 16, 2025 at 12:00:00 PM GMT+3

https://meet.google.com/zdz-skqa-dkj

Turkish Online Session – Room 1

- Digital Transformation, Artificial Intelligence and Sustainability: Global Approaches to Future Societies and Marketing Ecosystems
  Murat Başal (İstanbul Gelişim Üniversitesi, Meslek Yüksekokulu)
  Ömer Faruk Şarkbay (İstanbul Gelişim Üniversitesi, Sağlık Fakültesi)
  Aslı Kaya (İstanbul Gelişim Üniversitesi, Sağlık Fakültesi)
  Aslı Ercan Önbıçak (Bağımsız Araştırmacı)
  Hikmet Emir Önbıçak (Kıdemli Dış Ticaret Danışmanı)
  Nadire Kantarcıoğlu (Bağımsız Araştırmacı)
- Örgütlerde Yapay Zekâ Uygulamalarının Etkin Yönetim Sürecine Etkileri: Literatür Taraması
  Gönül Gül Ekşi (Karatekin Üniversitesi)
- AI and Employee Adaptation: Development and Validation of a New Scale
  Hüseyin Çiçeklioğlu (Mersin University)
  Ayşe Meriç Yazıcı (İstanbul Gelişim Üniveristesi)
  Mesut Öztırak (İstanbul Medipol Üniversitesi)
  Osman Yılmaz (Batman Üniversitesi)
- "Corporate Governance" in Members of The Organization of Turkic States: Bibliometric Overview of Publications
  Nurcan Günce (Kocaeli)
  Cengiz Güney (Kocaeli Üniversity)
- Dijital Dönüşüm Parametrelerinin Telekomünikasyon Sektöründeki Algısının Araştırılması: Türk Telekom Örneği
  Levent Sümer (Bogazici University)
  Mesut Bayrak (Türk Telekom)
  Fatih Kiraz (İstinye University)
- Investigation of the Effect of Pop-Up Types Used in Shopping Websites on User Attitudes
  Fatih Çağatay Baz (Osmaniye Korkut Ata University)
  Şerife Keleş (Osmaniye Korkut Ata University)

ENGLISH IN-PERSON – SESSION 4

Session Chair: Anis Binti Marzlan / Üniversiti Putra Malaysia

Friday, May 16, 2025 at 10:45:00 AM GMT+3 – Friday, May 16, 2025 at 12:15:00 PM GMT+3

English In-Person Session – Room 1

- Climate Change, Water and Food Security: Challenges for Sustainability
  Muhammad Ashfaq (The University of Faisalabad)
- Designing Sustainable Plant-Based Cheese as a Future Food: Optimizing Formulation through Fractional Factorial Design and Artificial Neural Networks
  Anıs Binti Marzlan (Universiti Putra Malaysia)
  Anis Shobirin Meor Husssin (Universiti Putra Malaysia)
  Aliah Zannierah Mohsin (Universiti Putra Malaysia)
  Fatema Hossain Brishti (Universiti Putra Malaysia)
  Sylvie Marchesseau (Universite De Montpellier)

ENGLISH ONLINE SESSION – SESSION 10

Session Chair: Doç. Dr. Ayşe Meriç Yazıcı / Istanbul Gelisim University

Friday, May 16, 2025 at 10:45:00 AM GMT+3 – Friday, May 16, 2025 at 12:15:00 PM GMT+3

https://meet.google.com/eav-htfr-int

English Online Session – Room 1

- AI Generative Surveillance for Public Well- Being: Revolutionizing Face Mask Detection System
  Rabia Shahid (The University of Faisalabad)
  Mamoona Jabbar (Govt College University)
  Majid Hussain (The University of Faisalabad)
  Muhammad Ibrar (The University of Faisalabad)
- Span of Attention in Adolescents: A Comparative Analysis Based on Digital Device Usage
  Saroj Pandey (Rashtrasant Tukadoji Maharaj Nagpur University)
  Rajshree S.Vaishnav (Rashtrasant Tukadoji Maharaj Nagpur University)
- Impact of Nutrition Education and Whey Supplementation on Body Composition and Endurance Performance of Athletes
  Bareera Munir (University of veterinary and anmal sciences lahore)
  Ahmed Wagas (University of Veterinary and Animal Sciences)
  Ali Ahmad (University of Veterinary and Animal Sciences)
  Khan Tahir Sajid (University of Veterinary and Animal Sciences)
- Fedneurox: Privacy-Preserving and Explainable Federated Learning for Early Detection of Alzheimer Disease Through Multi-Modal Analysis
  Muqadsa Jabeen (The University of Faisalabad)
  Mehak Rana (The University of Faisalabad)
  Majid Hussain (The University of Faisalabad)
  Muhammad Ibrar (The University of Faisalabad)
- Evaluating Health Costs and Lifestyle Impact of Polycystic Ovary Syndrome Among Women in District Faisalabad
  Kanza Naeem (University of Agriculture, Faisalabad)
  Rakhshanda Kousar (University of Agriculture Faisalabad)
  Javaria Nasir (University of agriculture fsd)
  Samia Yousaf (UAF)

TURKISH IN-PERSON – SESSION 3

Session Chair: Doç. Dr. Gökben Bayramoğlu / Hitit Üniversitesi

Friday, May 16, 2025 at 10:45:00 AM GMT+3 – Friday, May 16, 2025 at 12:15:00 PM GMT+3

Turkish In-Person – Salon 1

- Başarı Psikolojisini Yeniden Kodlamak: Giyilebilir Teknolojilerin Sporcuların Duygu ve Motivasyon Dinamiklerindeki Rolü **Furkan Çamiçi (Hitit Üniversitesi)**
  Nida Palabıyık (Yozgat Bozok Üniversitesi)
  Gökben Bayramoğlu (Hitit Üniversitesi)
- XGBoost Modeli Tabanlı Mobil Karar Destek Uygulamasının Geliştirilmesi
  Serpil Sevimli Deniz (Van Yüzüncü Yıl Üniversitesi
- Hazır Giyim Sektöründe Kalite Maliyeti, Göçmen İşçiler ve Kayıt Dışı İstihdamın Etkileri: Nitel Bir Araştırma
  Fatih Semercioöz (İstanbul Üniversitesi)
  Caner Tekin (Batman Üniversitesi)
  Levent Bozkurt (Shein)
- A Compraison of Agility Perception in Manufacturing and ServiceSector
  Ismail Özdemir (İstanbul Gedik Üniversitesi)
  Ahmet Erkasap (Istanbul Gedik University)
- ORTAK YAZAR: YAPAY ZEKÂ
  Ebru Bağcı (Istanbul Beykent University)
  Feyza Taşkın (Istanbul Beykent University)
  Yeliz Akçay (Istanbul Beykent University)
  Gül Nihan Güven Yeşildağ (Istanbul Beykent University)
- Sürdürülebilir Toplum İçin Denetimin İşlevi
  İsmail Ercan Ünal (Bilgi Bağımsız Denetim)
- Havayolu ile İlk Kez Seyahat Edecekler İçin Bir Web Sitesi Geliştirilmesi
  Tülay Karabuğa (İstanbul Gedik Üniversitesi)
  Mehmet Ali Budak (İstanbul Gedik Üniversitesi)
- Türkiye'de Sağlık Kurumlarında İnovasyon ve Yenilik Konulu Lisansüstü Çalışmaların Bibliyometrik Analizi
  Gizem Yiğit (Sağlık Bilimleri Üniversitesi)
  Saadet Karakuş (Sağlık Bilimleri Üniversitesi)

TURKISH IN-PERSON – SESSION 4

Session Chair: Prof. Dr. Hasan Bozgeyikli / Selçuk Universitesi

Friday, May 16, 2025 at 10:45:00 AM GMT+3 – Friday, May 16, 2025 at 12:15:00 PM GMT+3

Turkish In-Person – Salon 2

- Intercorrelations among the Big Five Personality Traits: A Meta-Analytic Review
  Ayhan Ünal (Selçuk Üniversitesi)
  Hasan Bozgeyikli (Selçuk University)
- Parent and Preschool Teachers' Feedback on the Transition of Refugee Children with Special Needs to School: A Techno-Pedagogical Assessment for a Sustainable Society
  Mehmet Kumru (Sakarya Üniversitesi)
- Yapay Zekânın Kutsal Metinlerin Yorumlanmasına Ve Dini Kimliklerin Şekillenmesine Olan Etkisi
  Duygu Karakaş Aydın (Erciyes Üniversitesi)
- Dijitalleşme Döneminde Somut Olmayan Kültürel Mirasın Korunması ve Popülerleştirilmesi: Kazakistan ve Türkiye Deneyimi
  Kuralay Yermagambetova (L.N. Gumilyov Eurasian National University)
  Adiya Ramazanova (L.N. Gumilyov Eurasian National University)
  Meyram Kikimbayev (L.N. Gumilyov Eurasian National University)

ENGLISH ONLINE SESSION – SESSION 12

Session Chair: Dr. Hakan AKIN / Bodrum Institute

Friday, May 16, 2025 at 12:00:00 PM GMT+3 – Friday, May 16, 2025 at 1:30:00 PM GMT+3

https://meet.google.com/eav-htfr-int

English Online Session – Room 1

- Smart Safety Helmet with Real-Time Falling Object Detection and Alert System
  Rama Rao Lachanna (Politeknik Banting Selangor)
  Suchada Cham Nam (Politeknik Banting Selangor)
- Numerical Simulation of Eco Blue Bin
  Saw Chun Lin (Politeknik Bagan Datuk)
- Automated Rainwater Harvesting System for Plant Irrigation
  Azyan Md Zahri (Politeknik Tuanku Syed Sirajuddin)
  Azman Mat Hussin (Politeknik Tuanku Syed Sirajuddin)
  Choong Chee Guan (Politeknik Tuanku Syed Sirajuddin)
  Nur Adilla Idris (Politeknik Tuanku Syed Sirajuddin)
- IOT Pet Feeding Box
  Azyan Md Zahri (Politeknik Tuanku Syed Sirajuddin)
  Azman Mat Hussin (Politeknik Tuanku Syed Sirajuddin)
  Choong Chee Guan (Politeknik Tuanku Syed Sirajuddin)
- Artificial Intelligence and Its Impact on Sustainable Development: A Comprehensive Systematic Review
  Sobia Maqsood (The University of Faisalabad)
- The ‘Effectiveness of Duolingo in İmproving Students
  Goncagül Keskin Öztürk (19 Mayıs Üniversitesi)
  Dilek Büyükahıska (19 Mayıs Üniversitesi)

TURKISH ONLINE SESSION – SESSION 4

Session Chair: Dr. Özge Demirdelen / Çağ Üniversitesi

Friday, May 16, 2025 at 12:00:00 PM GMT+3 – Friday, May 16, 2025 at 1:30:00 PM GMT+3

https://meet.google.com/zdz-skqa-dkj

Turkish Online Session – Room 1

- Stratejik Planlamanın Yükseköğretim Kurumlarında Yönetime Etkisi
  Taleh Khalilov (Nakhchivan State University)
- Yükseköğretim Kalite Güvence Faaliyetlerindeki İyi Uygulama Örnekleri: Nitel Bir Araştırma
  İsa Bayhan (Bolu Abant İzzet Baysal Üniversitesi)
  Nida Bayhan (Bolu Abant İzzet Baysal Üniversitesi)
- Çevrimiçi Eğitimde Yapay Zekâ ve Eğitim Platformlarının Etkisi: Nitel Bir İnceleme
  Serpil Sevimli Deniz (Van Yüzüncü Yıl Üniversitesi)
- An Interdisciplinary Approach Focusing on SDG 4 For Law Faculty Students
  Özge Demirdelen (Cag University Faculty of Law)
- Social Justice, Counselor Education and More: Hot Topics of School Counseling
  Zeynep Görgülü (Selçuk University)
  Hasan Bozgeyikli (Selçuk University)
- Okul Öncesi Dönemde Yapay Zeka Okuryazarlığına İlişkin Öğretmen Görüşlerinin İncelenmesi
  Betül Yıldızhan Bora (Bingöl Üniversitesi)
  Cansu Şahin Kölemen (Beykoz Üniversitesi)
- Yapay Zeka Tabanlı Öğrenme Yönetim Sistemlerinin Pilot Eğitimindeki Etkileri Üzerine Bir İnceleme
  Güler Eryılmaz (Nişantaşı Üniversitesi)

TURKISH IN-PERSON – SESSION 5

Session Chair: Dr. Talha Turhan / Erciyes Üniversitesi

Friday, May 16, 2025 at 12:30:00 PM GMT+3 – Friday, May 16, 2025 at 2:00:00 PM GMT+3

Turkish In-Person – Salon 1

- Examining The Savings, Expenditures and Investments of Individuals in Terms of Sustainability During The Covid-19 Period.
  Dogan-Kutukiz Kutukiz (Mugla Sitki Kocman University)
  Beyaz Simge Çalık
  Ebru Okçu
- The Impact of Minimum Wage Increases on Youth Employment in Turkey During the 2000s
  Mürüvvet Akar (İstanbul Okan Üniversitesi)
- Dijitalleşme Sürecinde Vergi Uyumu: OECD Ülkelerinde Gelişim
  Eylül Tepe (Süleyman Demirel University)
  Esra Küçük (Süleyman Demirel University)
  Serpil Ağcakaya (Süleyman Demirel University)
- Sosyal Yardımlarının Bireylerin Sağlık Refahına Etkisi: Türkiye Örneğinde Sürdürülebilir Toplum Hedefiyle Bir Ekonomik Değerlendirme
  Saadet Karakuş (Sağlık Bilimleri Üniversitesi)
  Fatma Kılıç (TÜBİTAK Marmara Araştırma Merkezi)

TURKISH IN-PERSON – SESSION 6

Session Chair: Dr. Nida Palabıyık / Yozgat Bozok Üniversitesi

Friday, May 16, 2025 at 12:30:00 PM GMT+3 – Friday, May 16, 2025 at 2:00:00 PM GMT+3

Turkish In-Person – Salon 1

- Yaşlılık, Evde Sağlık Hizmetleri ve Sağlıklı Yaş Alma Polikliniği
  Mehmet Murat Şahin (Karabük Üniversitesi)
  Ufuk Karadavut (Karabük Üniversitesi)
- Madencilik Sektöründe Psikososyal Riskler ve Tükenmişlik Düzeylerinin Üretim Yöntemlerine Göre Karşılaştırmalı Analizi
  Erol Ünal (İstanbul Gedik Üniversitesi Lisansüstü Eğitim Enstitüsü İSG Doktora Programı)
  Mustafa Yağımlı (İstanbul Gedik Üniversitesi)
- Ötenin Keşfi: Yapay Zeka Destekli Biyo Analizlerle İnsan Hayatında Yeni Bir Epistemoloji
  Garbi Hasanov (İstanbul Gedik University)
  Mustafa Yağımlı (İstanbul Gedik Üniversitesi)
- Kronik Non-Spesifik Boyun Ağrısının Tedavisinde PNF Tekniği İle Fotobiyomodülasyon Tedavisinin Etkinliğinin Karşılaştırılması: Randomize Kontrollü Çalışma
  Edanur Tüfekçi (İstanbul Gedik Üniversitesi)
  Sıla İnce (İstanbul Gedik Üniversitesi)
  Lala Huseynova (İstanbul Gedik Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 13

Session Chair: Azyan Md Zahri / Politeknik Tuanku Syed Sirajuddin)

Friday, May 16, 2025 at 1:30:00 PM GMT+3 – Friday, May 16, 2025 at 3:00:00 PM GMT+3

https://meet.google.com/fdo-mbpm-etz

English Online Session – Room 1

- Pronunciation Errors Among English Language Learners: Looking at an Inventory of Pronunciation Errors from Polytechnic Students

  Ezatul Ghazalı (Polıteknık Sultan Azlan Shah)

  Lam Kok Weı Lam (Polıteknık Sultan Azlan Shah)

  Norhamızah Tamat (Polıteknık Sultan Azlan Shah)

- Impact of Psychological Factors on Cognitive Development of Students at Elementary Level

  Bushra Bashir (UAF)

- Level of Effectiveness of Group Work In The Implementation of the Dte50154 Course: Event Project Case Study: Semester 5, Diploma in Event Management, Department of Tourism And Hospitality, Polytechnic Malaysia

  Elena Binti Anwar (Politeknik Tuanku Syed Sirajuddin

  Norrasidah Binti Abidin (Politeknik Tuanku Syed Sirajuddin)

  Faizal Bin Abdul Razak (Politeknik Tuanku Syed Sirajuddin)

ENGLISH ONLINE SESSION – SESSION 14

Session Chair: Doç. Dr. Harika Suklun / Batman Üniversitesi

Friday, May 16, 2025 at 1:30:00 PM GMT+3 – Friday, May 16, 2025 at 3:00:00 PM GMT+3

https://meet.google.com/fdo-mbpm-etz

English Online Session – Room 2

- Unveiling Greenwashing and Greenhushing: A Comparative Analysis of ESG Risk Indices and Sustainability Risk Scores

  Elyase Iskender

- Exploring Marketing Constraints in the Potato Value Chain: Implications for Farmer Profitability

  Abdullah Hammad (Institute of Agricultural and Resource Economics)

- Production of Paper Bags from Banana Stem Infused with Pandan Aroma Via Esterification Process

  Zainal Abiddin Ahmad (Politeknik Kuching Sarawak)

  Mohammad Ismail Anuar bin Mohammad Sufian (Politeknik Kuching Sarawak)

- Investigate The Dietary Pattern and Factors Associated with Dietary Diversity Among School Aged Children in District, Faisalabad

  Tahira Sadaf (Institute of Agricultural and Resource Economics, Faculty of Social Sciences, University of Agriculture, Faisalabad)

  Nazia Tabasam (University of Agriculture Faisalabad)

  Ayesha Rouf (Institute of Agricultural and Resource Economics University of Agriculture Faisalabad) Komal Azhar (University of Agriculture, Faisalabad)

- Development of an Affordable Smart Farming System for Small-Scale Agriculture

  Tze Ching Ong (Politeknik Kuching Sarawak)

- Exploring Marketing Constraints in the Potato Value Chain: Implications for Farmer Profitability

  Abdullah Hammad

  Muhammad Ashfaq

  Asghar Ali

TURKISH ONLINE SESSION – SESSION 5

Session Chair: Dr. Güray Karacıl / Hatay Mustafa Kemal Üniversitesi

Friday, May 16, 2025 at 1:30:00 PM GMT+3 – Friday, May 16, 2025 at 3:00:00 PM GMT+3

https://meet.google.com/zdz-skqa-dkj

Turkish Online Session – Room 1

- Türkiye'deki Orman Rekreasyon Alanlarinin CBS Sistemi ile Analizi
  Güray Karacıl (Hatay Mustafa Kemal Üniversitesi)
- Kişisel Marka Bağlamında LinkedIn: Üniversite Öğrencilerinin Kullanım Alışkanlıkları Üzerine Bir Araştırma
  Nurzat Sultanbekova (Kyrgyz-Turkish Manas University)
  Azamat Maksüdünov (Kyrgyz-Turkish Manas University)
- Beslenme Biliminde Yapay Zeka: Uygulamalar, Potansiyeller, Sınırlar
  Çağla Pınarlı Falakacılar (İstanbul Gedik University)
  Merve Özvar Kütük (İstanbul Gedik University)
  Birol Özkalp (İstanbul Gedik University)
- İklim Değişikliğiyle Mücadelede Yapay Zeka Uygulamaları: Gerçek Zamanlı Veri Analizi ve Stratejik Yaklaşımlar
  Egemen Tekkanat (Trakya Üniversitesi)
  Murat Topaloğlu (Trakya Üniversitesi)
- Tarımda Görüntü İşleme Tekniklerinin Kullanılması ve Dijitalleşmeye Katkısı
  Harun Özkişi (Trakya Üniversitesi)
- Sürdürülebilir Tarımın Geleceği: İnsan-Teknoloji-Yapay Zeka İşbirliğinde Fırsatlar ve Riskler
  Onur Kara (Trakya Üniversitesi)
  Harun Özkişi (Trakya Üniversitesi)

ENGLISH IN-PERSON – SESSION 5

Session Chair: Prof. Dr. Onur Oğuz / Batman Üniversitesi

Friday, May 16, 2025 at 2:15:00 PM GMT+3 – Friday, May 16, 2025 at 3:45:00 PM GMT+3

English In-Person Session – Room 1

- Automatic Error Detection of Banking Transaction Forms Using Similarity Algorithms
  Esra Dinçer (Gedik University)
  Emine Gülmez (ArchiTech)
- Technological Change and Corporate Sustainability Models and Frameworks in the Maritime Sector
  Mehmet Ziya Sogut (Piri Reis University)
  Şebnem Helvacıoğlu (Piri Reis University)
- Challenges of AI Adoption in Malaysian SMES: Identifying Barriers and Opportunities for Digital Transformation
  Meenakshi Murugappan (University of Nottingham Malaysia)
  Bavani Ramayah (University of Nottingham Malaysia)
  Logaiswari Indiran (AHIBS)
  Jayakumar Raj (OPTIMUM)
- Effects of Economic Convergence on Stock Market Returns: Case of Borsa Istanbul Sustainability Index
  Onur Oğuz (Batman University)

ENGLISH IN-PERSON – SESSION 6

Session Chair: Dr. Habıb Ur Rehman Fatıma / Jınnah Medıcal Unıversıty

Friday, May 16, 2025 at 2:15:00 PM GMT+3 – Friday, May 16, 2025 at 3:45:00 PM GMT+3

English In-Person Session – Room 1

- Lifestyle Modification in Obese Diabetic Patients: Effectiveness of Diet and Exercise Programs

Habib Ur Rehman (Fatima Jinnah Medical University)

- Mechatronics System Design of Surgical Robot Using VDI-2206 Approach

Alphonce Mulalo (İstanbul Gedik Üniversitesi)

Loai Khalil (İstanbul Gedik Üniversitesi)

Savaş Dilibal (istanbul Gedik University)

- The Existential Crisis in Wislawa Szymborska's Poetry: A Thematic Analysis

Lareeb Gull (Independent Researcher)

- Advancing Brain Tumor Diagnostics: A Comparative Study of AI-Driven Multi-Class Detection Model Using Machine Learning

Kerem Er (İstanbul Technic University)

Erke Arıbaş (İstanbul Technic University)

- Breaking Barriers: Using Krashen's Input Hypothesis to Improve English Pronunciation among Malaysian Polytechnic Students

Ezatul Ghazali (Politeknik Sultan Azlan Shah)

Lam Kok Wei Lam (Politeknik Sultan Azlan Shah)

Zulaikha Kamarudın (Politeknik Sultan Azlan Shah)

ENGLISH ONLINE SESSION – SESSION 25

Session Chair: Dr. Shama Mushtaq / University of Agriculture Faisalabad

Friday, May 16, 2025 at 2:15:00 PM GMT+3 – Friday, May 16, 2025 at 3:45:00 PM GMT+3

https://meet.google.com/fdo-mbpm-etz

English Online Session – Room 1

- A Review on Diode Based Rectifier for RF Energy Harvesting System

Raja Nor Azrin Raja Yunus (Jabatan Pendidikan Politeknik dan Kolej Komuniti)

- TLSO BACK BRACES: IMPROVING QUALITY OF LIFE FOR SPINE PATIENTS

Nur Hisham (Politeknik Sultan Salahuddin Abdul Aziz Shah)

Muhammad Zulhelmi Bin Zainoor Hisham (Politeknik Sultan Salahuddin Abdul Aziz Shah)

Wan Muhammad Haziq Bin Wan Hassan (Politeknik Sultan Salahuddin Abdul Aziz Shah)

Zunuwanas Bin Mohamad (Politeknik Sultan Salahuddin Abdul Aziz Shah)

- Leveraging 3D Visual Software to Improve Understanding of Orthographic Projection in Architectural Drawing Education

Wan Abd Wahab (Politeknik Port Dickson)

Zanariah Kass (Politeknik Port Dickson)

Sharonjit Kaur Walia (Politeknik Port Dickson)

- Internet Of Thing (IoT) Protocol Learning Kit Based on Message Queuing Telemetry Transport (MQTT)

J Sam Hamidon (Seberang Perai Polytechnic)

Huda Azuddin (Seberang Perai Polytechnic)

Husaini Aza Mohd Adam (Seberang Jaya Community College)

- Fabrication Of Portable Pizza Oven with Hybrid Burner Method

Mohd Shahrizan Khamis (Politeknik Kuching Sarawak)

Adiani Ab Rahman (Politeknik Kuching Sarawak)

Lailatul Hamidah Hamdan (Politeknik Kuching Sarawak)

TURKISH IN-PERSON – SESSION 7

Session Chair: Doç Dr. Murat Cihangir / Batman Üniversitesi

Friday, May 16, 2025 at 2:15:00 PM GMT+3 – Friday, May 16, 2025 at 3:45:00 PM GMT+3

Turkish In-Person – Salon 1

- Kriz Müzakerelerinde Öfke Diplomasisi: Trump ve Zelenski'nin Performanslarının Karşılaştırmalı Analizi

  Begüm Erim (Gedik University)

- Türkiye ve Ürdün'deki Suriyeli Göçmenlerin Temel Haklara Erişimlerinin Karşılaştırılması: Eğitim ve Sağlık Hakki

  Naime Ördek (Çağ University)

  Kübra Şahin Ceren (Çağ University)

- The Relationship Between Social Media and Democracy in a Post-Truth Universe: The US Example

  Murat Cihangir (Batman Üniversitesi)

- Dijitalleşmenin Sivil Katılım ve Toplumsal Farkındalık Üzerindeki Etkisi: Sivil Toplum Kuruluşları İçin Yeni İletişim Stratejileri

  Talha Turhan (Erciyes Üniversitesi)

- Türkistan'da Sanayinin Gelişimi, Mülk Sahibi Sınıfı ve Sovyet Hükümetinin Ekonomik Politikası

  Sharofiddin Xoshimjonov (Andijan State University)

- Özbekistan'da Mahalle Sistemi Dönüşümü

  Manzuraxon Yunusova (Andijan State University)

ENGLISH ONLINE SESSION – SESSION 15

Session Chair: Doç. Dr. Filiz Demir / Karamanoğlu Mehmetbey Üniversitesi

Friday, May 16, 2025 at 3:00:00 PM GMT+3 – Friday, May 16, 2025 at 4:30:00 PM GMT+3

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English Online Session – Room 1

- Building Brand Loyalty through Advertising Appeal and Brand Engagement

  Aliha Qadeer (The University of Faisalabad)

- From Awareness to Action: Moderated Mediation to Improve Resource Efficiency

  Anum Tariq (The University of Faisalabad, Pakistan)

  Yasir Tanveer (Government College University Faisalabad.)

- Frugal Innovation and Green HRM through AI-Driven Ergonomics

  Fasiha Batool (TUF)

- Business Model innovation in the digital Era: An IT Sector perspective

  Hira Shafqat (The University of faisalabad)

- The Relationship Between Motivation And Organizational Commitment- A Meta-Analytic Review

  Gökçe Akdemir Ömür (Istanbul University)

- Transformation into Learning Ecosystem of the Future

  Doç. Dr. Hakan Aydogan (Moscow State Pedagogical University , Comparative Linguistics Dept.)

  Doç. Dr. Önder Şanlı (Adıyaman University, Besni Vocational School)

TURKISH ONLINE SESSION – SESSION 6

Session Chair: Dr. Mehmet Nurettin Alabay / Abdullah Gül Üniversitesi

Friday, May 16, 2025 at 3:00:00 PM GMT+3 – Friday, May 16, 2025 at 4:30:00 PM GMT+3

https://meet.google.com/zdz-skqa-dkj

Turkish Online Session – Room 1

- PB-CNT Nanokompozit Kaplamalarinin Aa7075 Alüminyum Altlık Üzerine Soğuk Püskürtme Yöntemi İle Uygulanması Sonrası Elektriksel Özelliklerinin İncelenmesi

  Mustafa Batuhan Yılançalı (Dokuz Eylül)

  Fatih Kahraman (Dokuz Eylul University)

- Yapay Zekâ ile Şekillenen Sürdürülebilir Toplum: Toplum 5.0'ın Teknolojik Vizyonu

  Mehmet Nurettin Alabay (Abdullah Gül Üniversitesi)

- Yüksek Basinçli Alüminyum Döküm Kalıplarında Vakum Bloğuna Alternatif Olarak Hava Tahliye Bloğunun (Chill-vent) Tasarımı

  Selin Tuna (Tasarim Mühendisi)

- Sağlıkta Dijitalleşme Perspektifinden Besin Ögesi Analizi: Yapay Zeka İle Geleneksel Yöntemin Karşilaştirilmasi

  Merve Özvar Kütük (İstanbul Gedik University)

  Çağla Pınarlı Falakacılar (İstanbul Gedik University)

  Birol Özkalp (İstanbul Gedik University)

- Habercilikte Değişen Paradigmalar ve Yapay Zekânın Gazetecilikte Kullanılması

  Durmuş Koçak (Bağımsız Araştırmacı)

- Effects of Digital Leadership on Business Success in Businesses

  Münevver Bayar (Sosyal Güvenlik Kurumu)

  Nadire Kantarcıoğlu (Bağımsız Araştırmacı, Türkiye)

- Yapay Zekâya Yönelik Tutum, Değişime Hazır Olma ve İşten Ayrılma Niyeti Arasındaki İlişkinin İncelenmesi

  Nuran Varışlı (Sosyal Güvenlik Kurumu)

- Digital Transformation and Music: "Opportunities for Cooperation in Education Among Turkish States"

  Hakan Emre Ziyagil (HEZ Music)

ENGLISH IN-PERSON – SESSION 7

Session Chair: Dr. Üstün Yüksel / Independent Researcher

Friday, May 16, 2025 at 4:00:00 PM GMT+3 – Friday, May 16, 2025 at 5:30:00 PM GMT+3

English In-Person Session – Room 1

- Christian America

  Üstün Yüksel (Independent Researcher)

- The Use of Fragility Data to Predict Society's Level of Happiness with a Logistic Regression Model

  Çağlar Akar (İstanbul Okan University)

- Quality Assurance and Institutional Culture in Higher Education Institutions: An Analysis in the Context of Satisfaction, Sense of Belonging, and Participation

  Hakan Akın (Bodrum Institute)

TURKISH IN-PERSON – SESSION 9

Session Chair: Prof. Dr. Süreyya Karsu / Bolu Abant İzzet Baysal Üniversitesi

Friday, May 16, 2025 at 4:00:00 PM GMT+3 – Friday, May 16, 2025 at 5:30:00 PM GMT+3

Turkish In-Person – Salon 1

- Kıdemli Yetişkinlerde Çevrimiçi Satın Alma Niyeti İle Davranışı Arasında Yakın Desteğinin Düzenleyici Rolü

  Hande Tasa (İstanbul Aydın University)

  Süreyya Karsu (Bolu Abant İzzet Baysal University)

  Meltem Nurtanış Velioğlu (İstanbul Aydın University)

  Dilşad Çoknaz (Bolu Abant İzzet Baysal University)

  Meftune Özbakır Umut (Bolu Abant İzzet Baysal University)

- Yapay Zekâ Destekli Karar Alma Süreçleri: Veri Odaklı Yönetişim

  Hümeyra Bağ

- Performance Analysis of Image Processing-Based Robotic Scanning Systems in Detecting Weld Defects Using X-Ray Digital Radiography: A Research Design

  Uralbek Nurgeldiyev (Istanbul Gedik University)

  Aytac Ugur Yerden (Istanbul Gedik University)

- Yapay Zeka Destekli Tanılama Araçlarının Özel Eğitimde Kullanılabilirliği ve Etik Boyutları: Karma Yöntemle Bir İnceleme

  Aslan Aydoğan (İstanbul Gedik Üniversitesi)

- Dalış Ekipmanlarının Güvenli Muhafazası İçin Eklemeli İmalat Yöntemiyle Geliştirilen Askılık Tasarımı

  Hüseyin Kaygısız (İstanbul Gedik University)

  Güvenç Sorarlı (İstanbul Gedik University)

- NX Tabanlı HVAC Sistemlerinin Entegrasyonu Yoluyla Enerji Verimliliği ve Kontrol Stratejilerinin Karşılaştırmalı Bir İncelemesi

  Feriha Kuyumcu (İstanbul Gedik Üniversitesi)

  Fatih Ülker (İstanbul Gedik Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 16

Session Chair: Dr. Sobirjon Kodirov / Andijan State university

Friday, May 16, 2025 at 4:30:00 PM GMT+3 – Friday, May 16, 2025 at 6:00:00 PM GMT+3

https://meet.google.com/fdo-mbpm-etz

English Online Session – Room 1

- Mentality Features of Medical Discourse (on the Example of English and Russian)
  Shohida Khoshimovna Shahabitdinova (Andijan State University)
  Madina Abdurakhmanova (Andijan State University)
- The role of teacher training in Enhancing student self efficiency and achievement
  Aasheesh Kumar (CMP Degree college University of Allahabad)
- Factors of the Emergence of Neologisms in the Lexical System of the Language
  Diloro Nabiyeva (Andijan State University)
  Sobirjon Kodirov (Andijan Satate University)
- Stylistic and Social Characteristics of the “Wish” Speech Genre in The Uzbek Language
  Durdona Sayfutdinova (Andijan State University)
  Dilfuza Nurmanova (Andijan State University)
- Investor Behavior and Financial Literacy in Pakistan
  Rabia Arshad (The University of Faisalabad)
- Transformation of Uzbekistan’s Education system during the Years of Independence
  Irodaxon Bazarova (Andijon davlat universiteti)

TURKISH ONLINE SESSION – SESSION 7

Session Chair: Prof. Dr. Sabiha Kılıç / Hitit Üniversitesi

Friday, May 16, 2025 at 4:30:00 PM GMT+3 – Friday, May 16, 2025 at 6:00:00 PM GMT+3

https://meet.google.com/zdz-skqa-dkj

Turkish Online Session – Room 1

- An Empirical Analysis of The Impact of the Climate Crisis on the Misery Index in the Countries of the Mena Region
  Ayşegül Ertuğrul (İstanbul Gelisim University)
  İlknur Külekçi (İstanbul Gelisim Unıveristy)
- Yapay Zeka Ve Sürdürülebilirlik Ekseninde Süper Akıllı Toplum Yolculuğunun Entelektüel Eğilim Yapısının Görselleştirilmesi
  Sabiha Kılıç (Hitit University)
- Yapay Zeka Destekli Sürdürülebilir Tarım Uygulamalarının Teorik ve Uygulamalı Çalışmalar Açısından İncelenmesi
  Sabiha Kılıç (Hitit University)
- The Effect of Artificial Intelligence on Industry 5.0
  Hazal Ezgi Özbek (Çağ University)
  Mert Demircioğlu (Çukurova Üniversitesi)
- Uzaktan Algılama Verilerine Dayalı Spei İle Kuraklık Analizi: Küçük Menderes Havzası Örneği
  İrem Özok Yazıcı (Tapu ve Kadastro Genel Müdürlüğü- Aydın Kadastro Müdürlüğü)
  Derya Öztürk (Ondokuz Mayıs Üniversitesi)
- A Data-Driven Decision Support System for Post-Earthquake Disaster Management
  Diana Sabah Nimma Elbidari (İstanbul Gedik Üniversitesi)
  Tuğbay Burçin Gümüş (İstanbul Gedik Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 17

Session Chair: Prof. Dr. Süreyya Karsu / Bolu Abant İzzet Baysal Üniversitesi

Saturday, May 17, 2025 at 9:00:00 AM GMT+3 – Saturday, May 17, 2025 at 10:30:00 AM GMT+3

https://meet.google.com/exk-rdxp-dhq

English Online Session – Room 1

- Relationship Between the Service Quality of Taxi Software Towards User Satisfaction
  Cheng Jiawei (Universiti Teknologi Malaysia)
  Mohd Zulfabli Hasan (Universiti Teknologi Malaysia)
- From Policy to People: Strengthening Anti-Encroachment Efforts for Sustainable Cities of Punjab Pakistan
  Sidra GM (TUF)
  Rimsha Shahid (TUF)
  Abdullah Hammad (TUF)
  Ayesha Sadiqa (GCUF)
- The Mediating Role of Organizational Agility in the Impact of Digital Leadership on Individual Performance
  Deniz Çınar (İstanbul Sabahattin Zaim Üniversitesi)
  Ahmet Erkasap (Istanbul Gedik University)
  Kadir Yildiz (İstanbul Gedik Üniversitesi)
- Entrepreneurial Persistence in a Developing Economy: Exploring the Influence of Career Motivation in Punjab Pakistan.
  Aisha Saleem (GCUF)
  Riffat Gill (GCUF)
- Impact of Ethical Leadership on Employee Moral Disengagement: Mediating Role of Psychological Contract fulfillment
  Sania Arif (University of Wah)
- High-Performance Work Practices and Organizational Innovation: A Serial Mediation of Affective Commitment to Change and Individuals' Readiness to Change
  Muhammad Salman Chughtai (International Islamic University, Islamabad)
- An Examination of The Artificial Intelligence Self-Efficacy of Foreign Language Teachers: Sample of K12 Education
  Sevda Çelenk (Ereğli Primary School)
  Dilek Büyükahiska (Ondokuz Mayıs Üniversitesi)

TURKISH ONLINE SESSION – SESSION 8

Session Chair: Prof. Dr. Ufuk Karadavut / Karabük Üniversitesi

Saturday, May 17, 2025 at 9:00:00 AM GMT+3 – Saturday, May 17, 2025 at 10:30:00 AM GMT+3

https://meet.google.com/twg-htth-xrs

Turkish Online Session – Room 1

- Sağlık Çalışmalarında Başarılı Klinik Karar Almak İçin Dikkat Edilmesi Gerekenler
  Ufuk Karadavut (Karabük Üniversitesi)
  Mehmet Murat Şahin (Karabük Üniversitesi)
- PD-L1 Heterogeneity in Cytopathology: Enhancing Diagnostic Workflows through Digital Cytopathology and AI Integration
  Hatice Elmas (Section Cytopathology, Institute of Pathology, University Medical Center & Airway Research Center North (ARCN), German Center for Lung Research (DZL) & Vocational School of Health Services, Malatya Turgut Ozal University)
  Fahriye Secil Tecellioglu (Department of Pathology, School of Medicine, Malatya Turgut Ozal University)
  Abdullah Fahri Şahin (Department of Pathology, School of Medicine, Malatya Turgut Ozal University)
  Lutz Welker (Section Cytopathology, Institute of Pathology, University Medical Center, Airway Research Center North (ARCN) & German Center for Lung Research (DZL)
- Yapay Zekâ ve Terapötik İttifak: Yapay Zekâ Terapistlerin Yerini Alabilir Mi?
  Yaren Budak (İstanbul Aydın Üniversitesi)
- Gambling Gone Digital, Everywhere: A Scoping Review on the Transformation of Traditional and Digital Gambling Dynamics Among Youth
  Demet Akarçay Ulutaş (KTO Karatay Üniversitesi)
  Cemre Öztürk (KTO Karatay Üniversitesi)
  Nazlı Betül Cansever (KTO Karatay Üniversitesi)
  Kezban Çetin (KTO Karatay Üniversitesi)
- Memory Function and Mental Health in Old Age
  Ayşe Hazal Dündar (Uşak Üniversitesi)
  Ali Yasin Kafes (Süleyman Demirel Üniversitesi)
- The Effect of Sport Recreation Participants' Body Image Perceptions on Their Recreation Anxiety: The Role Of Gender
  Ali Yasin Kafes (Süleyman Demirel Üniversitesi)
  Ayşe Hazal Dündar (Uşak Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 18

Session Chair: Prof. Dr. Süreyya Karsu / Bolu Abant İzzet Baysal Üniversitesi

Saturday, May 17, 2025 at 10:30:00 AM GMT+3 – Saturday, May 17, 2025 at 12:00:00 PM GMT+3

https://meet.google.com/exk-rdxp-dhq

English Online Session – Room 1

- UAE's Diversification Strategies in Economy and Security with China and India: A Comparative Analysis

  Aswina Sreekumar (University of Wollongong in Dubai)

- Impacts of United Nations Resolutions on Conflict Resolution and Peace Process: Regional Perspectives And Implementations

  Muhammad Noman (University of Beira Interior)

  Gül Ünver (Batman Üniversitesi)

- Crisis of Japanese Foreign Policy in The Post-Cold War Transition Period: Economic Constraints, Political Drift, and Strategic Alliance Realignments

  Elif Sercen Nurcan (Meiji University)

ENGLISH ONLINE SESSION – SESSION 19

Session Chair: Doç. Dr. Esra Gökçen KAYGISIZ / Giresun Üniversitesi

Saturday, May 17, 2025 at 10:30:00 AM GMT+3 – Saturday, May 17, 2025 at 12:00:00 PM GMT+3

https://meet.google.com/smw-fphd-jmz

English Online Session – Room 2

- The Role of Loanwords in National Languages in the Process of Globalization

  Iskandarbek Kuchkarov (ASPI)

- Linguocognitive Features of Construction-Architecture Language Units

  Baxodirjon Burxonov (ASU)

- Alumni-Based Evaluation of Peos for Diploma in Mechanical Engineering (Plastics) Program

  Mohd Fadhli Bin Ahmad (Politeknik Sultan Abdul Halim Muadzam Shah)

  Mohd. Hairol Mizzam Bin Haris, Politeknik Sultan Abdul Halim Muadzam Shah

  Masniza Binti Yusof, Politeknik Sultan Abdul Halim Muadzam Shah

- Types of Linguistic Evaluation

  Nabieva Dilora Abdulhamidovna (Andijan State University)

  Zilolakhon Zokirovna Isakova (Kokand State University)

- Nlp Over Requirement Engineering Document for Conceptual Modeling

  Muhammad Javed (The University of Faisalabad)

  Muhammad Ibrar (The University of Faisalabad)

  Majid Hussain (The University of Faisalabad)

  Muhammad Talha (The University of Faisalabad)

  Muhammad Usman (The University of Faisalabad)

TURKISH ONLINE SESSION – SESSION 9

Session Chair: Doç. Dr. İlhami Kaya / Batman Üniversitesi

Saturday, May 17, 2025 at 10:30:00 AM GMT+3 – Saturday, May 17, 2025 at 12:00:00 PM GMT+3

https://meet.google.com/twg-htth-xrs

Turkish Online Session – Room 1

- Bale ve Dans Konusundaki Ulusal Lisansüstü Tezlerin Antrenman ile Metodoloji Açısından İncelenmesi
  Gökçe Akgün (İstanbul Esenyurt Üniversitesi)
- Green Office Practices: Sustainability Approaches in Office Management
  Songül Demirkan (Kırşehir Ahi Evran Üniversitesi)
- Yapay Zeka ile Kısa Film Üretimi
  Firat Sayıcı (İstanbul Esenyurt Üniversitesi)
- TOPLUMSAL BÜTÜNLÜK AÇISINDAN MÜZİK ALANINDA YAPAY ZEKÂYI BEKLEYEN TARTIŞMALAR
  İlhami Kaya
- Yapay Zekâ Teknolojilerinin Âşıklık Geleneğinin Sürdürülebilirliğine Etkisi Ve Katkısı
  Serdar Gürçay (İstanbul Kültür Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 20

Session Chair: Prof. Dr. Irfan Ahmad Baig Dean / Faculty of Information Technology

Saturday, May 17, 2025 at 12:00:00 PM GMT+3 – Saturday, May 17, 2025 at 1:30:00 PM GMT+3

https://meet.google.com/exk-rdxp-dhq

English Online Session – Room 1

- DESIGN AND FABRICATION OF PORTABLE BARBECUE GRILL
  Nurul Khairunnisa Su (Politeknik Tuanku Syed Sirajuddin)
  Suzilawati Iberahim (Politeknik Tuanku Syed Sirajuddin)
  Choong Chee Guan (Politeknik Tuanku Syed Sirajuddin)
- A Proposed Study of Multipurpose Car Repair Undercarriage for Automotive Workshop
  Mazrul Hisyam Mat Ali (Politeknik Tuanku Syed Sirajuddin)
  Choong Chee Guan (Politeknik Tuanku Syed Sirajuddin)
  Mohd Zubir Yahaya (Politeknik Tuanku Syed Sirajuddin)
- Comparative Study of Mechanical Properties in Tig and Mig Welding: Influence of Current on Hardness and Tensile Strength
  Mohd Fadhli Bin Ahmad (Politeknik Sultan Abdul Halim Muadzam Shah)
  Masniza Binti Yusof (Politeknik Sultan Abdul Halim Muadzam Shah)
  Ahmad Zawawi Bin Zulkifli (Politeknik Sultan Abdul Halim Muadzam Shah)
- DESIGN AND DEVELOPMENT OF VERTICAL CENTRIFUGAL CASTING MACHINES FOR SMALL-SCALE MANUFACTURING
  Mazrul Hisyam Mat Ali (Politeknik Tuanku Syed Sirajuddin)
  Yap Tek Hong (Politeknik Tuanku Syed Sirajuddin)
  Nurul Khairunnisa Su (Politeknik Tuanku Syed Sirajuddin)
  Choong Chee Guan (Politeknik Tuanku Syed Sirajuddin)
- Comparing K-Means and Hierarchical Clustering Techniques for Moba Game Data Analysis
  Sema Yıldırım (Selçuk University)

All abstracts will be published in the abstract booklet.
There will be opportunities for publication in SCOPUS, TRDizin, and international journals.
Our congress is designed to be indexed in WoS. All processes will be conducted accordingly, and an application will be made to WoS.
To submit a paper, please visit https://asc.academicianstudies.com/

ENGLISH ONLINE SESSION – SESSION 21

Session Chair: Prof. Dr. Majid Hussain Dean / Faculty of Information Technology

Saturday, May 17, 2025 at 12:00:00 PM GMT+3 – Saturday, May 17, 2025 at 1:30:00 PM GMT+3

https://meet.google.com/smw-fphd-jmz

English Online Session – Room 2

- Conceptualization And Design f A Coconut Shell Cutter Machine

  Mohd Hılmı Arıffın (Politeknik Tuanku Syed Sırajuddın)

  Verawaty Ismaıl (Politeknik Tuanku Syed Sırajuddın)

  Mohd Hafıdz Zakarıa (Politeknik Tuanku Syed Sırajuddın)

- Optimizing Gamma-Ray Shielding: A Comprehensive Study of Material Effectiveness from Low to High Z Materials and Cross-Sectional Data Across Energy Regimes

  İlker Can Çelik (Physics Department, Harran University)

- Technology as a Catalyst for Building a Sustainable Society in Pakistan

  Abid Aziz (PTCL)

- Design And Fabricationof Rov For Pest And Disease Control in Manggo Farm at Kota Sarang Semut, Kedah State, Malaysia.

  Hashimi Lazim (Politeknik Tuanku Syed Sirajuddin)

  Yap Tek Hong (Politeknik Tuanku Syed Sirajuddin)

- SCOPE-BIAS: Social Contextual Optimization for Evaluating Bias in AI Systems

  Noureen Hameed (The University of Faisalabad)

TURKISH ONLINE SESSION – SESSION 10

Session Chair: Dr. Eray Alım / Batman Üniversitesi

Saturday, May 17, 2025 at 12:00:00 PM GMT+3 – Saturday, May 17, 2025 at 1:30:00 PM GMT+3

https://meet.google.com/twg-htth-xrs

Turkish Online Session – Room 1

- Turkish policies towards Syrian refugees: Economic and Social Challenges in the Shadow of the Syrian War.

  Hassan ET-Talib (Erciyes University)

  Aylin Yonca Gençoğlu (Erciyes Üniversitesi)

- Sivil Toplum Kuruluşlarının Yerel Siyasetteki Rolü ve Etkileri: Batman İli Örneğinde Bir Saha Araştırması (2019-2024)

  Abdurrahim Demirtaş (Batman Üniversitesi)

- KÜRESLLEŞME ÇAĞINDA DİASPORANIN DİJİTAL DÖNÜŞÜMÜ

  Meltem Yıldırım Başoğlu (Düzce Üniversitesi)

- Türkiye'de Sürdürülebilirlik Üzerine Yapılan Doktora Tezlerinin Analizi

  Feyza Akgün (Araştırma Görevlisi Doktor)

ENGLISH ONLINE SESSION – SESSION 22

Session Chair: Dr. Sharjeel Yousaf / National Business School, Faculty of Management Studies, The university of Faisalabad (TUF)

Saturday, May 17, 2025 at 1:30:00 PM GMT+3 – Saturday, May 17, 2025 at 3:00:00 PM GMT+3

https://meet.google.com/exk-rdxp-dhq

English Online Session – Room 1

- OPTIMIZING CNN HYPERPARAMETERS FOR ENHANCED HANDWRITTEN DIGIT RECOGNITION ON CUSTOM DATA-SETS:A SYSTEMATIC STUDY
  Mehak Rana (The University of Faisalabad)
  Muhammad Ibrar (The University of Faisalabad)
  Majid Hussain (The University of Faisalabad)
  Naeem Akhtar Khan (Punjab Highway Department Lahore, Pakistan)
  Muqadsa Jabeen (The University of Faisalabad)
- Early Detection of Diabetic Retinopathy Using Machine Learning for Sustainable Healthcare Solutions
  Naseer Ahmad (The University of Faisalabad)
  Tanıa Faryad (The University of Faisalabad)
  Rabıa Kanwal (The University of Faisalabad)
  Majıd Hussaın (The University of Faisalabad)
  Muhammad Ibrar (The University of Faisalabad)
- Crime Scene Investigation 2.0: AI-Powered Forensics Transforming Crime Scene Investigation and Criminal Justice Administration for a Safer Society
  Sreya Biswas (Kiit University)
- ENHANCED ANKLE IMMOBILIZATION: A PATIENT-CENTRIC APPROACH TO FIBULA FRACTURE
  Ainin Hazuwaimi
  Muhamad Bin Husni (Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam)
- Reduce NG (Not Good) Losses at Separation Process
  Husni Nazra Abu Bakar (Polytechnic Ungku Omar)
  Muhammad Syukri Bin Mohd Jailani (Polytechnic Ungku Omar)
  Norhayati Mohd (Polytechnic Ungku Omar)

ENGLISH ONLINE SESSION – SESSION 23

Session Chair: Doç. Dr. Eray Alım / Batman Üniversitesi

Saturday, May 17, 2025 at 1:30:00 PM GMT+3 – Saturday, May 17, 2025 at 3:00:00 PM GMT+3

https://meet.google.com/smw-fphd-jmz

English Online Session – Room 2

- Media Literacy: A Deception or a Redemption?
  Nehir Devrim Eserol (Kastamonu University)
- The Effectiveness of Interactive Digital Platforms on Students' Understanding of 3d Architectural Modelling **Norliza Johan (Politeknik Port Dickson)**
  Nuraini Binti Mahmud (Kolej Komuniti Kuching)
  Luke Kenny Doring (Kolej Komuniti Kuching)
- Student Punctuality in Focus: An Examination of Factors Contributing to Tardiness In Sarawak Community Colleges
  Roland Tsok Vui Liang (Kolej Komuniti Miri)
  Nur Atiqah Abdul Rahman (Kolej Komuniti Miri)
  Norshafiza Zakaria (Kolej Komuniti Miri)
- Educational Use of Chatbot-Based Artificial Intelligence Applications
  Esra Türk (İstanbul Gedik Üniversitesi)
  Aytac Ugur Yerden (Istanbul Gedik University)
- Sustainable AI Education: A Holistic Approach through STEM and Non-STEM integration
  Laraib Manzoor (The University of Faisalabad)

TURKISH ONLINE SESSION – SESSION 11

Session Chair: Dr. Esin Ceylan Şaşmaz / Selçuk Üniversitesi

Saturday, May 17, 2025 at 1:30:00 PM GMT+3 – Saturday, May 17, 2025 at 3:00:00 PM GMT+3

https://meet.google.com/twg-htth-xrs

Turkish Online Session – Room 1

- Metaverse Teknolojileriyle Üretim Yönetiminde Yeni Bir Dönem
  Vildan Bayram (Vildan Bayram)
  Osman Yılmaz (Batman Üniversitesi)
- Artificial Intelligence Supported Enterprise Resource Planning in Universities
  Emre Ergün Öz (Necmettin Erbakan University)
  Mustafa Kocaoğlu (Necmettin Erbakan University)
- Çalışanlarda, Yıkıcı Teknoloji Olarak Yapay Zekânın Yarattığı Kaygının Yenilikçi Davranışlar Üzerindeki Etkisinin ve Değişime Direncin Düzenleyici Rolünün İncelenmesi
  İsmail Özdemir (İstanbul Gedik University)
  Murat Uzunlu (İGÜ)
- Liderliğin Dijital Dönüşümü: Turizm İşletmeleri Üzerine Bir Araştırma
  Esin Ceylan Şaşmaz (Selçuk Üniversitesi)
- Algılanan Örgütsel Destek, İşyeri Mutluluğu, Örgütsel Güven ve İşin Pozitif Anlamı Arasındaki İlişkiler: Bir Durumsal Aracılık Modeli
  Emre Seyrek (Ağrı İbrahim Çeçen Üniversitesi)
  İbrahim Halil Çelik (Artvin Çoruh Üniversitesi)
- Türkiye'deki Gastronomi Müzeleri İle İlgili Bibliyometrik Analiz
  Macide Tiğiz (Batman University)
  Reşat Arıca (Batman University)
  Hasan Önal Şeyhanlıoğlu (Batman University)
- Muhasebe Meslek Mensuplarının Dijitalleşme Sürecindeki Rolü ve Sorunları
  Hasan Önsoy (Kırıkkale Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 24

Session Chair: Dr. Erke Arıbaş / Istanbul Technical University

Saturday, May 17, 2025 at 3:00:00 PM GMT+3 – Saturday, May 17, 2025 at 4:30:00 PM GMT+3

https://meet.google.com/exk-rdxp-dhq

English Online Session – Room 1

- 3D Exploration Using Augmented Reality: A Case Study Of Politeknik Port Dickson
  Norliza Johan (Politeknik Port Dickson)
  Zanariah Kasim (Politeknik Port Dickson)
  Roslina Muda (Politeknik Port Dickson)
- Digital Twins for Society 5.0: Risks and Opportunities
  Arzu Kilitci Calayir (Istanbul Gedik University)
  Erdal Özdoğan (Bursa Uludag University)
- The Implementation of Artificial Intelligence in The Light of the Legal Certainty Principle
  Panagis Christodoulou (Aristotle University of Thessaloniki)
- Optimizing Urban Air Quality Via Deep Reinforcement Learning-Based Adaptive Greenwave Traffic Control in Dense Smart Cities – Istanbul Case
  Erke Arıbaş (ITU)
- Evidence of Passive Design Strategies in A Tropical Modern Timber House
  Zanariah Kasim (Politeknik Port Dickson)
  Che Zawiyah Che Hasan (Politeknik Ungku Omar)
  Sharonjit Kaur Walia (Politeknik Port Dickson)

TURKISH ONLINE SESSION – SESSION 12

Session Chair: Doç. Dr. Reşat Arıca / Batman Üniversitesi

Saturday, May 17, 2025 at 3:00:00 PM GMT+3 – Saturday, May 17, 2025 at 4:30:00 PM GMT+3

https://meet.google.com/twg-htth-xrs

Turkish Online Session – Room 1

- Sosyolojide Yapay Zeka Kavramı Üzerine Vosviewer ile Bibliyometrik Bir Analiz

  Can Çeliktaş (Osmaniye Korkut Ata Üniversitesi)

- Yangın Söndürme ve Kurtarma Vagonu Tasarım ve Uygulaması

  İsmail Satılmış (İstanbul Gedik Üniversitesi)

  Egemen Sulukan (İstanbul Gedik University)

  Doruk Gürkan (İstanbul Gedik University)

- Ölçeklenebilir Yeşil Dalga Senkronizasyon Sistemleri: Büyük Ölçekli Kentsel Trafik Ağları İçin Makine Öğrenmesi Yöntemleri ile Derin Pekiştirmeli Öğrenmenin (DRL) Kullanımı

  Erke Arıbaş (ITU)

- Dijital Olgunluk ile Dinamik Yeteneklerin Etkileşimi: PRISMA Temelli Sistematik Analiz

  Kadir Öncel (İstanbul Üniversitesi)

  Gökçe Akdemir Ömür (İstanbul University)

- Dijital Dönüşüm ve Rekabetçilik: Stratejik Bir Değerlendirme

  Muzaffer Karakuş (Kocaeli University)

  İbrahim Yıkılmaz (Kocaeli University)

TURKISH ONLINE SESSION – SESSION 13

Session Chair: Doç. Dr. Fatih Çağatay Baz

Saturday, May 17, 2025 at 3:00:00 PM GMT+3 – Saturday, May 17, 2025 at 4:30:00 PM GMT+3

https://meet.google.com/twg-htth-xrs

Turkish Online Session – Room 1

- Sosyal İletişim Ağlarında Yiyecek ve İçecek İşletmelerine Yönelik Paylaşımların İncelenmesi: Batman Örneği

  Macide Tığız (Batman Üniversitesi)

- Z Kuşağının Etik ve Motivasyon Algısı Üzerine Bir Vaka Analizi: Kuşaklar Arası Çatışmalarda Gri Alanlar

  Tuğkan Arıcı (Gebze Teknik Universitesi)

- Hizmetkar Liderliğin Konaklama Sektörüne Etkisi Literatür Taraması

  Burak Güven (Kocaeli Üniversitesi)

  İbrahim Yıkılmaz (Kocaeli Üniversitesi)

- Peltier Etkisi ve Faz Değiştiren Malzeme Kullanımı ile Lityum-İyon Batarya Soğutmasının ANSYS ile Termal Modellenmesi

  Burhan Günder (İstanbul Gedik Üniversitesi)

  Ali Köse (İstanbul Teknik Üniversitesi)

  Utku Cancı Matur (İstanbul Gedik Üniversitesi)

  Neslihan Yuca Doğdu (İstanbul Teknik Üniversitesi)

ENGLISH ONLINE SESSION – SESSION 26

Session Chair: Dr. Muhammad Idrees / Faculty of Social Sciences University of Agriculture Faisalabad

Saturday, May 17, 2025 at 4:30:00 PM GMT+3 – Saturday, May 17, 2025 at 6:00:00 PM GMT+3

https://meet.google.com/exk-rdxp-dhq

English Online Session – Room 1

- Identifications of Key Challenges and Constraints Faced by Importers, Processors and Wholesalers in Ghee and Oil Industry
  Fatima Zahid (The University of Faisalabad)
- Integrating Legal and Technological Mechanisms for Trade Secret Protection In Sustainable Innovation And Commercialization
  Shahizan Sarmijan (Universiti Teknologi Malaysia)
- Hybrid Work and Sustainable Employment: A Study on Female Employees in Türkiye
  Begüm Al (Marmara University)
- Analyzing the Constraints Faced by Retailers and Consumers in Palm Oil Industry
  Wajeeha Nawaz (The University of Faisalabad)
- Malaysia's Path to Low-Carbon Power: An Integrated Study of System Challenges and Sustainability
  Aiman Ziqrie Mohamad Tarmizi (Politeknik Ungku Omar)
  Kamil Iqram Kamil Hisham (Politeknik Ungku Omar)
  Anas Abd Mu'as (Politeknik Ungku Omar)
  Adam Mohd Nasir (Politeknik Ungku Omar)
- Pressureguard: A Smart Cushion System for Timely Repositioning and Pressure Ulcer Prevention
  Muhammad Alımus (Politeknik Sultan Salahuddin Abdul Aziz Shah)
- Big Data for Evidence-Based Policy in Achieving the Sustainable Development Goals- Letting the Data Speak for a Smarter Society
  Elanur Türküz (İstanbul Kültür University)
  Mustafa Bekmezci (İstanbul Kültür University)

ENGLISH ONLINE SESSION – SESSION 27

Session Chair: Prof. Dr. Ufuk Karadavut / Karabük Üniversitesi

Sunday, May 18, 2025 at 11:00:00 AM GMT+3 – Sunday, May 18, 2025 at 12:30:00 PM GMT+3

https://meet.google.com/gad-ftpo-jpo

English Online Session – Room 2

- Ecological Reflections of Turkey's Financial Development: An Evaluation on Foreign Direct Investment and Domestic Loans
  Fatma Dural (Gedik University)
- Emotional Competence of Upper Primary School Teachers: A Comparative Study of Government and Private Schools
  Nikita Yadav (Iftm University)
  Rajkumari Singh (School of Education and Humanities
- Media Literacy: A Deception or a Redemption?
  Nehir Devrim Eserol (Kastamonu University)
- Brightlearn Hub: Transforming Microlearning for Kolej Komuniti Kuching Through a Centralized E-learning Resource
  Luke Kenny Dorıng (Kolej Komuniti Kuching)
  Nuraini Binti Mahmud (Kolej Komuniti Kuching)
  Foong Ching Liew (Kolej Komuniti Kuching)
- A Triadic Pedagogical Approach and Lean Thinking for Community Engagement: Empowering Student Output Through Heutagogy, Service-Learning, and Participatory Action Learning
  Mohd Zulfabli Hasan (Utm)
  Ruhil Amal Zainal Abidin (Pasir Gudang Community College)
  Teh Zaharah Yaacob (Universiti Teknologi Malaysia)
  Hanini Ilyana Che Hashim (Universiti Teknologi Malaysia)
  Muhammad Harith Zainal Abidin (Universiti Teknologi Malaysia)
  Mohd Khairul Afzan Mohd Lazi (Universiti Teknologi Malaysia)

TURKISH ONLINE SESSION – SESSION 14

Session Chair: Dr. Sinem Sönmez / Bingöl Üniversitesi

Sunday, May 18, 2025 at 11:00:00 AM GMT+3 – Sunday, May 18, 2025 at 12:30:00 PM GMT+3

https://meet.google.com/fyc-hpuo-cvp

Turkish Online Session – Room 1

- The Intersection of Artificial Intelligence, Industry 4.0 and Society 5.0 Concepts: A Bibliometric Review

  Sinem Sönmez (Bingöl Üniversitesi)

- Algoritmik Görünürlük ve Kamusal Akıl: Yapay Zekâ İle Biçimlenen Yeni Kamusal Alan Üzerine Kuramsal Bir Tartışma

  Özge Ercebe (Trakya University)

- Yapay Zekâ Destekli Reklamcılıkta Algoritmik Etik İlkeler ve Toplumsal Sürdürülebilirlik: İnsanlık ve Teknoloji Arasında Denge Arayışı

  Erdal Yörük (Selçuk Üniversitesi)

- Heidegger'in Teknoloji Eleştirisi: Doğa, İnsan, Yapay Zeka

  Hafize Gizem Kılınç Demirhan (Çankırı Karatekin Üniversitesi)

- Geleceğin Ajanları: Gerçek Zamanlı Bilgiye Erişimin Yeni Yolu

  Egemen Tekkanat (Trakya Üniversitesi)

  Murat Topaloğlu (Trakya Üniversitesi)

- The Future of Hadith Studies in the Digital Age

  Nuran Sarıcı Doğan (Kastamonu Üniversitesi)

- Yapay Zeka ve Tarımın Geleceği: Sürdürülebilir Gıda Sistemlerine Yapılan Dijital Geçiş

  Huriye Zafera (Öğretim Görevlisi, İstanbul Gedik Üniversitesi)

  Cansu Zengin (Tezli Yüksek Lisans Öğrencisi, İstanbul Gedik Üniversitesi)



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