THE BOOK OF ABSTRACTS

ZEUGMA

16TH INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH

June 26-28, 2026 | Gaziantep, Turkiye

EDITOR

Lecturer Dr. Neşe YILMAZ

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ZEUGMA 16TH INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH

ORGANIZING INSTITUTION

Institute of Economic Development and Social Researches (IKSAD)

CONGRESS ID

CONGRESS TITLE	
ZEUGMA 16TH INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH	
DATE	**PLACE**
June 26-28, 2026	**Gaziantep, Turkiye**

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16TH INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH

Zeugma

June 26–28, 2026 · Gaziantep, Türkiye

CONGRESS PROGRAM

ONLINE PARTICIPATION

Meeting ID: 847 7043 0612 **Passcode:** 161616
Link: https://us02web.zoom.us/j/84770430612?pwd=iaf9onEdDbwVagapejk7pDc72537Ld.1

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SESSION	Online Session-1 · Hall-1	MEETING ID	PASSCODE
Session-1 HALL *Hall-1*	27 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Ümmühan AKHİSAR		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Murtuzayev Sahil Vidadi	*Azerbaijan State University of Economics (UNEC), Azerbaijan*	**THE INDEPENDENCE OF THE CENTRAL BANK AS A FACTOR IN ENSURING FINANCIAL STABILITY IN AZERBAIJAN'S BANKING SYSTEM**
Assoc. Prof. Dr. Perihan Hazel KAYA Ahmet YETKİN	*Selçuk University, Türkiye*	**STATE-OWNED ENTERPRISES AND PRIVATIZATIONS DURING THE TRANSITION TO A LIBERAL ECONOMY IN TURKIYE**
Assoc. Prof. Dr. Perihan Hazel KAYA Mehmet Rıfat ÖZDEMİR	*Selçuk University, Türkiye*	**THE KEY DRIVERS OF STRUCTURAL TRANSFORMATION IN THE TURKISH ECONOMY AND INCOME DISTRIBUTION: A COMPARATIVE ANALYSIS WITH THE SOUTH KOREAN EXPERIENCE**
Assoc. Prof. Dr. Yasser AL-HUSIEN Osman KABKAB	*Gaziantep University, Türkiye*	**THE ROLE OF PROTECTIONIST POLICIES IN THE STRUCTURAL TRANSFORMATION OF THE MALAYSIAN ECONOMY: AN ANALYTICAL STUDY IN LIGHT OF THE INFANT INDUSTRY THEORY (1959–2000)**
Assoc. Prof. Dr. Perihan Hazel KAYA Ali Furkan KARA	*Selçuk University, Türkiye*	**THE DEVELOPMENT OF THE TAX SYSTEM IN TURKIYE FROM THE TANZIMAT ERA TO THE PRESENT DAY**
Asst. Prof. Dr. İbrahim Gürsu TEKDEMİR Basir Ahmad OMID	*Bursa Technical University, Türkiye*	**SOC AND SOH ESTIMATION IN ELECTRIC VEHICLE BATTERIES USING GPS-BASED DRIVING DATA**
Dr. Erdal KILIÇ	*Military Academy, National Defence University, Türkiye*	**LIBERALIZATION IN RAILROAD TRANSPORTATION: A STRATEGIC MANAGEMENT PERSPECTIVE FROM GLOBAL PRACTICES TO TURKIYE**
Dr. Erdal KILIÇ	*Military Academy, National Defence University, Türkiye*	**INVESTIGATION OF POST DISASTER SPATIAL CHANGE BY IMAGE EVALUATION AND SEMANTIC DIFFERENTIATION METHODS**

SESSION	Online Session-1 · Hall-2	MEETING ID	PASSCODE
Session-1 HALL *Hall-2*	27 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Assoc. Prof. Dr. Gönül GÖKÇAY**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Prof. Dr. Bayram ÜNVER Öykü BULDUK	*Dokuz Eylül University, Türkiye*	**EVALUATION OF METHODOLOGICAL AND REPORTING QUALITY OF RANDOMIZED CONTROLLED TRIALS INCLUDING STABILIZATION EXERCISES IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS ACCORDING TO CONSORT, JADAD, PEDRO AND CERT CRITERIA**
Prof. Dr. Bayram ÜNVER Tuana YILDIRIM	*Dokuz Eylül University, Türkiye*	**METHODOLOGICAL QUALITY OF TELEREHABILITATION INTERVENTIONS IN RANDOMIZED CONTROLLED TRIALS INVOLVING INDIVIDUALS WITH JUVENILE IDIOPATHIC ARTHRITIS: AN EVALUATION BASED ON CONSORT, JADAD AND PEDRO CRITERIA**
Alperen BAYTAR Assoc. Prof. Dr. Günseli USGU	*Special Hayat Special Education and Rehabilitation Center, Türkiye* *Hasan Kalyoncu University, Türkiye*	**THE EFFECTS OF CORE STABILIZATION EXERCISES COMBINED WITH BREATHING EXERCISES ON RESPIRATORY FUNCTION, RESPIRATORY MUSCLE STRENGTH, VOICE QUALITY, AND PHONATION DURATION IN RAP MUSIC PERFORMERS**
Asst. Prof. Anıl KALE Assoc. Prof. Ozan GÜLER Zehra KUŞAT	*Mersin University, Türkiye*	**EXAMINATION OF WOMEN'S MOTIVATIONS AND CONSTRAINTS TO PARTICIPATION IN RECREATIONAL ACTIVITIES IN SPORTS COMPLEXES**
Asst. Prof. Dr. Alırıza Han CİVAN	*Karabük University, Türkiye*	**THE EFFECT OF ACUTE ANAEROBIC FATIGUE ON COGNITIVE PERFORMANCE: A COMPARISON OF ATHLETIC AND SEDENTARY MEN**
Berkay ÇALIK	*Yalova University, Türkiye*	**DEVELOPMENT OF A VALID AND RELIABLE SPORTS LAW AWARENESS SCALE**

SESSION *Session-1* HALL *Hall-3*	**Online Session-1 · Hall-3** 27 June 2026 · Ankara Time: **10:00 – 12:00**	MEETING ID **847 7043 0612**	PASSCODE **161616**

HEAD OF SESSION: **Dr. Aslıhan PULAT DALKIN**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Asst. Prof. Menekşe YAVUZ	*Haliç University, Türkiye*	**A PSYCHOLOGICAL APPROACH TO LITERARY TEXTS: FAIK REŞAT'IN NETÎCE-İ SEFÂLET**
Rıdvan GÜNDOĞDU	*Bursa Uludağ Üniversitesi, Türkiye*	**AN EVALUATION OF SUFI TERMINOLOGY IN MUHAMMAD IBN YUSUF'S WORK TITLED KITAB-I MASJID AL-AQSA**
Rıdvan GÜNDOĞDU	*Bursa Uludağ Üniversitesi, Türkiye*	**AN EVALUATION OF THE APHORISMS IN MUHAMMAD IBN YUSUF'S WORK TITLED KITAB-I MASJID AL-AQSA**
Dr. İsmail BAĞÇEVAN	*Ministry of National Education, Türkiye*	**ADJECTIVES IN ABDULHALUK UYGUR'S POEMS**
Dr. İsmail BAĞÇEVAN	*Ministry of National Education, Türkiye*	**THE FUNCTION OF ADJECTIVES IN THE LINGUISTIC CONSTRUCTION OF MOTION EVENTS: THE CASE OF AHMET MUHIP DIRANAS'S POETRY**
Asst. Prof. Dr. Hakan SARITİKEN İrem Sude MACİT	*Düzce Üniversitesi, Türkiye*	**AN INVESTIGATION OF LISTENING/VIEWING TEXTS IN 6TH GRADE TURKISH TEXTBOOKS ACCORDING TO THE VIRTUE-VALUE-ACTION FRAMEWORK**

SESSION		MEETING ID	PASSCODE
Session-1 HALL *Hall-4*	**Online Session-1 · Hall-4** 27 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Bogdan-Catalin SERBAN

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Shahzaib KHAN Prof. Muhammad USMAN	*Government College University Faisalabad, Pakistan*	**FORMULATION OF DYSPROSIUM MOLYBDATE-REDUCED GRAPHENE OXIDE NANOCOMPOSITE FOR SUPERCAPACITORS**
Bogdan-Catalin SERBAN Matei-Gabriel URSACHESCU Vlad DIACONESCU Caterina ZETU Maria Ruxandra SALAGEAN Diana DUMITRAȘCU Octavian BUIU Marius BUMBAC	*National Institute for Research and Development in Microtechnologies (IMT Bucharest), Romania*	**MOLECULAR TWEEZERS: SELECTIVE SUPRAMOLECULAR RECEPTORS FOR MOLECULAR RECOGNITION AND BIOMEDICAL APPLICATIONS**
Bogdan-Catalin SERBAN Matei-Gabriel URSACHESCU Vlad DIACONESCU Caterina ZETU Maria Ruxandra SALAGEAN Diana DUMITRAȘCU Octavian BUIU Marius BUMBAC	*National Institute for Research and Development in Microtechnologies (IMT Bucharest), Romania*	**PILLARARENES: VERSATILE MACROCYCLIC HOSTS AND THEIR APPLICATIONS IN MODERN SUPRAMOLECULAR CHEMISTRY**
Bogdan-Catalin SERBAN Matei-Gabriel URSACHESCU Vlad DIACONESCU Caterina ZETU Maria Ruxandra SALAGEAN Diana DUMITRAȘCU Octavian BUIU Marius BUMBAC	*National Institute for Research and Development in Microtechnologies (IMT Bucharest), Romania*	**SYNTHESIS AND APPLICATIONS OF PHTHALOCYANINES IN BIOMEDICAL AND TECHNOLOGICAL FIELDS**
Fatima CHARBOUB Hakima FARAHI Abdallah ALBOURINE Mohamed ERRAMI Rachid AIT AKBOUR	*Ibn Zohr University, Morocco*	**ADSORPTION-PHOTOCATALYSIS-FENTON TRIFECTA ON MAGNETIC EUCALYPTUS-DERIVED BIOCHAR: DECIPHERING THE SYNERGISTIC ACETAMIPRID DEGRADATION PATHWAY**
Zakarya ZEBIRI Khalida BELAHLOU	*University Constantine 1, Algeria*	**PLANT-MEDIATED GREEN SYNTHESIS OF ZNO NANOPARTICLES FOR PHOTOCATALYTIC DEGRADATION**
Aouicha Mounia BOUAYED Lemya BOUGHRARA	*University of Science and Technology Mohamed Boudiaf, Algeria*	**NANOSTRUCTURED ZINC-DOPED TITANATE NANOTUBES: SYNTHESIS, CHARACTERIZATION AND DYE DEGRADATION PERFORMANCE**
Youssef ADNAN Hassan OUACHTAK Abdelaziz AIT ADDI	*Ibn Zohr University, Morocco*	**ELECTROCHEMICAL AND THEORETICAL STUDY OF TWO NEW SUN-HEALED PYRAZOLONE-DERIVED INHIBITORS C4-PRZ-1 AND CL-PRZ EFFECTIVE AGAINST MILD STEEL CORROSION IN HYDROCHLORIC ACID MEDIUM**

SESSION	Online Session-1 · Hall-5	MEETING ID	PASSCODE
Session-1 HALL *Hall-5*	27 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Prof. Nuno BAPTISTA

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Libina BABU Prof. Dr. Gireesh Kumar G. S. Aby Emmanuel LOPUS	*Nirmala College, India* *Henry Baker College, Melukavu* *St Joseph's Institute of Hotel Management and Catering Technology, India*	**DIGITAL TRANSFORMATION IN THE INSURANCE INDUSTRY: OPPORTUNITIES, CHALLENGES, AND THE RISE OF INSURTECH**
Athira V S Prof. Dr. Gireesh Kumar G. S.	*Nirmala College, India* *Henry Baker College, India*	**AI-DRIVEN PERSONALIZATION IN MARKETING: HELPFUL INNOVATION OR PRIVACY THREAT?**
George SALIBA Prof. Sélim MEKDESSI Prof. Gregory WEGMANN	*Lebanese University, Lebanon* *University of Burgundy Europe, France*	**THE INVISIBLE ARCHITECTURE OF NGO PERFORMANCE: MOTIVATION, COMMITMENT, AND ORGANIZATIONAL OUTCOMES**
Elena MAKDISSI Prof. Cendrella ABOU FAYAD Prof. Gregory WEGMANN	*Lebanese University, Lebanon* *CNAM Liban, Lebanon* *University of Burgundy Europe, France*	**WHEN BIASES SHAPE ENTREPRENEURIAL CHOICES: A BEHAVIORAL FRAMEWORK FOR STARTUP DECISION-MAKING IN CRISIS ENVIRONMENTS**
Prof. Nuno BAPTISTA Bárbara CARDOSO Célia FERREIRA Isabel FERREIRA Prof. Mário ANTÃO	*Polytechnic Institute of Leiria, Portugal* *Lusíada University, Portugal*	**SILENCE IN SUSTAINABILITY COMMUNICATION: UNDERSTANDING STAKEHOLDER RESPONSES TO GREENHUSHING**
Prof. Nuno BAPTISTA Maja HOLZAPFEL Prof. Mário ANTÃO	*Polytechnic Institute of Leiria, Portugal* *Hochschule Bochum - Bochum University of Applied Sciences, Germany* *Lusíada University, Portugal*	**STRATEGIC APPROACHES TO ENHANCING CRISIS RESILIENCE IN GLOBAL SUPPLY CHAINS**
MSc. Edvin PRENÇE	*ProExport Albania, Albania*	**CLOTHING AND FOOTWEAR MANUFACTURING INDUSTRY: CHALLENGES AND OPPORTUNITIES FOR INCREASING COMPETITIVENESS**
Moses Adeolu AGOI Andrew Ayanfeola OKE Micheal Olayemi OLADUNJOYE Hendri Hermawan ADINUGRAHA	*Lagos State University of Education, Nigeria* *Universitas Islam Negeri K.H Abdurrahman Wahid Pekalongan, Indonesia*	**EDGE ARTIFICIAL INTELLIGENCE SYSTEMS AND THEIR IMPACT ON FIRM-LEVEL COST OPTIMIZATION**

SESSION		MEETING ID	PASSCODE
Session-1 HALL *Hall-6*	**Online Session-1 · Hall-6** 27 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Prof. Georgina IMO**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Julius WINSTONE Prof. Georgina IMO Prof. Sayita G. WAKJISSA	*University of Jos, Nigeria*	**BASIC EDUCATION CERTIFICATE EXAMINATION MATHEMATICS AS PREDICTOR OF SENIOR CERTIFICATE EXAMINATION MATHEMATICS ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS IN ADAMAWA STATE, NIGERIA**
Rheinhard David SUTRISNO Oktavianus RANGGA Dewi YULIANA	*Sekolah Tinggi Agama Kristen Arastamar Grimenawa Jayapura, Indonesia*	**FROM SCROLL TO SOUL: DEVELOPING A CHRISTIAN RELIGIOUS EDUCATION MODEL FOR ADOLESCENT CHARACTER FORMATION IN INDONESIA'S SOCIAL MEDIA CULTURE**
Rezeki Putra GULO Ratnasari WARUWU Natalia Christy Megumi KAUNANG Anius KALOLIK	*Universitas Kristen Indonesia, Indonesia*	**INNOVATION IN DEEP LEARNING EVALUATION OF CHRISTIAN RELIGIOUS EDUCATION IN INDONESIA: INTEGRATION OF PRACTICAL THEOLOGY, TRANSFORMATIVE PEDAGOGY, AND COMPETENCY-BASED ASSESSMENT**
Robraw ANN	*National Institute of Education, Cambodia*	**CHALLENGES AND SOLUTIONS TO TEACHING AND LEARNING SCIENCE AT UPPER SECONDARY SCHOOL IN CAMBODIA**
PhD. Nguyen Nhu TRANG PhD Student Nguyen Xuan DUY PhD Student Le Quang NGOC	*Vietnam Academy of Social Sciences,Vietnam*	**DIMENSIONS OF DIGITAL TECHNOLOGY COMPETENCE AMONG UNIVERSITY STUDENTS IN VIETNAM'S DIGITAL TRANSFORMATION CONTEXT**
Maheen SHAKEEL Dr. Afshan NASEEM	*University of Management and Technology, Pakistan*	**EXPLORING THE OPPORTUNITIES AND CHALLENGES OF TECHNOLOGY INTEGRATION IN MATHEMATICS TEACHING: A QUANTITATIVE ANALYSIS**
Nguyen Le Minh TRANG Chau Nguyen Tuong VY Duong Bao NGOC Le Thi Thanh XUAN	*Ho Chi Minh City University of Technology, Vietnam*	**STUDENTS' PERCEPTIONS OF EXTRACURRICULAR ACTIVITIES AT UNIVERSITY: THE CASE OF HO CHI MINH CITY UNIVERSITY OF TECHNOLOGY**
Miss. Kalanthar Lebbe Fathima NUFLA	*South Eastern University of Sri Lanka, Sri Lanka*	**FACTORS INFLUENCING THE ADOPTION OF GENERATIVE AI TOOLS AMONG UNDERGRADUATE STUDENTS: EVIDENCE FROM SOUTH EASTERN UNIVERSITY OF SRI LANKA**

SESSION	Online Session-2 · Hall-1	MEETING ID	PASSCODE
Session-2 HALL *Hall-1*	27 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: Assoc. Prof. Handan DEMİRCİOĞLU

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Assoc. Prof. Dr. Gökçe ÖZDEMİR Res. Asst. Birgül SEVİNÇ	*Gaziantep Üniversitesi, Türkiye*	**IMPLEMENTATION OF THE TURKEY CENTURY MAARIF MODEL AT THE SCHOOL LEVEL: REFLECTIONS FROM ADMINISTRATOR AND TEACHER EXPERIENCES**
Ömer Faruk ÖZCAN Yunus DEMİRDAĞ Prof. Dr. Mustafa YEŞİLYURT	*Amasya Üniversitesi, Türkiye*	**THE IMPACT OF TECHNOLOGY ON TIME MANAGEMENT AND ACADEMIC SUCCESS IN PRIMARY SCHOOL**
Yunus DEMİRDAĞ Ömer Faruk ÖZCAN Prof. Dr. Mustafa YEŞİLYURT	*Amasya Üniversitesi, Türkiye*	**THE IMPACT OF SMART LEARNING TECHNOLOGIES ON CONSCIOUS CONSUMER DEVELOPMENT IN PRIMARY SCHOOLS**
Servet ÖZTÜRK Assoc. Prof. Dr. Özlem ÜZÜMCÜ	*Ministry of Education, Türkiye* *Hasan Kalyoncu University, Türkiye*	**A CONTENT ANALYSIS OF GRADUATE THESES ON COMPUTATIONAL THINKING**
Prof. Dr. Şenay Sezgin NARTGÜN Hatice GÜNEŞ	*Bolu Abant İzzet Baysal University, Türkiye* *Ministry of National Education, Türkiye*	**THE RELATIONSHIP BETWEEN ORGANIZATIONAL DNA PROFILES OF SCHOOLS AND JOB SATISFACTION OF TEACHERS**
Prof. Dr. Türkan ARGON Hatice GÜNEŞ	*Bolu Abant İzzet Baysal University, Türkiye* *Ministry of National Education, Türkiye*	**CAREER PLANNING COMPETENCE AND CAREER ANXIETY OF VOCATIONAL HIGH SCHOOL STUDENTS**

SESSION	Online Session-2 · Hall-2	MEETING ID	PASSCODE
Session-2 HALL *Hall-2*	27 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: Dr. Ali Sercan KARAKAŞ

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Asst. Prof. Muhammed İŞCİ Berat YILDIRIM	*Kayseri University, Türkiye*	**CLASSIFICATION OF HEALTHY AND CRACKED GEAR CONDITIONS IN A TWO-STAGE GEARBOX USING MACHINE LEARNING**
Asst. Prof. Dr. Hilmi TEKDİR Prof. Dr. Tuba YETİM	*Erzurum Technical University, Türkiye*	**INVESTIGATION OF TRIBOLOGICAL PROPERTIES OF ZR-DOPED PDMS COATINGS OBTAINED BY SOL-GEL METHOD ON METAL LASER POWDER BED FUSION ADDITIVELY MANUFACTURED TI6AL4V ALLOY**
Res. Asst. Ahmed Receb DEMİREL Asst. Prof. Dr. Cemil YİĞİT	*Sakarya University, Türkiye*	**ENHANCEMENT OF THE AERODYNAMIC EFFICIENCY (CL/CD) OF THE NACA 2412 AIRFOIL VIA ADJOINT-BASED OPTIMIZATION AND PROPOSAL OF A NEW AIRFOIL**
Res. Asst. Ahmed Receb DEMİREL Asst. Prof. Dr. Cemil YİĞİT	*Sakarya University, Türkiye*	**OPENVSP-BASED LOW-FIDELITY AERODYNAMIC ANALYSIS AND COMPARISON OF DIFFERENT AIRFOILS FOR A BLENDED WING BODY (BWB) UNMANNED AERIAL VEHICLE DESIGN**
Assoc. Prof. Dr. Çağın BOLAT Kaan Atakan KAHVECİ	*Samsun University, Türkiye*	**NEW RESEARCH TRENDS ON THE MACHINIBILITY OF SUPERALLOYS USING THE WEDM METHOD**
Dr. Merve TAFTALI KÖSEOĞLU Prof. Dr. Ali Fatih YETİM	*Erzurum Technical University, Türkiye*	**EFFECT OF POLYMER AND COMPOSITE COATINGS ON THE CORROSION BEHAVIOR OF SLM-MANUFACTURED 316L STAINLESS STEEL FOR AEROSPACE FASTENERS**

SESSION	Online Session-2 · Hall-3	MEETING ID	PASSCODE
Session-2 HALL *Hall-3*	27 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Dr. Erkam CÖMERT**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Assoc. Prof. Dr. Zehra YAZBAHAR	*Gümüşhane University, Türkiye*	**THE FUNCTION OF THE HERFENE TRADITION AS A SITE OF SOCIAL MEMORY (THE CASE OF GÜMÜŞHANE)**
Asst. Prof. Dr. Mesut KÜRÜM	*Gümüşhane University, Türkiye*	**NARRATOR TYPES AND ORAL PERFORMANCE IN HERFENE GATHERINGS (THE CASE OF GÜMÜŞHANE)**
Asst. Prof. Dr. Meltem ÖNER	*Gaziantep University, Türkiye*	**CULTURAL TRANSMISSIONS OF WOMEN IN GAZIANTEP BATHHOUSES IN THE CONTEXT OF COLLECTIVE MEMORY**
Eminenur CAN Prof. Dr. Kemal GÖZ	*Bilecik Şeyh Edebali University, Türkiye*	**PHILOSOPHICAL DEFINITIONS IN THE TRADITION OF ISLAMIC PHILOSOPHY DICTIONARIES**
Assoc. Prof. Fehmi SOĞUKOĞLU	*Duzce University, Türkiye*	**THE NARRATIVE OF HARUT AND MARUT IN THE CONTEXT OF THE TRIAL OF WEALTHY PIOUS PEOPLE WITH WORLDLY BLESSINGS**
Assoc. Prof. Fehmi SOĞUKOĞLU Adem ATAŞ Muhammed KILIÇ Naşide BAYRAKÇI	*Duzce University, Türkiye* *Gaziantep University, Türkiye*	**THE EFFECT OF "THEOLOGY" AND "ISLAMIC SCIENCES" NAMING ON STUDENTS' CAREER PLANNING (THE CASE OF GAZIANTEP)**
Assoc. Prof. Dr. Yunus BUCUKA	*Bingöl University, Türkiye*	**KOKOPELLI: THE HUNCHBACK GOD OF THE NATIVE AMERICANS**
Dr. Buket Kayışlı ARKADAŞ	*İnönü University, Türkiye*	**THE SUFI UNDERSTANDING OF HUMAN CULTIVATION IN THE CONTEXT OF PHILOSOPHY OF EDUCATION AND PHILOSOPHICAL ANTHROPOLOGY: IRFAN, TARBIYA, AND THE MODEL OF THE PERFECT HUMAN BEING**

SESSION		MEETING ID	PASSCODE
Session-2 HALL *Hall-4*	**Online Session-2 · Hall-4** 27 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: Assoc. Prof. Dr. Sara KHELIL

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Ph.D. Candidate Sami MELIK Assoc. Prof. Dr. Sara KHELIL Assoc. Prof. Dr. Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Faculty of Architecture and Urbanism and Structural Engineering and Hydrology, Department of Architecture, Biskra*	**DEMAND-DRIVEN URBAN ARCHITECTURE: BALANCING DENSITY, FUNCTION, AND SPATIAL QUALITY IN CONTEMPORARY CITIES.**
Ph.D. Candidate Sami MELIK Assoc. Prof. Dr. Sara KHELIL Assoc. Prof. Dr. Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Faculty of Architecture and Urbanism and Structural Engineering and Hydrology, Department of Architecture, Biskra*	**USER-CENTERED HOUSING DESIGN: INTEGRATING OCCUPANT NEEDS INTO CONTEMPORARY RESIDENTIAL ARCHITECTURE.**
Ph.D. Candidate Sami MELIK Assoc. Prof. Dr. Sara KHELIL Assoc. Prof. Dr. Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	**ORGANIC URBANISM IN CONTEMPORARY CITIES: INTEGRATING NATURAL SYSTEMS INTO ARCHITECTURAL AND URBAN DESIGN.**
Ph.D. Candidate Sami MELIK Assoc. Prof. Dr. Sara KHELIL Assoc. Prof. Dr. Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	**ORGANIC ARCHITECTURE IN CONTEMPORARY PRACTICE: INTEGRATING NATURAL FORM AND ENVIRONMENTAL PERFORMANCE.**
Ph.D. Candidate Sami MELIK Assoc. Prof. Dr. Sara KHELIL Assoc. Prof. Dr. Tallal Abdel Karim BOUZIR	*Mohamed Khider Biskra University, Algeria*	**RETAIL ARCHITECTURE AND SPATIAL ECONOMICS: OPTIMIZING DESIGN FOR CONSUMER ENGAGEMENT AND SALES PERFORMANCE.**
Deyasini DAS Prof. Suchandra BARDHAN	*Jadavpur University, India*	**ABANDONED SITES IN URBAN AREAS: AN UNTAPPED POTENTIAL FOR SOCIO-ECONOMIC DEVELOPMENT**
Krati RASTOGI	*M. J. P. Rohilkhand University, India*	**ANALYSING THE IRREVERSIBILITY AND OPTIMAL FLOW OF UNSTEADY FLUID IN MAGNETOHYDRODYNAMIC SYSTEM WITH HEAT AND MASS TRANSFER**
Ogwede Daniel OBAKESA AGBO Christiana ENE	*Federal College of Education Technical Isu, Nigeria* *University of Abuja, Nigeria*	**LOCAL STABILITY ANALYSIS OF AN INFECTION-AGE MATHEMATICAL MODEL FOR COVID-19 DISEASE DYNAMICS**
Yogita RANI Indeewar KUMAR Gitanjali	*Bhagwan Parshuram Institute of Technology (BPIT), India* *Manipal University Jaipur, India* *Maharaja Surajmal Institute of Technology (MSIT), India*	**RELIABILITY MODELING OF PARALLEL TUBULAR AND PLATE HEAT EXCHANGERS USING REGENERATIVE POINT TECHNIQUE**

SESSION		MEETING ID	PASSCODE
Session-2 HALL *Hall-5*	**Online Session-2 · Hall-5** 27 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: M.A. Fathima JELSA MUHASEBE

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Akaninyene Akpan ARTHUR Emmanuel Solomon UDOH Iniabasi Ignatius ESSIEN	*Akwa Ibom State Polytechnic, Nigeria* *Akwa Ibom State College of Science and Technology, Nigeria* *Federal Polytechnic, Ukana, Nigeria*	**ENVIRONMENTAL INCIDENTS, WASTE MANAGEMENT, REGULATORY COMPLIANCE DISCLOSURES AND MARKET VALUE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA**
Akaninyene Akpan ARTHUR	*Akwa Ibom State Polytechnic, Nigeria*	**CORPORATE GOVERNANCE CHARACTERISTICS AND THE MARKET VALUE OF CONSUMER GOODS COMPANIES IN NIGERIA**
M. Faiz Yuniza PUTRA Agustin Leofard ALMUKMIN Muhammad Fatih AUFAR	*Universitas Lampung, Indonesia*	**THE EFFECT OF TAX REVENUE ON GOVERNMENT SOCIAL SPENDING AND ITS IMPACT ON SOCIETY**
Clara Resti WAHYUNINGSIH Andini Nares WATI	*Universitas Lampung, Indonesia*	**THE ECONOMIC CONSEQUENCES OF INDONESIA WITHOUT THE TAXATION SECTOR**
M.A. Fathima JELSA	*South Eastern University of Sri Lanka, Sri Lanka*	**ARTIFICIAL INTELLIGENCE IN FINANCE AND FINANCIAL TECHNOLOGY**
M.A. Fathima JELSA	*South Eastern University of Sri Lanka (SEUSL), Sri Lanka*	**IMPACT OF INVENTORY MANAGEMENT ON THE FINANCIAL PERFORMANCE OF PUBLIC LISTED MANUFACTURING COMPANIES IN SRI LANKA**
Alicia Gwen HALIM Chelsea Olivia HANDOKO Akila Ramadhani ANWAR	*University of Lampung, Indonesia*	**TAX TRANSPARENCY AND GOVERNMENT ACCOUNTABILITY IN BUILDING PUBLIC TRUST**

SESSION	Online Session-2 · Hall-6	MEETING ID	PASSCODE
Session-2 HALL *Hall-6*	27 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: Dr. Violla MAKHZOUM

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Dr. Violla MAKHZOUM Heyam FAKIH Abbas WEHBI	*Islamic University of Lebanon (IUL), Lebanon*	**ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION: FROM LEARNING SUPPORT TO REDEFINING THE ROLE OF THE UNIVERSITY PROFESSOR**
PAROSHA JAHA SHATUL	*Universiti Putra Malaysia, Malaysia*	**ROLE OF RAJSHAHI UNIVERSITY IN LOCAL AND REGIONAL DEVELOPMENT**
Olua Sylvanus CHINAEMEREM Amadi Ugochukwu FRANKLYN Timothy Jonah ARIK	*Federal College of Education (Technical) Isu, Nigeria* *University of Jos, Nigeria*	**EXAMINE THE INFLUENCE OF GOVERNMENT REMOVAL OF FUEL SUBSIDY ON SECONDARY SCHOOL TEACHERS' PRODUCTION AND UTILISATION OF INSTRUCTIONAL MATERIAL IN PLATEAU STATE**
Dr. Hanane RAHMOUNI	*University of Oran 2 Mohamed Ben Ahmed, Algeria*	**TO SUCCEED IN ONE'S EXPERIENCE, TO SUCCEED IN ONE'S UNIVERSITY STUDIES**
Edgar A. BURNS	*University of Waikato, New Zealand*	**INTERCULTURAL INSTRUCTION TEACHING MĀORI CULTURE IN A NEW ZEALAND BUSINESS COURSE**
Assoc. Prof. Dr. Naseem AKHTER	*Shaheed Benazir Bhutto Women University, Pakistan*	**SUFISM AND MORAL SELF-REFORM: A STUDY IN THE INTELLECTUAL AND SOCIAL CONTEXT OF SOUTH ASIA**
Assoc. Prof. Dr. Naseem AKHTER	*Shaheed Benazir Bhutto Women University, Pakistan*	**HUMAN RIGHTS IN ISLAMIC JURISPRUDENCE: AN ANALYSIS OF CLASSICAL SOURCES AND CONTEMPORARY DISCOURSE**
Onwuma Uzoma AKAJIAKU	*Federal College of Education (Technical) Isu, Nigeria*	**APPLICATION OF ARTIFICIAL INTELLIGENCE TOOLS FOR IMPROVING TROUBLESHOOTING SKILLS IN ELECTRONIC SYSTEMS AMONG TECHNICIANS IN RIVERS STATE**

SESSION	Online Session-3 · Hall-1	MEETING ID	PASSCODE
Session-3 HALL *Hall-1*	27 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Aydın SELLİOĞ

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Burhan YALÇIN Prof. Dr. Selda POLAT HÜSREVŞAHİ	*Kdz. Ereğli Şahinde Hayrettin Yavuz Science and Art Center, Türkiye* *Bülent Ecevit University, Türkiye*	**THE IMPACT OF REPUPLICAN ERA EDUCATION POLICIES ON ZONGULDAK PROVINCE**
Öğr. Gör. Ruken ÜNLÜ TOPRAK Prof. Dr. Mustafa ERDEM	*Adıyaman Üniversitesi, Türkiye* *Kırşehir Ahi Evran Üniversitesi, Türkiye*	**PROPOSAL FOR AN ALTERNATIVE MANAGEMENT MODEL FOR PRESCHOOL EDUCATION INSTITUTIONS: A THEMATIC ANALYSIS BASED ON EXPERT OPINIONS**
Özlem COŞKUN Burcu SEZEK Prof. Munise SEÇKİN KAPUCU	*Eskisehir Osmangazi University, Türkiye*	**AN ANALYSIS OF SECONDARY SCHOOL STUDENTS' EXPERIENCES OF PLAYING DIGITAL GAMES USING THE SWOT ANALYSIS**
Özlem COŞKUN Prof. Munise SEÇKİN KAPUCU	*Eskisehir Osmangazi University, Türkiye*	**AN EXAMINATION OF THE RELATIONSHIP BETWEEN SECONDARY SCHOOL STUDENTS' LEVELS OF FINANCIAL LITERACY AND THEIR CONSCIOUS CONSUMPTION BEHAVIOURS**
İsmail ENSAR ÜSTÜN Prof. Dr. Süha YILMAZ	*Dokuz Eylül University, Türkiye*	**INVESTIGATION OF FIELD KNOWLEDGE OF MIDDLE SCHOOL STUDENTS WITH HEARING IMPAIRMENT REGARDING THE VIEWS OF OBJECTS FROM DIFFERENT DIRECTIONS**
İsmail ENSAR ÜSTÜN Prof. Dr. Süha YILMAZ	*Dokuz Eylül University, Türkiye*	**INVESTIGATION OF MATHEMATICAL LANGUAGE USE OF MIDDLE SCHOOL STUDENTS WITH HEARING IMPAIRMENT REGARDING THE VIEWS OF OBJECTS FROM DIFFERENT DIRECTIONS**
Nuryeter ŞAHAN Prof. Dr. Uğur BÜYÜK	*Erciyes University, Türkiye*	**HOW GROUP WORK EXPERIENCES ARE REMEMBERED IN SCIENCE EDUCATION: A PHENOMENOLOGICAL PERSPECTIVE ON THE MEMORIES OF IN-SERVICE TEACHERS AND PRE-SERVICE TEACHERS**
Şükriye SAĞLAM Prof. Dr. Uğur BÜYÜK	*Ministry of National Education, Türkiye* *Erciyes University, Türkiye*	**CHALLENGES ENCOUNTERED BY SCIENCE TEACHERS IN THE PREPARATION AND EVALUATION OF OPEN-ENDED QUESTIONS**

SESSION	Online Session-3 · Hall-2	MEETING ID	PASSCODE
Session-3 HALL *Hall-2*	27 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Dr. Şükrü OKUL

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Öznur GÜLTEKİN Prof. Dr. Ömer AYDOĞDU	*Konya Technical University, Türkiye*	**DYNAMIC ANESTHESIA DOSE OPTIMIZATION USING DEEP Q-NETWORK AND INVESTIGATION OF THE EFFECTS OF MULTIPLE PHYSIOLOGICAL PARAMETERS ON BIS STABILIZATION**
Sıla SEZGİN Asst. Prof. Dr. Tolga ÖZER	*Afyon Kocatepe University, Türkiye*	**SINGLE EVENT EFFECT IN UART COMMUNICATION INTERFACE**
Gökhan SALÇIK İbrahim Gürsu TEKDEMİR	*Bursa Technical University, Türkiye*	**OPTIMAL PLANNING OF ELECTRIC VEHICLE CHARGING AND DISCHARGING STRATEGIES IN A TEST DISTRIBUTION SYSTEM**
Lect. Fatma Nur KILIÇKAYA Prof. Dr. Celal ÖZTÜRK Prof. Dr. Arzu YAY Res. Asst. Eda KÖSEOĞLU	*Kayseri University, Türkiye* *Erciyes University, Türkiye*	**DEEP CONVOLUTIONAL NEURAL NETWORK-BASED AUTOMATIC CLASSIFICATION OF OVARIAN SECTIONS WITH DIFFERENT HISTOLOGICAL STAINING TECHNIQUES**
Öykü SAĞIR Murat ÜÇÜNCÜ	*Başkent University, Türkiye*	**DEINTERLEAVING RADAR PULSES BY DENSITY-BASED SPATIAL CLUSTERING**
Prof. Dr. Vagif NEVRUZOGLU Res. Asst. Melih MANIR	*Recep Tayyip Erdoğan University, Türkiye*	**INVESTIGATION OF THE IMPACT OF INNOVATIVE MANUFACTURING TECHNIQUES ON PERFORMANCE IN CDS/CDTE SOLAR CELLS**
Prof. Dr. Vagif NEVRUZOGLU Res. Asst. Melih MANIR	*Recep Tayyip Erdoğan University, Türkiye*	**PRODUCTION AND ANALYSIS OF CD1-XPBXS FILMS BY CHEMICAL SPRAYING METHOD**

SESSION *Session-3* HALL *Hall-3*	**Online Session-3 · Hall-3** 27 June 2026 · Ankara Time: **15:00 – 17:00**	MEETING ID **847 7043 0612**	PASSCODE **161616**

HEAD OF SESSION: **Assoc. Prof. Mehmet GÜNEŞ**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Mehmed Seyda TEPEDELEN Assoc. Prof. Dr. Burcu UYSAL Prof. Dr. Medaim YANIK	*Ibn Haldun University, Türkiye*	**EPIDEMIOLOGY OF DISSOCIATIVE IDENTITY DISORDER: PRELIMINARY RESULTS**
Asst. Prof. Dr. Furkan ARI Sefa Oğulcan ÖNDER	*Sivas Cumhuriyet University, Türkiye* *Başkent University, Türkiye*	**SMARTPHONE ADDICTION AMONG UNIVERSITY STUDENTS: AN EXAMINATION IN TERMS OF SOCIAL MEDIA USE AND DEMOGRAPHIC VARIABLES**
Asst. Prof. Dr. Ferhat ATİK	*Girne American University, Türkiye*	**DIGITAL TASAVVUF: TRANSFORMATION OF SPIRITUAL EXPERIENCE BETWEEN DHIKR, REPETITION AND PLATFORM RITUALS**
Prof. Dr. Emet GÜREL Asst. Prof. Dr. İlkay Burak TAŞKIRAN Ekin KARAKUYU	*Ege University, Türkiye* *İstanbul Aydın University, Türkiye*	**CELEBRITY USE IN PUBLIC SERVICE ANNOUNCEMENTS: A QUALITATIVE STUDY**
Prof. Dr. Emet GÜREL Asst. Prof. Dr. İlkay Burak TAŞKIRAN Ekin KARAKUYU	*Ege University, Türkiye* *İstanbul Aydın University, Türkiye*	**EMOTIONAL ENGAGEMENT AND REAL TIME MARKETING IN DIGITAL CULTURE: AN ANALYSIS OF THE VIRAL TREND OF PUNCH THE MONKEY**
Selin UZUNER GÜNEŞ Prof. Dr. Serdar BOZKURT	*Yıldız Technical University, Türkiye*	**THE ROLE OF PSYCHOLOGICAL SAFETY CLIMATE IN THE EFFECT OF LEADER–EMPLOYEE RELATIONSHIP QUALITY ON INNOVATIVE WORK BEHAVIOR**

SESSION	Online Session-3 · Hall-4	MEETING ID	PASSCODE
Session-3 HALL *Hall-4*	27 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Major Gheorghe GIURGIU**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Odebiyi O. A. Fatore T. A. Omoniyi S. O. Adewole T. E.	*Ladoke Akintola University of Technology, Nigeria*	**HIV/AIDS MODEL INCORPORATING HOLLING TYPE II SATURATED INCIDENCE WITH STABILITY AND SENSITIVITY ANALYSIS**
Adewole E. T. Odebiyi O. A. Omoniyi S. O. Fatore T. A.	*Ladoke Akintola University of Technology, Nigeria*	**MATHEMATICAL MODELLING OF COVID-19 TRANSMISSION DYNAMICS**
Anita PANDEY	*Kirodimal Govt. Arts and Science College, India*	**THE ASPECTS OF SPIDER WEB: TYPES AND STRUCTURES**
Fatima ARKAM Ahlem MOKRANE Khoukha ALILECHE Amina KRIBECHE Siham NADJI	*M'Hamed Bougara University of Boumerdès, Algeria* *Mouloud Mammeri University of Tizi-Ouzou, Algeria* *Scientific and Technical Research Center for Physico-Chemical Analysis (CRAPC), Algeria* *ORpin Center Research and Development Company, Algeria*	**PHYTOCHEMICAL CHARACTERIZATION AND EVALUATION OF THE HEPATOPROTECTIVE EFFECT OF BRASSICA OLERACEA SEEDS METHANOLIC EXTRACT IN PARACETAMOL-INDUCED HEPATOTOXICITY**
Dr. Iram LIAQAT	*Government College University Lahore, Pakistan*	**MARINE BIOFILM INHIBITION VIA QUORUM SENSING**
Asmaa LAFRAM Amal DAGNI Bouchra EL KHALFI Rachida ROKY	*University of Hassan II Casablanca, Morocco*	**ECOTOXICOLOGICAL IMPACT OF POLYSTYRENE NANOPLASTICS ON THE PROTOZOAN TETRAHYMENA PYRIFORMIS: CYTOTOXICITY, BEHAVIORAL DISRUPTIONS, AND OXIDATIVE STRESS**
Major Gheorghe GIURGIU Prof. Dr. Med. Manole COJOCARU	*Deniplant-Aide Sante Medical Center, Romania* *Titu Maiorescu University, Romania*	**OPTIMIZING OUTCOMES IN PSORIASIS: IMPACT OF DENIPLANT NUTRACEUTICALS**

SESSION	Online Session-3 · Hall-5	MEETING ID	PASSCODE
Session-3 HALL *Hall-5*	27 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Dr. Asma Seemi MALIK**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Mr. Satish Kumar SINGH	*Central University of Punjab, India*	**AUTOMATED CUSTOMS DECISION-MAKING AND CORPORATE DUE PROCESS RIGHTS: A COMPARATIVE LEGAL ANALYSIS OF ALGORITHMIC TRADE GOVERNANCE IN INDIA, THE EUROPEAN UNION AND SINGAPORE**
Khadim Hussain BABUL	*International Islamic University, Pakistan*	**WAR CRIMES UNDER INTERNATIONAL HUMANITARIAN LAW: LEGAL FOUNDATIONS, JURISPRUDENCE, AND CONTEMPORARY ISSUES**
Mirwais Iqbal ZADA	*Ustad Abdul Ghafoor University, Afghanistan*	**CONFLICT, DIPLOMACY, AND INTERNATIONAL LAW: LEGAL TOOLS FOR GLOBAL STABILITY**
David Barbosa de OLIVEIRA	*Federal University of Ceará, Brazil*	**THE CHIEF SCIENTIST OF HUMAN RIGHTS: EVIDENCE-BASED RESEARCH IN ACTION AT CEARÁ'S HUMAN RIGHTS SECRETARIAT**
Dr. Ayesha BATOOL Dr. Farkhanda ANJUM Dr. Sobia MAQSOOD Dr. Shafiq-ur-Rehman ZIA	*University of Agriculture Faisalabad, Pakistan*	**SILENT WITNESSES, HIDDEN VICTIMS: EXAMINING THE IMPACT OF DOMESTIC VIOLENCE ON CHILDREN IN PUNJAB, PAKISTAN**
Marinela SOTA	*University of Tirana, Albania*	**SOCIO-ECONOMIC INTEGRATION OF ASYLUM SEEKERS IN ALBANIA FROM THEIR EXPERIENCES: IS THE NEW LEGISLATION ENOUGH?**
Qader VAZIFEH DAMIRCHI	*University of Applied Science and Technology, Iran*	**IDENTITY IN THE MUGHAN REGION**
Dr. Asma Seemi MALIK Dr. Anam AFZAL Dr. Amjad MAHMOOD	*Lahore College for Women University, Pakistan* *Punjab College of Information Technology, Pakistan*	**FINANCIAL DECISION-MAKING POWER AND FREEDOM: A QUANTITATIVE ANALYSIS OF MARRIED COUPLES**

SESSION	Online Session-3 · Hall-6	MEETING ID	PASSCODE
Session-3 HALL *Hall-6*	27 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Khoa Tam Nhu NGUYEN**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Dr. Mas'ud HAMDAN	*University of Haifa,Palestine*	**DISCOURSE OF POWER AND TRUTH IN POETIC WORKS (LITERATURE AND ART): AN INTRODUCTION**
Dr. Khalida MADOUI	*Higher School for Teachers (ENSC) Assia Djebar, Algeria*	**"EL MAWAQIF" OF EL EMIR ABDELKADER AND THE RELIGIOUS SPIRIT IN ALGERIAN REVOLUTIONS**
Dr. Edmond MUÇO	*University of Shkodra "Luigj Gurakuqi", Albania*	**THE ETHNOGRAPHIC ELEMENT IN THE PHOTOGRAPHY OF THE ALBANIAN NATIONAL RENAISSANCE**
Khoa Tam Nhu NGUYEN Thanh Luan NGUYEN	*Da Lat University, Vietnam*	**AN ANALYSIS OF ERRORS IN THE USE OF THE SIMPLE PAST TENSE IN EMAILS WRITTEN BY NON-ENGLISH MAJOR SENIORS AT A UNIVERSITY IN DA LAT**
Thanh Luan NGUYEN Chi Nguyen NGUYEN Hau Phuong Ngan NGUYEN Quoc Dung DANG	*University of Foreign Languages and International Studies, Hue University, Vietnam* *Dong Thap University, Vietnam* *Da Lat University, Vietnam*	**APPLYING CONTEXT OF CULTURE AND CONTEXT OF SITUATION IN ANALYZING THE WORK "THU PHỐ CA" BY LI BAI**
Iruoghene Kenneth ANTHONY	*Federal College of Education (Technical) Isu, Nigeria*	**IMPACT OF ARTIFICIAL INTELLIGENCE TOOLS ON INFORMATION RETRIEVAL EFFICIENCY AND USER SATISFACTION IN NIGERIAN COLLEGE LIBRARIES: A CASE STUDY OF THE FEDERAL COLLEGE OF EDUCATION (TECHNICAL) ISU, EBONYI STATE, NIGERIA**
Dr. Yuyut PRAYUTI Dr. Ahmad JAMALUDIN Erna LISTIAWATI	*Indonesia*	**CONSUMER PROTECTION IN INDONESIA: THEORY, DATA, REGULATION, AND EDUCATION**

SESSION	Online Session-1 · Hall-1	MEETING ID	PASSCODE
Session-1 HALL *Hall-1*	28 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Dr. Lecturer Recep BOZKURT**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Adem ŞAFAK	*Başkent University, Türkiye*	**EARLY CLINICAL OUTCOMES OF MICROSCOPE-ASSISTED SNUFF-BOX ARTERIOVENOUS FISTULA CREATION: A SINGLE-CENTER EXPERIENCE**
Asst. Prof. Dr. Ahmet Şenol UYAR Dr. Yılmaz SAFİ Dr. Ali BUCAK	*Gaziantep University, Türkiye*	**MULTIDISCIPLINARY INTENSIVE CARE MANAGEMENT IN A PATIENT WITH GIANT BASILAR ARTERY ANEURYSM AND BUERGER'S DISEASE**
Asst. Prof. Dr. Ahmet Şenol UYAR Dr. Ali BUCAK Dr. Yılmaz SAFİ	*Gaziantep University, Türkiye*	**A CASE OF TOXICITY INDUCED BY LOCAL ANESTHETICS WITH ADRENALINE USED IN RHINOPLASTY OPERATIONS**
Asst. Prof. Dr. Melih AKŞAMOĞLU	*Gaziantep University, Türkiye*	**COMPUTED TOMOGRAPHY UTILIZATION TRENDS IN A TERTIARY UNIVERSITY HOSPITAL BETWEEN 2015 AND 2025: THE IMPACT OF ENVIRONMENTAL EVENTS ON RADIOLOGICAL WORKLOAD**
Asst. Prof. Dr. Sezen Milli AVTAN	*Health Sciences University, Türkiye*	**EVALUATION OF A STRUCTURED FACULTY DEVELOPMENT PROGRAM FOR CLINICAL EDUCATORS DURING THE ACCREDITATION PROCESS USING THE KIRKPATRICK MODEL**
Asst. Prof. Dr. Burak YAĞDIRAN	*Başkent University, Türkiye*	**PULMONARY ARTERY HYDATID DISEASE MIMICKING CHRONIC THROMBOEMBOLIC DISEASE: A REVIEW OF THE LITERATURE ACCOMPANIED BY A REPRESENTATIVE CASE**

SESSION	Online Session-1 · Hall-2	MEETING ID	PASSCODE
Session-1 HALL *Hall-2*	28 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Asst. Prof. Seda OĞUR

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Sibel ÇELİK Asst. Prof. Dr. Arzu İMECE	*Iğdır University, Türkiye*	**MICROPLASTIC CONTAMINATION IN PACKAGED FOODS: SOURCES, SPREAD ROUTES AND EFFECTS ON HUMAN HEALTH**
Kübra İŞGÜZAR Asst. Prof. Dr. Dilek BÜYÜKBEŞE YAYLA Asst. Prof. Dr. Gülten ŞEKEROĞLU	*Gaziantep University, Türkiye*	**PRODUCTION AND CHARACTERIZATION OF SESAME MILK AND SESAME MILK POWDER**
Bilge ZUBİ TAŞLIDERE Prof. Dr. Zeynep B. GÜZEL SEYDİM	*Mehmet Akif Ersoy University, Türkiye* *Süleyman Demirel University, Türkiye*	**ISPARTA ROSE TURKISH DELIGHT: SCIENTIFIC CHARACTERIZATION OF A TRADITIONAL HERITAGE**
Muhammed İsmail KARAGÖZ Asst. Prof. Dr. Enes KAVRUT Prof. Dr. Dureyt VEZİROĞLU	*Iğdır University, Türkiye*	**EDIBLE FILMS AND COATINGS BASED ON AQUAFABA: FROM WASTE TO PACKAGING**
Murat Ayberk BARAN Prof.Dr. Behçet BECERİR	*Bursa Uludağ University, Türkiye*	**OPTIMIZING THE COLORATION AND COMPLEXATION KINETICS OF REACTIVE-DYED WOOL FABRICS: A COMPARATIVE STUDY OF METALLIC AND BIO-MORDANTING METHODOLOGIES**
Keziban ÇAKMAKTAŞI	*Ilsan Tekstil ve San. Tic. A.Ş., Türkiye*	**INVESTIGATION OF WASTE RATES ACCORDING TO DYE, CHEMICAL, AND ENZYME DOSAGES USED IN THE DYEING OF SINGLE JERSEY AND ELASTANE-BLENDED FABRICS**
Ebru YALÇIN Asst. Prof. Dr. Emre ÇALIŞKAN	*Gazi University, Türkiye*	**LABOR TIME ESTIMATION UNDER LIMITED DATA CONDITIONS IN DEFENSE AVIATION MANUFACTURING: AN EVALUATION OF MODEL STABILITY AND GENERALIZATION RELIABILITY**
Ali Haydar BAYDIR Assoc. Prof. Dr. Fulya ZARALI	*Kayseri University, Türkiye*	**ALUMINUM INGOT SUPPLIER SELECTION USING FUZZY AHP-TOPSIS METHODS**

SESSION	Online Session-1 · Hall-3	MEETING ID	PASSCODE
Session-1 HALL *Hall-3*	28 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Lecturer Dr. Neşe YILMAZ**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Asst. Prof. Dr. Abdullah EROL	*Istanbul University, Türkiye*	**BEYOND THE WORKPLACE: RETHINKING PROTECTION AGAINST VIOLENCE AND HARASSMENT IN TURKISH LAW UNDER ILO C190 AND R206**
Z. Gönül BALKIR Dr. Başak BALKIR GÜLEN Dr. Ecem KOCAOĞLAN	*Kıbrıs Aydın Üniversitesi, KKTC* *Kocaeli Üniversitesi, Türkiye*	**PROTECTION OF WOMEN'S RIGHT TO BODILY AUTONOMY AND THE FETUS'S RIGHT TO LIFE**
Z. Gönül BALKIR Dr. Başak BALKIR GÜLEN Dr. Ecem KOCAOĞLAN	*Kıbrıs Aydın Üniversitesi, KKTC* *Kocaeli Üniversitesi, Türkiye*	**THE INVISIBILITY OF POWER AND PANOPTIC SURVEILLANCE IN FOUCAULT**
Dr. İsmail AKBAŞ	*Süleyman Demirel University, Türkiye*	**THE PROCEDURAL ASPECT OF THE ACTION FOR DISSOLUTION OF JOINT-STOCK COMPANIES FOR JUST CAUSE**
Betül ÖZER Asst. Prof. Dr. Batu DURU	*Hasan Kalyoncu University, Türkiye*	**IS THE POLICE THE SUBJECT OF BIOPOLITICS? THE CONSTRUCTION OF MODERN POWER THROUGH THE BODY**
Adem ALPASLAN Asst. Prof. Fulya Harp ÇELİK	*Hasan Kalyoncu University, Türkiye*	**RETROSPECTIVE ANALYSIS OF SHARPS INJURIES AMONG HOSPITAL WORKERS: AN INNOVATIVE SOLUTION PROPOSAL**
Bilal ASLAN Asst. Prof. Fulya Harp ÇELİK	*Hasan Kalyoncu University, Türkiye*	**HEALTHCARE WORKERS' LEVEL OF TRUST IN THE DIGITAL OCCUPATIONAL HEALTH AND SAFETY SYSTEM AND THEIR PROPENSITY TO REPORT NEAR-MISS INCIDENTS AT THE ORAL AND DENTAL HEALTH CENTRE**

SESSION		MEETING ID	PASSCODE
Session-1 HALL *Hall-4*	**Online Session-1 · Hall-4** 28 June 2026 · Ankara Time: **10:00 – 12:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Dr. Zubia SHAH**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Dr. Zubia SHAH	*Khyber Girls Medical College, Pakistan*	**GLYCAEMIC AND ANTIOXIDANT RESPONSES TO SHORT-BOUT MODERATE-INTENSITY PHYSICAL ACTIVITY IN A PREDIABETIC POPULATION: A CLINICAL PERSPECTIVE**
Sergey PUKHLIK Alexander ANDREEV Irina TAGUNOVA Alexander PLAKIDA Sergiy GUSHCHA	*Odessa National Medical University, Ukraine* *Ukrainian Research Institute of Medical Rehabilitation and Balneology, Ukraine*	**SUCCESSFUL TREATMENT OF RECURRENT EAR KELOID WITH INTRASCAR CRYOSURGERY**
Abdul WAHEED	*Government Graduate College (B) Taunsa Sharif, Pakistan*	**ENHANCED ELECTROCHEMICAL PERFORMANCE OF BI-DOPED NI_3SE_2/RGO COMPOSITE SYNTHESIZED VIA HYDROTHERMAL METHOD**
Sudhangshu CHAKRABORTY Mun MAJUMDER	*Asansol Engineering College, India*	**PIEZOELECTRIC ENERGY HARVESTING FROM HUMAN FOOTSTEPS: DESIGN, DEVELOPMENT, AND EXPERIMENTAL EVALUATION OF A FOOTSTEP-BASED POWER GENERATION SYSTEM**
Chetachi MUOKWE	*Alex Ekwueme Federal University, Nigeria*	**RENEWABLE ENERGY ADOPTION AND ENERGY TRANSITION POLICIES IN EMERGING ECONOMIES**
Asst. Prof. K. R. PADMA	*Sri Padmavati Mahila VisvaVidyalayam (Women's) University, India*	**BIOTECHNOLOGICAL POTENTIAL OF A LACCASE-PRODUCING FUNGAL ISOLATE FOR RED WINE CLARIFICATION AND STABILIZATION**
Z. AIT SAID L. HARCHAOUI S. OUAFI	*USTHB, Algeria*	**IN VITRO CALLUS CULTURE OF SOLENOSTEMMA ARGEL: BRIDGING PLANT BIOTECHNOLOGY AND BIOACTIVE COMPOUND PRODUCTION**
Muqadas Zhijia FANG	*Guangdong Ocean University, China*	**AI DRIVEN MODELS FOR PHAGE DISCOVERY AND PREDICTION**

SESSION *Session-1* HALL *Hall-5*	**Online Session-1 · Hall-5** 28 June 2026 · Ankara Time: **10:00 – 12:00**	MEETING ID **847 7043 0612**	PASSCODE **161616**

HEAD OF SESSION: **Tahreer FAROUK**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Dinoop K Renjith RAJ	*Rabindranath Thakur Vishwavidyalaya, India* *Chanakya University, India*	**THE EVOLVING ECONOMIST: FROM ABSTRACT THEORY TO INTERDISCIPLINARY, DATA-DRIVEN PRACTICE**
Andrew Baah MacCLEVER	*University of Pannonia, Hungary*	**RESEARCH TRENDS AND FUTURE PERSPECTIVES IN ECONOMIC-RELATED STATISTICAL PROCESS CONTROL: EVIDENCE FROM A SYSTEMATIC LITERATURE REVIEW**
EL JALLAB HIBA Professor ZERYOUH ASSIA	*University of Sidi Mohamed Ben Abdellah, Morocco*	**FISCAL POLICY: A LITERATURE REVIEW**
Makarova-Korobeynikova Ekaterina Petrovna Tatarenko Nikita Sergeevich	*Russian Customs Academy, Russia*	**ARTIFICIAL INTELLIGENCE IN THE GLOBAL ECONOMY: CHALLENGES FOR SOCIETAL ADAPTATION**
Nuryanti MUSTARI Amina Andi Farras ABIYYU A. Dwi MULYANA	*Universitas Muhammadiyah Makassar, Indonesia*	**E-GOVERNMENT REFORM AND BUREAUCRATIC TRANSFORMATION IN INDONESIA THROUGH QUALITATIVE STUDY OF DIGITAL PUBLIC SERVICE INNOVATION IN ASEAN CONTEXT**
Tahreer FAROUK	*Greater Amman Municipality, Jordan*	**GOOD GOVERNANCE AND ITS ROLE IN IMPROVING THE EFFICIENCY OF MANAGING AND INVESTING MUNICIPAL ASSETS: AN APPLIED STUDY ON GREATER AMMAN MUNICIPALITY**
Ngueya ESSALLAMI Ahmed KHOUYA M'barka EL MOUEDDEN Mohamed DAOUDI Ifakkou EL ISMAILI	*Abdelmalek Essaâdi University, Morocco*	**GOVERNANCE AND STRATEGIC PLANNING OF RENEWABLE-POWERED DESALINATION SYSTEMS: IMPLICATIONS FOR PUBLIC WATER MANAGEMENT**
Dr. Praveen KAKADA Suryansh SAHARIYA Sarthak DATE	*National Institute of Technology Warangal, India*	**AI-DRIVEN HR ANALYTICS AND EMPLOYEE WELL-BEING: EXAMINING PRODUCTIVITY, WORK-LIFE BALANCE, AND JOB SATISFACTION IN THE DIGITAL WORKPLACE**

SESSION	Online Session-2 · Hall-1	MEETING ID	PASSCODE
Session-2 HALL *Hall-1*	28 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: Assoc. Prof. Sevil PAMUK CEBECİ

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Keziban Merve ÇELEBİ Assoc. Prof. Dr. Gizem Deniz BÜYÜKSOY	*Kırşehir Ahi Evran University, Türkiye*	**THE CHILDHOOD HYPERTENSION AS A PUBLIC HEALTH ISSUE: WHAT CAN NURSES DO?**
Muhammed Sefa YİĞİT Senanur SOYVURAL Asst. Prof. Dr. Burcu ÇAKI DÖNER	*Gaziantep Islam Science and Technology University, Türkiye*	**SUBSTANCE ADDICTION AND NURSING APPROACH**
Melike ŞIHLAR Elif TARHAN Asst. Prof. Dr. Burcu ÇAKI DÖNER	*Gaziantep Islam Science and Technology University, Türkiye*	**APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN PREVENTING DRUG ADMINISTRATION ERRORS**
Asst. Prof. Dr. Leila MEHDIZADEHTAPEH Asst. Prof. Dr. Yasemin YILMAZER Assoc. Prof. Dr. Burhan BAŞARAN	*Recep Tayyip Erdoğan University, Türkiye* *Istanbul Sabahattin Zaim University, Türkiye*	**IN SILICO EVALUATION OF THE ANTITUMOURAL INTERACTIONS BETWEEN HEPATOCELLULAR CARCINOMA AND TEA CATECHIN DERIVATIVES**
Elif KILIÇ Asst. Prof. Dr. Hatice Gözde HOSTA YAVUZ	*Akdeniz University, Türkiye*	**EXTRACTION OF PHENOLIC COMPOUNDS WITH DEEP EUTECTIC SOLVENTS**
Seda PALA Asst. Prof. Dr. Hatice Gözde HOSTA YAVUZ	*Akdeniz University, Türkiye*	**USE OF DEEP EUTECTIC SOLVENTS IN PROPOLIS EXTRACTION**
Rabia Nur DİREK Asst. Prof. Dr. Zeynep Büşra ERARSLAN	*University of Health Sciences, Türkiye*	**THE ROLE OF NATURAL ROSA L. SPECIES GROWING IN ERZINCAN AND ITS SURROUNDINGS IN PUBLIC HEALTH**
Fatih Berk UYAR Beyza Nur KORKMAZ Assoc. Prof. Dr. Münevver BARAN	*Erciyes University, Türkiye*	**INVESTIGATION OF THE CYTOTOXIC AND ANTIANGIOGENIC EFFECTS OF QUERCETIN AND CISPLATIN, ALONE OR IN COMBINATION, IN LIVER CELL LINES**

SESSION *Session-2* HALL *Hall-2*	**Online Session-2 · Hall-2** 28 June 2026 · Ankara Time: **12:30 – 14:30**	MEETING ID **847 7043 0612**	PASSCODE **161616**

HEAD OF SESSION: **Assoc. Prof. Mustafa EKEN**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Beste TAŞ	*Adana Alparslan Türkeş Bilim ve Teknoloji Üniversitesi, Türkiye*	**CONSERVATION OF CULTURAL HERITAGE IN ABANDONED VERNACULAR SETTLEMENTS: THE CASE OF ZRIBA OLIA, TUNISIA**
Meryem ALKAN Asst. Prof. Dr. Aydanur YENEL	*Hasan Kalyoncu University, Türkiye*	**PROPOSAL FOR THE RE-FUNCTIONALIZATION OF NIZIP SAYINLAR SABUNHANESİ AND SABUN HAN**
Faruk FİDAN Assoc. Prof. Dr. Murat BOSTANCIOĞLU	*Sivas Cumhuriyet University, Türkiye*	**AN INVESTIGATION INTO THE PHYSICAL AND SHORT-TERM AGEING PROPERTIES OF BITUMINOUS BINDERS MODIFIED WITH CHLORINATED POLYETHYLENE (CPE)**
Mehmet Arif KARAMANOĞULLARI Prof. Dr. Önder YAĞMUR	*Ataturk University, Türkiye*	**MICRO HORIZONS IN ROMANTIC LANDSCAPE PAINTING**
Sina ARSLAN	*İstanbul Nişantaşı Üniversitesi, Türkiye*	**THE DEVELOPMENT OF CHARACTERS IN JAPANESE ANIME IN THE CONTEXT OF EXISTENTIALIST PHILOSOPHY: AN ANALYSIS OF DEATH NOTE**

SESSION	Online Session-2 · Hall-3	MEETING ID	PASSCODE
Session-2 HALL *Hall-3*	28 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: Dr. Mehmet Emin HACIYUSUFOĞLU

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Dr. Mesut ERYİĞİT Prof. Dr. Ümit DEMİR	*Balıkesir University, Türkiye* *Gebze Technical University, Türkiye*	**HIGH-PERFORMANCE CDS/CDSE QUANTUM DOT CO-SENSITIZED ERGO/ZNO@TIO₂ HETEROSTRUCTURED PHOTOANODES FOR PHOTOELECTROCHEMICAL APPLICATIONS**
Ramin GARAYEV Shafa KAZIMZADEH Ali ADIGOZALOV Gunay MUSTAFAYEVA	*Institute of Chemistry, Azerbaijan*	**BUTYLXANTHOGENATEMETHYLENETHIOMETHELENECARBOXYDIBUTYLBORATE AS EXTREME PRESSURE ADDITIVE TO TRANSMISSION OILS**
Prof. Dr. Şükrü KARATAŞ	*Kahramanmaraş Sütçü İmam University, Türkiye*	**THE ELECTRICAL POWER STATES ANALYSIS OF THE AL/P-SI SEMICONDUCTOR STRUCTURES WITH PTCDA INTERLAYER AS A FUNCTION OF LIGHT INTENSITY**
Prof. Dr. Şükrü KARATAŞ	*Kahramanmaraş Sütçü İmam University, Türkiye*	**VARIATION OF PHOTOSENSITIVITY VALUES OF AL/PTCDA/P-SI STRUCTURE OVER A WIDE RANGE OF LIGHT INTENSITY (10-100 MW CM-2)**
Asst. Prof. Dr. Aykut EMNİYET Meryem BİNDEBİR	*Osmaniye Korkut Ata University, Türkiye*	**MODELING THE RELATIONSHIP BETWEEN ACADEMIC SATISFACTION AND INSTITUTIONAL BELONGING OF UNIVERSITY STUDENTS USING FUZZY LOGIC**
Asst. Prof. Dr. Aykut EMNİYET	*Osmaniye Korkut Ata University, Türkiye*	**UPSIDE-DOWN LOGIC IN PLITHOGENIC SPACES: CONTEXTUAL TRUTH FLIPS IN EVERYDAY DECISION MAKING PROBLEMS**
Ceren GÖÇ Belma NURAL YAMAN Mehmet Burçin MUTLU Prof. Dr. Ahmet ÇABUK	*Eskişehir Osmangazi University, Türkiye* *Eskişehir Technical University, Türkiye*	**OPTIMIZATION AND CHARACTERIZATION OF HALOPHILIC PHB PRODUCTION**

SESSION		MEETING ID	PASSCODE
Session-2 HALL *Hall-4*	**Online Session-2 · Hall-4** 28 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: Fatjona ISUFAJ

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Chahinez BOUDJEMAI Mourad DJEZIRI Hassiba ZEMMOURI	*Advanced Technologies Laboratory (ENSTA), Algeria* *Center for Scientific and Technical Research in Physico-Chemical Analysis (CRAPC), Algeria*	**MARINE BIOINDICATORS AS TOOLS FOR MONITORING THE ENVIRONMENTAL IMPACT OF DESALINATION PLANT DISCHARGES ON COASTAL ECOSYSTEMS**
Fatjona ISUFAJ Prof. Assoc. Loreta VALLJA Prof. Dr. Skender DEMAKU MSc. Arbnorë ALIU MSc. Donika SYLEJMANI	*University of Prishtina, Kosovo* *University of Tirana, Albania*	**IMPACTS OF CLIMATE CHANGE ON NUTRIENT AND TRACE ELEMENT DYNAMICS IN FRESHWATER ECOSYSTEMS: A CASE STUDY OF THE DRENICA RIVER DURING THE SPRING–SUMMER SEASON OF 2026**
Ode Onyeche ANN Koledola Oluwaseun KOLEDO Makyur Anita ONYECHE	*Bioresource Development Centre Abuja, Nigeria* *Federal University Wukari, Nigeria*	**BULK DENSITY OF AUTOMECHANIC WORK SOILS IN SELECTED MUNICIPAL AREA COUNCILS IN ABUJA**
H. MABCHOUR H. AKARNI A. AKOUIBAA L. EL AARABI S. MORDANE	*Hassan II University, Morocco*	**REFLECTION AND TRANSMISSION OF WAVES INTERACTING WITH A UNIFORM CURRENT OVER DOUBLE RECTANGULAR SUBMERGED STRUCTURES**
Helal UDDIN Sohag AHASAN Md. Antor Jaman JIHAD Fardin KHAN Rasel AHMED Md. Abdur Rahim HERA Alamgir HOSSAIN	*Hajee Mohammad Danesh Science and Technology University* *Rajshahi University of Engineering & Technology*	**WHY BEARINGS NEED LUBRICATION: A MECHANICAL ENGINEERING CASE STUDY ON FRICTION, WEAR, AND RELIABILITY**
Mouad BENAICHA Es-Sabry YOUSSEF Nabil AMMARI Elmiloud CHAABELASRI	*LPTPME Laboratory, Faculty of Sciences, Mohammed 1st University, 60000, Oujda*	**INNOVATIVE COOLING-DUCT DESIGNS FOR IMPROVED THERMAL MANAGEMENT AND PERFORMANCE OF PHOTOVOLTAIC/THERMAL COLLECTORS**
DJEZIRI Mourad ALILECHE Khoukha HEZIL Djamila MAAMRI Sarra LAOUFI Razika	*Scientific and Technical Research Center for Physical and Chemical Analysis (CRAPC), Algeria*	**PHYSICOCHEMICAL CHARACTERIZATION AND QUALITY ASSESSMENT OF EMPTY CAPSULES OF THE ANTI-ANEMIC PHARMACEUTICAL PRODUCT ZANITRA PLUS**
Babita GUPTA	*Institute of Technology and Management Gida Gorakhpur, India*	**REVOLUTIONIZING CANCER DIAGNOSIS: THE POTENTIAL OF 3D PRINTED NANOSENSORS**

SESSION *Session-2* HALL *Hall-5*	**Online Session-2 · Hall-5** 28 June 2026 · Ankara Time: **12:30 – 14:30**	MEETING ID **847 7043 0612**	PASSCODE **161616**

HEAD OF SESSION: **PhD Roxana Mihaela MOISOIU**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Rusli Muh. Fadhyl SYAH	*Institut 'Aisyiyah Sulawesi Selatan, Indonesia*	**IMPLEMENTATION OF ELECTRONIC HUMAN RESOURCE MANAGEMENT (E-HRM) IN IMPROVING EMPLOYEE PERFORMANCE AT THE DEPARTMENT OF CULTURE AND TOURISM OF SOUTH SULAWESI PROVINCE**
PhD Roxana Mihaela MOISOIU	*U.S.P.E.E. "C. Stere" Chişinău, Moldova*	**ARTIFICIAL INTELLIGENCE – BETWEEN INFLUENCE AND NECESSITY IN THE STUDY OF CONTEMPORARY FORENSICS**
Mina MOHAMMADI	*Ahlul Bayt International University, Iran*	**DIGITAL RESISTANCE: THE ROLE OF SOCIAL MEDIA IN AWARENESS-RAISING AND PROTEST MOBILIZATION AMONG AFGHAN WOMEN UNDER TALIBAN RULE (2021–PRESENT)**
Eduard-Alexandru OȚEL	*Alexandru Ioan Cuza University of Iași, Romania*	**THE FISCAL LEAKAGE OF EDUCATION: ESTIMATING THE COST OF PUBLIC EDUCATION LOST TO BRAIN DRAIN IN ROMANIA**
Juliana AJDINI	*University of Tirana, Albania*	**"WE JUST KEEP QUIET... BUT THINGS ARE CHANGING": MICRO-ACTS OF CLASSROOM JUSTICE IN ALBANIAN HIGHER EDUCATION**
Iges BANDA Jora BANDA	*Western Balkans University, Albania* *European University of Tirana, Albania*	**DATA-DRIVEN APPROACHES TO PREDICTING SOCIOECONOMIC TRENDS**
Assoc. Prof. Dr. Mehmet Emin KALGI	*Ardahan University, Türkiye*	**A SOCIO-PSYCHOLOGICAL ANALYSIS OF HIZB UT-TAHRIR WITHIN THE FRAMEWORK OF RADICALIZATION AND JIHAD DISCOURSE**

SESSION		MEETING ID	PASSCODE
Session-2 HALL *Hall-7*	**Online Session-2 · Hall-6** 28 June 2026 · Ankara Time: **12:30 – 14:30**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Afaq AHMAD**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Afaq AHMAD Alanoud Dawood AL SADAIRI Najma Hamed AL MANDHARI Mohammed Hafidh AL MASKARI Husam Salam AL BUSAIDI Raneem Ahmed AL-NAABI Arwa Arif SHAIKHNAG	*Modern College of Business and Science, Oman*	**LEARNING DIGITAL IMAGE PROCESSING IN THE NEW ERA: ARTIFICIAL INTELLIGENCE, DEEP LEARNING, AND FUTURE DIRECTIONS**
Faruku Muhammad ALIERO Muhammad GARBA	*Abdullahi Fodio University of Science and Technology, Nigeria*	**ARTIFICIAL INTELLIGENCE FOR CYBER THREAT DETECTION AND RESPONSE USING PHP MYSQL**
Ahmed Jihad Aliwi Al SALLOUM	*University of the People, USA*	**CYBERSECURITY RISKS OF AI-GENERATED DIGITAL IDENTITIES: CHALLENGES, THREAT VECTORS, AND TRUST-AWARE VERIFICATION FRAMEWORKS**
Asst. Prof. Dhivya C Kaviya G Abidh M Karthika P	*SRS Institute of Agriculture and Technology, India*	**ASSESSING THE RELATIONSHIP BETWEEN SOCIO-ECONOMIC ATTRIBUTES AND ENTREPRENEURIAL BEHAVIOUR OF GUAVA FARMERS**
Arulselvan K Suresh Padmanabhan T	*A. V. C. College of Engineering, India* *E.G.S. Pillay Engineering College, India*	**DEEP LEARNING-BASED WATER LEVEL PREDICTION IN A DUAL CONICAL TANK SYSTEM FOR INTELLIGENT PROCESS CONTROL**
Jora BANDA Iges BANDA	*European University of Tirana, Albania* *Western Balkans University, Albania*	**BIG DATA ANALYTICS FOR SUSTAINABLE DEVELOPMENT: OPPORTUNITIES AND CHALLENGES**
Amina Muhammad AHMAD	*Umaru Musa Yar'adua University, Nigeria*	**METALS AS CATALYSTS FOR BIOJET CONVERSION**
Atta ul HAQ Marhaba ZAFAR	*Government College University Faisalabad, Pakistan*	**ENGINEERING OF VISIBLE LIGHT ACTIVATED BISMUTH OXIDE/CHITOSAN NANOCOMPOSITE FOR THE PHOTOCATALYTIC DEGRADATION OF AMOXICILLIN**
Hasan ABBAS Prof. Dr. Nasir RASOOL Ayesha TARIQ	*Government College University Faisalabad, Pakistan*	**FACILE SYNTHESIS OF NOVEL THIOPHEN-2-YLMETHYL 5-PHENYLFURAN-2-CARBOXYLATES VIA SUZUKI–MIYAURA COUPLING: A PROMISING STRATEGY FOR ANTI-SEIZURE DRUG DEVELOPMENT IN BRAIN DISORDERS SUPPORTED BY MOLECULAR DOCKING**

SESSION	Online Session-3 · Hall-1	MEETING ID	PASSCODE
Session-3 HALL *Hall-1*	28 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Lecturer Sinan İRTEGÜN

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Sena Nur ÇETİN Assoc. Prof. Dr. Hacer ALAN DİKMEN	*Selçuk Üniversitesi, Türkiye*	**ADVANCED CARE MODELS IN BIRTH FOR VULNERABLE GROUPS**
Sena Nur ÇETİN Assoc. Prof. Dr. Hacer ALAN DİKMEN	*Selçuk Üniversitesi, Türkiye*	**MIDWIFERY INTERVENTIONS IN LIGHT OF FETAL PROGRAMMING THEORY**
Arzu AK Prof. Dr. Sema YILMAZ	*Selçuk University, Türkiye*	**NON-PHARMACOLOGICAL METHODS USED FOR LABOR PAIN AND THEIR MECHANISMS OF ACTION**
Rabia Işıl UZUN Prof. Dr. Sema YILMAZ	*Selçuk University, Türkiye*	**EVIDENCE-BASED PRACTICES IN THE MANAGEMENT OF LACTATION PROBLEMS**
Asst. Prof. Dr. Gökçe Banu ACAR GÜL Cansu ERSAN TAYRANOĞLU	*Çankırı Karatekin University, Türkiye*	**HEALTHCARE MODELS FOR MIGRANT HEALTH AND TRANSCULTURAL NURSING APPROACHES: A REVIEW FROM THE PERSPECTIVE OF WOMEN'S HEALTH**
Asst. Prof. Dr. Gökçe Banu ACAR GÜL Sedanur YEŞİLYURT	*Çankırı Karatekin University, Türkiye*	**COMPLEMENTARY AND ALTERNATIVE TREATMENT APPROACHES USED IN THE FIELD OF WOMEN'S HEALTH**

SESSION		MEETING ID	PASSCODE
Session-3 HALL *Hall-2*	**Online Session-3 · Hall-2** 28 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: **Ayşegül GÜDÜL**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Asst. Prof. Ayşe CABİ BİLGE	*Selçuk University, Türkiye*	**UPCYCLING APPLICATIONS IN TOURISM: A CONCEPTUAL LITERATURE REVIEW FROM THE PERSPECTIVE OF CREATING SUSTAINABLE VALUE**
Assoc. Prof. Dr. Tuğçe ÖZOĞUL BALYALI Asuman LEVENT	*Van Yüzüncü Yıl Üniversitesi, Türkiye*	**SOFT SOCIALIZATION EXPERIENCES OF SOLO TRAVELERS IN HOTEL MANAGEMENTS**
Prof. Dr. İbrahim GİRİTLİOĞLU Muhammet Serdar ÖZTÜRK	*Gaziantep University, Türkiye*	**A STUDY ON THE ENVIRONMENTALLY FRIENDLY BEHAVIORS OF EMPLOYEES WORKING IN FIVE-STAR HOTEL ESTABLISHMENTS IN GAZIANTEP**
Nejla AKYILMAZ Prof. Dr. İbrahim GİRİTLİOĞLU	*Gaziantep University, Türkiye*	**UNIVERSITY STUDENTS' LEVEL OF CAFETERIA SATISFACTION IN MASS CATERING: THE CASE OF GAZIANTEP UNIVERSITY**
Prof. Dr. İbrahim GİRİTLİOĞLU Senanur ARSLAN	*Gaziantep University, Türkiye*	**SOCIAL MEDIA MARKETING IN FOOD AND BEVERAGE BUSINESSES: EXAMINING INSTAGRAM CONTENT ANALYSIS AND ENGAGEMENT LEVELS**
Salih KIZILCIK Prof. Dr. İbrahim GİRİTLİOĞLU	*Gaziantep University, Türkiye*	**A LITERATURE REVIEW ON THE RELATIONSHIP BETWEEN MANAGEMENT APPROACH AND PERFORMANCE IN TOURISM ENTERPRISES**
Nurgül DEMİR Asst. Prof. Dr. Seda HATİPOĞLU	*Gazi University, Türkiye*	**FUNCTIONAL TRANSFORMATION IN THE EASTERN EXPRESS: A STUDY ON THE TRANSITION PROCESS FROM TRANSPORTATION SERVICE TO TOURISTIC EXPERIENCE**
Merve USLU Asst. Prof. Dr. Emine ŞİMŞEK EVREN	*Gümüşhane University, Türkiye*	**AN EVALUATION OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE TOURIST GUIDING PROFESSION AND EDUCATION FROM THE PERSPECTIVE OF ACADEMICS IN THE TOURISM GUIDING DEPARTMENT**

SESSION		MEETING ID	PASSCODE
Session-3 HALL *Hall-3*	**Online Session-3 · Hall-3** 28 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Asst. Prof. Erhan AKALP

AUTHOR(S)	ORGANISATION	TOPIC TITLE
Assoc. Prof. Dr. İrem ERGİN Dr. Sümeyye SAİNKAPLAN Assoc. Prof. Dr. Oytun Okan ŞENEL	*Ankara University, Türkiye*	**DIAGNOSIS AND MANAGEMENT OF RETROBULBAR ABSCESSES IN RABBITS**
Assoc. Prof. Dr. Oytun Okan ŞENEL Veterinarian Sena EFE Assoc. Prof. Dr. İrem ERGİN Veterinarian Nazlı Sezin ÖZER	*Ankara University, Türkiye*	**QUALITATIVE AND QUANTITATIVE EVALUATION OF TEAR FILM IN BRACHYCEPHALIC CAT BREEDS**
Ebru KÜPCÜ Prof. Dr. Emrullah EKEN	*Selçuk University, Türkiye*	**COMPARATIVE ANALYSIS OF PELVIC MORPHOLOGY AND BREED- AND SEX-RELATED PELVIC MEASUREMENTS IN DOMESTIC CATS**
Assoc. Prof. Dr. Ali KAYAHAN Dr. Betül KAYAHAN	*Yozgat Bozok University, Türkiye* *Isparta University of Applied Sciences, Türkiye*	**PHYSIOLOGICAL EFFECTS OF A PYRETHROID INSECTICIDE ON ENZYME ACTIVITY IN THE WHEAT STINK BUG AELIA ROSTRATA BOHEMAN (HEMIPTERA: PENTATOMIDAE)**
Assoc. Prof. Dr. Emrullah CULPAN	*Tekirdağ Namık Kemal University, Türkiye*	**DROUGHT-TOLERANT OILSEED CROPS**
Tülay CANATAN YILMAZ Abdullah Taner ÖNALDI Dr. Mesut KIRBAŞ Dr. Neffel Kürşat AKBULUT Dr. İbrahim HALICI Harun GÜLCAN Fatih PALA Prof. Dr. Alper YILMAZ Prof. Dr. Sıddık KESKİN Prof. Dr. Sibel SOYCAN ÖNENÇ	*Bahri Dagdas International Agricultural Research Institute, Türkiye* *Necmettin Erbakan University, Türkiye* *Istanbul University-Cerrahpaşa, Türkiye* *Van Yüzüncü Yıl University, Türkiye* *Namık Kemal University, Türkiye*	**SLAUGHTER AND CARCASS CHARACTERISTICS OF DAGLIÇ AND AKKARAMAN BREED MALE LAMBS DUE TO GRAZING ON ARTIFICIAL PASTURE AND THE ADDITIONAL SUPPLEMENTATION WITH CONCENTRATED FEED**

SESSION		MEETING ID	PASSCODE
Session-3 HALL *Hall-4*	**Online Session-3 · Hall-4** 28 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

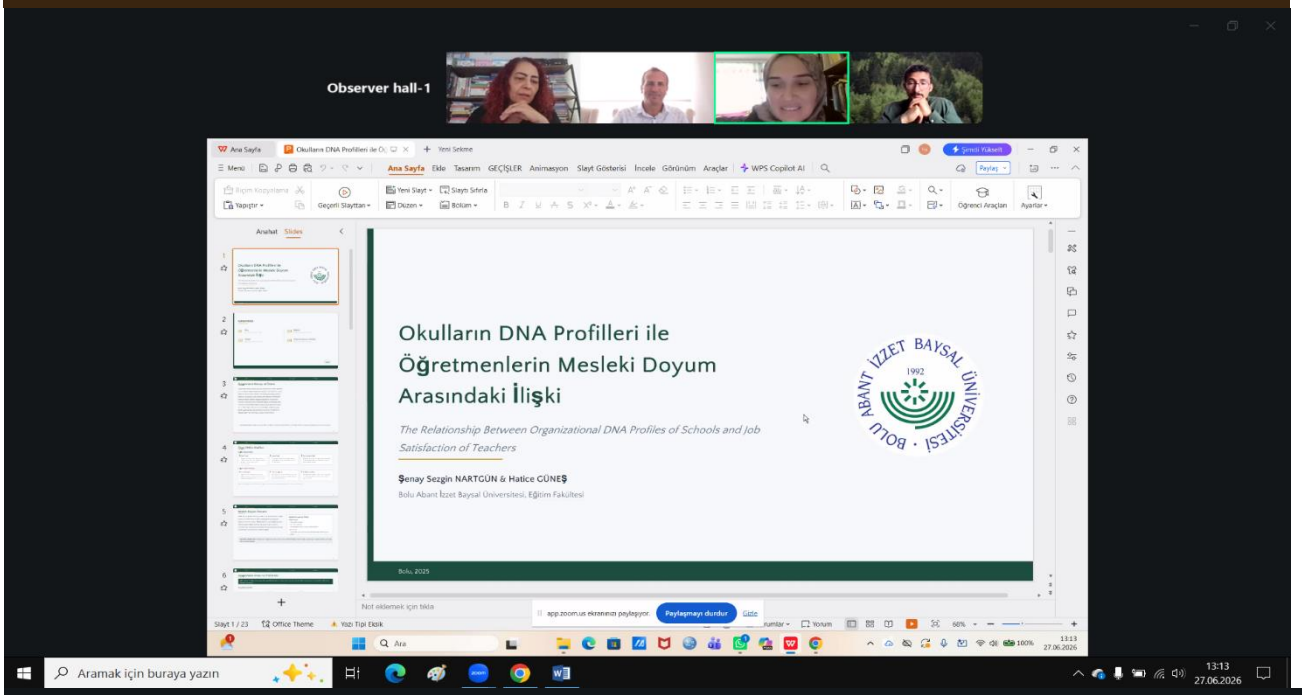
HEAD OF SESSION: **Bogdan-Catalin SERBAN**		
AUTHOR(S)	**ORGANISATION**	**TOPIC TITLE**
Driss IDRISSI Khadija EL-MOUSTAQIM Jamal MABROUKI	*Mohammed V University in Rabat, Morocco* *Ibn Tofaïl University, Morocco*	**FROM WASTE TO IMPACT: MULTIDISCIPLINARY MODELING AND LIFE-CYCLE ASSESSMENT OF LANDFILL SOLID WASTE**
Mohamed EL MORSY Prof. Dr. Laila AFIA	*Ibnou Zohr University, Morocco*	**STRATEGIES FOR EMISSION REDUCTION IN INDUSTRIAL STEAM GENERATION SYSTEMS**
Bogdan-Catalin SERBAN Matei-Gabriel URSACHESCU Vlad DIACONESCU Caterina ZETU Maria Ruxandra SALAGEAN Diana DUMITRAȘCU Octavian BUIU Marius BUMBAC	*National Institute for Research and Development in Microtechnologies (IMT Bucharest), Romania*	**SHORT-TERM STABILITY OF GRAPE RESIDUES UNDER REFRIGERATED AND ROOM TEMPERATURE STORAGE**
Bogdan-Catalin SERBAN Matei-Gabriel URSACHESCU Vlad DIACONESCU Caterina ZETU Maria Ruxandra SALAGEAN Diana DUMITRAȘCU Octavian BUIU Marius BUMBAC	*National Institute for Research and Development in Microtechnologies (IMT Bucharest), Romania*	**SENSOR-BASED ASSESSMENT OF BANANA STORAGE ATMOSPHERES UNDER VENTILATED AND NON-VENTILATED CONDITIONS**
Lukman A. Abdullahi H. A. Zailani S. A. Bashir M. B.	*Ahmadu Bello University, Nigeria* *National Agricultural Extension and Research Liaison Services, Ahmadu Bello University, Nigeria*	**VEGETATION COMPOSITION AND CONSTRAINTS TO GRAZING LAND UTILIZATION AMONG SMALLHOLDER LIVESTOCK FARMERS IN TARABA STATE, NIGERIA**
BOUAMAR Sarah NAAS Hiba	*Ahmed Zabana University, Algeria*	**FAST FOOD CONSUMPTION HABITS AND THEIR POTENTIAL IMPACT ON HEALTH AMONG ALGERIAN CONSUMERS: A DESCRIPTIVE SURVEY**
Sabina LACHOWICZ-WIŚNIEWSKA Dr. Agata KOTOWSKA Anna MILLER	*University of Kalisz, Poland* *University of Rzeszow, Poland*	**NUTRITION KNOWLEDGE, DIET QUALITY AND LIFESTYLE AS DETERMINANTS OF HEALTH PROFILES AMONG OLDER ADULTS IN POLISH UNIVERSITIES OF THE THIRD AGE**
Mr. Anil Kumar BAGHEL Dr. Rabiya HUSAIN Dr. Dhananjoy SHAW	*Indira Gandhi Institute of Physical Education and Sports Sciences, University of Delhi, India*	**GAIT BIOMECHANICS OF SCHOOL-GOING SPORTS GIRLS: CHANGES IN RIGHT FOOT MAXIMUM FORCE II ACROSS 42 EXPERIMENTAL CONDITIONS**

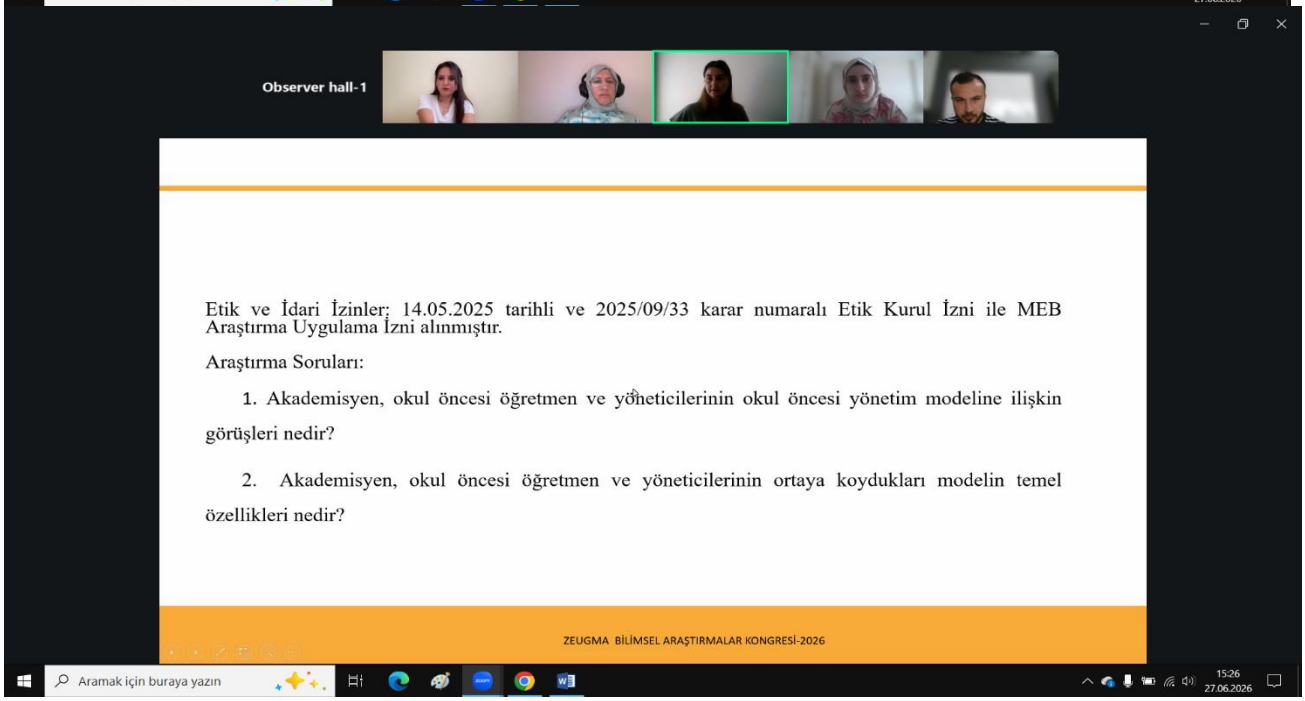
SESSION		MEETING ID	PASSCODE
Session-3 HALL *Hall-5*	**Online Session-3 · Hall-5** 28 June 2026 · Ankara Time: **15:00 – 17:00**	**847 7043 0612**	**161616**

HEAD OF SESSION: Amena Khatun MANICA

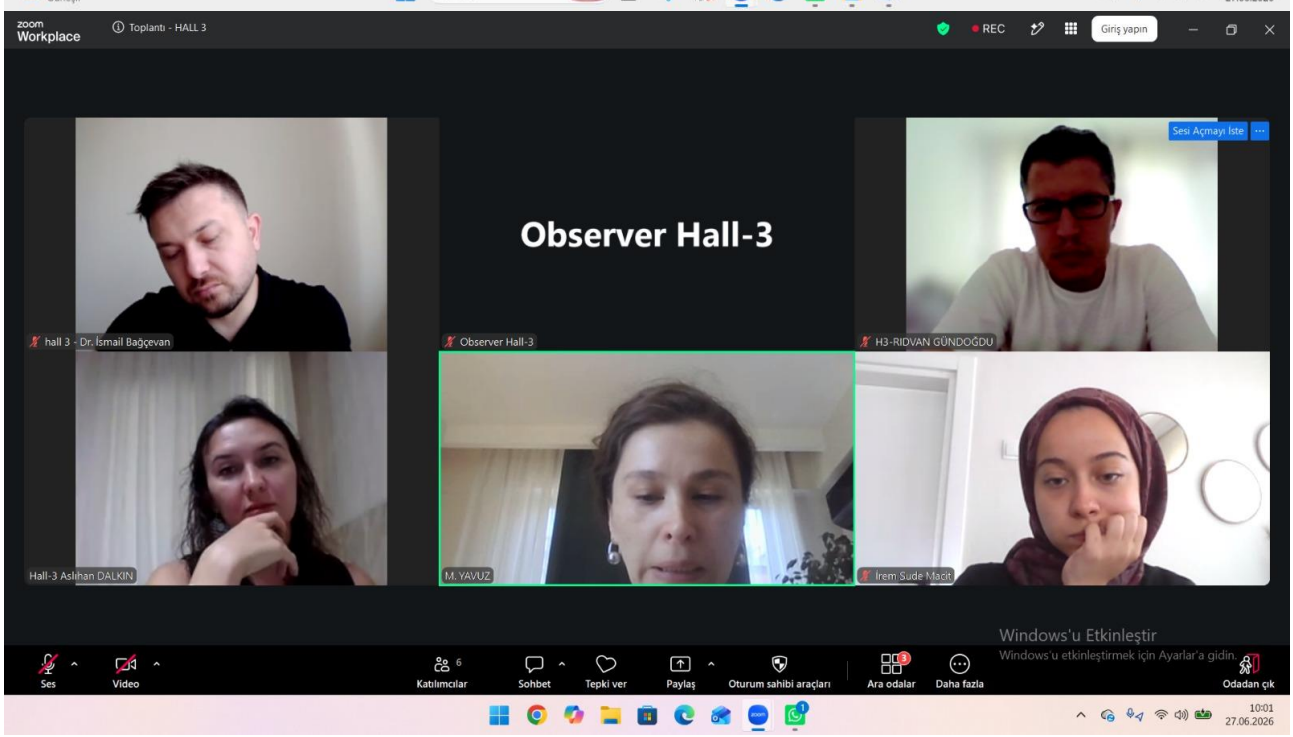
AUTHOR(S)	ORGANISATION	TOPIC TITLE
K S M Ikramul BARI Md. Mosabbir HOSSAIN Md. Abdulla Al JUBAYED Shariar Jannat SEEAM	*Rajshahi Institute of Bioscience, Bangladesh*	**OCCURRENCE AND ISOLATION OF MYCOTOXIGENIC FUNGI IN STORED DRIED FISH**
Abdelaadim KHRISS Aissa KERKOUR ELMIAD Mohammed BADAOUI Filip ŠULIGOJ	*Mohammed Premier University, Morocco* *University of Zagreb, Croatia*	**ANATOMICAL LANDMARK DETECTION IN FULL-LEG RADIOGRAPHS USING SPATIAL CONFIGURATION NETWORKS**
Allel MOKADDEM Mohammed BELKHEIR Mehdi ROUISSAT Djamila ZIANI	*Centre Universitaire Nour Bachir El-Bayadh, Algeria*	**A BIODEGRADABLE EPOXY/HYDROXYAPATITE/SILK FIBROIN BIOCOMPOSITE FOR NON-INVASIVE BIOMEDICAL TERAHERTZ ANTENNAS**
Dr. Shama ISLAM Dr. Zubair ASLAM Dr. Mohd SHOEB Saad ANWAR Dr. Syed Shahabuddin ASHRAF Dr. Kaveri UMESH	*Jamia Hamdard University, India*	**PREPARATION AND CHARACTERIZATION OF POLY(O-TOLUIDINE)/V2O5 COMPOSITES: ELECTRICAL CONDUCTIVITY AND DIELECTRIC BEHAVIOUR**
Amena Khatun MANICA	*University of New Haven, USA*	**AI-GUIDED DRUG REPURPOSING FOR OVERCOMING KINASE INHIBITOR RESISTANCE IN CANCER**
Bernadette Hegnonamede BOYIAKO Sarah NWAMBA Francisca OBASI-ONUOHA Favour CHUKWUEMEKA Prince AGIDI Nancy OCHELEBE Rita ENWEOGU MSc. Joseph Eze ALI Prof. Nadia FANOU-FOGNY Prof. Catherine NNAMANI Prof. Folusho DAVID-ABRAHAM	*Ebonyi State University, Nigeria* *University of Abomey-Calavi, Benin*	**MICROBIAL SAFETY, PROXIMATE COMPOSITION, AND IRON RETENTION IN AMARANTHUS SPECIES: EFFECTS OF SALT WASHING AND HOUSEHOLD COOKING METHODS IN WEST AFRICA**
Dr. Valery V. BELAKHOV	*Technion – Israel Institute of Technology, Israel*	**ACHIEVEMENTS OF THE USE OF NON-MEDICAL ANTIFUNGAL ANTIBIOTICS TO PROTECT AGRICULTURAL PLANTS FROM DISEASES CAUSED BY FUNGAL PHYTOPATHOGENS**
Ibrahim Sani DIKKO	*Umaru Musa Yar'adua University, Nigeria*	**OMICS TECHNOLOGIES IN NATURAL PRODUCT DRUG DISCOVERY: APPLICATIONS OF METABOLOMICS, PROTEOMICS, AND GENOMICS IN IDENTIFYING ANTI-INFLAMMATORY AND ANTIMICROBIAL AGENTS**

CONFERENCE GALERY

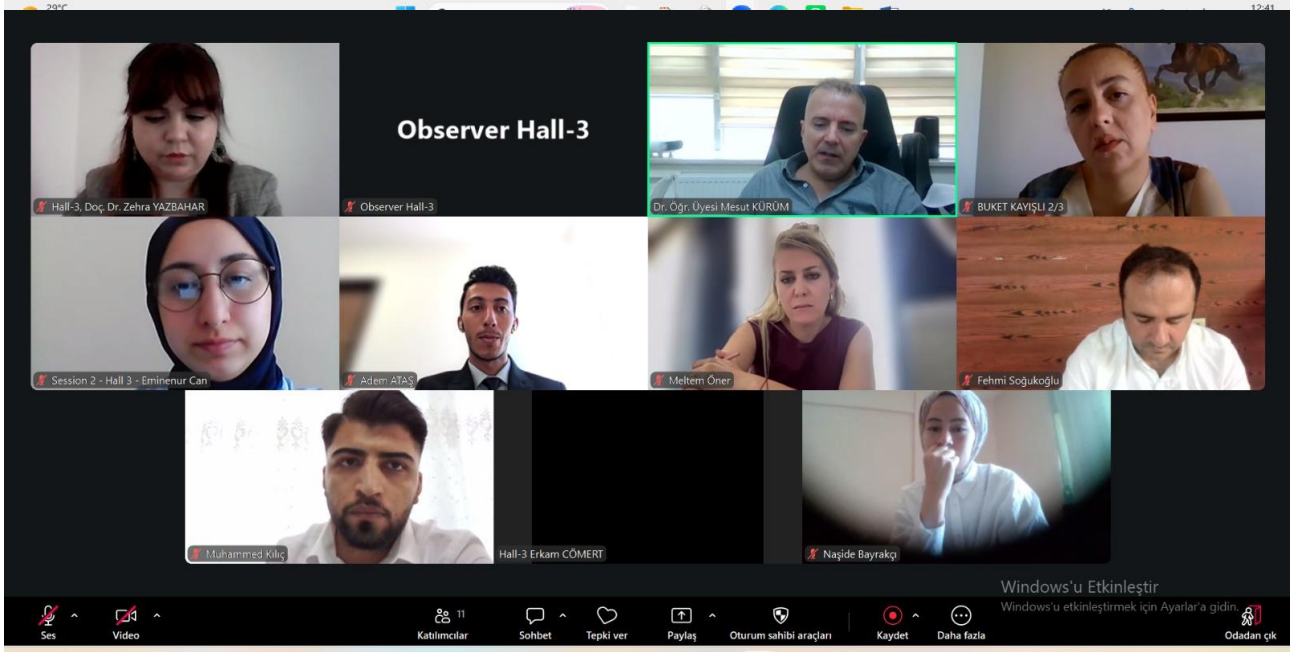


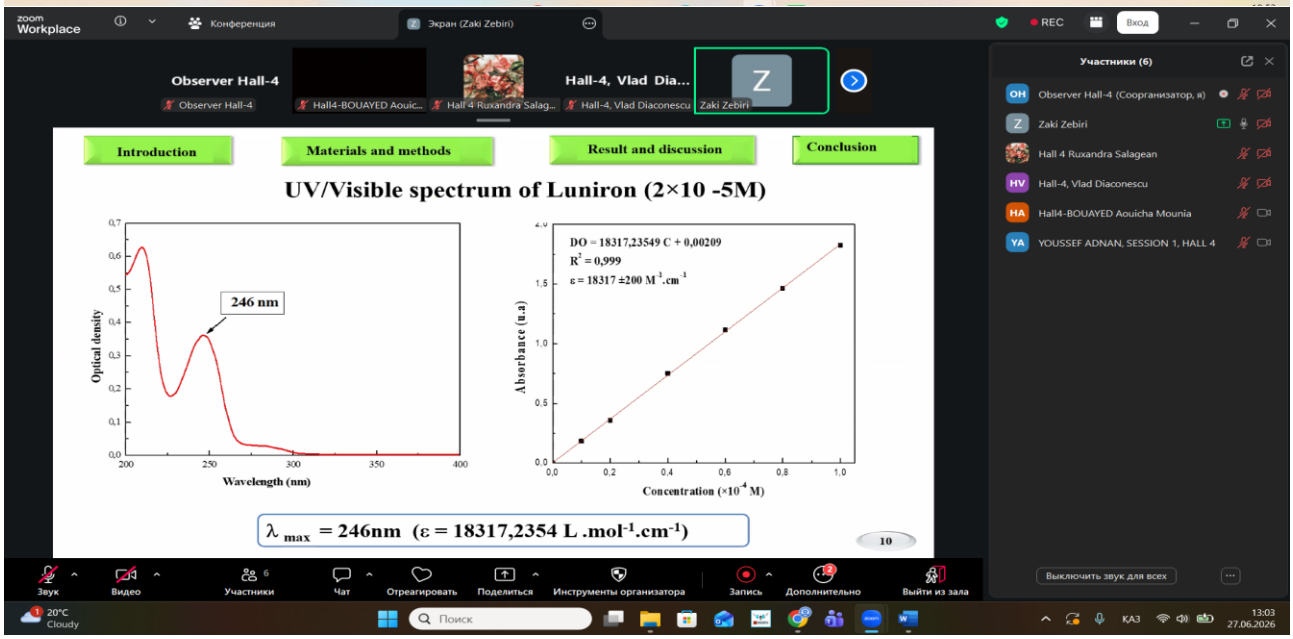


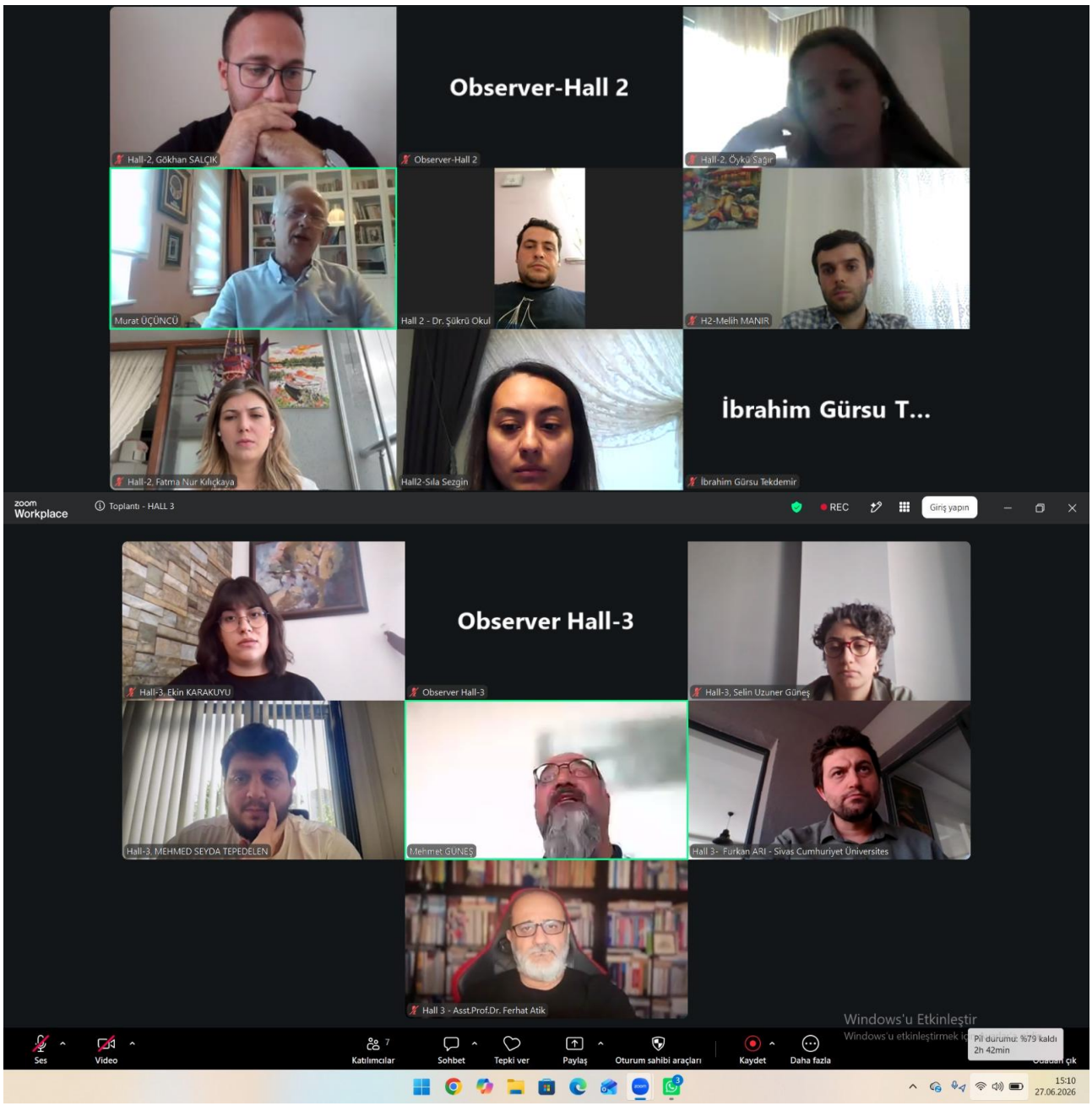

zoom Workplace
Toplantı - HALL 2
REC
Giriş yapın
Observer-Hall 2
Hall-2 Alperen baytar
Observer-Hall 2
Sesi Açmayı İste
Hall 2-ALİRIZA HAN CİVAN
hall-2 tuana yıldırım
Hall 2Öykü Bulduk
Berkay Calik
Assoc Prof. Dr. GÖNÜL GÖKÇAY-HALL 2
Hall-2 , Berkay...
Hall-2 , Berkay Çalık
3 atanmamış katılımcı
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Oturum sahibi araçları
Ara odalar
Daha fazla
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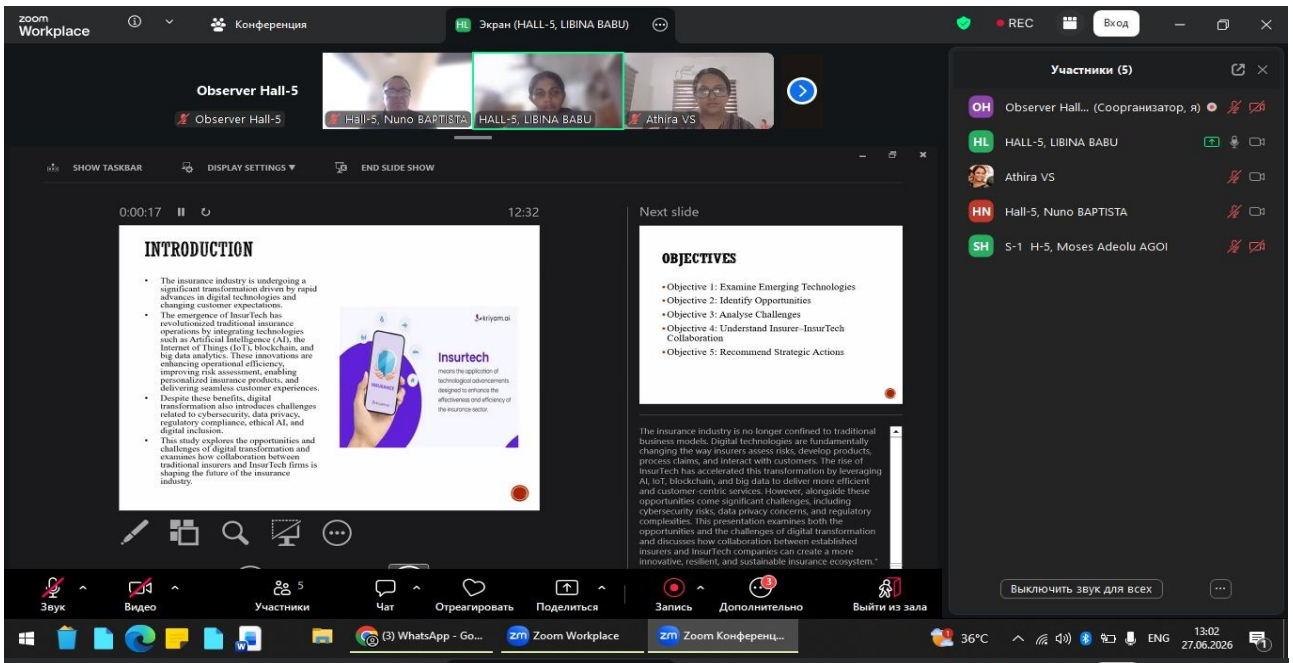

zoom Workplace
Toplantı - HALL 3
REC
Giriş yapın
Observer Hall-3
hall 3 - Dr. İsmail Bağçevan
Observer Hall-3
Sesi Açmayı İste
H3-RIDVAN GÜNDOĞDU
Hall-3 Aslıhan DALKIN
M. YAVUZ
İrem Süde Macit
Windows'u Etkinleştir
Windows'u etkinleştirmek için Ayarlar'a gidin.
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Oturum sahibi araçları
Ara odalar
Daha fazla
Odadan çık
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27.06.2026

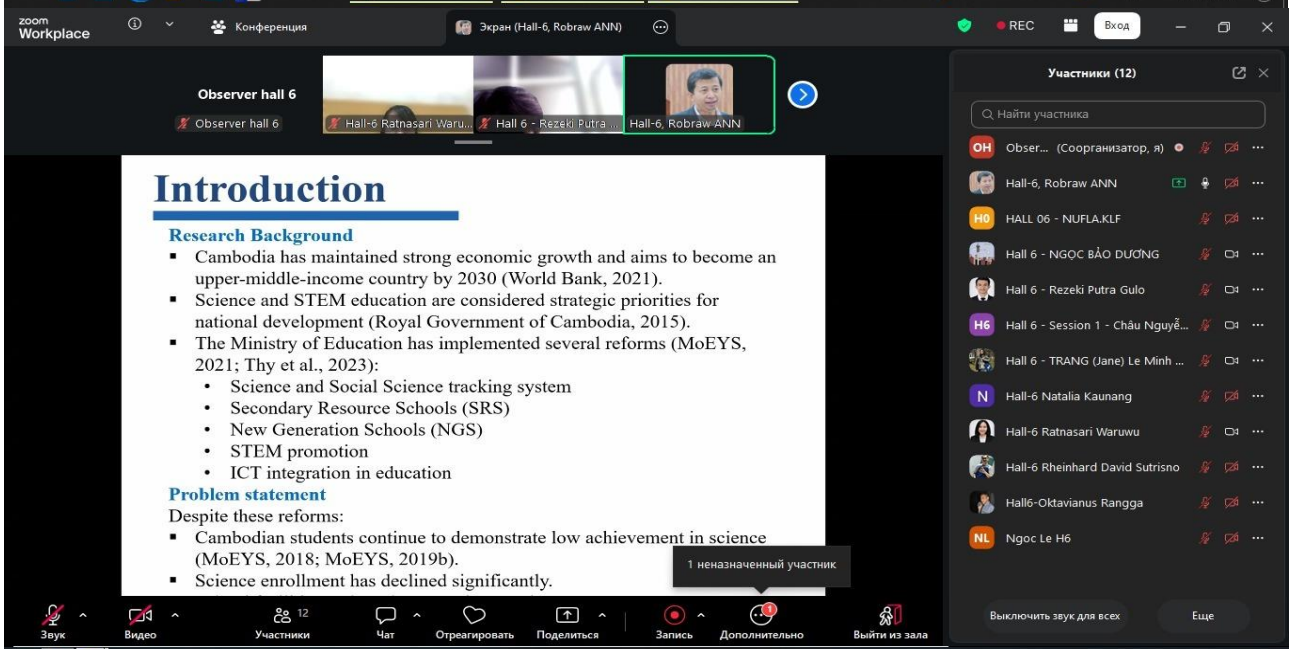

Observer-Hall 2
Ali Sercan KARAKAŞ-S-2-H-2
Observer-Hall 2
Hall-2, Merve Taftalı Köseoğlu
Hall-2 Kaan Atakan KAHVECİ
Berat Yıldırım Hall-2
Ahmed Receb Demirel
Hilmi Tekdir
Öznur Gültekin- hall2
Ö
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Oturum sahibi araçları
Kaydet
Daha fazla
Odadan çık

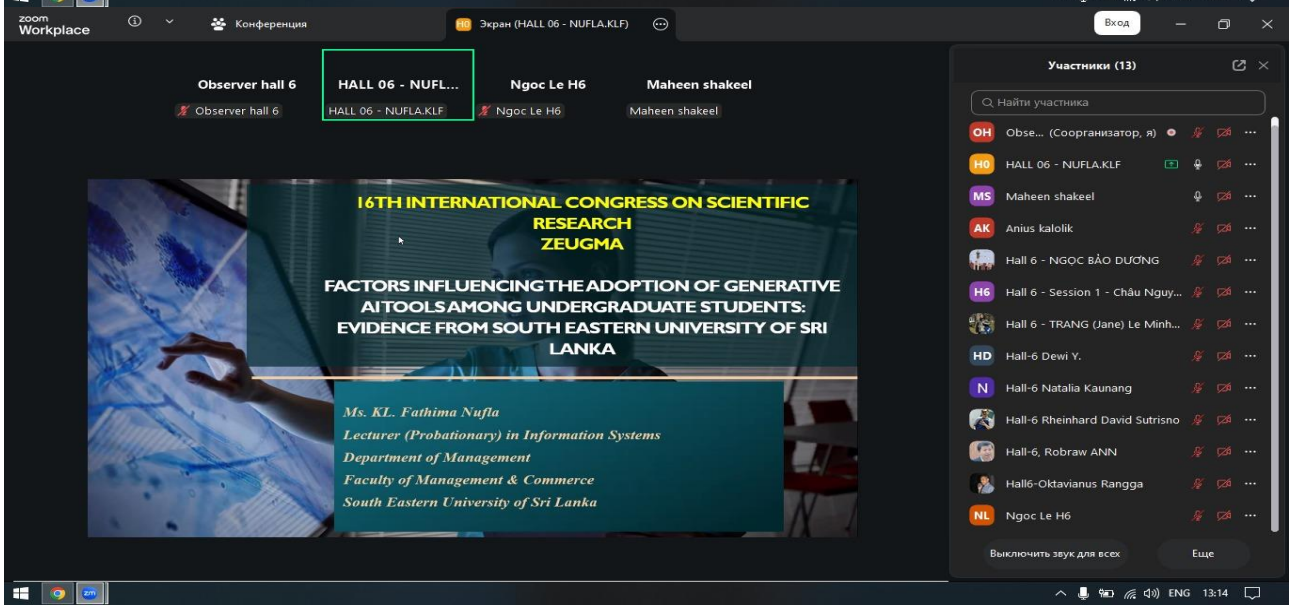

Observer Hall-3
Hall-3, Doç. Dr. Zehra YAZBAHAR
Observer Hall-3
Dr. Öğr. Üyesi Mesut KÜRÜM
BUKET KAYIŞLI 2/3
Session 2 - Hall 3 - Eminenur Can
Adem ATAŞ
Meltem Öner
Fehmi Soğukoğlu
Muhammed Kiliç
Hall-3 Erkam CÖMERT
Naşide Bayrakçı
Windows'u Etkinleştir
Windows'u etkinleştirmek için Ayarlar'a gidin.
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Oturum sahibi araçları
Kaydet
Daha fazla
Odadan çık

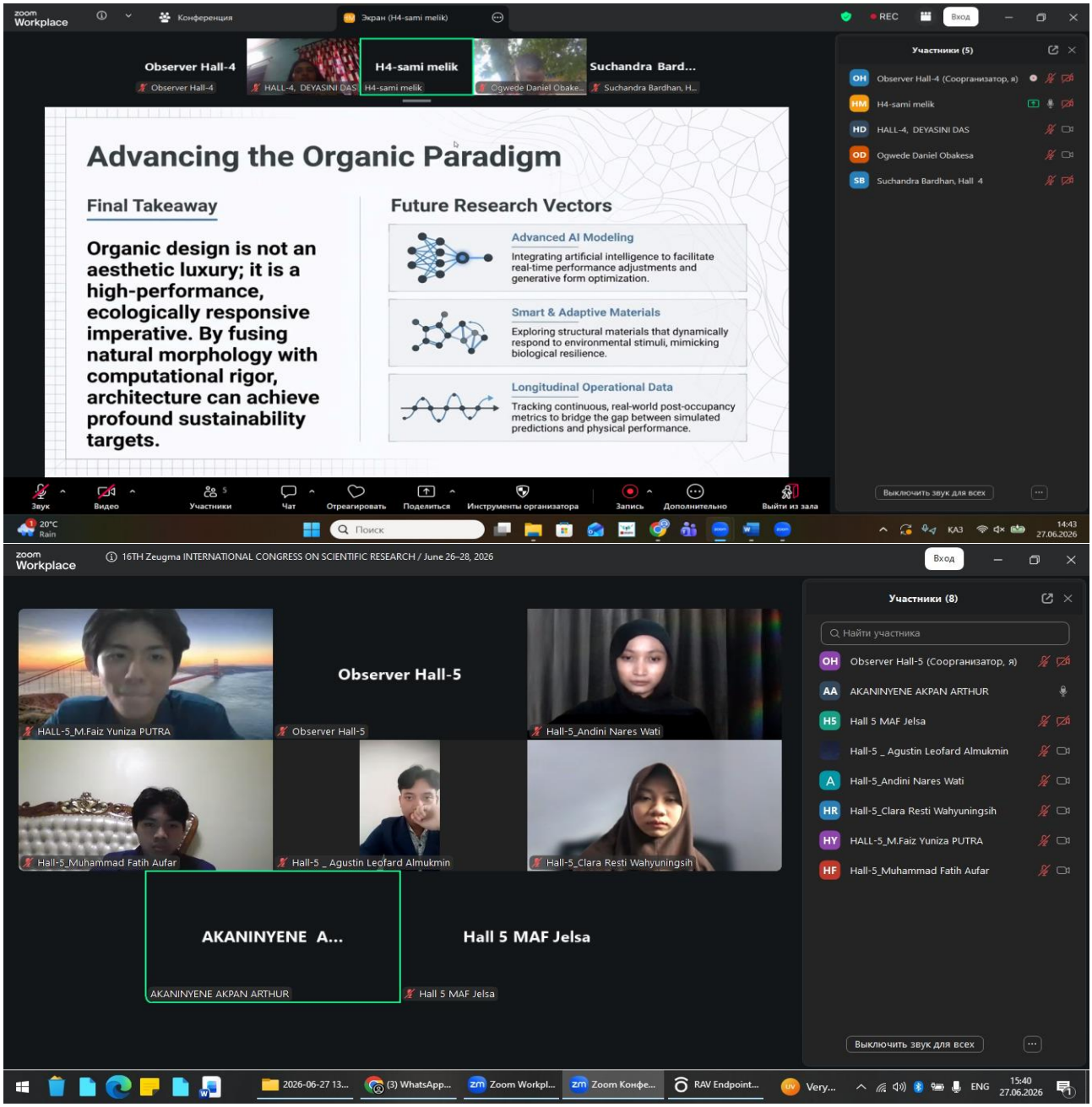

zoom Workplace
Конференция
Экран (Zaki Zebiri)
REC
Вход
Observer Hall-4
Hall-4, Vlad Dia...
Участники (6)
Observer Hall-4 (Соорганизатор, я)
Zaki Zebiri
Hall 4 Ruxandra Salagean
Hall-4, Vlad Diaconescu
Hall4-BOUAYED Aouicha Mounia
YOUSSEF ADNAN, SESSION 1, HALL 4
Introduction
Materials and methods
Result and discussion
Conclusion
UV/Visible spectrum of Luniron (2×10 -5M)
246 nm
Optical density
Wavelength (nm)
DO = 18317,23549 C + 0,00209
R² = 0,999
ε = 18317 ±200 M⁻¹.cm⁻¹
Absorbance (u.a)
Concentration (×10⁻⁴ M)
λ max = 246nm (ε = 18317,2354 L .mol⁻¹.cm⁻¹)
10
Звук
Видео
Участники
Чат
Отреагировать
Поделиться
Инструменты организатора
Запись
Дополнительно
Выйти из зала
Выключить звук для всех
20°C
Cloudy
Поиск
13:03
27.06.2026


Observer-Hall 2
Hall-2, Gökhan SALÇIK
Observer-Hall 2
Hall-2, Öykü Sağır
Murat ÜÇÜNCÜ
Hall 2 - Dr. Şükrü Okul
H2-Melih MANIR
Hall-2, Fatma Nur Kılıçkaya
Hall2-Sıla Sezgin
İbrahim Gürsu T...
İbrahim Gürsu Tekdemir
zoom Workplace
Toplantı - HALL 3
REC
Giriş yapın
Observer Hall-3
Hall-3, Ekin KARAKUYU
Observer Hall-3
Hall-3, Selin Uzuner Güneş
Hall-3, MEHMED SEYDA TEPEDELEN
Mehmet GÜNEŞ
Hall 3- Furkan ARI - Sivas Cumhuriyet Üniversites
Hall 3 - Asst.Prof.Dr. Ferhat Atik
Windows'u Etkinleştir
Ses
Video
Katılımcılar
Sohbet
Tepki ver
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Daha fazla
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27.06.2026

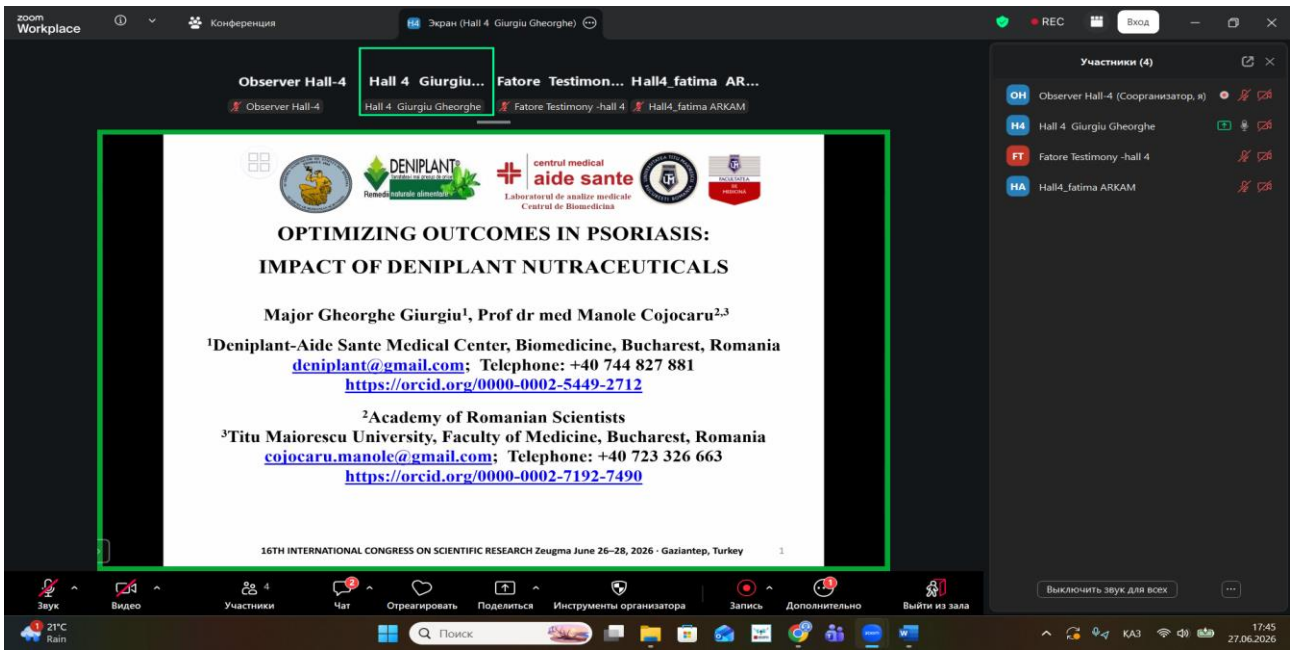

Observer Hall-5
Hall-5, Nuno BAPTISTA
HALL-5, LIBINA BABU
Athira VS
INTRODUCTION
The insurance industry is undergoing a significant transformation driven by rapid advances in digital technologies and changing customer expectations.
The emergence of InsurTech has revolutionized traditional insurance operations by integrating technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), blockchain, and big data analytics. These innovations are enhancing operational efficiency, improving risk assessment, enabling personalized insurance products, and delivering seamless customer experiences.
Despite these benefits, digital transformation also introduces challenges related to cybersecurity, data privacy, regulatory compliance, ethical AI, and digital inclusion.
This study explores the opportunities and challenges of digital transformation and examines how collaboration between traditional insurers and InsurTech firms is shaping the future of the insurance industry.
Insurtech
Next slide
OBJECTIVES
Objective 1: Examine Emerging Technologies
Objective 2: Identify Opportunities
Objective 3: Analyse Challenges
Objective 4: Understand Insurer–InsurTech Collaboration
Objective 5: Recommend Strategic Actions
Участники (5)
Observer Hall... (Соорганизатор, я)
HALL-5, LIBINA BABU
Athira VS
Hall-5, Nuno BAPTISTA
S-1 H-5, Moses Adeolu AGOI
Выключить звук для всех

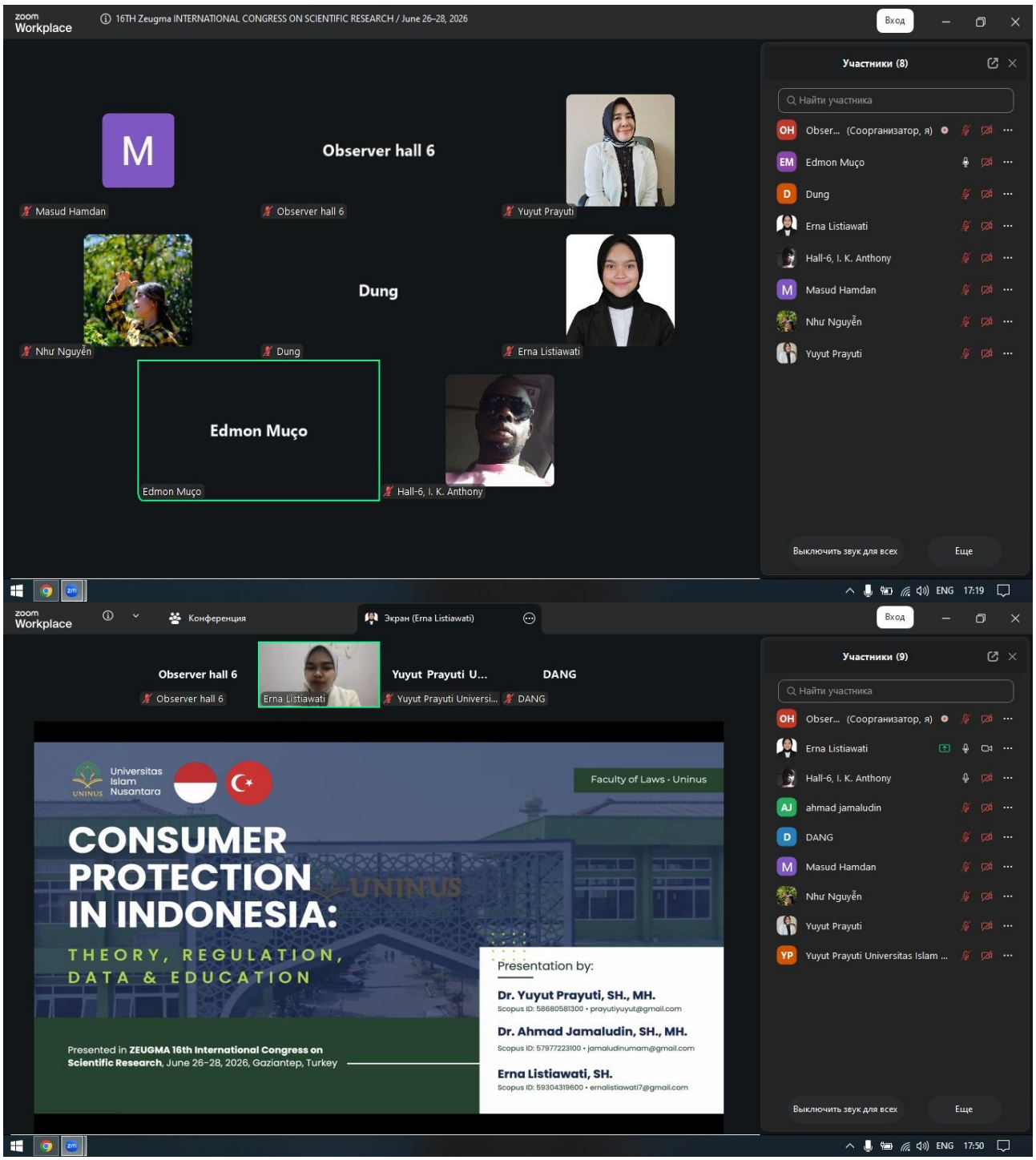

Observer hall 6
Hall-6 Ratnasari Waru...
Hall 6 - Rezeki Putra ...
Hall-6, Robraw ANN
Introduction
Research Background
Cambodia has maintained strong economic growth and aims to become an upper-middle-income country by 2030 (World Bank, 2021).
Science and STEM education are considered strategic priorities for national development (Royal Government of Cambodia, 2015).
The Ministry of Education has implemented several reforms (MoEYS, 2021; Thy et al., 2023):
Science and Social Science tracking system
Secondary Resource Schools (SRS)
New Generation Schools (NGS)
STEM promotion
ICT integration in education
Problem statement
Despite these reforms:
Cambodian students continue to demonstrate low achievement in science (MoEYS, 2018; MoEYS, 2019b).
Science enrollment has declined significantly.
1 неназначенный участник
Участники (12)
Hall-6, Robraw ANN
HALL 06 - NUFLA.KLF
Hall 6 - NGỌC BẢO DƯƠNG
Hall 6 - Rezeki Putra Gulo
Hall 6 - Session 1 - Châu Nguyễ...
Hall 6 - TRANG (Jane) Le Minh ...
Hall-6 Natalia Kaunang
Hall-6 Ratnasari Waruwu
Hall-6 Rheinhard David Sutrisno
Hall6-Oktavianus Rangga
Ngoc Le H6
Выключить звук для всех
Еще


Observer hall 6
HALL 06 - NUFL...
Ngoc Le H6
Maheen shakeel
16TH INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH
ZEUGMA
FACTORS INFLUENCING THE ADOPTION OF GENERATIVE AI TOOLS AMONG UNDERGRADUATE STUDENTS: EVIDENCE FROM SOUTH EASTERN UNIVERSITY OF SRI LANKA
Ms. KL. Fathima Nufla
Lecturer (Probationary) in Information Systems
Department of Management
Faculty of Management & Commerce
South Eastern University of Sri Lanka
Участники (13)
HALL 06 - NUFLA.KLF
Maheen shakeel
Anius kalolik
Hall 6 - NGỌC BẢO DƯƠNG
Hall 6 - Session 1 - Châu Nguy...
Hall 6 - TRANG (Jane) Le Minh...
Hall-6 Dewi Y.
Hall-6 Natalia Kaunang
Hall-6 Rheinhard David Sutrisno
Hall-6, Robraw ANN
Hall6-Oktavianus Rangga
Ngoc Le H6
Выключить звук для всех
Еще

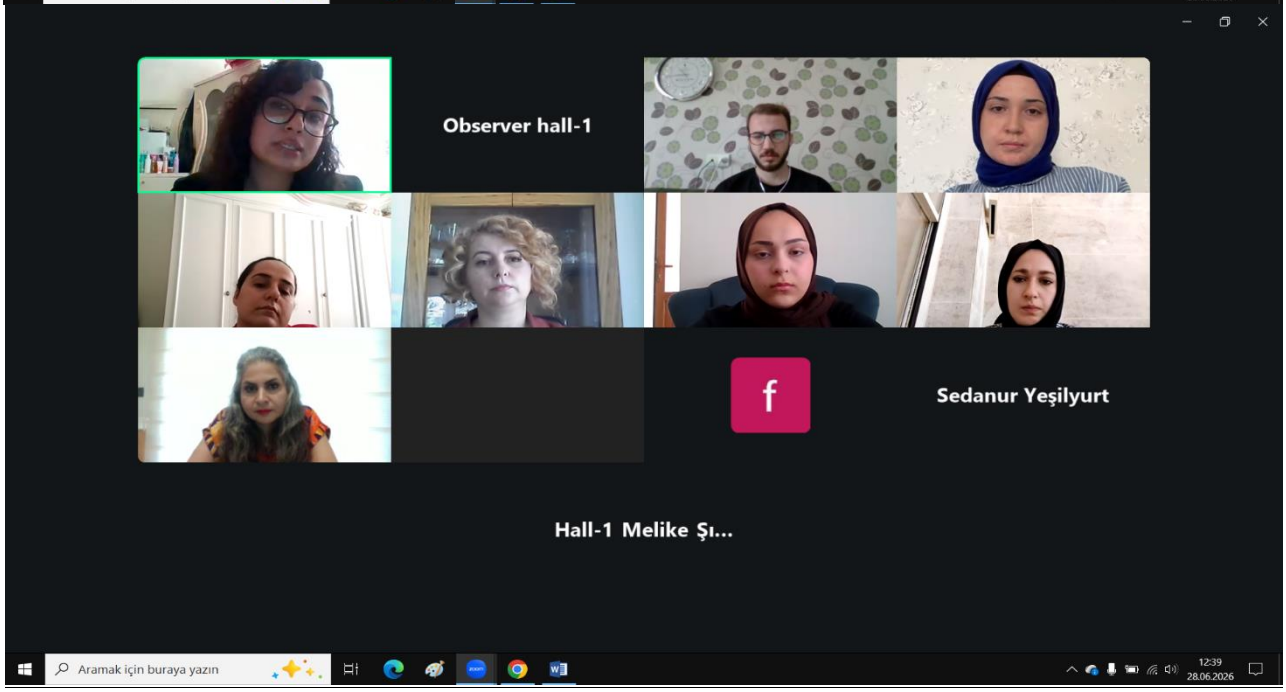

Observer Hall-4
H4-sami melik
Suchandra Bard...
Advancing the Organic Paradigm
Final Takeaway
Organic design is not an aesthetic luxury; it is a high-performance, ecologically responsive imperative. By fusing natural morphology with computational rigor, architecture can achieve profound sustainability targets.
Future Research Vectors
Advanced AI Modeling
Integrating artificial intelligence to facilitate real-time performance adjustments and generative form optimization.
Smart & Adaptive Materials
Exploring structural materials that dynamically respond to environmental stimuli, mimicking biological resilience.
Longitudinal Operational Data
Tracking continuous, real-world post-occupancy metrics to bridge the gap between simulated predictions and physical performance.
Участники (5)
Observer Hall-4 (Соорганизатор, я)
H4-sami melik
HALL-4, DEYASINI DAS
Ogwede Daniel Obakesa
Suchandra Bardhan, Hall 4
Выключить звук для всех

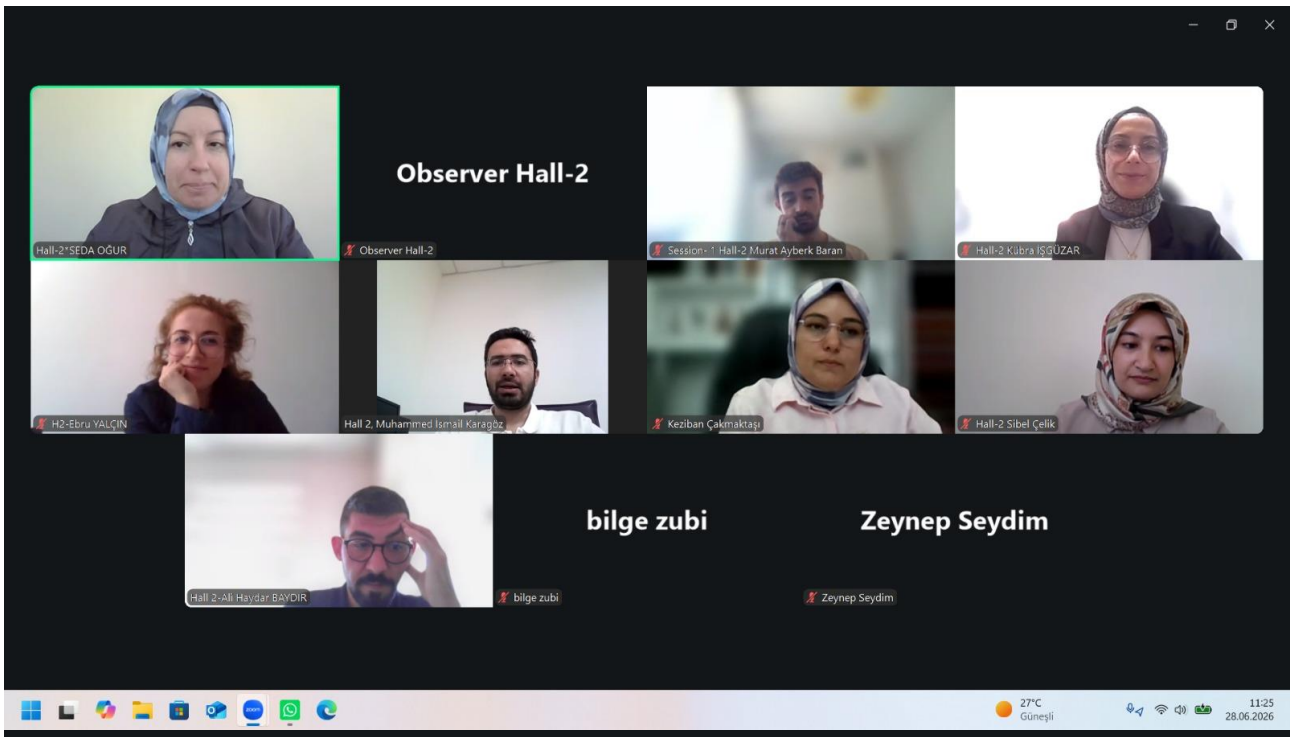
16TH Zeugma INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH / June 26–28, 2026
Observer Hall-5
HALL-5_M.Faiz Yuniza PUTRA
Hall-5_Andini Nares Wati
Hall-5_Muhammad Fatih Aufar
Hall-5 _ Agustin Leofard Almukmin
Hall-5_Clara Resti Wahyuningsih
AKANINYENE A...
AKANINYENE AKPAN ARTHUR
Hall 5 MAF Jelsa
Участники (8)
Найти участника
Observer Hall-5 (Соорганизатор, я)
AKANINYENE AKPAN ARTHUR
Hall 5 MAF Jelsa
Hall-5 _ Agustin Leofard Almukmin
Hall-5_Andini Nares Wati
Hall-5_Clara Resti Wahyuningsih
HALL-5_M.Faiz Yuniza PUTRA
Hall-5_Muhammad Fatih Aufar
Выключить звук для всех

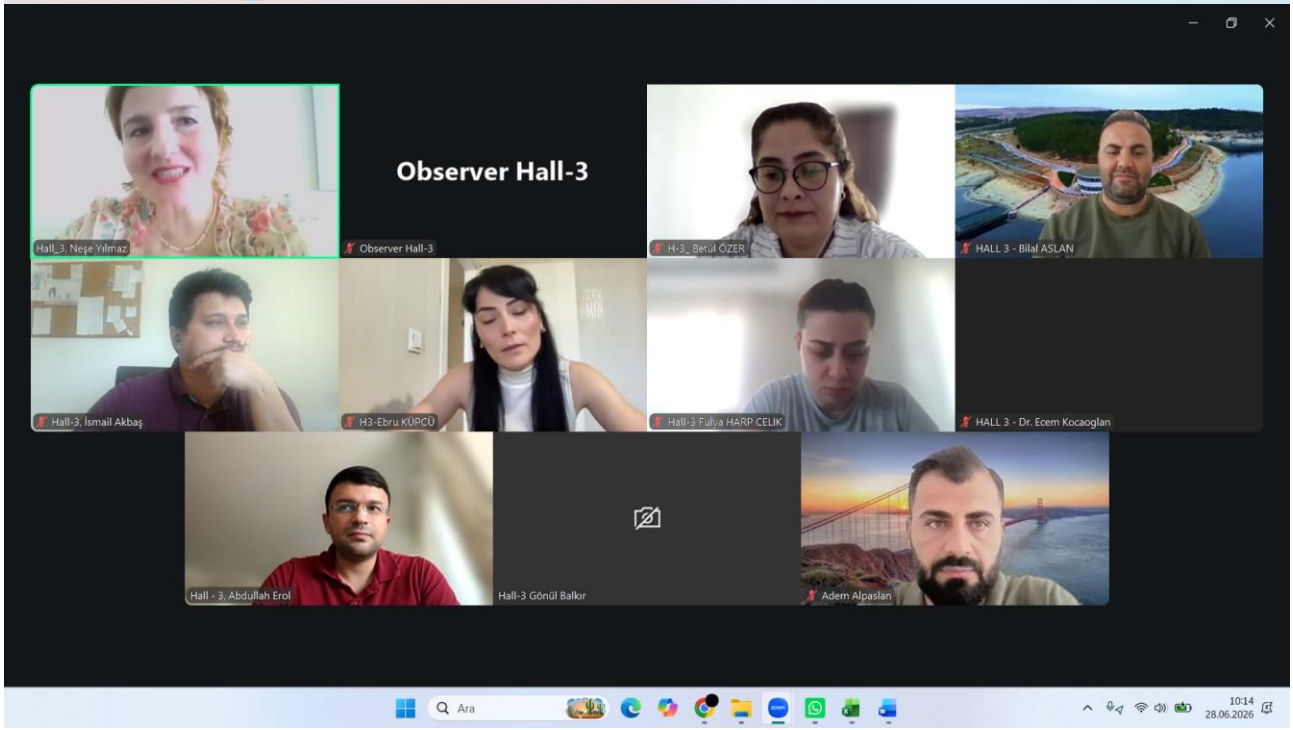

Observer Hall-4
Hall 4 Giurgiu...
Fatore Testimon...
Hall4_fatima AR...
OPTIMIZING OUTCOMES IN PSORIASIS:
IMPACT OF DENIPLANT NUTRACEUTICALS
Major Gheorghe Giurgiu[1], Prof dr med Manole Cojocaru[2,3]
[1]Deniplant-Aide Sante Medical Center, Biomedicine, Bucharest, Romania
deniplant@gmail.com; Telephone: +40 744 827 881
https://orcid.org/0000-0002-5449-2712
[2]Academy of Romanian Scientists
[3]Titu Maiorescu University, Faculty of Medicine, Bucharest, Romania
cojocaru.manole@gmail.com; Telephone: +40 723 326 663
https://orcid.org/0000-0002-7192-7490
16TH INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH Zeugma June 26–28, 2026 · Gaziantep, Turkey
Участники (4)
Observer Hall-4 (Соорганизатор, я)
Hall 4 Giurgiu Gheorghe
Fatore Testimony -hall 4
Hall4_fatima ARKAM

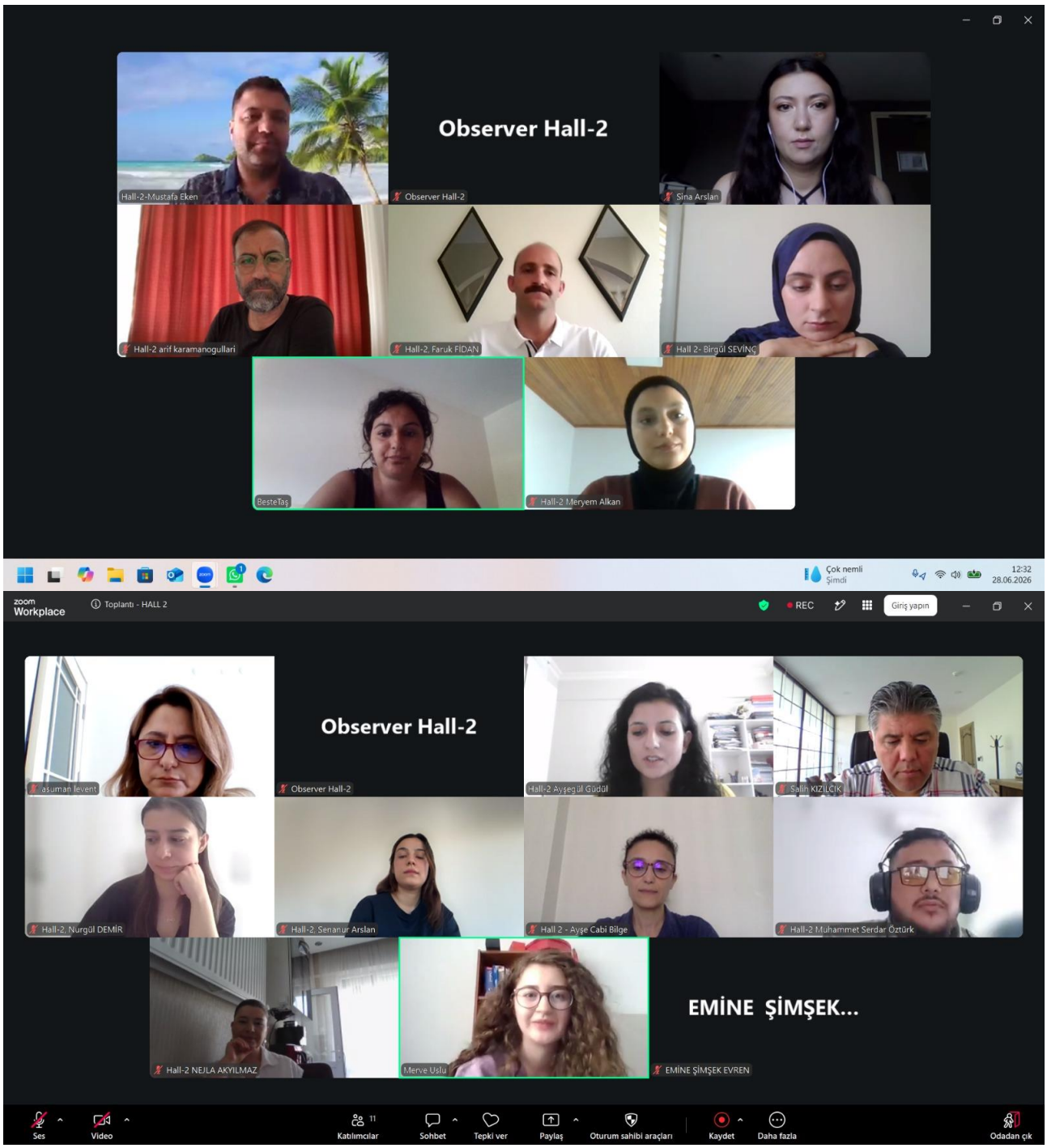

zoom Workplace
16TH Zeugma INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH / June 26–28, 2026
Вход
Участники (8)
Найти участника
Observer hall 6
Masud Hamdan
Observer hall 6
Yuyut Prayuti
Dung
Như Nguyễn
Dung
Erna Listiawati
Edmon Muço
Edmon Muço
Hall-6, I. K. Anthony
Obser... (Соорганизатор, я)
Edmon Muço
Dung
Erna Listiawati
Hall-6, I. K. Anthony
Masud Hamdan
Như Nguyễn
Yuyut Prayuti
Выключить звук для всех
Еще
ENG 17:19
zoom Workplace
Конференция
Экран (Erna Listiawati)
Вход
Участники (9)
Observer hall 6
Erna Listiawati
Yuyut Prayuti U...
DANG
Observer hall 6
Yuyut Prayuti Universi...
DANG
Universitas Islam Nusantara
Faculty of Laws · Uninus
CONSUMER PROTECTION IN INDONESIA:
THEORY, REGULATION, DATA & EDUCATION
Presentation by:
Dr. Yuyut Prayuti, SH., MH.
Scopus ID: 58680581300 • prayutiyuyut@gmail.com
Dr. Ahmad Jamaludin, SH., MH.
Scopus ID: 57977223100 • jamaludinumam@gmail.com
Erna Listiawati, SH.
Scopus ID: 59304319600 • ernalistiawati7@gmail.com
Presented in ZEUGMA 16th International Congress on Scientific Research, June 26-28, 2026, Gaziantep, Turkey
Erna Listiawati
Hall-6, I. K. Anthony
ahmad jamaludin
DANG
Masud Hamdan
Như Nguyễn
Yuyut Prayuti
Yuyut Prayuti Universitas Islam ...
Выключить звук для всех
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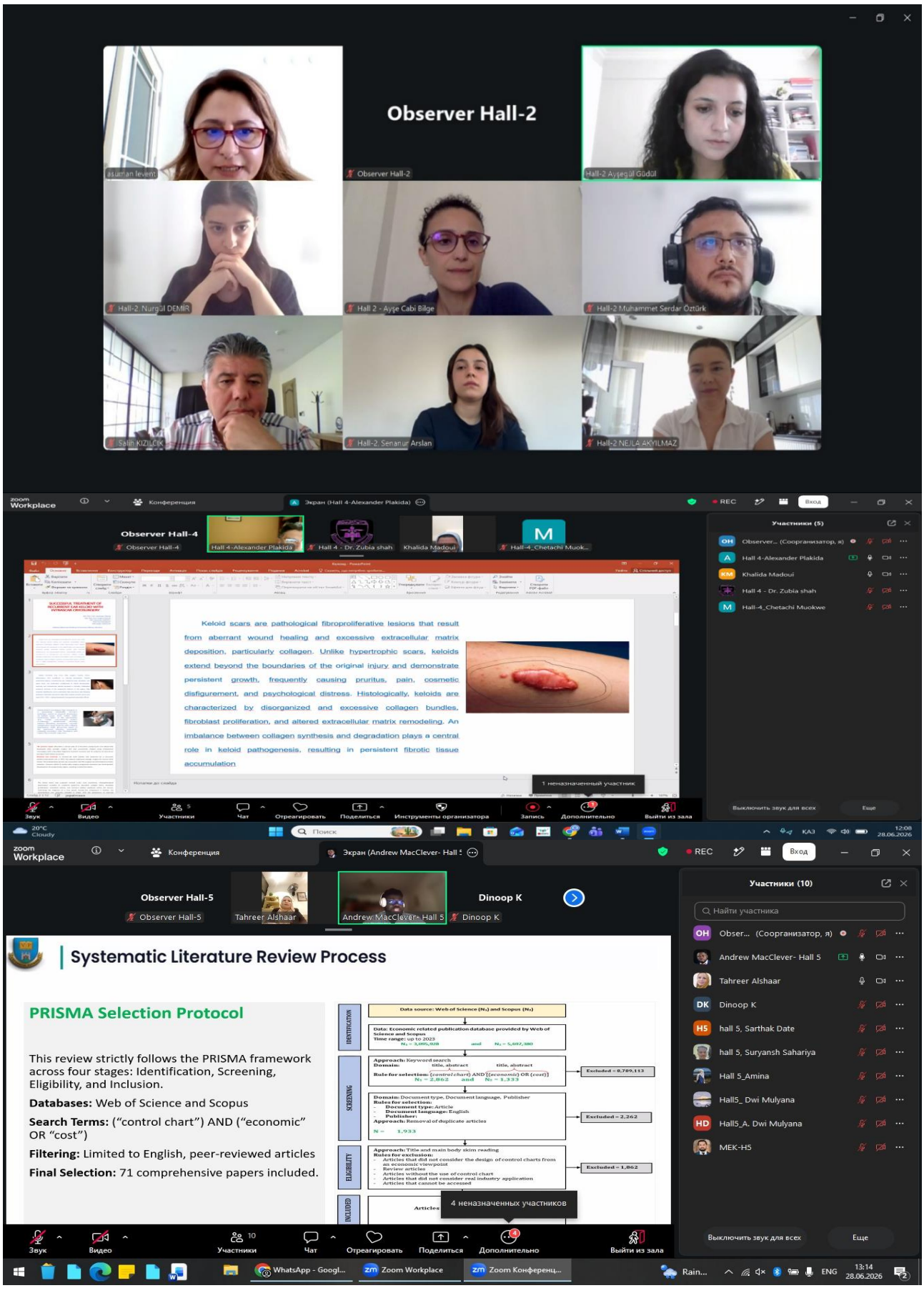

Observer hall-1
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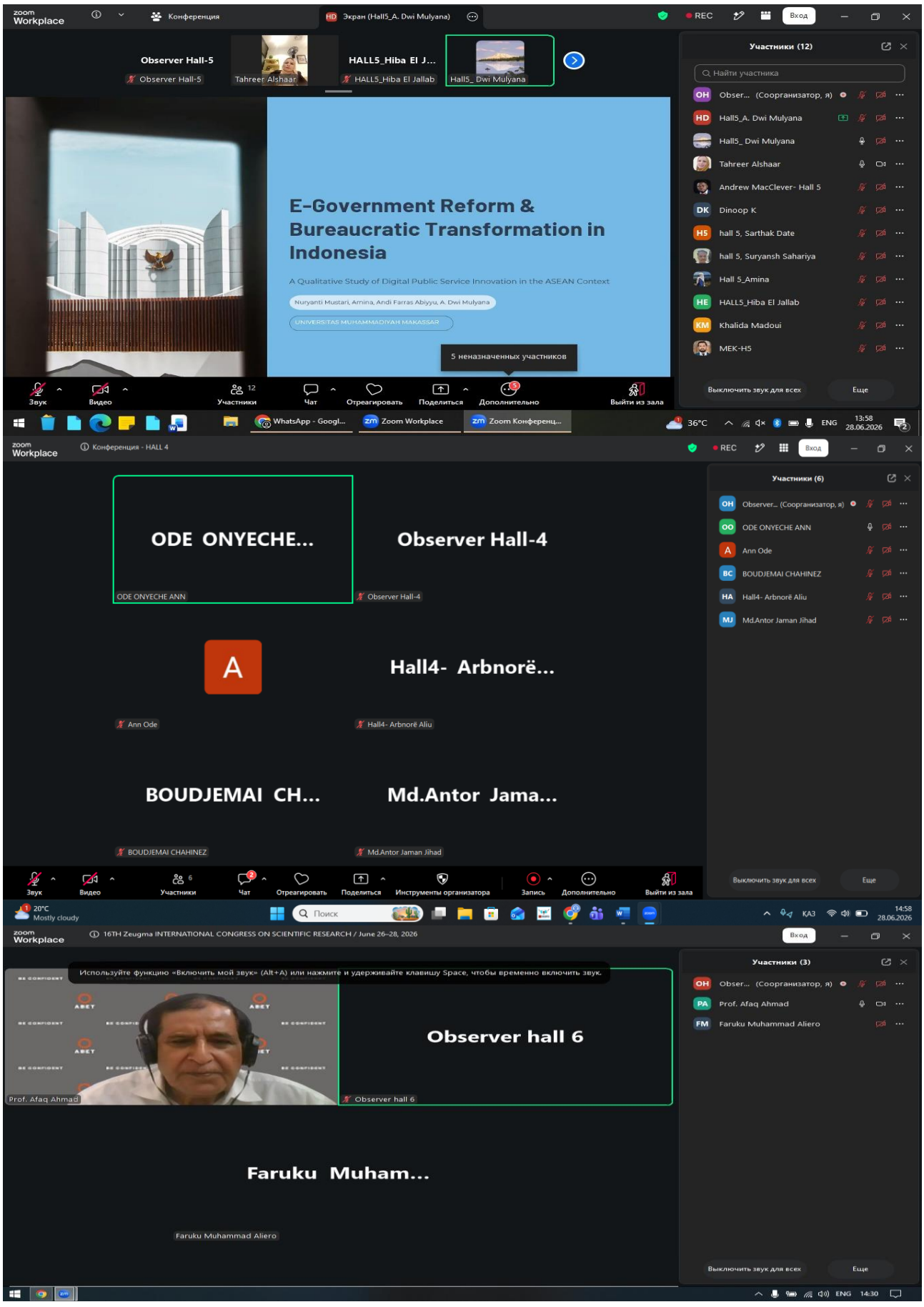

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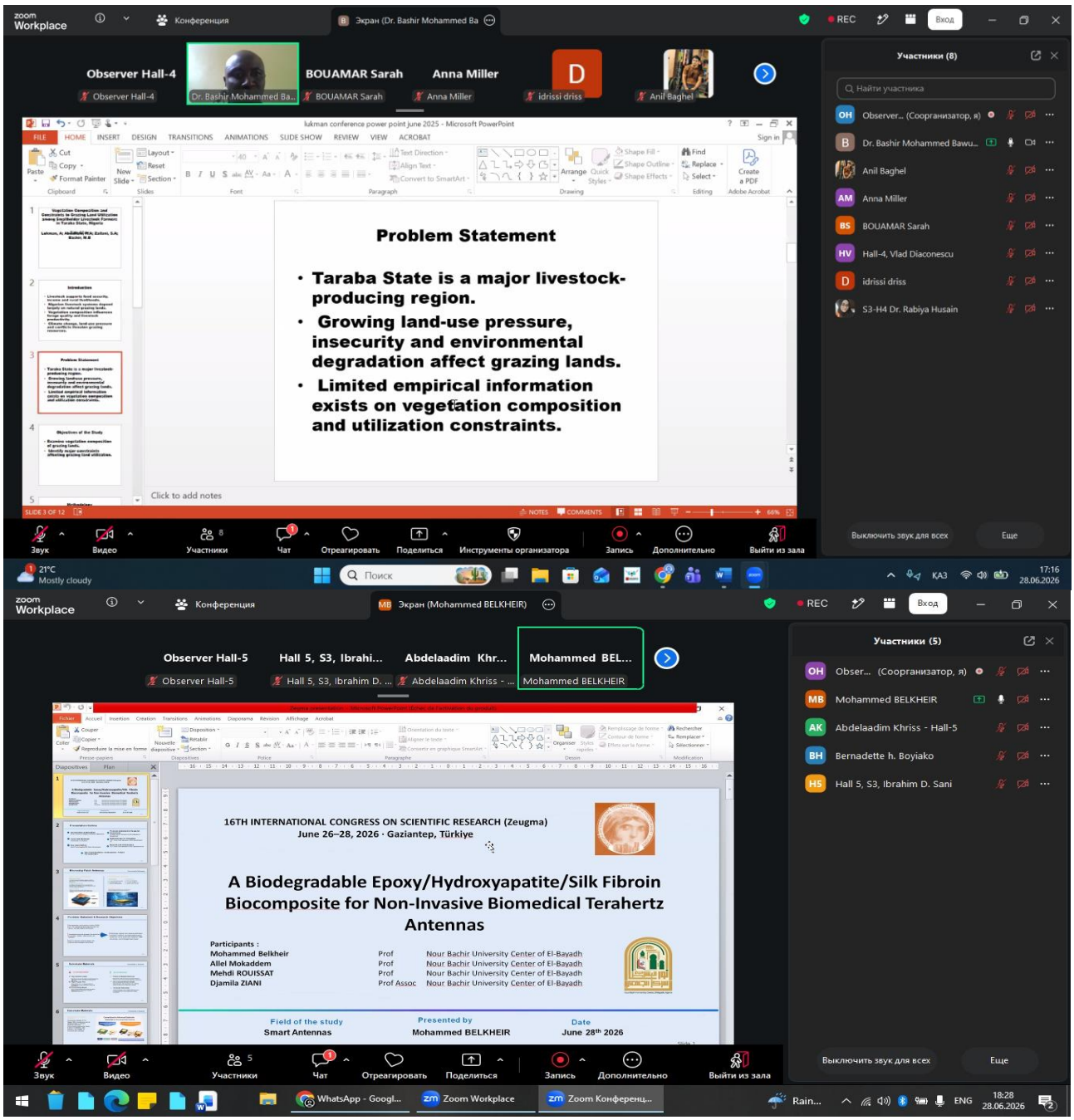

Observer Hall-2
Hall-2*SEDA OĞUR
Observer Hall-2
Session - 1 Hall-2 Murat Ayberk Baran
Hall-2 Kübra IŞGÜZAR
H2-Ebru YALÇIN
Hall 2, Muhammed İsmail Karagöz
Keziban Çakmaktaşı
Hall-2 Sibel Çelik
Hall 2-Ali Haydar BAYDIR
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Zeynep Seydim
Zeynep Seydim
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11:25
28.06.2026


Observer Hall-3
Hall_3, Neşe Yılmaz
Observer Hall-3
H-3_ Betül ÖZER
HALL 3 - Bilal ASLAN
Hall-3, İsmail Akbaş
H3-Ebru KÜPCÜ
Hall-3 Fulya HARP CELIK
HALL 3 - Dr. Ecem Kocaoglan
Hall - 3, Abdullah Erol
Hall-3 Gönül Balkır
Adem Alpaslan
Ara
10:14
28.06.2026


Observer Hall-2
Hall-2-Mustafa Eken
Observer Hall-2
Sina Arslan
Hall-2 arif karamanogullari
Hall-2, Faruk FİDAN
Hall 2- Birgül SEVİNÇ
BesteTaş
Hall-2 Meryem Alkan
zoom Workplace
Toplantı - HALL 2
REC
Giriş yapın
Observer Hall-2
Observer Hall-2
Hall-2 Ayşegül Güdül
Salih KIZILCIK
Hall-2, Nurgül DEMİR
Hall-2, Senanur Arslan
Hall 2 - Ayşe Cabi Bilge
Hall-2 Muhammet Serdar Öztürk
Hall-2 NEJLA AKYILMAZ
Merve Uslu
EMİNE ŞİMŞEK...
EMİNE ŞİMŞEK EVREN
Ses
Video
Katılımcılar
Sohbet
Tepki ver
Paylaş
Oturum sahibi araçları
Kaydet
Daha fazla
Odadan çık


Observer Hall-2
Observer Hall-4
Keloid scars are pathological fibroproliferative lesions that result from aberrant wound healing and excessive extracellular matrix deposition, particularly collagen. Unlike hypertrophic scars, keloids extend beyond the boundaries of the original injury and demonstrate persistent growth, frequently causing pruritus, pain, cosmetic disfigurement, and psychological distress. Histologically, keloids are characterized by disorganized and excessive collagen bundles, fibroblast proliferation, and altered extracellular matrix remodeling. An imbalance between collagen synthesis and degradation plays a central role in keloid pathogenesis, resulting in persistent fibrotic tissue accumulation
Observer Hall-5
Dinoop K
Systematic Literature Review Process
PRISMA Selection Protocol
This review strictly follows the PRISMA framework across four stages: Identification, Screening, Eligibility, and Inclusion.
Databases: Web of Science and Scopus
Search Terms: (“control chart”) AND (“economic” OR “cost”)
Filtering: Limited to English, peer-reviewed articles
Final Selection: 71 comprehensive papers included.
IDENTIFICATION
SCREENING
ELIGIBILITY
INCLUDED
Excluded = 8,789,113
Excluded = 2,262
Excluded = 1,862
4 неназначенных участников


Observer Hall-5
Tahreer Alshaar
HALL5_Hiba El J...
Hall5_ Dwi Mulyana
E-Government Reform & Bureaucratic Transformation in Indonesia
A Qualitative Study of Digital Public Service Innovation in the ASEAN Context
Nuryanti Mustari, Amina, Andi Farras Abiyyu, A. Dwi Mulyana
UNIVERSITAS MUHAMMADIYAH MAKASSAR
5 неназначенных участников
Участники (12)
ODE ONYECHE...
Observer Hall-4
Hall4- Arbnorë...
BOUDJEMAI CH...
Md.Antor Jama...
Участники (6)
Observer Hall 6
Faruku Muham...
Faruku Muhammad Aliero
Участники (3)


Problem Statement
• Taraba State is a major livestock-producing region.
• Growing land-use pressure, insecurity and environmental degradation affect grazing lands.
• Limited empirical information exists on vegetation composition and utilization constraints.
Click to add notes

16TH INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH (Zeugma)
June 26–28, 2026 · Gaziantep, Türkiye
A Biodegradable Epoxy/Hydroxyapatite/Silk Fibroin Biocomposite for Non-Invasive Biomedical Terahertz Antennas
Participants :
Mohammed Belkheir Prof Nour Bachir University Center of El-Bayadh
Allel Mokaddem Prof Nour Bachir University Center of El-Bayadh
Mehdi ROUISSAT Prof Nour Bachir University Center of El-Bayadh
Djamila ZIANI Prof Assoc Nour Bachir University Center of El-Bayadh
Field of the study
Smart Antennas
Presented by
Mohammed BELKHEIR
Date
June 28th 2026

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THE INDEPENDENCE OF THE CENTRAL BANK AS A FACTOR IN ENSURING FINANCIAL STABILITY IN AZERBAIJAN'S BANKING SYSTEM

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Abstract
Central bank independence has long been regarded as a cornerstone of sound monetary governance and macroeconomic stability. In transitional economies such as Azerbaijan, however, the institutional underpinnings of this independence remain contested and underexplored. This study investigates the relationship between the operational and political autonomy of the Central Bank of the Republic of Azerbaijan (CBA) and the stability of the country's banking sector over the period 2003–2023. Drawing on legislative analysis, financial soundness indicators published by the International Monetary Fund, and regression-based empirical modelling, the paper assesses the extent to which CBA independence has shaped key banking-sector outcomes, including non-performing loan ratios, capital adequacy, and systemic liquidity buffers. The findings indicate that periods of greater de facto independence were associated with measurably lower financial distress indicators, whereas phases of heightened political interference — particularly during the 2015 currency crisis — corresponded with elevated systemic vulnerability. The study further demonstrates that CBA autonomy operates as a complementary mechanism alongside macroprudential regulation; neither variable alone accounts for observed stability outcomes. By situating the Azerbaijani experience within broader comparative literature on central bank independence and financial stability, the paper contributes to the scholarly debate on institutional design in oil-dependent economies and offers policy implications for strengthening governance frameworks in the South Caucasus region.
Keywords: central bank independence, financial stability, banking system, Azerbaijan, macroprudential policy, monetary governance

TÜRKİYE'DE LİBERAL EKONOMİYE GEÇİŞ DÖNEMİNDE KAMU İKTİSADİ TEŞEBBÜSLERİ VE ÖZELLEŞTİRMELER

STATE-OWNED ENTERPRISES AND PRIVATIZATIONS DURING THE TRANSITION TO A LIBERAL ECONOMY IN TURKIYE

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Abstract
With the proclamation of the Republic, political independence was gained, and subsequently, efforts began towards economic independence. While liberal policies were initially pursued to achieve economic independence, this attempt proved unsuccessful. Following the Great Depression of 1929, state-led economic policies were adopted both globally and in Turkey, implementing a system in which the state intervened in the economy. This period also marked the establishment of state-owned enterprises to intervene in the market. With these enterprises, Turkey transitioned to a planned economy model, and state intervention in the economy became more pronounced with the First Five-Year Development Plan, first published in 1934. During the planned development period, sector-specific banks were established, and these banks provided loans to support the development of those sectors. Similarly, state-owned enterprises worked with state support to develop their respective sectors. However, with the economic difficulties experienced both domestically and globally in the 1970s, policies involving state intervention were abandoned, and replaced with liberal policies advocating market freedom. Influenced by global change, Turkey began implementing liberal policies with the January 24, 1980 decrees, marking the beginning of a period of economic liberalization. During this period, privatization efforts were initiated to reduce the state's influence on the market, aiming to transfer state-owned enterprises to the private sector. However, due to the recent transition to a liberal system, the legal basis for privatizations remained weak, and in the initial stages, court decisions prevented their implementation. In the 1990s, privatizations were legalized, and thus, privatization efforts gained momentum. This study will examine Turkey's brief economic history, state-owned enterprises, and the privatization process of these enterprises.
Keywords: State-Controlled Economy, Liberal Economy, State-Owned Enterprises, Privatization.

Özet
Cumhuriyetin ilanı ile birlikte siyasi bağımsızlık kazanılmış ve siyasi bağımsızlığın ardından ekonomik bağımsızlık için çalışmalara başlanılmıştır. Ekonomik bağımsızlık için ilk dönemde liberal politikalar izlenmeye çalışılsa da bu girişim başarısızlıkla sonuçlanmıştır. 1929 yılında yaşanan Büyük Buhran'ın ardından gerek dünyada gerek ise ülkemizde devletçi ekonomi politikaları benimsenmiş ve devletin ekonomiye müdahale ettiği bir sistem uygulanmıştır. Aynı zamanda bu dönem devletin piyasaya müdahale amacıyla kamu iktisadi teşebbüslerini kurduğu dönem olmuştur. Kamu iktisadi teşebbüsleri ile birlikte Türkiye planlı ekonomi modeline geçmiş ve ilk kez 1934 yılında yayınlanan Birinci Beş Yıllık Kalkınma Planı ile birlikte ekonomide devletin müdahaleleri daha belirgin hale gelmiştir. Planlı kalkınma dönemi ile birlikte sektörlere özel bankalar kurulmuş ve bankalar ilgili sektörlerin kalkınması için krediler vermiştir. Benzer şekilde kamu iktisadi teşebbüsleri de ilgili oldukları sektörlerin gelişimi için devlet destekli olarak çalışmışlardır. Ancak 1970'li yıllarda hem ülkemizde hem de dünyada yaşanan ekonomik sıkıntılar ile birlikte küresel olarak devlet müdahaleciliğini içeren politikalar terk edilmiş ve yerine piyasa serbestliğini savunan liberal politikalar uygulanmaya başlanmıştır. Küresel değişimden etkilenen Türkiye 24 Ocak 1980 kararları ile birlikte liberal politikaları uygulamaya başlamış ve ekonomide serbestleşme dönemi başlamıştır.

Bu dönemde devletin piyasa üzerindeki etkilerini azaltmak amacıyla özelleştirme çalışmaları başlamış ve bu çalışmalar neticesinde kamu iktisadi teşebbüsleri özel sektöre devredilmek istenmiştir. Ancak liberal sisteme yeni geçilmesi sebebiyle özelleştirmelerin hukuki temeli zayıf kalmış ve ilk dönemlerde mahkeme kararları ile özelleştirmeler sağlanamamıştır. 1990'lı yıllarda özelleştirmeler kanunlaşmış ve böylelikle özelleştirme çalışmaları hız kazanmıştır. Bu çalışmada Türkiye'nin kısa ekonomik tarihi ile birlikte kamu iktisadi teşebbüsleri ve bu teşebbüslerin özelleştirilme süreci incelenecektir.
Anahtar Kelimeler: Devletçi Ekonomi, Liberal Ekonomi, Kamu İktisadi Teşebbüsleri, Özelleştirme

TÜRKİYE EKONOMİSİNDE YAPISAL DÖNÜŞÜMÜN TEMEL DİNAMİKLERİ VE GELİR DAĞILIMI: GÜNEY KORE DENEYİMİ İLE KARŞILAŞTIRMALI BİR ANALİZ

THE KEY DRIVERS OF STRUCTURAL TRANSFORMATION IN THE TURKISH ECONOMY AND INCOME DISTRIBUTION: A COMPARATIVE ANALYSIS WITH THE SOUTH KOREAN EXPERIENCE

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Abstract
This study aims to analyze the fundamental dynamics of the structural transformation exhibited by the Turkish economy over the last forty years and the multidimensional impacts of these dynamics on income distribution. In the economics literature, structural transformation is defined as the reallocation of production factors from low-productivity traditional sectors to high-productivity modern sectors. However, in the case of Turkey, unlike the historical experience of developed countries, this process exhibits a character of "premature deindustrialization" and "tertiarization," where industrialization is replaced by a low-value-added services sector before reaching maturity.
In the study, post-1980 outward-oriented strategies, technological change, labor market polarization, and human capital accumulation are addressed as the primary dynamics of transformation, and this process is examined from a comparative perspective with the South Korean experience. The analyses, conducted in the light of empirical data and theoretical approaches, reveal the effects of this change in the production structure on the Gini coefficient, the Palma ratio, and functional income distribution indicators. The main findings of the research indicate that structural transformation in Turkey is driven by sectoral overexpansion rather than productivity growth, and this situation turns income inequality into a structural problem. In the conclusion section, qualitative issues in the current production structure are discussed, and a general assessment centered on technological deepening is presented for Turkey to overcome the middle-income trap and achieve a more inclusive distribution structure.
Keywords: Structural Transformation, Income Distribution, Turkish Economy, South Korea, Comparative Analysis, Premature Deindustrialization, Human Capital.

Özet
Bu çalışma, Türkiye ekonomisinin son kırk yıllık süreçte sergilediği yapısal dönüşümün temel dinamiklerini ve bu dinamiklerin gelir dağılımı üzerindeki çok boyutlu yansımalarını analiz etmeyi amaçlamaktadır. İktisat literatüründe yapısal dönüşüm, üretim faktörlerinin düşük verimli geleneksel sektörlerden yüksek verimli modern sektörlere doğru yer değiştirmesi olarak tanımlanmaktadır. Ancak Türkiye örneğinde bu süreç, gelişmiş ülkelerin tarihsel deneyiminden farklı olarak, sanayileşmenin olgunlaşmadan yerini düşük katma değerli hizmetler sektörüne bıraktığı bir "erken sanayisizleşme" ve "hizmetleşme" karakteri sergilemektedir.
Çalışmada; 1980 sonrası dışa açılma stratejileri, teknolojik değişim, işgücü piyasasındaki kutuplaşma ve beşeri sermaye birikimi temel dönüşüm dinamikleri olarak ele alınmakta ve bu süreç Güney Kore deneyimi ile karşılaştırmalı bir perspektifte incelenmektedir. Ampirik veriler ve teorik yaklaşımlar ışığında yapılan analizler; üretim yapısındaki bu değişimin Gini katsayısı, Palma oranı ve fonksiyonel gelir dağılımı göstergeleri üzerindeki etkilerini ortaya koymaktadır. Araştırmanın temel bulguları, Türkiye'deki yapısal dönüşümün verimlilik artışından ziyade sektörel şişkinliğe dayalı olduğunu ve bu durumun gelir adaletsizliğini yapısal bir sorun haline getirdiğini göstermektedir.

Sonuç bölümünde ise mevcut üretim yapısındaki niteliksel sorunlar tartışılmakta ve Türkiye'nin orta gelir tuzağını aşarak daha kapsayıcı bir bölüşüm yapısına kavuşabilmesi için teknolojik derinleşmeyi merkeze alan genel bir değerlendirme sunulmaktadır.

Anahtar Kelimeler: Yapısal Dönüşüm, Gelir Dağılımı, Türkiye Ekonomisi, Güney Kore, Karşılaştırmalı Analiz, Erken Sanayisizleşme, Beşeri Sermaye.

THE ROLE OF PROTECTIONIST POLICIES IN THE STRUCTURAL TRANSFORMATION OF THE MALAYSIAN ECONOMY: AN ANALYTICAL STUDY IN LIGHT OF THE INFANT INDUSTRY THEORY (1959–2000)

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Abstract
This study aimed to analyze the role of protectionist policies in supporting the structural transformation of the Malaysian economy during the period from 1957 to 2000 and to examine their impact on industrial development and economic growth. The study was motivated by a central research question concerning the effectiveness of protectionist policies in building a competitive national productive base amid the transformations witnessed in the international trading system and the growing trend toward trade liberalization.
The study adopted a descriptive-analytical approach and was grounded in Friedrich List's Infant Industry Theory, which argues that domestic industries in their early stages require temporary protection from foreign competition in order to acquire the efficiency and competitiveness necessary to enter global markets. Within this theoretical framework, the study analyzed the economic policies implemented by the Malaysian government, including selective tariffs, industrial incentives, and support programs for strategic sectors, as well as their relationship with indicators of economic growth, industrialization, and structural transformation.
The findings revealed that the Malaysian experience did not rely on traditional protectionism as an end in itself; rather, protectionist measures were applied selectively and temporarily within a comprehensive development strategy aimed at nurturing infant industries and enhancing their competitiveness. This strategy combined targeted protection with the promotion of foreign direct investment and the expansion of industrial exports, contributing to the transformation of Malaysia from an economy dependent on the production and export of primary commodities into a more diversified and competitive industrial economy.
The results further demonstrated that the success of the Malaysian experience was closely linked to the state's ability to balance temporary protection with gradual integration into global markets. This was reflected in the increased contribution of the industrial sector to gross domestic product, the growth of high-technology manufactured exports, and the strengthening of domestic innovation and productive capacities. Moreover, these policies contributed to job creation and reduced dependence on primary sectors, thereby supporting the transition toward a more diversified and sustainable economy. The study also found that government intervention during the 1997 Asian Financial Crisis played a significant role in safeguarding development achievements and accelerating economic recovery. These findings highlight the importance of integrating protectionist policies with investments in education, technology, and carefully managed economic openness in order to achieve sustainable industrial development.
Keywords: Protectionist Policy, Malaysia, Infant Industry Theory, Friedrich List, Industrial Development, Structural Transformation, Economic Growth

TANZİMATTAN GÜNÜMÜZE TÜRKİYE'DE VERGİLENDİRME SİSTEMİNİN GELİŞİMİ

THE DEVELOPMENT OF THE TAX SYSTEM IN TURKIYE FROM THE TANZIMAT ERA TO THE PRESENT DAY

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Abstract
This study aims to analyze the fundamental dynamics of the structural transformation exhibited by the Turkish economy over the last forty years and the multidimensional impacts of these dynamics on income distribution. In the economics literature, structural transformation is defined as the reallocation of production factors from low-productivity traditional sectors to high-productivity modern sectors. However, in the case of Turkey, unlike the historical experience of developed countries, this process exhibits a character of "premature deindustrialization" and "tertiarization," where industrialization is replaced by a low-value-added services sector before reaching maturity.
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Anahtar Kelimeler: Yapısal Dönüşüm, Gelir Dağılımı, Türkiye Ekonomisi, Güney Kore, Karşılaştırmalı Analiz, Erken Sanayisizleşme, Beşeri Sermaye.

GPS TABANLI SÜRÜŞ VERİLERİ KULLNILARAK EKELTRİKLİ ARAÇ BATARYALARINDA SOC VE SOH TAHMİNİ

SOC AND SOH ESTIMATION IN ELECTRIC VEHICLE BATTERIES USING GPS-BASED DRIVING DATA

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Abstract
The battery in electric vehicles constitutes a significant portion of the total vehicle cost and serves as the primary energy storage component that directly determines vehicle performance. Therefore, the effectiveness of battery management systems largely depends on the accuracy of estimating the State of Charge (SOC) and State of Health (SOH) of the battery. Conventional SOC and SOH estimation methods are primarily based on electrical quantities such as current and voltage, and these methods can yield satisfactory results under certain conditions. However, under real driving conditions, battery behavior is significantly influenced by environmental and operational factors such as driver behavior, route characteristics, road gradient, and traffic conditions. This study aims to improve estimation accuracy by integrating GPS-based driving data into SOC and SOH estimation processes. Within the scope of the research, parameters obtained from GPS sensors, including position, speed, acceleration, road gradient, and stop-and-go intensity, are analyzed in conjunction with battery current and voltage data using a holistic approach. Using GPS position data, vehicle constants, and fundamental physical principles, the energy required for the vehicle's displacement on a second-by-second basis is calculated. Based on this, the amount of energy that must be drawn from the battery to meet this demand is determined, and comparative evaluations are conducted for different driving scenarios. The results enable the extraction of energy consumption profiles of vehicles across different routes and allow SOH estimation based on these profiles without requiring a direct physical connection to the battery. Furthermore, the proposed approach makes it possible to comprehensively evaluate the behavior of a selected vehicle under different route and driving conditions and to identify the most suitable vehicle type for specific routes in terms of energy efficiency and battery life.
Keywords: Electric vehicles, State of Charge (SOC), State of Health (SOH), GPS-based driving data, Driving profile analysis.

Özet
Elektrikli araçlarda batarya, toplam araç maliyetinin önemli bir bölümünü oluşturan ve aynı zamanda araç performansını doğrudan belirleyen temel enerji depolama bileşenidir. Bu nedenle batarya yönetim sistemlerinin etkinliği, bataryanın Şarj Durumu (State of Charge – SOC) ve Sağlık Durumu (State of Health – SOH) tahminlerinin doğruluğuna büyük ölçüde bağlıdır. Geleneksel SOC ve SOH tahmin yöntemleri çoğunlukla akım ve gerilim gibi elektriksel büyüklüklere dayanmaktadır ve bu yöntemler belirli koşullar altında başarılı sonuçlar verebilmektedir. Ancak gerçek sürüş koşullarında batarya davranışı; sürücünün kullanım alışkanlıkları, güzergâh özellikleri, yol eğimi ve trafik yoğunluğu gibi çevresel ve operasyonel faktörlerden de önemli ölçüde etkilenmektedir. Bu çalışma, GPS tabanlı sürüş verilerinin SOC ve SOH tahmin süreçlerine entegre edilerek tahmin doğruluğunun artırılmasını amaçlamaktadır. Araştırma kapsamında GPS sensörlerinden elde edilen konum, hız, ivmelenme, yol eğimi ve dur-kalk yoğunluğu gibi parametreler ile bataryaya ait akım ve gerilim verileri birlikte ve bütüncül bir yaklaşımla analiz edilmiştir. GPS konum verileri, araç sabitleri ve temel fizik kuralları kullanılarak aracın saniye bazında gerçekleştirdiği yer değiştirme için ihtiyaç duyduğu enerji

hesaplanmıştır. Bu enerji ihtiyacını karşılamak üzere bataryadan çekilmesi gereken enerji miktarı belirlenmiş ve farklı sürüş senaryoları için karşılaştırmalı değerlendirmeler yapılmıştır. Elde edilen sonuçlar, farklı güzergâhlarda araçların enerji tüketim profillerinin çıkarılmasına ve bu profiller üzerinden batarya ömrü (SOH) tahminlerinin fiziksel olarak batarya ile bağlantı gerek kalmayacak şekilde yapılmasına olanak sağlamaktadır. Ayrıca önerilen yaklaşım, seçilen bir aracın farklı rota ve sürüş koşullarındaki davranışının detaylı biçimde değerlendirilmesini ve belirli güzergâhlar için enerji verimliliği ile batarya ömrü açısından en uygun araç tipinin belirlenmesini mümkün kılmaktadır.

Anahtar kelimeler: Elektrikli araçlar, Şarj durumu (SOC), Sağlık durumu (SOH), GPS tabanlı sürüş verileri, Sürüş profili analizi.

LIBERALIZATION IN RAILROAD TRANSPORTATION: A STRATEGIC MANAGEMENT PERSPECTIVE FROM GLOBAL PRACTICES TO TURKİYE

DEMİRYOLU TAŞIMACILIĞINDA LİBERALİZASYON: KÜRESEL UYGULAMALARDAN TÜRKİYE'YE STRATEJİK YÖNETİM PERSPEKTİFİ

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ABSTRACT

The railroad transportation sector is undergoing a profound transformation with the development of other modes of transportation such as road and air. Historically regarded as a "natural monopoly," this sector has undergone liberalization movements worldwide over the past twenty years, opening up to private entrepreneurs. In the United States, Canada, Australia, the United Kingdom, and most member countries of the European Union, the share of the private sector in railroad transportation has significantly increased. Turkiye, influenced by the European Union's accession process, has accelerated its investments in railroads over the past decade and has begun to move away from its state monopoly structure. However, the current liberalization process has been limited to wagon operation and has not yet fully opened up to train operation and infrastructure operation. In the event that the relevant legislation is enacted, full liberalization of the railroad sector in Turkiye will occur (Yavuz, 2014). In the early years of the Republic in Turkiye, railroads were given importance, but from the 1950s onward, they were neglected due to the state's road-oriented policy (Yavuz, 2014). Until 1940, an average of 200 km of new lines were constructed annually, but in the following 40 years, this rate dropped to only 30 km per year (Gerçek, 1997). In this context, it is planned to separate infrastructure management from train operations. The separated model (examples: the United Kingdom, Sweden, the Netherlands, and Spain) ensures competition and improves customer service quality, while the integrated model (examples: Germany, Italy, and Austria) ensures operational safety and cooperation. Research findings indicate that vertical integrated competition should be preferred, especially in freight-heavy railroad transportation. Considering the successful experiences in North American countries, Turkiye should also pave the way for competition among vertically integrated railroads in freight transportation and prefer the market-for-competition (regulated access) model in passenger transportation. The establishment of an independent regulatory body, the increase of research and development activities, and the development of international railroad corridors are the fundamental conditions for Turkiye's success in the railroad sector. Turkiye's geographical location between Asia and Europe offers a critical advantage in achieving these goals.

Keywords: Railway Transportation, Liberalization, Competitive Strategies, Strategic Management

ÖZET

Demiryolu taşımacılığı sektörü, karayolu ve havayolu gibi diğer ulaştırma türlerinin gelişmesiyle birlikte köklü bir dönüşüm yaşamaktadır. Tarihsel olarak "doğal monopol" olarak görülen bu sektör, son yirmi yılda dünya genelinde serbestleşme hareketlerine tabi tutulmuş, özel girişimcilerin katılımına açılmıştır. Amerika Birleşik Devletleri, Kanada, Avustralya, İngiltere ve Avrupa Birliği üye ülkelerinin çoğunda özel sektörün demiryolu taşımacılığındaki payı önemli ölçüde artmıştır. Türkiye, Avrupa Birliğine uyum sürecinin etkisiyle son on yılda demiryollarına yatırımlarını hızlandırmış ve devlet tekelindeki yapısından uzaklaşmaya başlamıştır. Bununla birlikte, mevcut serbestleşme süreci henüz vagon işletmeciliği ile sınırlı kalmış olup, tren işletmeciliği ve altyapı işletmeciliğine henüz tam açılmamıştır. İlgili mevzuatın yasalaşması durumunda, Türkiye'de demiryolu sektöründe tam anlamıyla serbestleşme gerçekleşecektir (Yavuz, 2014).

Türkiye'de Cumhuriyet döneminin ilk yıllarında önem verilen demiryolları, 1950'li yıllardan itibaren karayoluna yönelik devlet politikası nedeniyle ihmal edilmiştir (Yavuz, 2014). 1940 yılına kadar yılda ortalama 200 km yeni hat yapılırken, sonraki 40 yıl boyunca bu oran yılda sadece 30 km'ye düşmüştür (Gerçek, 1997.

Bu çerçevede altyapı işletmeciliği ile tren işletmeciliğinin ayrılması planlanmıştır. Ayrışık model (Birleşik Krallık, İsveç, Hollanda, İspanya örneği) rekabetin sağlanmasını ve müşteri hizmet kalitesinin artmasını sağlarken, bütünleşik model (Almanya, İtalya, Avusturya örneği) işletme güvenliği ve işbirliğini sağlamaktadır. Araştırma bulguları, özellikle yük-ağırlıklı demiryolu taşımacılığında dikey entegre rekabetin tercih edilmesi gerektiğini göstermektedir. Kuzey Amerika ülkelerindeki başarılı deneyimler dikkate alındığında, Türkiye'nin de yük taşımacılığında dikey entegre demiryolları arasındaki rekabetin önünü açması, yolcu taşımacılığında ise pazar-için rekabet (denetimli erişim) modelini tercih etmesi gerekmektedir. Bağımsız bir düzenleme kurumunun oluşturulması, araştırma-geliştirme faaliyetlerinin artırılması ve uluslararası demiryolu koridorlarının geliştirilmesi, Türkiye'nin demiryolu sektöründe başarısının temel koşullarıdır. Türkiye'nin Asya-Avrupa arasındaki coğrafi konumu, bu amaçların gerçekleştirilmesinde kritik bir avantaj sunmaktadır.
Anahat Kelimeler: Demiryolu Taşımacılığı, Liberalizasyon, Rekabet Stratejileri, Stratejik Yönetim

INVESTIGATION OF POST DISASTER SPATIAL CHANGE BY IMAGE EVALUATION AND SEMANTIC DIFFERENTITATION METHODS

YEŞİL TEDARİK ZİNCİRİ YÖNETİMİNDE KURUMSAL İTTİFAKLAR: İMALAT FİRMALARININ SÜRDÜRÜLEBİLİR DÖNÜŞÜMÜ

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ABSTRACT
The increasing production of waste and consumer awareness are creating strong pressures that will force businesses to develop environmental management strategies. This study examines the closed-loop supply chain (CLSC) concept, particularly the strategic partnerships between manufacturing businesses and environmental organizations. The research conducted by Kumar and Malegeant (2006) analyzes two successful real-world applications, such as Nike's Reuse-A-Shoe program and the Throwplace.com platform. The findings show that partnering with environmental organizations in the product collection process creates more value than businesses creating their own collection network. Such a partnership reduces investment costs for companies and helps them create a green image, supports them in focusing on their core business, and enables them to position themselves as carriers of environmental responsibility. These findings indicate that the closed-loop supply chain is no longer a choice but a mandatory strategy to gain a competitive advantage.
Keywords: Closed-loop supply chain, recycling logistics, collection, environmental organizations, strategic partnership, industrial ecology, life cycle management

ÖZET
Artan atık üretimi ve tüketici bilinçlenişi, işletmeleri çevre yönetimi stratejileri geliştirmeye zorlayacak kadar güçlü baskılar oluşturmaktadır. Bu çalışma, kapalı döngü tedarik zinciri (KDTZ) konseptini, özellikle de imalat işletmeleri ile çevre kuruluşları arasındaki stratejik ortaklıkları incelemektedir. Kumar ve Malegeant (2006) tarafından yapılan araştırma, Nike'ın Reuse-A-Shoe programı ve Throwplace.com platformu gibi iki başarılı gerçek dünya uygulamasını analiz etmektedir. Bulgular göstermektedir ki, ürün toplama sürecinde çevre kuruluşları ile ortaklık kurmak, işletmelerin kendi toplama ağını oluşturmaktan daha fazla değer yaratmaktadır. Böyle bir ortaklık, şirketlerin yatırım maliyetlerini azaltırken aynı zamanda yeşil imaj oluşturmasını sağlamakta, temel işine yoğunlaşmasını desteklemekte ve çevresel sorumluluk taşıyıcısı olarak konumlanmasını mümkün kılmaktadır. Bu bulgular, kapalı döngü tedarik zincirinin artık bir seçim değil, rekabetçi avantaj elde etmek için zorunlu bir strateji haline geldiğini göstermektedir.
Anahtar Kelimeler: Kapalı döngü tedarik zinciri, geri dönüşüm lojistiği, toplama, çevre kuruluşları, stratejik ortaklık, endüstriyel ekoloji, yaşam döngü yönetimi

AKSİYAL SPONDİLOARTRİTLİ (AXSPA) HASTALARDA STABİLİZASYON EGZERSİZLERİNİ İÇEREN RANDOMİZE KONROLLÜ ÇALIŞMALARIN CONSORT JADAD PEDRO VE CERT KRİTERLERİNE GÖRE METODOLOJİK VE RAPORLAMA KALİTESİNİN DEĞERLENDİRİLMESİ

EVALUATION OF METHODOLOGICAL AND REPORTING QUALITY OF RANDOMIZED CONTROLLED TRIALS INCLUDING STABILIZATION EXERCISES IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS ACCORDING TO CONSORT, JADAD, PEDRO AND CERT CRITERIA STABILIZATION EXERCISES IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS ACCORDING TO CONSORT, JADAD, PEDRO AND CERT CRITERIA

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Abstract
Axial spondyloarthritis (axSpA), classified into radiographic and non-radiographic subtypes, is a chronic inflammatory disease primarily affecting the axial spine and sacroiliac joints. Recent studies highlight the importance of stabilization exercises due to balance and postural stability impairments. In heterogeneous conditions such as axSpA and ankylosing spondylitis (AS), methodological rigor and proper reporting are essential, as factors like blinding and randomization directly influence study outcomes. To evaluate the methodological and reporting quality of randomized controlled trials (RCTs) involving stabilization exercises in axSpA and AS according to CONSORT, PEDro, JADAD, and CERT criteria.This study was designed as a methodological quality assessment of RCTs. Included studies were evaluated using JADAD, PEDro, CERT, and nine predefined criteria from the CONSORT 2010 guideline.Mean JADAD and PEDro scores were 2.87±0.35 and 5.62±1.30, respectively, indicating moderate to moderate-high methodological quality. According to CERT, only one study (67.2%) showed moderate reporting quality, while the remaining seven demonstrated low reporting levels. The mean CONSORT score was 6.37±1.06, with half of the studies classified as high and the other half as moderate quality.RCTs involving stabilization exercises in axSpA and AS generally show moderate to high methodological quality; however, reporting of exercise interventions remains insufficient and heterogeneous. Future RCTs should adopt more detailed reporting approaches.
Keywords: Axial Spondyloarthritis, Stabilization Exercises, Randomized Controlled Trials

Özet
Radyografik ve non-radyografik olmak üzere iki alt tipe ayrılan aksiyal spondiloartrit (axSpA); primer olarak aksiyal vertebra ve sakroiliak eklem tutulumuyla karakterize kronik inflamatuar bir hastalıktır. Son zamanlarda yayınlanan çalışmalarda, axSpA hastalarında denge ve postural stabilite bozuklukları nedeniyle stabilite egzersizlerinin rehabilitasyona entegre edilmesinin önemi vurgulanmaktadır. Bu nedenle axSpA ve AS gibi heterojen klinik özellikleri olan hastalıklarda körleme, randomizasyon süreci gibi unsurlar çalışmaların sonuçlarını doğrudan etkilediği için raporlama ve kalite değerlendirme araçlarının kullanımını gerekli kılmaktadır. Bu çalışmada CONSORT, PEDro, JADAD ve CERT kriterlerine göre; axSpA ve AS hastalarında stabilizasyon egzersizlerini içeren randomize kontrollü çalışmaların (RKÇ) metodolojik ve raporlama kalitesinin değerlendirilmesi amaçlanmıştır. Bu çalışma RKÇ'leri içeren bir metodolojik kalite değerlendirmesi olarak planlanmıştır. Dahil edilen çalışmalar; Oxford Kalite Puanlama Sistemi (JADAD), Fizyoterapi Kanıt Veritabanı (PEDro), Egzersiz Raporlaması için Uzlaşı Şablonu (CERT) ve Konsolidasyonlu Raporlama Standartları (CONSORT) 2010 kılavuzunda belirtilen dokuz tanımlanmış kriter ile değerlendirilmiştir.

Dahil edilen RKÇ'lerin metodolojik kalitesi tanımlayıcı istatistikler kullanılarak değerlendirilmiştir. JADAD puanları ortalama 2,87±0,35 ve PEDro puanları ortalama 5,62±1,30 standart sapma olarak hesaplanmış; çalışmaların genel olarak orta ile orta-yüksek düzeyde metodolojik kalitede olduğu görülmüştür. CERT kriterlerine göre yalnızca bir çalışmanın (%67,2) orta düzeyde raporlandığı, diğer yedi çalışmanın egzersiz müdahalesi raporlama düzeyinin ise düşük olduğu görülmüştür. CONSORT 2010 kılavuzuna göre yapılan değerlendirmede ise ortalama 6,37±1,06 standart sapma olarak hesaplanmıştır. Çalışmaların yarısının yüksek, diğer yarısının ise orta metodolojik kalite düzeyinde olduğu görülmüştür. Bu çalışmadan elde edilen bulgular, axSpA ve AS hastalarında stabilizasyon egzersizlerini içeren RKÇ'lerin genel olarak orta-yüksek metodolojik kalitede olduğunu göstermiştir. Ancak egzersiz müdahalesi raporlama düzeyinin yetersiz ve heterojen olduğu tespit edilmiştir. Bu nedenle gelecekte yapılacak RKÇ'lerde egzersiz müdahalelerinin ayrıntılı raporlanmasına yönelik yaklaşımın benimsenmesi önerilmektedir.

Anahtar kelimeler: Aksiyal Spondiloartrit, Stabilizasyon Egzersizleri, Randomize Kontrollü Çalışmalar

JUVENİL İDİOPATİK ARTRİTLİ BİREYLERDE TELEREHABİLİTASYON MÜDAHALELERİNİN RANDOMİZE KONTROLLÜ ÇALIŞMALARDA METODOLOJİK KALİTESİ: CONSORT, JADAD VE PEDRO KRİTERLERİNE DAYALI DEĞERLENDİRME

METHODOLOGICAL QUALITY OF TELEREHABILITATION INTERVENTIONS IN RANDOMIZED CONTROLLED TRIALS INVOLVING INDIVIDUALS WITH JUVENILE IDIOPATHIC ARTHRITIS: AN EVALUATION BASED ON CONSORT, JADAD AND PEDRO CRITERIA

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Abstract
Juvenile Idiopathic Arthritis (JIA) is the most common rheumatologic disease in the pediatric population, with an etiology that remains unclear. Currently, telerehabilitation is one of the innovative approaches that improves access to treatment for JIA in situations where access to face-to-face rehabilitation is limited. Despite these promising findings, the limited amount of available data necessitates an evaluation of the validity of these results in terms of methodological quality. The aim of this study was to evaluate the reporting and methodological quality of randomised controlled trials (RCT) investigating telerehabilitation interventions in patients with JIA, using Consolidated Standards of Reporting Trials (CONSORT) guideline, JADAD Quality Assessment Scale and Physiotherapy Evidence Database (PEDro) criteria, given the limited number of available RCTs in the literature. RCTs involving telerehabilitation interventions in patients with JIA were systematically reviewed between 2017 and 2025, and 7 RCTs were included in the analysis. The reporting quality of the included studies was assessed based on CONSORT criteria, while methodological quality was evaluated using the JADAD and PEDro scales. According to the evaluation of the seven included RCTs based on CONSORT, the mean score was calculated as 7.85 ± 1.46 and the methodological quality was considered high. The mean JADAD score was 2.71 ± 0.48, indicating an overall moderate-to-low methodological quality. In the PEDro assessment, the mean score was 6.28 ± 1.7, corresponding to good methodological quality. The methodological quality of RCTs investigating telerehabilitation interventions in individuals with JIA was generally found to be moderate to good. Therefore, future RCTs involving telerehabilitation interventions in JIA should prioritize strengthening blinding procedures and reporting long-term follow-up outcomes.
Keywords: Telerehabilitation, Juvenile Idiopathic Arthritis, Randomised Controlled Trial

Özet
Juvenil İdiopatik Artrit (JIA), pediatrik grupta en sık görülen ve etiyolojisi net olarak bilinmeyen romatolojik bir hastalıktır. Güncel olarak telerehabilitasyon, yüz yüze rehabilitasyona erişimin kısıtlandığı durumlarda JIA'da tedaviye erişimi artıran yenilikçi yaklaşımlardan biridir. Elde edilen olumlu bulgulara rağmen telerehabilitasyonun JIA tedavisine ilişkin mevcut verilerin sınırlı olması, bu sonuçların geçerliliğinin metodolojik kalite açısından değerlendirilmesini gerektirmektedir. Bu çalışmanın amacı, JIA'lı hastalarda telerehabilitasyon müdahalelerinin literatürde sınırlı sayıda randomize kontrollü çalışmaya (RKÇ) konu olması nedeniyle, yapılan çalışmalardaki metodolojik ve raporlama kalitesini Konsolidasyonlu Raporlama Standartları (CONSORT) Kılavuzu, JADAD Kalite Değerlendirme ve Fizyoterapi Kanıt Veritabanı Ölçeği (PEDro) kriterleri doğrultusunda değerlendirmektir. 2017-2025 yılları arasında JIA'lı hastalarda telerehabilitasyon müdahalelerini içeren RKÇ'ler sistematik olarak tarandı. Seçim süreci sonucunda 7 RKÇ analiz edildi.

Dahil edilen çalışmaların raporlama kalitesi CONSORT temel alınarak, çalışmaların metodolojik kalitesi ise JADAD ve PEDro ölçeği kullanılarak incelendi. İncelenen 7 RKÇ'nin CONSORT kılavuzuna göre yapılan değerlendirmesinde ortalama 7,85±1,46 standart sapma olarak hesaplanmıştır ve çalışmaların metodolojik kalitesi yüksek düzeyde bulunmuştur. Çalışmaların JADAD skoru ortalama 2,71±0,48 standart sapma olup metodolojik kalite genel olarak orta-düşük düzeyde bulunmuştur. PEDro değerlendirmesinde ise çalışmaların PEDro skoru ortalama 6,28±1,7 standart sapma olarak bulunmuş ve iyi düzeyde metodolojik kalite olarak değerlendirilmiştir. JIA'lı bireylerde telerehabilitasyon müdahalelerini inceleyen RKÇ'lerin metodolojik kalitesi genel olarak orta-iyi düzeyde bulunmuştur. Bu nedenle gelecekte JIA'lı bireylerde yapılacak telerehabilitasyon müdahalesi içeren RKÇ'lerde özellikle körleme yönteminin güçlendirilmesi ve uzun dönem takip sonuçlarının raporlanması önerilmektedir.
Anahtar kelimeler: Telerehabilitasyon, Juvenil İdiopatik Artrit, Randomize Kontrollü Çalışma

RAP MÜZİK İCRACILARINDA KOR STABİLİZASYONU EGZERSİZLERİ İLE BİRLİKTE VERİLEN SOLUNUM EGZERSİZLERİNİN SOLUNUM FONKSİYONU, SOLUNUM KAS KUVVETİ, SES KALİTESİ, FONASYON SÜRESİ ÜZERİNE ETKİSİ

THE EFFECTS OF CORE STABILIZATION EXERCISES COMBINED WITH BREATHING EXERCISES ON RESPIRATORY FUNCTION, RESPIRATORY MUSCLE STRENGTH, VOICE QUALITY, AND PHONATION DURATION IN RAP MUSIC PERFORMERS

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Abstract
Rap music performance is a complex performance process requiring a high level of respiratory control and postural stability due to rapid articulation, rhythmic vocal transitions, and prolonged phonation durations. It is considered that core stabilization exercises and breathing exercises may positively contribute to trunk control, respiratory mechanics, and vocal performance. The aim of this study was to evaluate the effects of breathing exercises added to core stabilization exercises on postural muscle performance in individuals actively engaged in rap music performance. Twenty male individuals actively performing rap music were included in the study. Participants were divided into a study group (n=10, age: 24.40±2.07 years) and a control group (n=10, age: 24.50±2.80 years). Both groups participated in a core stabilization exercise program twice weekly for 12 weeks, while the study group additionally received breathing exercise training. Assessments were performed before and after the intervention period. The Matthias test was used to assess postural muscle performance. Pre-intervention Matthias test results demonstrated that the study and control groups revealed similar characteristics (p=0,820). Although increases in Matthias test were observed in both groups following the intervention (respectively, p=0.01, p<0.01), improvement was more pronounced in the control group (p=0.036). Furthermore, effect size analysis revealed a high level of effect in both groups (respectively, Cohen d=1.03, Cohen d= 3.69). Both core stabilization and combined exercise protocol significantly improve postural muscle performance in active rap music performers. Although the addition of breathing exercises did not create a advantage over core training alone within 12 weeks training, both approaches demonstrated high clinical effect sizes. Including structured stabilization programs into the routine of rap musicians can be recommended to support the postural endurance required for their demanding vocal performances.
Keywords: Rap music, Core stabilization, Breathing exercises, Postural control, Matthias test

Özet
Rap müzik performansı; hızlı artikülasyon, ritmik vokal geçişleri ve uzun fonasyon süreleri nedeniyle yüksek düzeyde solunum kontrolü ve postural stabilite gerektiren karmaşık bir süreçtir. Kor stabilizasyon ve solunum egzersizlerinin; gövde kontrolü, solunum mekaniği ve vokal performansa olumlu katkı sağlayabileceği düşünülmektedir. Bu çalışmanın amacı, rap müzik yapan bireylerde kor stabilizasyon egzersizlerine eklenen solunum egzersizlerinin postural kas performansı üzerindeki etkilerini değerlendirmektir. Çalışmaya aktif olarak rap müzik yapan 20 erkek birey dahil edilmiştir. Katılımcılar çalışma grubu (n=10, yaş: 24.40±2.07 yıl) ve kontrol grubu (n=10, yaş: 24.50±2.80 yıl) olarak ikiye ayrılmıştır. Her iki grup da 12 hafta boyunca haftada iki kez kor stabilizasyon egzersiz programına katılırken, çalışma grubuna ek olarak solunum egzersizi eğitimi verilmiştir. Değerlendirmeler müdahale dönemi öncesi ve sonrasında gerçekleştirilmiştir. Postural kas performansını değerlendirmek için Matthias testi kullanılmıştır.

Müdahale öncesi Matthias testi sonuçları, çalışma ve kontrol gruplarının benzer özelliklere sahip olduğunu göstermiştir (p=0.820).
Müdahale sonrasında her iki grupta da Matthias testi skorlarında artış gözlenmesine rağmen (sırasıyla p=0.01, p<0.01), iyileşmenin kontrol grubunda daha belirgin olduğu saptanmıştır (p=0.036). Ayrıca etki büyüklüğü analizi, her iki grupta da yüksek düzeyde bir etki göstermiştir (sırasıyla Cohen d=1.03, Cohen d=3.69). Hem kor stabilizasyon hem de kombine egzersiz protokolleri, aktif rap müzisyenlerinde postural kas performansını anlamlı derecede artırmaktadır. 12 haftalık eğitim sürecinde solunum egzersizlerinin eklenmesi, tek başına kor eğitimine kıyasla ekstra bir avantaj yaratmamış olsa da her iki yaklaşım da yüksek klinik etki büyüklüğü sergilemiştir. Rap müzisyenlerinin rutinlerine yapılandırılmış stabilizasyon programlarının dahil edilmesi, zorlu vokal performansları için gerekli olan postural dayanıklılığı desteklemek adına önerilebilir.
Anahtar Kelimeler: Rap müzik, kor stabilizasyon, solunum egzersizleri, postüral kontrol, Matthias testi.

KADINLARIN SPOR KOMPLEKSLERİNDEKİ REKREATİF ETKİNLİKLERE KATILIM MOTİVASYONLARININ VE ENGELLERİNİN İNCELENMESİ

EXAMINATION OF WOMEN'S MOTIVATIONS AND CONSTRAINTS TO PARTICIPATION IN RECREATIONAL ACTIVITIES IN SPORTS COMPLEXES

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Abstract
The aim of this study is to examine in depth the motivations and leisure constraints of women participating in recreational activities in sports complexes. Designed with a qualitative research method, the study conducted semi-structured interviews with 22 female participants who live in Gaziantep province and actively use sports facilities, selected using the purposive sampling method. The obtained data were analyzed using deductive content analysis and categorized into themes. The research findings indicate that the majority of the participants are between 30-44 years old, married, and hold a bachelor's degree. It was determined that the primary motivational sources directing women to these recreational activities are based on intrinsic factors such as maintaining health, relieving stress, socializing, acquiring new skills, and escaping from routine life. However, it was found that issues such as childcare problems, endless housework, irregular working hours of spouses, and economic limitations are the most prominent structural and interpersonal constraints that complicate women's participation in sports. Participants stated that providing childcare support (daycare) within sports facilities, offering budget-friendly activities, and creating ease of transportation would directly increase their participation in physical activities. In conclusion, although women have high intrinsic motivation, it is observed that this is suppressed by sociocultural and structural constraints. In this context, it is recommended that facility managers and policymakers go beyond merely providing physical space and develop accessible and inclusive social policies that meet the expectations of women.
Keywords: Women, recreation, motivation, leisure constraints.

Özet
Bu çalışmanın amacı, spor komplekslerindeki rekreatif etkinliklere katılan kadınların motivasyonlarını ve karşılaştıkları serbest zaman engellerini derinlemesine incelemektir. Nitel araştırma yöntemiyle tasarlanan çalışmada, amaçlı örnekleme yöntemi kullanılarak Gaziantep ilinde yaşayan ve spor tesislerinden aktif olarak faydalanan 22 kadın katılımcıyla yarı yapılandırılmış mülakatlar gerçekleştirilmiştir. Elde edilen veriler, tümdengelimci içerik analizi yöntemiyle çözümlenerek temalara ayrılmıştır. Araştırma bulguları, katılımcıların çoğunluğunun 30-44 yaş aralığında, evli ve lisans mezunu olduğunu göstermektedir. Kadınları bu rekreatif etkinliklere yönelten temel motivasyon kaynaklarının; sağlığı koruma, stresten arınma, sosyalleşme, yeni beceriler edinme ve rutin hayattan uzaklaşma gibi içsel faktörlere dayandığı saptanmıştır. Bununla birlikte; çocuk bakımı sorunu, bitmeyen ev işleri, eşin düzensiz çalışma saatleri ve ekonomik kısıtlılıklar gibi unsurların, kadınların spora katılımını zorlaştıran en belirgin yapısal ve kişilerarası engeller olduğu tespit edilmiştir. Katılımcılar, spor tesisleri bünyesinde çocuk bakım desteği (kreş) sağlanmasının, sunulan etkinliklerin bütçe dostu olmasının ve ulaşım kolaylığı yaratılmasının fiziksel aktivitelere katılımlarını doğrudan artıracağını ifade etmişlerdir. Sonuç olarak, kadınların yüksek bir içsel motivasyona sahip olmalarına rağmen bu durumun sosyokültürel ve yapısal engellerle baskılandığı görülmektedir. Bu bağlamda, tesis

yöneticilerinin ve politika yapıcıların salt mekân sağlamanın ötesine geçerek, kadınların beklentilerine uygun, erişilebilir ve kapsayıcı sosyal politikalar geliştirmesi önerilmektedir.

Anahtar Kelimeler: Kadın, rekreasyon, motivasyon, serbest zaman engelleri.

AKUT ANAEROBİK YORGUNLUĞUN BİLİŞSEL PERFORMANS ÜZERİNDEKİ ETKİSİ: SPORCU VE SEDANTER ERKEKLERİN KARŞILAŞTIRILMASI

THE EFFECT OF ACUTE ANAEROBIC FATIGUE ON COGNITIVE PERFORMANCE: A COMPARISON OF ATHLETIC AND SEDENTARY MEN

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Abstract
This study aimed to comparatively examine the effect of acute anaerobic fatigue on cognitive performance in athletic and sedentary men. Forty voluntary male participants aged 18–25 years were included in the study. Participants were divided into two main groups: an experimental group and a control group, with each group consisting of 10 athletes and 10 sedentary individuals. Athletes were defined as individuals with at least 4 years of regular training experience and who trained at least 3 days per week, whereas sedentary participants were individuals who had not engaged in regular physical exercise during the previous 6 months. To induce acute anaerobic fatigue, the experimental group performed a 30-second Wingate Anaerobic Power Test, while the control group underwent passive rest for an equivalent duration. Cognitive performance was assessed before and after the intervention using a computer-based Stroop test. In the experimental group, Wingate performance, heart rate responses, and perceived exertion using the Borg CR-10 scale were also recorded. Data were analyzed using the Wilcoxon signed-rank test and the Mann–Whitney U test.Within-group comparisons showed that Stroop task reaction time significantly decreased from pre-test to post-test in the athletes in the experimental group ($p=0.022$; $r=0.725$). In the athletes in the control group, a significant decrease was observed in word reading reaction time ($p=0.007$; $r=0.854$). However, no significant differences were found between the experimental and control groups in Stroop test pre-test, post-test, or post–pre difference values ($p>0.05$). Similarly, no significant differences were observed between athletic and sedentary individuals in cognitive performance variables ($p>0.05$). Regarding Wingate variables, relative peak power and relative average power values were significantly higher in athletes than in sedentary individuals ($p<0.05$). No significant differences were determined between groups in heart rate or Borg CR-10 values ($p>0.05$).In conclusion, limited changes in cognitive performance indicators were observed following acute anaerobic fatigue; however, these changes did not result in statistically distinct differences in between-group comparisons. The findings suggest that the effect of acute anaerobic loading on Stroop test performance may be limited in athletic and sedentary men.
Keywords: Anaerobic Fatigue, Wingate Test, Stroop Test, Cognitive Performance

Özet
Bu çalışma, akut anaerobik yorgunluğun bilişsel performans üzerindeki etkisini sporcu ve sedanter erkek bireylerde karşılaştırmalı olarak incelemek amacıyla yürütülmüştür. Araştırmaya 18–25 yaş aralığında 40 gönüllü erkek katılımcı dahil edilmiştir. Katılımcılar deney ve kontrol grubu olmak üzere iki ana gruba ayrılmış; her grupta 10 sporcu ve 10 sedanter birey yer almıştır. Sporcu katılımcılar en az 4 yıllık düzenli antrenman geçmişine sahip olan ve haftada en az 3 gün antrenman yapan bireylerden, sedanter katılımcılar ise son 6 ay içerisinde düzenli fiziksel egzersiz yapmayan bireylerden oluşturulmuştur. Deney grubuna akut anaerobik yorgunluk oluşturmak amacıyla 30 saniyelik Wingate Anaerobik Güç Testi uygulanmış, kontrol grubu ise eşdeğer süre boyunca pasif dinlenmeye alınmıştır. Bilişsel performans, uygulama öncesinde ve sonrasında bilgisayar tabanlı Stroop testi ile değerlendirilmiştir. Deney grubunda ayrıca Wingate performansı, kalp atım hızı ve Borg CR-10 algılanan zorlanma düzeyi kaydedilmiştir. Verilerin analizinde Wilcoxon işaretli sıralar testi ve Mann–Whitney U testi kullanılmıştır.Grup içi karşılaştırmalarda, deney grubundaki sporcularda Stroop görevi tepki süresinin son testte ön teste göre anlamlı düzeyde azaldığı belirlenmiştir ($p=0,022$; $r=0,725$). Kontrol grubundaki sporcularda ise kelime okuma tepki süresinde anlamlı azalma saptanmıştır ($p=0,007$; $r=0,854$). Buna karşın, Stroop testi ön test, son test ve son–ön fark değerleri açısından deney ve kontrol grupları arasında

anlamlı fark bulunmamıştır (p>0,05). Benzer şekilde, sporcu ve sedanter bireyler arasında bilişsel performans değişkenleri açısından anlamlı fark saptanmamıştır (p>0,05). Wingate değişkenlerinde sporcuların rölatif zirve güç ve rölatif ortalama güç değerleri sedanterlere göre anlamlı düzeyde daha yüksek bulunmuştur (p<0,05). Kalp atım hızı ve Borg CR-10 değerlerinde gruplar arasında anlamlı fark belirlenmemiştir (p>0,05).Sonuç olarak, bu çalışma kapsamında akut anaerobik yorgunluk sonrasında bilişsel performans göstergelerinde sınırlı düzeyde değişimler gözlenmiş, ancak bu değişimler gruplar arası karşılaştırmalarda istatistiksel olarak belirgin bir farklılık oluşturmamıştır. Elde edilen bulgular, sporcu ve sedanter erkek bireylerde akut anaerobik yüklenmenin Stroop testi performansı üzerindeki etkisinin sınırlı olabileceğini göstermektedir.

Anahtar Kelimeler: Anaerobik Yorgunluk, Wingate Testi, Stroop Testi, Bilişsel Performans

SPOR HUKUKU FARKINDALIK ÖLÇEĞİ: GEÇERLİ VE GÜVENİLİR BİR ÖLÇME ARACININ GELİŞTİRİLMESİ

DEVELOPMENT OF A VALİD AND RELİABLE SPORTS LAW AWARENESS SCALE

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Özet
Spor, günümüzde yalnızca fiziksel performans ve rekabet boyutuyla değil, aynı zamanda hukuki, etik ve yönetsel boyutlarıyla da önemli bir toplumsal alan hâline gelmiştir. Sporcuların, antrenörlerin, yöneticilerin ve sporla ilişkili diğer paydaşların hak ve yükümlülüklerini düzenleyen spor hukuku; disiplin işlemleri, sözleşmeler, doping uygulamaları, şiddet ve düzensizliğin önlenmesi, sporcu hakları ve tahkim süreçleri gibi birçok konuyu kapsamaktadır. Buna karşın bireylerin spor hukukuna ilişkin farkındalık düzeylerini belirlemeye yönelik geçerli ve güvenilir ölçme araçlarının sınırlı olduğu görülmektedir.
Bu araştırmanın amacı, spor hukuku farkındalığını ölçmeye yönelik geçerli ve güvenilir bir ölçek geliştirmektir. Araştırma, nicel araştırma yöntemlerinden ölçek geliştirme desenine göre yürütülecektir. İlk aşamada ilgili literatür taranarak kapsamlı bir madde havuzu oluşturulacak, ardından spor hukuku ve ölçme-değerlendirme alanında uzman görüşlerine başvurularak kapsam geçerliliği sağlanacaktır. Pilot uygulama sonrasında elde edilen veriler üzerinde madde analizleri gerçekleştirilecek; ölçeğin yapı geçerliliğini belirlemek amacıyla Açımlayıcı Faktör Analizi (AFA) ve Doğrulayıcı Faktör Analizi (DFA) uygulanacaktır. Ölçeğin güvenirliği Cronbach Alfa iç tutarlılık katsayısı ve ilgili güvenirlik analizleri ile değerlendirilecektir.
Araştırma sonucunda geliştirilecek ölçeğin, spor bilimleri öğrencilerinin ve spor paydaşlarının spor hukuku farkındalık düzeylerini belirlemede kullanılabilecek geçerli ve güvenilir bir ölçme aracı olması beklenmektedir. Ayrıca ölçeğin spor hukuku eğitimlerinin planlanması, eğitim ihtiyaçlarının belirlenmesi ve ilgili akademik çalışmalara katkı sağlaması öngörülmektedir.
Anahtar Kelimeler: Spor hukuku, farkındalık, ölçek geliştirme, geçerlik, güvenirlik, spor bilimleri.

Abstract
Sport has become an important social field not only in terms of physical performance and competition but also through its legal, ethical, and managerial dimensions. Sports law, which regulates the rights and obligations of athletes, coaches, managers, and other stakeholders in sport, encompasses a wide range of issues including disciplinary procedures, contracts, doping practices, the prevention of violence and disorder, athletes' rights, and arbitration processes. Given the increasing importance of sports law, determining individuals' levels of knowledge and awareness in this field has become a significant issue. However, a review of the literature reveals a limited number of valid and reliable measurement tools designed to comprehensively assess awareness of sports law.
The aim of this study is to develop a valid and reliable scale for measuring sports law awareness. The research will be conducted using a scale development design within the framework of quantitative research methods. In the first stage, a comprehensive item pool will be generated through an extensive review of national and international literature. Subsequently, expert opinions from the fields of sports law and educational measurement and evaluation will be sought to establish content validity. Following a pilot study, item analyses will be performed, and Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) will be conducted to examine the construct validity of the scale. The reliability of the instrument will be evaluated through Cronbach's Alpha coefficient and additional reliability analyses.
The scale developed through this research is expected to serve as a valid and reliable instrument for assessing the level of sports law awareness among students of sports sciences and other stakeholders in the field of sport. Furthermore, the scale is anticipated to contribute to the development of sports law education programs, the identification of educational needs, and future scientific research in this area.

In this respect, the study aims to provide an original contribution to the measurement and evaluation literature within the field of sports law.

Keywords: Sports law, awareness, scale development, validity, reliability, sports sciences.

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EDEBÎ METİNLERE PSİKOLOJİK YAKLAŞIM: FAİK REŞAT'IN *NETÎCE-İ SEFÂLET* ESERİ

A PSYCHOLOGICAL APPROACH TO LITERARY TEXTS: FAIK REŞAT'IN NETÎCE-I SEFÂLET

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Abstract

In the transition period of Turkish literary history from the Tanzimat to the Servet-i Fünûn, Faik Reşat emerges as a figure who, as Süheylâ Yüksel emphasizes, is almost a prototype of an era. The author's life story characterized by his service in the educational ranks from the Cadastre School to the Inas High School, his official medals, and his bureaucratic precision finds its reflection in his literary life. However, in his work titled Netîce-i Sefâlet, it is observed that he contemplates a collapse of will the exact opposite of this disciplined and serious life with profound psychological depth. At this point, the methodology of a psychological approach to literary texts suggests that the work serves as a map of the dark corridors within the individual's inner world. The downfall of the protagonist, which begins with a passion for alcohol and pleasure, is susceptible to being read through the concepts of defense mechanisms and alienation in modern psychology rather than as a mere moral collapse. While describing the process of the character's loss of will, the author actually displays the crushing tension between the dignity that an Ottoman intellectual should possess and the desires of the soul. In this process, the use of space also transforms into an element supporting the character's spiritual melancholy, the dilapidated streets of Istanbul become a physical reflection of the confusion and entrapment within the character's mind. In Faik Reşat's prose, narration is shaped with the aim of guiding society beyond pursuing an aesthetic concern. However, this didactic stance has not weakened the psychological layers of the text; instead, it has added depth by creating a gap between the author's superego and the character's morbid tendencies. While the reader is invited to the right path by the author's guiding voice, they also witness the staggering psychological reality of the character's misery. Consequently, a psychological analysis conducted through the aforementioned work reveals that, alongside his identity as a bureaucrat or educator, Faik Reşat was also an observer who masterfully analyzed the vulnerabilities of the human soul and the fragility of the will. This study aims to reposition the construction of individual psychology in the literature of the Intermediate Generation specifically through the case of Faik Reşat.

Özet

Türk edebiyat tarihinin Tanzimat'tan Servet-i Fünûn'a evrildiği geçiş sürecinde Faik Reşat, Süheylâ Yüksel'in vurguladığı üzere bir devrin adeta prototipi hüviyetinde bir şahsiyettir. Müellifin hayat hikâyesi, Kadastro Mektebi'nden İnas Sultanisi'ne kadar uzanan maarif ordusundaki neferliği, aldığı resmî nişanlar ve bürokratik titizliği edebî hayatında da yansımasını bulur. *Netîce-i Sefâlet* adlı eserinde ise bu disiplinli ve ciddi yaşamın tam zıddı olan bir irade çöküşünü psikolojik bir derinlikle mütalaa ettiği görülmektedir. Bu noktada edebî metinlere psikolojik yaklaşım metodolojisi, ferdin iç dünyasındaki karanlık dehlizlerin bir haritası olduğunu imler. Eserin merkezinde yer alan kahramanın alkol ve zevk tutkusuyla başlayan yıkımı, salt bir ahlâki çöküşten ziyade modern psikolojinin savunma mekanizmaları ve yabancılaşma kavramlarıyla okunmaya müsaittir. Müellif, karakterin iradesini kaybetme sürecini tasvir ederken aslında bir Osmanlı aydınının sahip olması gereken vakar ile nefsin arzuları arasındaki o ezici gerilimi sergilemektedir. Bu süreçte mekân kullanımı da karakterin ruhsal melankolisini destekleyen bir unsura dönüşür, İstanbul'un köhne sokakları karakterin zihnindeki karmaşanın ve hapsolmuşluğun fiziki bir izdüşümü haline gelir. Faik Reşat'ın kaleminde tahkiye, estetik bir kaygı gütmenin ötesinde topluma rehberlik etme gayesiyle şekillenir. Ancak bu didaktik tutum, metnin psikolojik katmanlarını zayıflatmamıştır. Yazarın süperegosu ile karakterin marazi eğilimleri arasında boşluk yaratarak metne derinlik katmıştır. Okur, yazarın rehberlik eden sesiyle doğru yola davet edilirken karakterin sefaletindeki psikolojik gerçekliğin sarsıcılığına da şahitlik eder.

Netice itibarıyla, mezkûr eser üzerinden yapılacak psikolojik bir çözümleme, Faik Reşat'ın bir bürokrat veya eğitimci yanıyla birlikte, insan ruhunun zafiyetlerini ve iradenin kırılganlığını ustalıkla tahlil eden bir gözlemci olduğunu da ortaya koyar. Bu çalışma, Ara Nesil edebiyatındaki fert psikolojisinin inşasını Faik Reşat özelinde yeniden konumlandırmayı hedeflemektedir.

Anahtar kelimeler: Netice-i Sefalet, Faik Reşad, Psikanaliz, anlatı, psikolojik yaklaşım.

MUHAMMED İBN YÛSUF'UN KİTÂB-I MESCİD-İ AKSÂ ADLI ESERİNDEKİ TASAVVUFİ TERİMLER ÜZERİNE BİR DEĞERLENDİRME

AN EVALUATION OF SUFI TERMINOLOGY IN MUHAMMAD IBN YUSUF'S WORK TITLED KITAB-I MASJID AL-AQSA

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ÖZET

Toplumun sahip olduğu kültür, gelenek, sosyal yapının nesiller boyunca aktarımında, yazıldıkları dönemin panaroması niteliğinde olan nasihatnâmeler ve menâkıbnâmeler önemli rol üstlenmektedirler. Peygamber veya velî menkıbelerinde tasavvufî anlayış, yaşayış ve düşünce yapıları ile ilgili bilgilerin yanında tasavvufî kavram ve konularla ilgili olarak sûfîlerin görüşleri de yer almaktadır. Tarîkatların ortaya çıkmasıyla birlikte nasihatnâme ile menâkıbnâmelerde artış olduğu tespit edilmektedir. Bu mirasın, ilmî bir bilinçle incelenmesi, değerlendirilmesi ve analiz edilmesi önem arz etmektedir. *Vahdet-i vücûd* anlayışının tasavvuf sürecine evrilmesi ve sonraki zamanlarda bazı sûfîlerin kendi meşrep ve gönül dünyalarına uygun bir şekilde bu hareketi idrak etme ve yorumlama yönünde çalışma ve gayretleri olmuştur. Bu anlayışla ortaya konan eserlerle birlikte zaman içerisinde bazı kelimeler bu cihette kendi anlamları dışında kullanılmaya başlanarak tasavvuf ekseninde belli başlı anlamları karşılamaya başlamıştır. Gündelik anlamının dışına çıkarılan bu kelimelerin bir kısmı farklı tarikat veya tasavvuf ekolüne mensup kesimlerce farklı tanımlansa da genel olarak tasavvufi terimlere yüklenen anlamların birçoğu aynıdır. İncelediğimiz *Kitâb-ı Mescid-i Aksâ* isimli çalışma da bu tarz terimleri ihtiva eden bir eserdir. Müellifi Muhammed ibn Yûsuf olan *Kitâb-ı Mescid-i Aksâ* isimli kitap ayet, hadis, vecize ve tasavvufi terimlerle örülmüş içerisinde peygamber ve velî kıssaları yer alan dinî tasavvufi bir eserdir. Tasnifini yaptığımız terimlerin tümü manzum ve mensur kısımlarda bulunmaktadır. Orhan BALCI tarafından yayımlanan çalışmada tasavvufi terimler üzerine bir değerlendirme veya tasnif yapılmamıştır. Çalışmamızda *Kitâb-ı Mescid-i Aksâ* adlı eserde yer alan terimlerin tasnifi ve öne çıkan bazı terimlerin tanımı ve metin içerisinde nasıl kullanıldığı örnekler üzerinden tespit edilmeye çalışılmıştır.

Anahtar Sözcükler: Dinî tasavvufi Türk edebiyatı, Muhammed ibn Yûsuf, Kitâb-ı Mescid-i Aksâ, Tasavvufi terimler.

ABSTRACT

Advice literature (*nasihatnâmes*) and hagiographies (*menâqibnâmes*) have played a crucial role in transmitting culture, tradition, and social structures across generations, serving as panoramas of the periods in which they were composed. In narratives concerning prophets or saints, one finds not only information about mystical thought, practice, and worldview, but also the opinions of Sufis regarding mystical concepts and themes. With the emergence of Sufi orders (*tarīqats*), a notable increase in the production of advice literature and hagiographies can be observed. It is of great importance to examine, evaluate, and analyze this legacy with scholarly awareness. The doctrine of *wahdat al-wujûd* (unity of being) evolved within the process of Sufism, and in later periods certain Sufis endeavored to comprehend and interpret this movement in ways suited to their own dispositions and spiritual sensibilities. Through works produced in this vein, over time certain words came to be employed beyond their everyday meanings, acquiring specialized connotations within the Sufi framework. Although some of these terms were defined differently by adherents of various orders or schools of thought, the majority of the meanings attributed to Sufi terminology remained largely consistent. The work under examination, *Kitâb al-Masjid al-Aqsâ*, is one such text that contains these terms. Authored by Muhammad ibn Yûsuf, the book is a religious and mystical composition interwoven with Qurʾânic verses, hadīths, aphorisms, and Sufi terminology, enriched with narratives of prophets and saints. The terms classified in our study are found throughout both the prose and verse sections of the work. In the edition published by Orhan BALCI, no evaluation or classification of the Sufi terminology was undertaken.

In our study, however, an attempt has been made to classify the terms present in *Kitâb al-Masjid al-Aqsâ* and to identify, through textual examples, the definitions and contextual usage of certain prominent terms.

Keywords: Religious and mystical Turkish literature, Muhammed ibn Yûsuf, Kitâb-ı Mescid-i Aksâ, Sufi terminology.

MUHAMMED İBN YÛSUF'UN KİTÂB-I MESCİD-İ AKSÂ ADLI ESERİNDEKİ VECİZELER ÜZERİNE BİR DEĞERLENDİRME

AN EVALUATION OF THE APHORISMS IN MUHAMMAD IBN YUSUF'S WORK TITLED KITAB-I MASJID AL-AQSA

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ÖZET
Vecize, bir duygu veya düşünceyi, bir ilkeyi mümkün olduğu kadar kısa, öz ve kesin bir biçimde anlatan bilgece ifadelerdir. Vecizeler, yaşanan olaylara ve yapılan keskin gözlemlere dayanılarak oluşmuş, Türk edebiyatında bilhassa 13. yüzyıldan sonra giderek geniş bir yer tutmaya başlamıştır. Türk İslam edebiyatı dairesi içinde vecizeleri içine alan birçok derleme eser meydana getirilmiştir. Parça parça kaydedilen özlü sözlerin yer aldığı kitaplar kendilerinden sonra bu minvalde yazılan eserler için başvuru kaynağı olma görevini üstlenmişlerdir. Bu çalışmada üzerinde durulacak olan eser de bu türden veciz ifadeleri içine alan manzum-mensur bir eserdir. Müellifi Muhammed ibn Yûsuf olan *Kitâb-ı Mescid-i Aksâ* isimli kitap ayet, hadis ve vecizelerle örülmüş içerisinde peygamber ve velî kıssaları yer alan dinî tasavvufi bir eserdir. Tasnifini yaptığımız vecizelerin tümü mensur kısımlarda bulunmaktadır. Orhan BALCI tarafından yayımlanan çalışmada vecizelerin tercümeleri dipnot olarak verilmiş fakat üzerlerine bir değerlendirme veya tasnif yapılmamıştır. Çalışmamızda *Kitâb-ı Mescid-i Aksâ* adlı eserde yer alan vecizelerin içeriği üzerine bir değerlendirme yapılmaya çalışılmıştır.
Anahtar Sözcükler: Dinî tasavvufi Türk edebiyatı, Muhammed ibn Yûsuf, Kitâb-ı Mescid-i Aksâ, Vecize.

ABSTRACT
An aphorism (*vecize*) is a wise expression that conveys a feeling, thought, or principle in the shortest, most concise, and definitive form possible. Aphorisms, formed through lived experiences and sharp observations, began to occupy an increasingly prominent place in Turkish literature, particularly after the thirteenth century. Within the sphere of Turkish-Islamic literature, numerous compilations were produced that incorporated aphorisms. These collections of succinct sayings, recorded piecemeal, subsequently served as reference sources for later works composed in a similar vein. The present study focuses on a work of this type, which contains both prose and verse and incorporates aphoristic expressions. The book entitled *Kitāb al-Masjid al-Aqṣā*, authored by Muḥammad ibn Yūsuf, is a religious and mystical text interwoven with Qurʾānic verses, ḥadīths, and aphorisms, and enriched with narratives of prophets and saints. The aphorisms classified in this study are all located within the prose sections of the work. In the edition published by Orhan BALCI, translations of the aphorisms were provided in footnotes; however, no evaluation or classification was undertaken. In our study, an attempt has been made to assess the content of the aphorisms contained in *Kitāb al-Masjid al-Aqṣā*.
Keywords: Religious and mystical Turkish literature, Muhammed ibn Yûsuf, Kitâb-ı Mescid-i Aksâ, Adage.

ABDULHALÛK UYGUR'UN ŞİİRLERİNDE SIFATLAR
ADJECTIVES IN ABDULHALUK UYGUR'S POEMS

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Abstract
This study aims to examine the adjectives in the poems of Abdulhalûk Uygur, one of the pioneering figures of Modern Uyghur literature, in terms of their structure, types, and usage characteristics. Adjectives, as one of the fundamental descriptive elements of language, are not only linguistic units that define entities and concepts, but also important components that shape the semantic organization, discourse structure, and stylistic features of a text. Therefore, the use of adjectives provides significant data for revealing poets' linguistic choices and poetic worlds. The main purpose of this study is to identify the structural and functional characteristics of adjectives used in Abdulhalûk Uygur's poems, to reveal their distribution in poetic language, and to evaluate their relationship with the poet's style.
The research was conducted using a qualitative research design and document analysis method. The data set consists of Abdulhalûk Uygur's poems. The adjectives identified in the poems were classified according to their structure as simple, derived, compound, and phrase-based adjectives. In addition, the adjectives were analysed in terms of function as qualifying and determining adjectives; determining adjectives were further examined within the categories of demonstrative, numeral, interrogative, and indefinite adjectives.
The analysis revealed that a total of 1071 adjectives were used in the poems. It was found that a significant portion of these adjectives are simple in structure, while derived and compound forms are relatively limited. The predominance of Turkish-origin elements among the adjectives indicates that the poet adopts a clear and colloquial style close to the spoken language of the people. Qualifying adjectives were found to enhance descriptive power in the poems, whereas determining adjectives play a role in directing discourse and clarifying meaning. It was also observed that adjectives are not used solely for descriptive purposes but also play an active role in conveying the poet's individual and social ideas.
In conclusion, the study demonstrates that adjectives in Abdulhalûk Uygur's poetic language exhibit both structural diversity and functional richness. The findings contribute to studies on the vocabulary of Modern Uyghur Turkish and the linguistic features of contemporary Uyghur poetry, while also providing new data for the linguistic analysis of adjective usage in poetic discourse.
Keywords: Abdulhalûk Uygur, Adjectives, Language and Expression, New Uighur Poetry

Özet
Bu çalışma, Yeni Uygur edebiyatının öncü isimlerinden Abdulhalûk Uygur'un şiirlerinde yer alan sıfatları yapı, tür ve kullanım özellikleri bakımından incelemeyi amaçlamaktadır. Dilin temel niteleme unsurlarından biri olan sıfatlar, yalnızca varlıkları ve kavramları tanımlayan dil birimleri değil, aynı zamanda metnin anlam örgüsünü, söylem yapısını ve üslubunu şekillendiren önemli öğelerdir. Bu nedenle şairlerin dil tercihlerini ve şiirsel dünyalarını ortaya koymada sıfatların kullanımı önemli veriler sunmaktadır. Çalışmanın temel amacı, Abdulhalûk Uygur'un şiirlerinde kullanılan sıfatların yapısal ve işlevsel özelliklerini belirlemek, bunların şiir dilindeki dağılımını ortaya koymak ve şairin üslubuyla ilişkisini değerlendirmektir.
Araştırma nitel araştırma desenine göre yürütülmüş olup doküman incelemesi yöntemi kullanılmıştır. Veri setini Abdulhalûk Uygur'un şiirleri oluşturmaktadır. Çalışmada şiirlerde yer alan sıfatlar tespit edilmiş; yapılarına göre basit, türemiş, birleşik ve kelime grubu niteliğindeki sıfatlar şeklinde sınıflandırılmıştır. Ayrıca sıfatlar işlev bakımından niteleme ve belirtme sıfatları olarak değerlendirilmiş; belirtme sıfatları gösterme, sayı, soru ve belirsizlik sıfatları çerçevesinde incelenmiştir. İnceleme sonucunda şiirlerde toplam 1071 sıfat kullanıldığı belirlenmiştir. Bu sıfatların önemli bir bölümünün basit yapılı olduğu, türemiş ve birleşik yapıların ise daha sınırlı düzeyde kaldığı görülmüştür. Sıfatların büyük ölçüde Türkçe kökenli unsurlardan oluşması, şairin anlaşılır ve halkın konuşma diline yakın bir üslup benimsediğini göstermektedir. Niteleme sıfatlarının şiirlerde tasvir

gücünü artırdığı; belirtme sıfatlarının ise söylemin yönlendirilmesinde ve anlamın belirginleştirilmesinde işlev üstlendiği tespit edilmiştir. Ayrıca sıfatların yalnızca betimleme amacıyla kullanılmadığı, şairin bireysel ve toplumsal düşüncelerinin aktarılmasında da etkin rol oynadığı görülmüştür.

Sonuç olarak çalışma, Abdulhalûk Uygur'un şiir dilinde sıfatların hem yapısal çeşitlilik hem de işlevsel zenginlik gösterdiğini ortaya koymayı amaçlamaktadır. Elde edilen bulguların, Yeni Uygur Türkçesinin söz varlığına ve çağdaş Uygur şiirinin dil özelliklerine ilişkin çalışmalara katkı sunmasının yanı sıra, şiir dilinde sıfat kullanımının dilbilimsel açıdan değerlendirilmesine de yeni veriler sağlayabilir.

Anahtar kelimeler: Abdulhalûk Uygur, Sıfatlar, Dil ve Anlatım, Yeni Uygur Şiiri

HAREKET OLAYLARININ DİLSEL İNŞASINDA SIFATLARIN İŞLEVİ: AHMET MUHİP DIRANAS'IN ŞİİRLERİ ÖRNEĞİ

THE FUNCTION OF ADJECTIVES IN THE LINGUISTIC CONSTRUCTION OF MOTION EVENTS: THE CASE OF AHMET MUHIP DIRANAS'S POETRY

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Abstract
This study examines the functions of adjectives in the linguistic construction of motion events in the poetry of Ahmet Muhip Dıranas. In Turkish linguistic literature, studies on motion events have mostly been conducted from a verb-centred perspective; by contrast, the function of motion adjectives has been addressed to a relatively limited extent. This research is based on the explanation of motion events through figure-ground, source-route-goal, and path relations in spatial linguistics.
A hybrid method aiming to bring together structural and semantic analysis traditions was adopted in the study. The data set of the research consists of 110 poems included in Ahmet Muhip Dıranas's Poetry. Through document analysis, motion-related expressions were identified. The deictic and topological adjectives and the participial adjectives derived from motion verbs occurring in these expressions were analysed functionally. The functions of adjectives in making motion-event components visible, delimiting them, intensifying them, and directing them were evaluated.
The findings show that 305 participial adjectives and 76 motion adjectives played a functional role in the linguistic construction of motion events. It was observed that participial adjectives define entities in motion within a process, whereas adjectives frame the direction, distance, intensity, and perceptual appearance of motion by making the figure-ground relationship more explicit. It was also determined that some adjectives can become substantivized and turn into source, route, or goal elements of motion. As a result, it can be said that in poetic language, motion events are constructed in a multilayered and complex manner, ranging from lexical adjectives to participial adjectives and from clauses to journey lexias containing dynamic spatial relations. With this study, it is intended to contribute to descriptive and theoretical discussions on the linguistic construction of motion in poetic language.
Keywords: Spatial Linguistics, Motion Events, Adjective, Ahmet Muhip Dıranas

Özet
Bu çalışma, Ahmet Muhip Dıranas'ın şiirlerinde yer alan hareket olaylarının dilsel inşasında sıfatların üstlendiği işlevleri incelemektedir. Türkçe dilbilim literatüründe hareket olaylarına ilişkin çalışmalar çoğunlukla fiil merkezli bir bakış açısıyla yürütülmüş; buna karşılık hareket sıfatlarının işlevi görece sınırlı ölçüde ele alınmıştır. Bu araştırma hareket olaylarının mekânsal dilbilimdeki figür-zemin, kaynak-rota-hedef ve patika ilişkileri üzerinden açıklanmasına dayanmaktadır.
Araştırmada yapısal ve anlamsal çözümleme geleneklerini bir araya getirmeyi hedefleyen hibrit bir yöntem benimsenmiştir. Araştırmanın veri setini Ahmet Muhip Dıranas'ın Şiirler adlı eserinde yer alan 110 şiir oluşturmaktadır. Bu şiirlerdeki hareket bildiren ifadeler doküman incelemesi yoluyla belirlenmiştir. Bu ifadelerde yer alan gösterimsel ve topolojik sıfatlar ve hareket fiillerinden türeyen sıfat-fiiller işlevsel açıdan çözümlenmiştir. Sıfatların hareket olayı bileşenlerini görünür kılma, sınırlandırma, yoğunlaştırma ve yönlendirme işlevleri değerlendirilmiştir.
Bulgular, hareket olaylarının dilsel kuruluşunda 305 sıfat-fiil ve 76 hareket sıfatının işlevsel rol üstlendiğini göstermektedir. Sıfat-fiillerin hareket hâlindeki varlıkları süreç içinde tanımladığı; sıfatların ise figür ve zemin ilişkisini belirginleştirerek hareketin yön, mesafe, yoğunluk ve algısal görünümünü çerçevelediği görülmüştür. Ayrıca bazı sıfatların adlaşıp hareketin kaynak, rota ya da hedef unsuru hâline gelebildiği tespit edilmiştir.
Sonuç olarak şiir dilinde hareket olaylarının, sözcük halindeki sıfatlardan sıfat-fiillere ve cümlelerden dinamik mekânsal ilişkileri içeren yolculuk sözbirimlerine kadar çok katmanlı ve karmaşık biçimlerde dile getirildiği söylenebilir. Bu çalışmayla şiir dilinde hareketin dilsel inşasına ilişkin betimleyici ve kuramsal tartışmalara katkı sunmak amaçlanmaktadır.
Anahtar Kelimeler: Mekânsal Dilbilim, Hareket Olayları, Sıfat, Ahmet Muhip Dıranas

6. SINIF TÜRKÇE DERS KİTAPLARINDAKİ DİNLEME/İZLEME METİNLERİNİN ERDEM-DEĞER-EYLEM ÇERÇEVESİNE GÖRE İNCELENMESİ

AN INVESTIGATION OF LISTENING/WIEVING TEXTS IN 6TH GRADE TURKISH TEXTBOOKS ACCORDING TO THE VIRTUE-VALUE-ACTION FRAMEWORK

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Özet
Bu araştırmada, 6. sınıf Türkçe ders kitaplarında yer alan dinleme/izleme metinleri, "Türkiye Yüzyılı Maarif Modeli" kapsamında belirlenen erdem-değer-eylem çerçevesi açısından incelenmiştir. İnsanı et ve kemikten ayıran unsurlar; duygu, düşünce ve erdemleridir. Yenilenen program ile birlikte 2019 Türkçe Dersi Öğretim Programı'nda yer alan "kök değerler" genişletilerek yeniden yapılandırılmıştır. Bu bağlamda çalışmanın amacı, 6. sınıf Türkçe ders kitaplarındaki dinleme/izleme metinlerinde yer alan değerlerin erdem-değer eylem çerçevesi doğrultusunda hangi biçimlerde yer aldığını ortaya koymaktır. Bu araştırma, nitel araştırma yöntemlerinden doküman analizi ile yürütülmüştür. Metinlerde yer alan değerler, betimsel analiz yöntemiyle incelenmiştir. Araştırmanın veri kaynağını Millî Eğitim Bakanlığı tarafından hazırlanan 6. sınıf Türkçe ders kitaplarında yer alan altı dinleme/izleme metni oluşturmaktadır.
Elde edilen bulgular sonucunda en fazla yer verilen değerin "içsel ahenge sahip huzurlu insan" kategorisi altında yer alan *çalışkanlık* olduğu belirlenmiştir. Bununla birlikte değerlerin dinleme/izleme metinleri arasında dengeli bir dağılım göstermediği görülmüştür. Ayrıca *tasarruf*, *temizlik* ve *mahremiyet* değerlerine yer verilmediği tespit edilmiştir. Elde edilen bulgular doğrultusunda çeşitli öneriler sunulmuştur.
Anahtar kelimeler: TYMM, Türkçe, 6. Sınıf, dinleme/izleme metinleri, değerler

Abstract
In this study, the listening/viewing texts in 6th-grade Turkish textbooks were examined within the framework of the virtue-value-action paradigm determined under the "Turkey Century Education Model." The elements that distinguish human beings from mere flesh and bone are their emotions, thoughts, and virtues. With the renewed curriculum, the "core values" included in the 2019 Turkish Language Curriculum have been expanded and restructured. In this context, the study aims to reveal how the values embedded in the listening/viewing texts of 6th-grade Turkish textbooks are represented in accordance with the virtue-value-action framework.
This research was conducted using document analysis, one of the qualitative research methodologies. The values present in the texts were analyzed through the descriptive analysis method. The data source of the study consists of six listening/viewing texts selected from the 6th-grade Turkish textbooks prepared by the Ministry of National Education.
The findings revealed that the most frequently featured value was "diligence," which falls under the category of a "peaceful person with internal harmony." On the other hand, it was observed that the values were not distributed configurations/balanced across the listening/viewing texts. Furthermore, it was determined that the values of thriftiness, cleanliness, and privacy were not included. Based on the findings obtained, various recommendations have been presented.
Keywords: TYMM (Turkey Century Education Model), Turkish, 6th Grade, listening/viewing texts, values

FORMULATION OF DYSPROSIUM MOLYBDATE-REDUCED GRAPHENE OXIDE NANOCOMPOSITE FOR SUPERCAPACITORS

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Abstract
The exceptional intrinsic conductivity and structural stability of mixed transition-metal oxides (MTMOs) make them a significant pseudocapacitive electrode material for supercapacitors. However, a major challenge is their inappropriate structures, facilitating extended cycling life and rapid Faradic redox reactions. This research reports the hydrothermal combination of dysprosium molybdate (Dy_2MoO_6) with reduced graphene oxide (rGO) to enhance the specific capacitance (C_s) and rate performance of supercapacitors. While comparing pure Dy_2MoO_6, the Dy_2MoO_6@rGO nanocomposite exhibits a higher C_s of 1118 F g^{-1} at a current density (j) of 1 A g^{-1} and retention capacitance of 83.7 % after 10,000 successive cycles. The enhanced electrochemical performance of Dy_2MoO_6@rGO results from its advantageous features, such as high structural stability, greater reactive surface area, favourable ion adoption, and rapid ion/electron transfer rate during the redox phenomenon. Furthermore, the asymmetric supercapacitors (ASCs) employing Dy_2MoO_6@rGO as the positive and activated carbon (AC) as the negative electrodes presented a C_s of 282 F g^{-1} at a rate of 1 A g^{-1}. When operated at 1.6 V, the constructed Dy_2MoO_6@rGO//AC ASC achieves an outstanding energy density (E_d) of 19.2 Wh kg^{-1} and a power density (P_d) of 272.2 W kg^{-1}. These outstanding findings suggest that the created nanostructures Dy_2MoO_6@rGO can be used in ultra-performance ASC devices. Moreover, the method simplifies the development of efficient energy storage devices using MTMOs by enhancing capacitance and expanding the potential range in an alkaline electrolyte.

Keywords: Dy_2MoO_6@rGO, Hydrothermal route, Electrochemical performance, Alkaline media, Asymmetric supercapacitor

MOLECULAR TWEEZERS: SELECTIVE SUPRAMOLECULAR RECEPTORS FOR MOLECULAR RECOGNITION AND BIOMEDICAL APPLICATIONS

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Abstract
Molecular tweezers represent a versatile class of synthetic supramolecular receptors designed to recognize and bind specific molecular targets through non-covalent interactions. Their architecture typically consists of two molecular arms connected by a central molecular bridge, which creates an open binding cavity resembling a pair of tweezers. This structural arrangement enables selective guest binding through π–π stacking, hydrogen bonding, electrostatic interactions, hydrophobic effects, and van der Waals forces. Because the binding process is reversible and does not require permanent covalent modification of the target, molecular tweezers are highly attractive for applications in dynamic and biologically relevant systems.
In recent years, molecular tweezers have gained particular attention for their ability to interact with amino acid residues, especially lysine and arginine, on protein surfaces. This interaction has opened new perspectives in the modulation of protein–protein interactions and in the inhibition of pathological protein aggregation. Compounds such as lysine-selective molecular tweezers have been investigated in the context of neurodegenerative disorders, including Alzheimer's and Parkinson's diseases, where misfolded protein aggregates play a central role. Beyond biomedical applications, molecular tweezers

have also been explored as components of chemical sensors, supramolecular catalysts, molecular switches, drug delivery systems, and stimuli-responsive materials.

Overall, molecular tweezers illustrate the strength of rational design in supramolecular chemistry. By combining structural preorganization, selective molecular recognition, and reversible binding, these systems offer powerful tools for controlling molecular behavior. Their continued development may contribute to advances in chemical biology, materials science, nanotechnology, and therapeutic research, making molecular tweezers an important platform in modern supramolecular chemistry.

Keywords: molecular tweezers, supramolecular chemistry, host–guest recognition.

PILLARARENES: VERSATILE MACROCYCLIC HOSTS AND THEIR APPLICATIONS IN MODERN SUPRAMOLECULAR CHEMISTRY

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Abstract
Pillararenes are a modern class of macrocyclic hosts distinguished by their rigid, pillar-shaped architecture, electron-rich cavities, and easily functionalized rims. Since their discovery, they have attracted increasing attention in supramolecular chemistry because they can selectively bind neutral molecules, cations, anions, and biologically relevant guests through hydrophobic, π–π, C–H···π, and electrostatic interactions. Their symmetrical structure, tunable cavity size, and good chemical stability make them valuable building blocks for advanced functional materials. Pillar[5]arenes and pillar[6]arenes are the most studied members, while larger homologues provide expanded recognition spaces for more complex systems.
The applications of pillararenes cover several important scientific and technological fields. In drug delivery, amphiphilic or water-soluble pillararenes can form supramolecular vesicles, nanoparticles, or inclusion complexes capable of transporting anticancer agents, antibiotics, and imaging probes. Stimuli-responsive systems based on pH, redox reactions, light, or enzymes allow controlled release at specific biological sites. In sensing, pillararenes are used for the detection of toxic ions, explosives, pesticides, amino acids, and pharmaceutical compounds, often producing optical, electrochemical, or fluorescence

responses. Their host–guest recognition also supports the construction of molecular machines, self-healing polymers, membranes, and porous materials. In environmental applications, functionalized pillararenes can capture organic pollutants, heavy metals, and dyes from water, contributing to separation and purification technologies.

Overall, pillararenes represent versatile supramolecular platforms with strong potential in medicine, analytical chemistry, nanotechnology, and environmental protection. Their future development depends on improving water solubility, biocompatibility, selectivity, and scalable synthesis, which will support their transition from laboratory research to practical applications.

Keywords: pillararenes, supramolecular chemistry, host–guest interactions, drug delivery, chemical sensors, environmental remediation.

SYNTHESIS AND APPLICATIONS OF PHTHALOCYANINES IN BIOMEDICAL AND TECHNOLOGICAL FIELDS

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Abstract
Due to their extended π-conjugated macrocyclic structure, high chemical and thermal stability, and intense optical absorption, phthalocyanines represent an important class of functional compounds closely related to porphyrins. Their molecular architecture consists of four isoindole units linked through nitrogen atoms, generating a highly delocalized electronic system and a central cavity capable of coordinating a wide variety of metal ions. This structural versatility allows the fine-tuning of their optical, redox, catalytic, and supramolecular properties through peripheral substitution, axial coordination, or metalation with transition, main-group, or lanthanide ions. Phthalocyanines are usually synthesized by cyclotetramerization reactions of phthalonitrile or related precursors, often in the presence of metal salts, leading to metal-free or metallophthalocyanine derivatives with specific properties.
Because of their strong absorption in the visible and near-infrared regions, especially in the Q-band, phthalocyanines are highly attractive for applications in photochemistry, materials science, medicine, and nanotechnology. They have been extensively investigated as photosensitizers in photodynamic therapy, in which light activation generates reactive oxygen species that destroy tumor cells or

microorganisms. Their photostability, tunable solubility, and ability to interact with biological or polymeric matrices also support applications in antimicrobial materials, diagnostic systems, imaging, and drug delivery. In materials science, phthalocyanines are used in organic semiconductors, chemical sensors, dyes, catalysts, solar cells, optoelectronic devices, and energy conversion systems. Their capacity to self-organize via π–π stacking, metal–ligand coordination, hydrogen bonding, and other noncovalent interactions further enhances their relevance to supramolecular chemistry and advanced functional materials. Therefore, phthalocyanines remain versatile macrocyclic compounds with significant potential for the design of innovative therapeutic platforms, catalytic systems, sensors, and photoactive nanostructured materials.

Keywords: phthalocyanines, synthesis, photodynamic therapy, biomedical applications.

ADSORPTION-PHOTOCATALYSIS-FENTON TRIFECTA ON MAGNETIC EUCALYPTUS-DERIVED BIOCHAR: DECIPHERING THE SYNERGISTIC ACETAMIPRID DEGRADATION PATHWAY

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Abstract
The growing prevalence of neonicotinoid pesticides such as acetamiprid in aquatic environments has raised significant concerns due to their toxicity and persistence. This study presents an innovative hybrid treatment strategy combining adsorption, solar-driven photocatalysis, and heterogeneous Fenton-like oxidation for the efficient removal and degradation of acetamiprid from aqueous solutions. A multifunctional biochar-based composite derived from Eucalyptus camaldulensis leaves was synthesized via magnetic functionalization with Fe_3O_4 and surface modification with TiO_2 nanoparticles, enabling simultaneous adsorption, catalytic activation, and facile magnetic recovery.
The treatment process proceeds via a synergistic two-stage mechanism: (i) rapid adsorption of acetamiprid onto the porous biochar matrix through π–π interactions, hydrogen bonding, and electrostatic attraction, followed by (ii) in situ oxidative degradation under solar irradiation with H_2O_2 activation. Reactive oxygen species ($^{\bullet}OH$ and $^{\bullet}O_2^-$) generated through TiO_2 photoexcitation and Fe-based Fenton-like reactions promoted efficient pesticide breakdown into less harmful intermediates and mineralization products.
The composite exhibited excellent removal efficiency, reusability, and catalytic stability, coupled with magnetic separation and low-cost biomass valorization. This integrated approach offers a sustainable and scalable solution for advanced water treatment, particularly for remediating agricultural runoff contaminated with persistent organic pollutants.
Keywords: Acetamiprid; Magnetic biochar; Solar photocatalysis; Heterogeneous Fenton oxidation; Eucalyptus camaldulensis; Advanced oxidation processes; Agricultural wastewater; Magnetic recovery.

PLANT-MEDIATED GREEN SYNTHESIS OF ZNO NANOPARTICLES FOR PHOTOCATALYTIC DEGRADATION

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Abstract
A novel, eco-friendly co-precipitation method was developed to synthesize stable, high-purity zinc oxide nanoparticles (RT-ZnO-NPs) using Retama plant extract. This study evaluated the effects of varying extract concentrations (1, 2, 5, and 10% w/v) as reducing and stabilizing agents, with zinc nitrate as the precursor. The NPs were characterized using XRD, FT-IR, and point of zero charge (PZC) analysis. The photocatalytic efficiency of the RT-ZnO-NPs was tested by degrading the herbicide linuron (LNR) in pure water under UV and sunlight. At neutral pH (7.21), the NPs achieved degradation efficiencies of 97% (UV) and 99% (sunlight), with rate constants of 1.01×10^{-2} min^{-1} and 1.34×10^{-2} min^{-1}, respectively. These results demonstrate that Retama-mediated ZnO NPs are highly effective for wastewater treatment applications.
Keywords: Green synthesis; Plant extract; zinc oxide nanoparticles; photocatalytic degradation.

NANOSTRUCTURED ZINC-DOPED TITANATE NAOTUBES: SYNTHESIS, CHARACTERIZATION AND DYE DEGRADATION PERFORMANCE

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Abstract
This work is devoted to the study of the structural and textural properties of titanate nanotubes (TiNTs) doped with zinc prepared by hydrothermal treatment and to test them in the degradation of dyes which are: tannic acid (TA), under UVA irradiation.
Catalysis plays a central role in the outlook for tomorrow's challenges in the fields of energy, environment and chemistry. In recent years, researchers have focused on environmental catalysis which plays a very important role in human health and well-being. Among the catalysts most used in environmental catalysis, titanium oxide (TiO_2) which is a semiconductor widely used in photocatalysis due to its oxidizing power, its stability and its non-toxicity. These characteristics make it a very effective catalytic material for environmental depollution. It can also be used in ceramics, solar cells, paints…ect [1] [2]
In this work, we present the preparation of Zn-TiNTs by a hydrothermal route from anatase and their application in the photodegradation of tannic acid. The prepared materials are characterized by different techniques: XRD, MEB, UV-Vis/RD, BET, Raman, and FTIR. [3]
Keywords: Dyes, Nanotube, Photodegradation, Photocatalysis, Zinc.

ELECTROCHEMICAL AND THEORETICAL STUDY OF TWO NEW SUN-HEALED PYRAZOLONE-DERIVED INHIBITORS C4-PRZ-1 AND CL-PRZ EFFECTIVE AGAINST MILD STEEL CORROSION IN HYDROCHLORIC ACID MEDIUM

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Abstract
This work aims to evaluate the corrosion inhibition performance of two newly synthesized C4-substituted pyrazolone-based heterocyclic compounds, namely 3-(5-methyl-3-oxo-2,3-dihydro-1H-pyrazol-4-yl)-3-phenylpropanoic acid (C4-PRZ-1) and its chloro-substituted derivative, 3-(5-methyl-3-oxo-2,3-dihydro-1H-pyrazol-4-yl)-3-(4-chlorophenyl)propanoic acid (Cl-PRZ), toward mild steel (MS) corrosion in 1 M hydrochloric acid solution. A comprehensive investigation was conducted through the integration of electrochemical techniques, surface characterization analyses, and theoretical calculations.
The corrosion protection efficiency of both compounds was assessed using electrochemical impedance spectroscopy (EIS) and potentiodynamic polarization (PDP) measurements. The influence of key operating parameters, including inhibitor concentration, temperature, and immersion duration, was systematically analyzed. The obtained results demonstrated a concentration-dependent improvement in inhibition performance, with maximum efficiencies reaching 85% for C4-PRZ-1 at 5.0 mM and 86% for Cl-PRZ at 1.0 mM under ambient conditions (298 K). Conversely, increasing the temperature from 298 to 328 K resulted in an increase in corrosion current density accompanied by a decrease in charge transfer resistance, reflecting a progressive decline in inhibition effectiveness.
Adsorption behavior analysis revealed that both inhibitors obey the Langmuir adsorption model, indicating the formation of a predominantly monolayer protective layer on the mild steel surface. The calculated thermodynamic parameters, particularly the standard free energy of adsorption ($\Delta G°ads \approx -38$ kJ·mol^{-1}), suggest that the adsorption process proceeds through a mixed adsorption mechanism involving both physisorption and chemisorption interactions.
Surface morphology and elemental analyses performed using scanning electron microscopy (SEM) and energy-dispersive X-ray spectroscopy (EDS) confirmed the development of a compact, homogeneous, and strongly adherent protective film that effectively mitigates steel degradation in the acidic medium.
Furthermore, density functional theory (DFT) calculations provided valuable insights into the electronic structure and charge transfer capability of the inhibitor molecules, highlighting the contribution of active adsorption centers to metal–inhibitor interactions. In parallel, Monte Carlo simulations coupled with simulated annealing algorithms (SAA) and adsorption locator approaches demonstrated energetically favorable adsorption configurations and strong interfacial interactions. Overall, the combined experimental and theoretical findings establish C4-PRZ-1 and Cl-PRZ as efficient, stable, and promising corrosion inhibitors for mild steel protection in hydrochloric acid environments.
Keywords: heterocyclic Organic inhibitor, EIS, Polarization, Langmuir, FDT, MD simulation, Mild steel.

DIGITAL TRANSFORMATION IN THE INSURANCE INDUSTRY: OPPORTUNITIES, CHALLENGES, AND THE RISE OF INSURTECH

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ABSTRACT
The insurance sector is undergoing a profound transformation as technological innovation increasingly reshapes traditional business models and operational processes. The rise of InsurTech has introduced new opportunities to improve efficiency, reduce costs, and enhance customer experiences across the insurance value chain. This study explores the impact of digital technologies on core insurance functions, including risk assessment, underwriting, product development, claims processing, and customer relationship management. Particular attention is given to the role of emerging technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), blockchain, and big data analytics in enabling data-driven decision-making, personalized insurance solutions, and automated service delivery. The article further investigates the benefits associated with digital transformation, including improved operational performance, enhanced risk evaluation capabilities, and increased customer engagement. At the same time, it critically examines the challenges arising from this technological shift, such as concerns related to data security, privacy protection, ethical use of algorithms, regulatory compliance, and the risk of excluding digitally underserved populations. Drawing on a mixed-methods approach that combines industry evidence, case-based insights, and existing academic research, the study highlights the evolving relationship between established insurers and emerging InsurTech firms. The findings suggest that collaborative business models, which integrate the strengths of both traditional insurance providers and technology-driven innovators, are likely to shape the future landscape of the industry. The paper concludes by proposing strategic guidelines for policymakers, insurers, and technology providers to foster innovation while ensuring resilience, inclusiveness, and sustainable growth within the insurance ecosystem.
Keywords: InsurTech, Digital Transformation, Artificial Intelligence, Insurance Innovation, Regulatory Technology (RegTech), Internet of Things (IoT), Big Data Analytics.

AI-DRIVEN PERSONALIZATION IN MARKETING: HELPFUL INNOVATION OR PRIVACY THREAT?

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Abstract
AI-driven personalization has become one of the most influential developments in modern marketing management. By using machine learning, predictive analytics, and consumer data, firms can deliver tailored messages, product recommendations, and advertisements that increase engagement and conversion rates. Supporters argue that this approach improves customer experience, reduces irrelevant advertising, and helps businesses use resources more efficiently. It allows marketers to understand consumer preferences more accurately and respond to customer needs in real time, making communication more relevant and effective. However, critics warn that the same systems can collect excessive personal data, weaken consumer autonomy, and encourage manipulation or bias in targeting. In many cases, consumers may not fully understand how their data is gathered, stored, or used, which raises serious ethical concerns. This paper examines both sides of the debate and argues that AI-driven personalization is a valuable marketing innovation only when it is guided by transparency, informed consent, and strong privacy protections. The discussion highlights the need for ethical standards that balance business efficiency with consumer trust and rights. Ultimately, the success of AI in marketing depends not only on technological advancement but also on responsible and ethical implementation.
Keywords: AI-driven personalization, consumer privacy, consent, and ethical marketing concerns.

THE INVISIBLE ARCHITECTURE OF NGO PERFORMANCE: MOTIVATION, COMMITMENT, AND ORGANIZATIONAL OUTCOMES

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Abstract
Understanding the determinants of organizational performance remains a major concern in management research, particularly within non-governmental organizations (NGOs), where limited financial incentives and mission-oriented work environments increase the importance of employees' psychological engagement. Although prior studies have confirmed a positive association between employee motivation and organizational performance, the internal mechanisms through which this relationship operates remain insufficiently clarified, especially in economically constrained and institutionally complex settings.
This study develops an integrated conceptual framework examining the mediating role of multidimensional organizational commitment in the relationship between employee motivation and organizational performance. Grounded in Self-Determination Theory, Social Exchange Theory, and Herzberg's Two-Factor Theory, the model differentiates between intrinsic and extrinsic motivation while conceptualizing organizational commitment as a multidimensional construct composed of affective, continuance, and normative dimensions.
The proposed framework advances eight hypotheses, including two direct relationships and six indirect mediation effects, forming a comprehensive multidimensional mediation structure. By explicitly capturing the differentiated influence of each commitment dimension, the study responds to the fragmented nature of prior research, where these relationships have frequently been examined separately rather than within a unified explanatory model.
In addition, the research extends the motivation–performance literature to NGOs operating in challenging environments such as Lebanon, where economic instability, institutional constraints, and resource scarcity may amplify the relevance of psychological drivers in shaping employee behavior and organizational outcomes.
Although the empirical phase is currently underway, the proposed framework offers a rigorous basis for subsequent testing through structural equation modeling (SEM). The expected findings are likely to generate valuable theoretical insights and practical implications for managers, policymakers, and NGO leaders seeking to strengthen employee performance through targeted motivational and commitment-oriented strategies.
Keywords: Employee motivation; Organizational commitment; Non-Governmental Organizations; Organizational performance; Mediation model.

WHEN BIASES SHAPE ENTREPRENEURIAL CHOICES: A BEHAVIORAL FRAMEWORK FOR STARTUP DECISION-MAKING IN CRISIS ENVIRONMENTS

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Abstract
This research examines how cognitive and emotional biases influence entrepreneurial decision-making in environments marked by severe uncertainty. Although behavioral finance literature has extensively analyzed biases in investors' judgments, their implications for entrepreneurial decision processes remain relatively underexplored, particularly within crisis-affected settings. To address this theoretical gap, the present study proposes an integrated conceptual framework explaining the effects of behavioral biases on major entrepreneurial decisions.
Drawing on behavioral finance and entrepreneurial cognition perspectives, entrepreneurial decision-making is conceptualized as a multidimensional construct including opportunity assessment, risk propensity, and resource deployment. The proposed framework links cognitive and emotional biases to these decision outcomes through both direct relationships and indirect pathways mediated by psycho-behavioral mechanisms, namely perceived risk, emotional activation, and entrepreneurial resilience. Incorporating these mediating variables enables a more refined understanding of how biases are converted into observable entrepreneurial actions.
This study offers three main contributions to the literature. First, it advances prior research by combining multiple behavioral biases within a single integrative model, thereby overcoming the fragmented treatment found in earlier studies. Second, it deepens understanding of the mechanisms through which cognition and affect shape strategic entrepreneurial choices. Third, it extends behavioral finance theory to a crisis environment by focusing on Lebanese startups, a distinctive context characterized by persistent economic instability, institutional weakness, and elevated uncertainty.
While empirical testing is currently in progress, the proposed model is intended to be validated using structural equation modeling (SEM), ensuring methodological robustness. Expected results should generate theoretical implications as well as practical recommendations for entrepreneurs, policymakers, and support organizations aiming to improve decision quality in highly volatile environments.
Keywords: Behavioral biases; Entrepreneurial decision-making; Startups; Crisis context; Lebanon; Conceptual model.

SILENCE IN SUSTAINABILITY COMMUNICATION: UNDERSTANDING STAKEHOLDER RESPONSES TO GREENHUSHING

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Abstract | Greenhushing, understood as the deliberate under-communication of genuine sustainability practices, is an emerging issue in corporate sustainability communication (Hilton, 2025), the deliberate under-communication of sustainability practices (Font et al., 2017). While prior research has mainly focused on organizational motivations, less is known about how different stakeholder groups interpret and respond to this. This study addresses this gap through a scoping literature review of academic research on greenhushing and stakeholders. The growing body of scientific research on greenwashing has brought this issue to the forefront of business and management scholarship. By deepening the understanding of deceptive sustainability practices, academic research plays an important role in discouraging greenwashing and promoting more responsible corporate behaviour. Following PRISMA-ScR guidelines, a search was conducted in the Scopus database using the keywords “sustainability,” “greenhushing,” “greenwashing,” and “stakeholders,” with defined inclusion and exclusion criteria. The findings indicate that stakeholder interpretations of greenhushing are heterogeneous: investors may view silence as strategic prudence, regulators as a barrier to transparency, consumers through perceptions of trust and authenticity, and civil society as a legitimacy concern. The study contributes to theory by framing greenhushing as a relational, context-dependent phenomenon shaped by stakeholder sensemaking. Practically, the results highlight the importance of adopting balanced sustainability communication strategies to avoid unintended reputational risks.
Keywords: Greenhushing; stakeholders; greenwashing; sustainability communication.

STRATEGIC APPROACHES TO ENHANCING CRISIS RESILIENCE IN GLOBAL SUPPLY CHAINS

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Abstract | Global supply chains have become increasingly interconnected and complex, yielding significant benefits such as cost efficiency and market access. However, this globalization has exposed businesses to heightened vulnerabilities, as external shocks like pandemics, geopolitical conflicts, natural disasters, and economic downturns threaten supply chain stability. This scoping review explores strategic approaches employed by companies to strengthen resilience against such shocks. Adopting an exploratory methodology, the review identifies and categorizes strategies into proactive and reactive measures, emphasizing phases of resilience: preparation, response, recovery, and adaptation. Key findings highlight the role of emerging technologies, such as digital twins and blockchain, in enhancing visibility, traceability, and decision-making. Furthermore, the review underscores the importance of balancing efficiency with redundancy and tailoring strategies to industry-specific risks and regional contexts. Despite substantial progress in resilience research, notable gaps remain, including limited empirical evidence on strategy effectiveness, underexplored regional variations, and insufficient integration of sustainability objectives. This review offers practical recommendations for managers, policymakers, and academics, contributing actionable insights for building robust and adaptable supply chains in an increasingly volatile global environment.
Keywords: Supply Chain Resilience, Global Supply Chains, Crisis Management, External Shocks, Emerging Technologies, Strategic Planning, Risk Mitigation

THE IMPACT OF AUTOMATION AND ARTIFICIAL INTELLIGENCE ON THE CLOTHING AND FOOTWEAR MANUFACTURING INDUSTRY: CHALLENGES AND OPPORTUNITIES FOR INCREASING COMPETITIVENESS

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Abstract
The clothing and footwear manufacturing industry represents one of the most important sectors of the Albanian economy, contributing significantly to employment, exports, and industrial development. However, global technological transformation, increasing international competition, and the demand for higher efficiency are creating the need for the adoption of advanced automation technologies and Artificial Intelligence.
These technologies are changing the way production processes, quality control, supply chain management, and resource planning are organized. The aim of this study is to analyze the level of use of automation and artificial intelligence in the clothing and footwear manufacturing industry, as well as to identify their impact on productivity, quality, operating costs, and competitiveness.
This study is based on a descriptive methodology, using interviews conducted with representatives of enterprises operating in the clothing and footwear manufacturing industry in Albania. The collected data will be analyzed in order to assess the level of technological readiness, the challenges of implementation, and the perceptions of industry stakeholders regarding digital transformation. The results are expected to show that the integration of intelligent technologies can significantly improve operational performance and production flexibility, while also requiring investments in infrastructure, the development of professional skills, and supportive policies.
The study aims to provide practical recommendations for enterprises and policymakers in order to support the sustainable growth and competitiveness of the sector in international markets.
Keywords: Artificial Intelligence (AI), Industrial Automation, Clothing and Footwear Industry, Digital Transformation, Competitiveness.

EDGE ARTIFICIAL INTELLIGENCE SYSTEMS AND THEIR IMPACT ON FIRM-LEVEL COST OPTIMIZATION

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ABSTARCT
Edge Artificial Intelligence (Edge AI) represents a transformative technological paradigm that integrates advanced artificial intelligence capabilities with decentralized edge computing infrastructures, allowing data processing and decision-making to occur closer to the point of data generation. Unlike traditional cloud-centric models, Edge AI minimizes reliance on distant data centers by enabling real-time analytics directly on edge devices such as sensors, embedded systems, and Internet of Things (IoT) nodes. This study critically examines the implications of Edge AI systems for firm-level cost optimization, with particular emphasis on operational efficiency, resource utilization, and long-term financial sustainability. Drawing on recent empirical and theoretical literature, the paper demonstrates that Edge AI significantly reduces latency, bandwidth consumption, and dependence on cloud infrastructure, thereby lowering operational expenditures and improving system responsiveness. By processing data locally, firms can avoid excessive data transmission costs while enhancing speed and reliability in mission-critical applications. Additionally, the study explores key optimization strategies, including intelligent task offloading, model compression techniques such as pruning and quantization, and energy-efficient computing architectures that collectively contribute to cost reduction. The findings indicate that Edge AI enhances cost efficiency across multiple industries by minimizing communication overhead, optimizing energy consumption, and enabling faster, data-driven decision-making processes. However, despite these benefits, several challenges persist, including high initial capital investment, increased system complexity, limited computational capacity at the edge, and concerns surrounding data governance, privacy, and security. The study concludes that Edge AI offers a strategic pathway for organizations seeking to balance technological innovation with cost efficiency, while emphasizing the importance of robust governance frameworks and scalable deployment strategies to ensure sustainable adoption.
Keywords: Cost Optimization; Edge Artificial Intelligence; Edge Computing; Firm-Level Efficiency.

BASIC EDUCATION CERTIFICATE EXAMINATION MATHEMATICS AS PREDICTOR OF SENIOR CERTIFICATE EXAMINATION MATHEMATICS ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS IN ADAMAWA STATE, NIGERIA

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Abstract
This study examined Basic Education Certificate Examination (BECE) Mathematics as a predictor of Senior Secondary Certificate Examination (SSCE) Mathematics achievement among secondary school students in Adamawa State, Nigeria. The study was motivated by persistent poor performance in SSCE Mathematics and concerns about the extent to which BECE results can predict students' later academic achievement. A correlational research design was adopted. The population of the study consisted of 742 students' examination results, made up of 371 BECE Mathematics results (2021) and 371 SSCE Mathematics results (2024) from co-educational public secondary schools in the state. A sample of 370 students' results, comprising 185 BECE and 185 SSCE results, was used for analysis. Data were analyzed using descriptive statistics (mean, standard deviation, and percentages) and inferential statistics (independent samples t-test, Pearson correlation, and simple linear regression) at 0.05 level of significance. Findings revealed that students' achievement in BECE Mathematics was moderate, with a slight but non-significant advantage for urban students over rural students. Similarly, SSCE Mathematics performance showed that only a small proportion of students achieved high grades, while a considerable proportion performed poorly. Urban students again performed slightly better than rural students, though the difference was not statistically significant. However, a very strong positive relationship was found between BECE and SSCE Mathematics achievement in both urban and rural schools. Regression analysis further showed that BECE Mathematics significantly predicted SSCE Mathematics achievement, accounting for a substantial proportion of the variance in SSCE scores. The study concluded that BECE Mathematics is a strong predictor of SSCE Mathematics performance regardless of school location. It was recommended that stronger emphasis should be placed on improving foundational mathematics at the basic education level to enhance students' performance at the senior secondary level.
Keywords: BECE, SSCE, Mathematics Achievement, Predictive Validity

FROM SCROLL TO SOUL: DEVELOPING A CHRISTIAN RELIGIOUS EDUCATION MODEL FOR ADOLESCENT CHARACTER FORMATION IN INDONESIA'S SOCIAL MEDIA CULTURE

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ABSTRACT

Background : Social media culture has become an inseparable part of adolescents' lives in Indonesia. The intensive use of digital platforms not only influences communication patterns and social interactions but also shapes adolescents' values, behaviors, and character. Meanwhile, Christian Religious Education (CRE) has largely focused on the transmission of religious knowledge and has not optimally responded to the growing challenges posed by social media culture. This condition creates a gap between the goal of Christian character formation and the realities of digital life experienced by adolescents on a daily basis.

Objective : This study aims to develop a contextual Christian Religious Education model for adolescent character formation in the era of social media culture in Indonesia through the integration of Christian spirituality, digital literacy, and character education.

Method : This study employs a qualitative approach based on library research. Data were collected from relevant scholarly sources, including books, national and international journal articles, conference proceedings, and educational policy documents. Data were analyzed using content analysis and conceptual analysis techniques to identify, compare, and synthesize key ideas related to Christian Religious Education, adolescent character development, and social media culture.

Novelty : The novelty of this study lies in the development of the "Scroll to Soul" Model, which integrates Christian spirituality, digital literacy, and character formation within a unified Christian Religious Education framework that is contextualized to the social media culture of Indonesian adolescents.

Findings : The study produced a conceptual Christian Religious Education model that enables adolescents to transform their digital activities from mere content consumption into reflective, critical, and responsible Christian character formation. The model integrates spiritual, moral, and social dimensions, thereby supporting sustainable adolescent character development amid the rapid growth of social media culture.

Keywords: Christian Religious Education, Adolescent Character, Social Media, Digital Spirituality

INNOVATION IN DEEP LEARNING EVALUATION OF CHRISTIAN RELIGIOUS EDUCATION IN INDONESIA: INTEGRATION OF PRACTICAL THEOLOGY, TRANSFORMATIVE PEDAGOGY, AND COMPETENCY-BASED ASSESSMENT

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ABSTRACT

Background : Christian Religious Education (CRE) learning evaluation in Indonesia faces two fundamental unresolved problems. First, existing evaluation practices only measure learning outcomes at the cognitive level, without reaching the true depth of learning, namely the transformation of faith and Christian character of students in a meaningful way. Second, Practical Theology, Transformative Pedagogy, and Assessment in CRE learning operate in isolation, creating a fundamental inconsistency between the spiritual nature of learning objectives and the secular-academic nature of assessment instruments. This condition is increasingly critical amid the demands of the Merdeka Curriculum and the challenges of the digital era, which require learning that is meaningful, reflective, and deeply transformative.

Objective : This study aims to develop an innovative model of deep learning evaluation in CRE in Indonesia that integrates Practical Theology, Transformative Pedagogy, and Competency-Based Assessment in a comprehensive and systematic manner, so as to measure the depth of student learning holistically and sustainably.

Method : This study employs a qualitative approach based on library research. Data were obtained from relevant scholarly literature, including books, national and international journals, conference proceedings, and educational policy documents. Data were analyzed through content analysis and conceptual analysis techniques to identify, compare, and synthesize key ideas related to deep learning evaluation in the context of CRE in Indonesia.

Novelty : The novelty of this study lies in the development of the Integrated CRE Deep Learning Evaluation Model, which explicitly connects three pillars - Practical Theology, Transformative Pedagogy, and Competency-Based Assessment - within a coherent and contextual evaluation framework. This model is the first of its kind specifically designed for the CRE context in Indonesia, simultaneously considering the dimensions of faith, character, and Christian competency.

Findings : The library research produced a theologically and pedagogically valid conceptual model of CRE deep learning evaluation. This model is capable of measuring the depth of student learning across three domains simultaneously: theological-cognitive, character-affective, and service-psychomotor, thereby fostering the measurable and sustainable growth of students' faith and Christian character.

Keywords: Deep Learning Evaluation, Christian Religious Education, Practical Theology, Transformative Pedagogy, Competency-Based Assessment

CHALLENGES AND SOLUTIONS TO TEACHING AND LEARNING SCIENCE AT UPPER SECONDARY SCHOOL IN CAMBODIA

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Abstract
This study aimed to assess the current situation of human resources and school facilities to support teaching and learning science in Cambodian public high schools. This study surveyed 240 science teachers and 45 principals. The data analysis employed descriptive statistics such as mean, standard deviation and percentage, and inferential statistics such as t-test, One-Way ANOVA, and Chi-Square to examine the association of some demographic variables, including gender, school type and location. The results revealed that Cambodian high schools have suitable infrastructure, incorporating libraries, science-laboratory rooms, computer labs, internet connection, clean water, toilet and electricity. However, ordinary high schools lack laboratory materials and computers for students to learn and use to support their learning. The insufficient number of classrooms and science teachers leads to a large class size and a high student-to-teacher ratio. Cambodian high school science teachers had sufficient knowledge in their subject content matter and pedagogical skills to teach the subjects. However, they did not indicate strong confidence in being an expert in their major. Cambodian high school science teachers possessed sufficient knowledge of basic ICT regarding administration work, social communication, and professional development. They have trivial knowledge of advanced ICT and did not indicate the effective use of ICT. The Ministry of Education, Youth and Sport of Cambodia should put more effort and investment into enhancing effective schools for science education and developing a comprehensive science teacher education program to produce effective teachers who can adopt ICT to teach science subjects effectively.
Keywords: effective school, effective teaching, science education, science teachers, Cambodia

DIMENSIONS OF DIGITAL TECHNOLOGY COMPETENCE AMONG UNIVERSITY STUDENTS IN VIETNAM'S DIGITAL TRANSFORMATION CONTEXT

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Abstract: In the context of rapid digital transformation, university students are among the social groups that most frequently access and use digital technologies. In Vietnam, identifying and assessing students' digital technology competence is of significant importance for policymakers and administrators in developing, adjusting, and implementing the objectives of the National Digital Transformation Program. By combining social media content analysis with the analysis of secondary data, this study examines several key dimensions of students' digital technology competence, including information searching and storage, the use of digital technologies for learning purposes, the expansion and maintenance of social relationships, and the protection of personal information in digital environments. The findings provide an overview of the current state of digital technology competence among Vietnamese university students and offer preliminary insights and implications for policymaking and the enhancement of students' digital competencies in the future.
Keywords: Digital technology; Competence; University students; Social Media; Digital transformation; Vietnam.

EXPLORING THE OPPORTUNITIES AND CHALLENGES OF TECHNOLOGY INTEGRATION IN MATHEMATICS TEACHING: A QUANTITATIVE ANALYSIS

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Abstract
The integration of technology in teaching and learning mathematics has acquired much relevancy in enhancing the quality of education. It aids teachers in the interactive and visual presentation of the complex mathematical concepts and this makes learning more meaningful to the students. The new teaching methods can be facilitated through digital tools as well as promote student interaction in the classroom. Technology has become an important element in the contemporary mathematics teaching practices. Thus, this study sought to explore the opportunities and challenges of secondary school mathematics teachers in the process of integrating technology in Lahore, Pakistan. The research used a quantitative descriptive survey research design as part of the positivist paradigm to objectively investigate the experiences of the teachers. The data collected were analyzed with descriptive and inferential statistics with the help of SPSS. The results showed that the lack of training, insufficient infrastructure, and time were major challenges, which implies that there are more barriers than opportunities. Additionally, the research advises on seeking professional growth, better infrastructure, and institutional support that will facilitate effective and fair implementation of technology.
Keywords: Challenges and Opportunities, Secondary Schools, Teachers, Quantitative Research, Mathematic Teachers

STUDENTS' PERCEPTIONS OF EXTRACURRICULAR ACTIVITIES AT UNIVERSITY_ THE CASE OF HOCHIMINH CITY UNIVERSITY OF TECHNOLOGY

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Abstract
At Ho Chi Minh City University of Technology – Vietnam National University (HCMUT), Ho Chi Minh City, extracurricular activities are not only needed as a requirement for students to be graduated but also provide them with opportunities to hone essential skills and forge connections. Thereby, led by the Office for International Study Programs (OISP), the university actively promotes engagement in diverse activities.
The present study aims to (1) investigate what OISP students at HCMUT know about extracurricular activities and (2) explore opportunities and challenges that students encounter when engaging in extracurricular activities (ECAs). To address the research objectives, a qualitative approach is employed as methods to collect data. The respondents are the freshmen at HCMUT. The research results indicate that the majority of students participated in at least one extracurricular activity out of the 10 events organized by the OISP during their first academic year, with the most significant being OISP Camp: Grand Fiesta. The primary benefits of them include being granted social work days, developing skills and networking. However, they still face challenges in managing their time and find it difficult to connect with other members. From that point of view, the outcome of the study can be used for shaping strategies to enhance extracurricular offerings at HCMUT and in Vietnamese Universities, in general.
Keywords*:* extracurricular activities, OISP, opportunities, challenges, overall university experience

FACTORS INFLUENCING THE ADOPTION OF GENERATIVE AI TOOLS AMONG UNDERGRADUATE STUDENTS: EVIDENCE FROM SOUTH EASTERN UNIVERSITY OF SRI LANKA

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ABSTRACT

The adoption of Generative AI tools like ChatGPT in Higher Education has been varied, with positive potential for boosting students' learning, but especially in developing nations. The objective of the present study is to find out the influencing factors in student's intention to use generative AI tools in the Faculty of Management and Commerce of the South Eastern University of Sri Lanka. Four predictors were tested based on the Unified Theory of Acceptance and Use of Technology (UTAUT) and Technology Acceptance Model (TAM): Perceived usefulness, perceived ease of use, AI literacy and social influence. The number of students sampled was 348 undergraduate students and this cross-sectional survey was conducted qualitatively. Correlation and multiple regression analysis were used to analyse the data. Results indicate that AI literacy is the strongest predictor of adoption intention ($\beta = 0.417$, $p < 0.001$), followed by perceived usefulness ($\beta = 0.244$, $p < 0.001$) and perceived ease of use ($\beta = 0.212$, $p < 0.001$). The social influence did not seem to be as significant as expected ($p = 0.133$). The model was able to account for 80.8% of the variance in the intention to use tools for generative AI. The results indicated that there was a need to enhance student's AI literacy and to expose them to the application of AI in the academic environment in the regional universities of Sri Lanka (M&C) more than any peer and lecturer pressure. The study recommended several guidelines, including: include the course in the field of AI training, it was suggested that there should be a demonstration of the use case for the course, the tools should be user friendly. These restrictions include: it is cross sectional and it's from one institution. This study empirically proves a study of a population which has yet been poorly studied and even extends the current UTAUT to the adoption of generative AI in higher education in developing countries.

Keywords: Generative AI, UTAUT, AI literacy, Technology adoption, Undergraduate students, Sri Lanka.

TÜRKİYE YÜZYILI MAARİF MODELİ'NİN OKUL DÜZEYİNDE UYGULANMASI: YÖNETİCİ VE ÖĞRETMEN DENEYİMLERİNDEN YANSIMALAR

IMPLEMENTATION OF THE TURKEY CENTURY MAARIF MODEL AT THE SCHOOL LEVEL: REFLECTIONS FROM ADMINISTRATOR AND TEACHER EXPERIENCES

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Özet
Bu araştırma, Türkiye Yüzyılı Maarif Modeli'nin (TYMM) okul düzeyinde uygulanma sürecini yönetici ve öğretmen deneyimleri çerçevesinde incelemeyi amaçlamaktadır. Araştırmada nitel araştırma desenlerinden fenomenoloji benimsenmiş; katılımcıların bu sürece ilişkin yaşantıları ve bu yaşantılara yükledikleri anlamlar derinlemesine ele alınmıştır.Çalışma grubu, amaçlı örnekleme yöntemiyle belirlenen 15 okul yöneticisi ve 22 öğretmenden oluşmaktadır. Veriler yarı yapılandırılmış görüşme formu aracılığıyla toplanmış; fenomenolojik analiz yaklaşımı doğrultusunda kodlama, alt tema ve tema oluşturma aşamaları izlenerek çözümlenmiştir.Bulgular altı tema altında sunulmuştur: TYMM'ye başlama süreci, reform sürecinde inisiyatif ve liderlik deneyimleri, risk alma ve yenilikçi uygulama deneyimleri, belirsizlik ve direnç yönetimi, öğretmen ve kaynakların sürece dahil edilmesi ile reform sürecinin okul kültürü ve sınıf ortamına etkileri. Sürecin merkezi yazışmalar ve hizmet içi eğitimlerle başladığı görülmüştür. Yöneticiler rehberlik ve destekleyici liderlik sergilemiş; öğretmenler ise etkinlik uyarlama, proje tabanlı öğrenme ve disiplinlerarası iş birliği yoluyla inisiyatif almıştır. Başlangıçta yaşanan belirsizlik ve çok paydaşlı direnç, meslektaş dayanışması ve düzenli toplantılarla yönetilmiştir. Reform süreci, okullarda iş birliğine dayalı bir kültürün gelişmesine ve sınıf ortamının daha öğrenci merkezli bir yapıya kavuşmasına katkı sağlamıştır.Sonuç olarak TYMM'nin uygulanmasında okul yöneticilerinin liderlik rolleri ve öğretmenlerin aktif katılımı belirleyici bir işlev üstlenmektedir. Sürecin daha etkin yürütülebilmesi için okul temelli kapasitenin güçlendirilmesi ve merkezi destek mekanizmalarının geliştirilmesi önerilmektedir.
Anahtar kelimeler: Türkiye Yüzyılı Maarif Modeli, okul yönetimi, değişim yönetimi, fenomenoloji, müfredat reformu

Abstract
This study aims to examine the implementation process of the Turkey Century Maarif Model (TYMM) at the school level through the experiences of school administrators and teachers. A phenomenological design, one of the qualitative research methods, was adopted in order to explore the lived experiences of participants and the meanings they attributed to this process.The study group consisted of 15 school administrators and 22 teachers determined through purposive sampling. Data were collected via a semi-structured interview form and analyzed through phenomenological analysis involving coding, sub-theme, and theme development stages.The findings were presented under six themes: the initiation process of TYMM, initiative and leadership experiences during the reform process, risk-taking and innovative implementation experiences, management of uncertainty and resistance, involvement of teachers and resources in the process, and the effects of the reform process on school culture and classroom environment. Findings revealed that the process was initiated through official correspondence and in-service training. Administrators demonstrated supportive and guidance-oriented leadership, while teachers took initiative through activity adaptation, project-based learning, and interdisciplinary collaboration. Uncertainty and multi-stakeholder resistance encountered at the beginning were managed through collegial solidarity and regular meetings. The reform process contributed to the development of a collaborative school culture and a more student-centered classroom environment.

In conclusion, the leadership roles of school administrators and the active participation of teachers are decisive in the successful implementation of TYMM. Strengthening school-based capacity and improving central support mechanisms are recommended for a more effective implementation process.

Keywords: Turkey Century Maarif Model, school administration, change management, phenomenology, curriculum reform

İLKOKULDA TEKNOLOJİNİN ZAMANI ÖLÇME KONUSUNDA AKADEMİK BAŞARIYA ETKİSİ

THE IMPACT OF TECHNOLOGY ON TIME MANAGEMENT AND ACADEMIC SUCCESS IN PRIMARY SCHOOL

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ÖZET

Bu çalışmanın amacı Matematik dersinde teknoloji tabanlı öğrenme araçlarından olan EBA'nın, ilkokul üçüncü sınıf öğrencilerinin "zaman ölçme'' konusundaki akademik başarılarına etkisini araştırmaktır. İncelenen alanyazın taramasında konuya ilişkin herhangi bir çalışmaya rastlanmamıştır. Araştırmada ön test-son test kontrol gruplu yarı deneysel desen kullanılmıştır. Çalışma grubunun oluşturulmasında uygun örnekleme yöntemi tercih edilmiş, gruplar seçkisiz bir şekilde belirlenmiştir. Çalışmanın örneklemini 2025–2026 eğitim öğretim yılında Doğu Anadolu Bölgesi'ndeki bir ilde iki ayrı sınıfta öğrenim gören 52 üçüncü sınıf öğrencisi (Deney = 30, Kontrol = 22) ile yapılan çalışmada, öğrencilerin akademik başarılarını ölçmek adına veri toplama aracı olarak Talim ve Terbiye Kurulu onaylı kaynaktan derlenen 10 çoktan seçmeli sorudan oluşan başarı testi uygulanmıştır. Çalışmanın deney grubunda teknoloji destekli etkinlikler kullanılmıştır. Kontrol grubunda ise mevcut öğretim programında yer alan etkinlikler uygulanmıştır. Bu çalışmada elde edilen veriler SPSS paket istatistik programı ile analiz edilmiş olup parametrik istatistiklerden ilişkili ve ilişkisiz örneklemler-t testleri kullanılmıştır. Elde edilen sonuçlar doğrultusunda teknoloji destekli etkinliklerinin uygulandığı deney grubu öğrencilerinin akademik başarısına istatistiksel olarak anlamlı bir artış olduğu saptanmıştır ($p < 0,05$) .

Anahtar Kelimeler: Akıllı Öğrenme Teknolojileri, İlkokul Matematik, Akademik Başarı, EBA, Yarı deneysel desen

ABSTRACT

The aim of this study is to investigate the effect of the Educational Informatics Network (EBA), one of the technology-based learning tools, on the academic achievement of third-grade primary school students regarding the topic of "time measurement" in Mathematics courses. A review of the literature revealed no prior studies on this specific subject. The research employed a quasi-experimental design with a pre-test/post-test control group. A convenience sampling method was used to select the study group, and the groups were assigned randomly. The sample of the study consisted of 52 third-grade students (Experimental= 30, Control= 22) attending two separate classes in a province in the Eastern Anatolia Region during the 2025–2026 academic year. To measure the students' academic achievement, a success test comprising 10 multiple-choice questions, compiled from sources approved by the Board of Education and Discipline, was administered as a data collection tool. While technology-supported activities were utilized in the experimental group, activities within the existing curriculum were implemented in the control group. The data obtained in this study were analyzed using the SPSS statistical software package, and parametric statistics, specifically paired and independent samples t-tests, were utilized. Based on the results, a statistically significant difference was found in favor of the academic achievement of the experimental group students, where technology-supported activities were applied ($p < 0.05$).

Keywords: Intelligent Learning Technologies, Primary School Mathematics, Academic Achievement, EBA, Quasi-experimental Design

İLKOKULDA AKILLI ÖĞRENME TEKNOLOJİLERİNİN BİLİNÇLİ TÜKETİCİ KAZANIMLARINA ETKİSİ

THE IMPACT OF SMART LEARNING TECHNOLOGIES ON CONSCIOUS CONSUMER DEVELOPMENT IN PRIMARY SCHOOLS

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ÖZET

Bu araştırma, ilkokul 4. sınıf öğrencilerinin "bilinçli tüketici" konusundaki kazanımları edinmelerinde akıllı öğrenme araçlarından biri olan "DersLig" uygulamasının etkililiğini, mevcut öğretim yöntemleriyle karşılaştırmalı olarak incelemeyi amaçlamaktadır. Araştırma, nicel araştırma desenlerinden yarı deneysel modelde tasarlanmıştır. Çalışma grubunun belirlenmesinde uygun örnekleme ve ölçüt örnekleme yöntemleri kullanılırken; sınıfların deney ve kontrol gruplarına atanmasında seçkisiz atama tercih edilmiştir. Toplam 36 öğrenci (Deney n=19; Kontrol n=17) ile yürütülen çalışmada, veri toplama aracı olarak Talim ve Terbiye Kurulu onaylı kaynaklardan derlenen çoktan seçmeli başarı testi kullanılmıştır. Verilerin analizi sürecinde öncelikle normallik testleri yapılmış ve parametrik testlerin uygulanmasına karar verilmiştir. Grupların ön test puanları karşılaştırıldığında, deney grubu lehine istatistiksel olarak anlamlı olmayan bir fark olduğu tespit edilmiştir ($p > 0,05$). Her iki grubun kendi içindeki ön test ve son test başarı puanları incelendiğinde, son testlerde anlamlı bir artışın olduğu gözlenmiştir. Gruplar arasındaki son test farklarını derinlemesine incelemek amacıyla yapılan kovaryans analizi (ANCOVA) sonuçları; öğrencilerin hazır bulunuşluk düzeyleri (ön test puanları) kontrol altına alındığında dahi, deney grubunda uygulanan akıllı öğrenme araçlarının kontrol grubundaki yönteme göre akademik başarıyı artırmada istatistiksel olarak anlamlı bir üstünlük sağlamadığını göstermiştir, $p=0,126$. Sonuç olarak, akıllı öğrenme teknolojilerinin öğrenci başarısı üzerinde mevcut yöntemler kadar etkili olduğu ve eğitim süreçlerinde alternatif bir araç olarak değerlendirilebileceği ortaya konulmuştur. Çalışmanın alan katkısı bakımından soyut ve sosyal bir becerinin doğrudan Akıllı Öğrenme Teknolojileri (DersLig) ile eşleştirilerek, vatandaşlık eğitiminin dijitalleşmesine dair somut bir amaç ortaya koymaktadır. Uluslararası literatürde (UNESCO ve AB yeterlilikleri) vurgulanan "finansal okuryazarlık" ve "dijital yetkinlik" hedeflerini birleştirerek, yerel kazanımları küresel eğitim eğilimleriyle birleştirmektedir. Literatürde genellikle ortaokul ve lise düzeyinde yoğunlaşan teknoloji odaklı başarı araştırmalarını ilkokul seviyesine indirgeyerek, erken çocukluk ve temel eğitim literatüründeki boşluğu doldurmaktadır.

Anahtar Kelimeler: Akıllı Öğrenme Teknolojileri, DersLig, Bilinçli Tüketici, İlkokulda Sosyal Bilgiler, Akademik Başarı, Yarı Deneysel Desen.

ABSTRACT

This study aims to examine the effectiveness of the "DersLig" application, which is one of the smart learning tools, in comparison with existing teaching methods for 4th-grade primary school students to acquire learning outcomes regarding "conscious consumerism". The research is designed in a quasi-experimental model, one of the quantitative research designs. While convenience sampling and criterion sampling methods were used to determine the study group, random assignment was preferred in assigning the classes to the experimental and control groups. In the study conducted with a total of 36 students (Experimental n=19; Control n=17), a multiple-choice achievement test compiled from

resources approved by the Board of Education and Discipline was used as a data collection tool. During the data analysis process, normality tests were first performed, and it was decided to apply parametric tests. When the pre-test scores of the groups were compared, a statistically non-significant difference was found in favor of the experimental group ($p > 0.05$). When the pre-test and post-test achievement scores of both groups within themselves were examined, a significant increase was observed in the post-tests. The results of the analysis of covariance (ANCOVA), conducted to examine the post-test differences between the groups in depth, showed that even when the students' readiness levels (pre-test scores) were controlled, the smart learning tools applied in the experimental group did not provide a statistically significant superiority in increasing academic achievement compared to the method in the control group, $p=0.126$. Consequently, it has been revealed that smart learning technologies are as effective as existing methods on student achievement and can be evaluated as an alternative tool in educational processes. In terms of the study's contribution to the field, it presents a concrete objective for the digitalization of citizenship education by directly pairing abstract and social skill with Smart Learning Technologies (DersLig). By combining the "financial literacy" and "digital competence" goals emphasized in international literature (UNESCO and EU competencies), it merges local learning outcomes with global educational trends. By bringing technology-oriented achievement research, which is generally concentrated at the secondary and high school levels in the literature, down to the primary school level, it fills the gap in the early childhood and basic education literature.

Keywords: Smart Learning Technologies, DersLig, Conscious Consumer, Social Studies in Primary School, Academic Achievement, Quasi- Experimental Design.

BİLGİ İŞLEMSEL DÜŞÜNME ÜZERİNE YAPILAN LİSANSÜSTÜ TEZLERİN İÇERİK ANALİZİ

A CONTENT ANALYSIS OF GRADUATE THESES ON COMPUTATIONAL THINKING

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Abstract
Today's rapid technological advancements fundamentally alter societal and individual needs. This situation necessitates the redefinition of competencies that individuals should possess. Computational thinking, on the other hand, is a skill whose importance and the number of researches conducted on it are gradually increasing. This study aims to examine master's and doctoral theses on computational thinking published between the years 2021 and 2025. For this purpose, master's and doctoral theses published in the CoHE (Council of Higher Education) National Thesis Center were scanned, and a content analysis was performed on a total of 164 theses (139 master's, 25 doctoral). In the study, document analysis design, one of the qualitative research methods, was preferred. The examined theses were analyzed under 8 themes: type, year of publication, preferred research method, department, sample level, sub-dimensions of computational thinking, skills and characteristics utilized in the theses, and computational thinking tools and platforms. Frequency and percentage were used in data analysis. As a result of the analyses, it was observed that the highest number of studies was conducted in 2025, and the most intensely studied discipline was Computer Education and Instructional Technology. It was determined that the quantitative research method was most frequently preferred in the theses, closely followed by the mixed method. Regarding the distribution of the target audience, the highest number of studies was conducted with middle school students. Within the context of the sub-dimensions of computational thinking, it is observed that the most frequently studied dimension is "algorithmic thinking." It was found that in the majority of the thesis studies, the subject of computational thinking skills and levels was addressed. Looking at the distribution of the computational thinking tools and platforms used, it was determined that the highest rate was that no tools were used; whereas in studies where tools were utilized, the Scratch application and unplugged activities were mostly preferred. In conclusion, this study reveals that academic interest in computational thinking skills has gained momentum in recent years and highlights the general trends and thematic distribution in this field. The findings obtained are of a quality that will guide researchers to notice understudied themes, sample groups, and digital platforms in the literature for their own work.
Keywords: Computational thinking, thesis review, document analysis, content analysis.

Özet
Günümüzdeki hızlı teknolojik ilerlemeler, toplumsal ve bireysel gereksinimleri temelden değiştirmektedir. Bu durum da bireylerin sahip olması gereken yetkinliklerin yeniden tanımlanmasını zorunlu kılmaktadır. Bilgi işlemsel düşünme yöntemi ise önemi ve hakkında yapılan araştırma sayısı giderek artan bir beceridir. Bu çalışmada, 2021-2025 yılları arasında bilgi işlemsel düşünme konulu yüksek lisans ve doktora tezlerinin incelenmesi amaçlanmıştır. Bu hedefe yönelik olarak YÖK Ulusal Tez Merkezinde yayınlanan yüksek lisans ve doktora tezleri taranmış ve toplam 164 tez (139 yüksek lisans, 25 doktora) üzerinde içerik analizi gerçekleştirilmiştir. Araştırmada, nitel araştırma yöntemlerinden doküman analizi deseni tercih edilmiştir. İncelenen tezler; tür, yapıldığı yıl, tezde tercih edilen yöntem, ana bilim dalı, örneklem düzeyi, bilgi işlemsel düşünmenin alt boyutları, tezlerde kullanılan beceriler ve özellikleri, bilgi işlemsel düşünme araç ve platformları olmak üzere 8 tema altında analiz edilmiştir. Verilerin analizinde frekans ve yüzde kullanılmıştır. Analizler sonucunda en

fazla çalışmanın 2025 yılında yapıldığı ve en yoğun çalışılan bilim dalının Bilgisayar ve Öğretim Teknolojileri Eğitimi olduğu görülmüştür. Tezlerde en çok nicel araştırma yönteminin tercih edildiği ve bunu çok yakın bir oranla karma yöntemin takip ettiği tespit edilmiştir. Hedef kitle dağılımına bakıldığında en fazla ortaokul öğrencileriyle çalışılmıştır. Tezlerin bilgi işlemsel düşünme alt boyutları bağlamında en çok "algoritmik düşünme" boyutunda çalışma yapıldığı görülmektedir. Tez çalışmalarının çoğunluğunda, bilgi işlemsel düşünme becerileri ve düzeyleri konusunun ele alındığı tespit edilmiştir. Kullanılan bilgi işlemsel düşünme araç ve platformlarının dağılımına bakıldığında, en yüksek oranda herhangi bir aracın kullanılmadığı; araç kullanılan çalışmalarda ise en çok Scratch uygulamasının ve bilgisayarsız (unplugged) etkinliklerin tercih edildiği tespit edilmiştir. Sonuç olarak bu çalışma, bilgi işlemsel düşünme becerisine yönelik akademik ilginin son yıllarda ivme kazandığını ve bu alandaki genel eğilimleri ve tematik dağılımı ortaya koymaktadır. Elde edilen bulgular araştırmacıların kendi çalışmalarında literatürde az çalışılmış temaları, örneklem gruplarını ve dijital platformları fark etmelerine rehberlik edecek niteliktedir.

Anahtar Sözcükler: Bilgi işlemsel düşünme, tez inceleme, doküman inceleme, içerik analizi

OKULLARIN DNA PROFİLLERİ İLE ÖĞRETMENLERİN MESLEKİ DOYUM ARASINDAKİ İLİŞKİ

THE RELATIONSHIP BETWEEN ORGANIZATIONAL DNA PROFILES OF SCHOOLS AND JOB SATISFACTION OF TEACHERS

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ÖZET

Bu araştırmanın temel amacı, eğitim örgütlerinde öğretmenlerin algıladıkları örgüt DNA'sı profilleri ile mesleki doyum düzeyleri arasındaki ilişkiyi ortaya koymak ve bu değişkenlerin çeşitli demografik özelliklere göre farklılaşıp farklılaşmadığını incelemektir. Nicel araştırma yöntemlerinden ilişkisel tarama modelinde desenlenen çalışmanın evrenini , 2025-2026 eğitim-öğretim yılında Bolu ili merkez ilçesindeki resmi okullarda görev yapan ve araştırmaya gönüllü olarak katılan 205 öğretmen oluşturmaktadır. Araştırmada veri toplama aracı olarak "Kişisel Bilgi Formu", "Örgüt DNA'sı Ölçeği" ve "Mesleki Doyum Ölçeği" kullanılmıştır. Verilerin analizi sürecinde ortalama, standart sapma, Mann-Whitney U, Kruskal-Wallis H ve Spearman Rho korelasyon analizi tekniklerinden yararlanılmıştır. Araştırma bulgularına göre, öğretmenlerin okullarını en yüksek düzeyde sağlıklı bir profil olan "Esnek Örgüt" yapısında algıladıkları , sağlıksız profillerden "Pasif-Saldırgan" örgüt yapısının ise en düşük ortalamaya sahip olduğu saptanmıştır. Öğretmenlerin genel mesleki doyum düzeylerinin ise yüksek olduğu tespit edilmiştir. Bağımsız değişkenlere yönelik analizlerde; cinsiyet, medeni durum, eğitim durumu ve mevcut okulda çalışma süresi değişkenlerinin öğretmenlerin mesleki doyumları ve genel örgüt DNA'sı algıları üzerinde istatistiksel olarak anlamlı bir farklılık yaratmadığı görülmüştür. Buna karşın, mesleki kıdemi "21 yıl ve üzeri" olan öğretmenlerin "Esnek" ve "Tam Zamanlı" örgüt DNA'sı algılarının, mesleğe yeni başlayan öğretmenlere göre anlamlı derecede daha yüksek olduğu belirlenmiştir. Ayrıca, ilkokulda görev yapan öğretmenlerin okullarını "Askeri Örgüt" yapısında algılama düzeyleri ile genel örgüt DNA'sı algı puanlarının, ortaokul ve lise öğretmenlerine kıyasla anlamlı düzeyde daha yüksek olduğu ortaya konulmuştur. Korelasyon analizi sonuçları, okulun DNA profili ile öğretmenlerin mesleki doyumu arasında güçlü ilişkiler olduğunu göstermiştir. Öğretmenlerin mesleki doyumları ile sağlıklı örgüt yapıları ("Esnek" ve "Tam Zamanlı") arasında pozitif yönlü, orta düzeyde anlamlı bir ilişki bulunurken ; sağlıksız örgüt yapıları ("Gelişigüzel", "Yönetim Ağırlıklı" ve "Pasif-Saldırgan") arasında negatif yönlü ve anlamlı bir ilişki tespit edilmiştir. Elde edilen sonuçlar, okullarda bürokratik engellerin azaltılarak esnek, şeffaf ve açık iletişim kanallarına sahip sağlıklı kurumsal yapıların inşa edilmesinin öğretmenlerin mesleki mutluluğunu artırmada kritik bir role sahip olduğunu göstermektedir.

Anahtar Kelimeler: Örgüt DNA'sı, Mesleki Doyum, Öğretmen.

ABSTRACT

The primary objective of this study is to reveal the relationship between organizational DNA profiles perceived by teachers in educational organizations and their job satisfaction levels, and to examine whether these variables differ according to various demographic characteristics. Designed in the correlational survey model, which is one of the quantitative research methods, the population of the study consists of 205 teachers who voluntarily participated in the research and were working in official schools located in the central district of Bolu province during the 2025-2026 academic year. A "Personal Information Form", the "Organizational DNA Scale", and the "Job Satisfaction Scale" were utilized as data collection instruments in the study. In the data analysis process, mean, standard deviation, Mann-Whitney U, Kruskal-Wallis H, and Spearman's Rho correlation analysis techniques were employed. According to the research findings, it was determined that teachers perceived their schools at the highest

level in the "Flexible Organization" structure, which is a healthy profile, whereas the "Passive-Aggressive" organizational structure, one of the unhealthy profiles, had the lowest average score. Furthermore, teachers' overall job satisfaction levels were found to be high. In the analyses directed toward independent variables; it was observed that gender, marital status, educational background, and tenure at the current school did not create a statistically significant difference on teachers' job satisfaction and overall organizational DNA perceptions. Conversely, it was determined that teachers with a professional seniority of "21 years and above" had significantly higher perceptions of "Flexible" and "Full-Time" organizational DNA compared to novice teachers. Additionally, it was revealed that the level of perceiving schools in the "Military Organization" structure and the overall organizational DNA perception scores of teachers working in primary schools were significantly higher compared to middle and high school teachers. The results of the correlation analysis demonstrated strong relationships between the schools' DNA profiles and teachers' job satisfaction. While a positive and moderately significant relationship was found between teachers' job satisfaction and healthy organizational structures ("Flexible" and "Full-Time"), a negative and significant relationship was detected with unhealthy organizational structures ("Random", "Overmanaged", and "Passive-Aggressive"). The obtained results indicate that reducing bureaucratic barriers in schools and constructing healthy institutional structures with flexible, transparent, and open communication channels play a critical role in enhancing teachers' professional happiness.
Keywords: Organizational DNA, Job Satisfaction, Teacher.

MESLEK LİSESİ ÖĞRENCİLERİNİN KARİYER PLANLAMA YETKİNLİĞİ VE KARİYER KAYGILARI

CAREER PLANNING COMPETENCE AND CAREER ANXIETY OF VOCATIONAL HIGH SCHOOL STUDENTS

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Özet
Bu araştırmanın amacı, meslek lisesi öğrencilerinin kariyer planlama yetkinliği ile kariyer kaygıları arasındaki ilişkiyi incelemektir. İlişkisel tarama modelinde yürütülen araştırmanın çalışma evrenini, 2025-2026 eğitim-öğretim yılında Bolu merkez ilçe meslek liselerinde öğrenim gören 203 öğrenci oluşturmaktadır. Araştırmada veri toplama aracı Kariyer Planlama Yetkinliği Ölçeği ve Kariyer Kaygısı Ölçeği kullanılmıştır. Verilerin analizinde ortalama, standart sapma ve Spearman Rho Korelasyon analizi yapılmıştır. Araştırmaya göre, meslek lisesi öğrencilerinin kariyer planlama yetkinliği ölçeği toplamı ve alt boyutları olan kendiliğe ilişkin yetkinlik, yardım yollarını tanıma, mesleğe ilişkin yetkinlik ve değişimi öngörebilme yeterliliği yönelik görüşleri "katılıyorum" düzeyindedir. Öğrencilerin kariyer kaygısına yönelik görüşleri ise ölçek genelinde ve aile etkisinden kaynaklı kaygılar boyutunda "hiç katılmıyorum"; meslek seçimine yönelik kaygılarda ise "kararsızım" düzeyindedir. Öğrencilerinin kariyer planlama yetkinliği ile kariyer kaygıları arasında orta düzeyde, negatif yönlü ve anlamlı ilişki bulunmuştur. Elde edilen sonuçlar doğrultusunda önerilerden birkaçı; okullarda sistemli kariyer rehberliği çalışmalarının yürütülmesi, okul-sektör iş birliklerinin artırılması, kariyer günleri düzenlenmesi, üniversite ve meslek tanıtım etkinliklerinin yaygınlaştırılması, uygulamalı etkinlikler, staj çalışmaları, rol model buluşmaları ve ailelere çocukların kariyer seçim süreçlerine sağlıklı bir biçimde eşlik etmeleri konusunda seminerler düzenlenmesi şeklindedir.
Anahtar kelimeler: Kariyer Planlama Yetkinliği,Kariyer Kaygısı,Meslek Lisesi Öğrencileri

Abstract
The aim of this study is to examine the relationship between career planning competence and career anxiety among vocational high school students. The study was conducted using the correlational survey model, and the study population consisted of 203 students enrolled in vocational high schools located in the central district of Bolu during the 2025–2026 academic year. The Career Planning Competence Scale and the Career Anxiety Scale were used as data collection instruments. In the analysis of the data, mean, standard deviation, and Spearman's Rho correlation analysis were employed. According to the findings of the study, vocational high school students' perceptions regarding the total score of the Career Planning Competence Scale and its sub-dimensions, namely self-related competence, recognizing support resources, profession-related competence, and the ability to foresee change, were at the "agree" level. Students' perceptions regarding career anxiety were found to be at the "strongly disagree" level both for the overall scale and for the sub-dimension of anxieties arising from family influence, whereas perceptions regarding anxieties related to career choice were at the "undecided" level. A moderate, negative, and statistically significant relationship was found between students' career planning competence and their career anxiety. Based on the findings obtained from the study, several recommendations were proposed, including implementing systematic career guidance programs in schools, increasing school-industry collaborations, organizing career days, expanding university and vocational promotion activities, conducting practical activities and internship programs, arranging meetings with role models, and organizing seminars for parents to support them in accompanying their children's career choice processes in a healthy manner.
Keywords:Career Planning Competence,Career Anxiety,Vocational High School Students

İKİ KADEMELİ DİŞLİ KUTUSUNDA SAĞLIKLI VE ÇATLAK DİŞLİ DURUMLARININ MAKİNE ÖĞRENMESİ İLE SINIFLANDIRILMASI

CLASSIFICATION OF HEALTHY AND CRACKED GEAR CONDITIONS IN A TWO-STAGE GEARBOX USING MACHINE LEARNING

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Abstract
This study addresses the classification of the structural condition of gearboxes, a critical component in rotating machinery, with high accuracy using machine learning methods. The analysis used the "Gearbox Fault Diagnosis Data" set from the Open Energy Data Initiative (OEDI) data center to examine healthy and cracked gear conditions in a two-stage system. Data were obtained on the SpectraQuest simulator using accelerometers positioned in four directions across a load spectrum ranging from 0% to 90%. As a method, raw vibration signals were divided into windows of 128 samples; a statistical feature set consisting of mean, standard deviation, maximum, minimum, RMS, and peak-to-peak values reflecting the signal's characteristics was derived from these segments. In the classification phase, 25% of the data was reserved for testing, and K-Nearest Neighbors, Decision Tree, Support Vector Machine, and Random Forest models were trained. In the performance evaluation, the healthy gear condition was defined as the positive class; accuracy, precision, recall, and F1-score were used as the evaluation metrics. The experimental results showed that the SVM model achieved the highest success rate. This model exhibited the most stable performance with 96.50% accuracy, 96.49% precision, 96.68% recall, and 96.58% F1-score. The Random Forest algorithm produced the second-best result with 95.97% accuracy and 96.00% F1-score; KNN followed with 95.19% accuracy, and Decision Tree with 93.14% accuracy. The findings demonstrate that features derived from multi-channel sensor data are decisive for fault diagnosis and that the SVM-based approach, in particular, provides a reliable basis for predictive maintenance strategies.
Keywords: Gearbox Fault Diagnosis, Vibration Analysis, Machine Learning, SVM, Predictive Maintenance

Özet
Bu çalışma, dönen makinelerde kritik bir bileşen olan dişli kutularının yapısal durumunun, makine öğrenmesi yöntemleri kullanılarak yüksek doğrulukla sınıflandırılmasını ele almaktadır. Analizde, iki aşamalı bir sistemde sağlıklı ve çatlak dişli koşullarını incelemek için Open Energy Data Initiative (OEDI) veri merkezinden alınan "Gearbox Fault Diagnosis Data" seti kullanıldı. Veriler, %0 ile %90 arasında değişen bir yük spektrumunda dört yönde konumlandırılmış ivmeölçerler kullanılarak SpectraQuest simülatöründe elde edildi. Çalışma şartı olarak, ham titreşim sinyalleri 128 örnekten oluşan pencerelere bölündü; bu segmentlerden sinyalin özelliklerini yansıtan ortalama, standart sapma, maksimum, minimum, RMS ve tepe-tepe değerlerinden oluşan istatistiksel bir özellik seti türetildi. Sınıflandırma aşamasında, verilerin %25'i test için ayrıldı ve K-Nearest Neighbors (KNN), Decision Tree, Support Vector Machine (SVM) ve Random Forest modelleri eğitildi. Performans değerlendirmesinde, sağlıklı dişli koşulu pozitif sınıf olarak tanımlandı; Değerlendirme ölçütleri olarak doğruluk, hassasiyet, geri çağırma ve F1 puanı kullanılmıştır. Deneysel sonuçlar, SVM modelinin en yüksek başarı oranına ulaştığını göstermiştir. Bu model, %96,50 doğruluk, %96,49 kesinlik, %96,68 duyarlılık ve %96,58 F1 skoru ile en istikrarlı performansı sergilemiştir. Random Forest algoritması %95,97 doğruluk ve %96,00 F1 skoru ile ikinci en iyi sonucu vermiştir; KNN %95,19 doğrulukla,

Decision Tree ise %93,14 doğrulukla onu takip etmiştir. Bulgular, çok kanallı sensör verilerinden elde edilen özelliklerin arıza teşhisi için belirleyici olduğunu ve özellikle SVM tabanlı yaklaşımın, öngörücü bakım stratejileri için güvenilir bir temel sağladığını göstermektedir.

Anahtar kelimeler: Dişli Kutusu Arıza Teşhisi, Titreşim Analizi, Makine Öğrenmesi, SVM, Kestirimci Bakım

SOL-JEL YÖNTEMİYLE ELDE EDİLEN ZR KATKILI PDMS KAPLAMALARIN TOZ YATAĞINDA METAL EKLEMELİ İMALAT YÖNTEMİYLE ÜRETİLEN TI6AL4V ALAŞIMI ÜZERİNDEKİ TRİBOLOJİK ÖZELLİKLERİN ARAŞTIRILMASI

INVESTIGATION OF TRIBOLOGICAL PROPERTIES ZR-DOPED PDMS COATINGS OBTAINED BY SOL-GEL METHOD ON METAL LASER POWDER BED FUSION ADDITIVELY MANUFACTURED TI6AL4V ALLOY

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Abstract
Additive manufacturing technologies such as Laser Powder Bed Fusion (L-PBF) enable the fabrication of Ti6Al4V ELI (Extra Low Interstitial) alloys with complex geometries owing to their high strength-to-weight ratio and superior biocompatibility. However, improving the surface characteristics and wear resistance of these materials is essential to ensure long-term performance under harsh mechanical service conditions. In this study, a zirconium (Zr)-doped polydimethylsiloxane (PDMS) hybrid coating was applied onto L-PBF fabricated Ti6Al4V ELI alloy surfaces via the sol-gel dip-coating method in order to enhance wear resistance, and the tribological behavior of the coated material was investigated. Within the scope of surface modification, specimens with dimensions of 10×10×5 mm³ were immersed three times into the prepared Zr-PDMS solution and subsequently cured at 130°C for 27 h to ensure the structural stability of the coating layer. The elemental composition of the synthesized coating was verified using energy-dispersive spectroscopy (EDS). Wear behavior was evaluated by means of ball-on-disk tribological testing. Post-wear structural, chemical, and morphological alterations were systematically investigated using microhardness measurements, X-ray diffraction (XRD), Fourier transform infrared spectroscopy (FT-IR), and scanning electron microscopy (SEM). The characterization results revealed that the surface hardness of the untreated L-PBF Ti6Al4V ELI alloy, initially measured at approximately 395 $HV_{0.1}$, increased by nearly 16% after the application of the Zr-doped PDMS coating, reaching approximately 460 $HV_{0.1}$. Tribological tests and post-wear morphological evaluations demonstrated that the hybrid coating formed an effective protective barrier layer on the surface, restricting friction-induced deformations and significantly improving the wear behavior compared to the untreated substrate. The findings indicate that the sol-gel derived Zr-doped PDMS hybrid coating is an effective approach for enhancing both the surface mechanical properties and wear protection performance of additively manufactured Ti6Al4V ELI alloys.
Keywords: Laser Powder Bed Fusion (L-PBF), Ti6Al4V ELI, Sol-Gel Dip Coating, Zr-Doped PDMS, Tribology, Wear.

Özet
Lazer Toz Yatağı Füzyonu (L-PBF) gibi eklemeli imalat teknolojileri, yüksek mukavemet/ağırlık oranı ve üstün biyouyumluluk özellikleri sayesinde Ti6Al4V ELI (Extra Low Interstitial) alaşımının karmaşık geometrilerde üretimine olanak sağlamaktadır. Bununla birlikte, bu yöntemle üretilen parçaların zorlu çalışma koşullarındaki uzun dönem performansı açısından yüzey özelliklerinin ve aşınma direncinin iyileştirilmesi önem arz etmektedir. Bu çalışmada, L-PBF yöntemiyle üretilen Ti6Al4V ELI alaşımının tribolojik performansını artırmak amacıyla yüzeye sol-jel daldırma (dip-coating) yöntemi ile zirkonyum (Zr) katkılı polidimetilsiloksan (PDMS) hibrit kaplama uygulanmış ve malzemenin aşınma davranışı incelenmiştir. Yüzey modifikasyonu kapsamında, 10×10×5 mm³ boyutlarındaki numuneler hazırlanan Zr-PDMS çözeltisine üç kez daldırılmış ve kaplamaların yapısal kararlılığını sağlamak amacıyla

130°C'de 27 saat kürleme işlemine tabi tutulmuştur. Sentezlenen kaplamanın bileşimi Enerji Dağılımlı X-Işını Spektroskopisi (EDS) ile doğrulanmıştır. İşlemsiz ve kaplanmış numunelerin aşınma davranışları ball-on-disk (disk üzerinde bilye) aşınma test cihazı kullanılarak değerlendirilmiştir. Aşınma testleri sonrasında meydana gelen yapısal, kimyasal ve morfolojik değişimler; mikrosertlik ölçümleri, X-ışını kırınımı (XRD), Fourier dönüşümlü kızılötesi spektroskopisi (FT-IR) ve taramalı elektron mikroskobu (SEM) analizleri kullanılarak gerçekleştirilmiştir. Karakterizasyon sonuçları, işlemsiz L-PBF Ti6Al4V ELI alaşımının yaklaşık 395 $HV_{0.1}$ olan yüzey sertliğinin, Zr katkılı PDMS kaplama sonrasında yaklaşık %16 artış göstererek 460 $HV_{0.1}$ seviyesine ulaştığını ortaya koymuştur. Tribolojik testler ve aşınma sonrası yapılan morfolojik incelemeler, hibrit kaplamanın yüzeyde etkin bir koruyucu tabaka oluşturduğunu, sürtünme kaynaklı deformasyonları sınırladığını ve işlemsiz numuneye kıyasla aşınma davranışını belirgin şekilde iyileştirdiğini göstermiştir. Elde edilen bulgular, sol-jel yöntemiyle uygulanan Zr katkılı PDMS hibrit kaplamanın, eklemeli imalatla üretilen Ti6Al4V ELI alaşımının hem yüzey mekanik özelliklerini hem de aşınmaya karşı koruyucu performansını geliştirmede etkili bir yaklaşım olduğunu göstermektedir.

Anahtar kelimeler: Lazer Toz Yatağı Füzyonu (L-PBF), Ti6Al4V ELI, Sol-gel Daldırma, Zr Katkılı PDMS, Triboloji, Aşınma.

NACA 2412 KANAT PROFİLİNİN ADJOINT TABANLI OPTİMİZASYON İLE AERODİNAMİK VERİMLİLİĞİNİN (CL/CD) ARTIRILMASI VE YENİ BİR KANAT PROFİLİ ÖNERİSİ

ENHANCEMENT OF THE AERODYNAMIC EFFICIENCY (CL/CD) OF THE NACA 2412 AIRFOIL VIA ADJOINT-BASED OPTIMIZATION AND PROPOSAL OF A NEW AIRFOIL

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Abstract
The aerodynamic efficiency of an airfoil, commonly expressed through the lift-to-drag ratio (CL/CD), is a decisive factor governing the range, endurance and overall energy consumption of fixed-wing aerial vehicles. The NACA 2412, a widely used four-digit airfoil, is frequently adopted as a baseline geometry; nevertheless, its performance leaves room for improvement, particularly at the design lift conditions relevant to small unmanned aerial vehicles. In this study, the shape of the NACA 2412 airfoil is optimised by means of a gradient-based adjoint solver with the objective of maximising the CL/CD ratio at a prescribed Reynolds number and angle of attack. First, the baseline airfoil is analysed with a Reynolds-Averaged Navier-Stokes solver in ANSYS Fluent in order to establish a reference performance level. Subsequently, the continuous adjoint method is employed to compute the sensitivity of the objective function with respect to the airfoil surface, and the geometry is deformed iteratively until convergence is achieved. The optimised contour is then re-analysed under identical flow conditions, and its aerodynamic characteristics are compared with those of the original profile. On the basis of the resulting geometry, a new airfoil is proposed as an improved alternative to the NACA 2412. The study demonstrates that adjoint-based optimisation provides a computationally efficient framework for systematic airfoil improvement and yields a candidate profile with enhanced aerodynamic efficiency, offering a justified basis for further high-fidelity and experimental investigation.
Keywords: NACA 2412, Adjoint Optimization, Aerodynamic Efficiency, Airfoil Design, Computational Fluid Dynamics

Özet
Bir kanat profilinin, genellikle taşıma/sürükleme oranı (CL/CD) ile ifade edilen aerodinamik verimliliği; sabit kanatlı hava araçlarının menzil, havada kalış süresi ve toplam enerji tüketimini belirleyen başat etkenlerden biridir. Yaygın olarak kullanılan dört haneli bir profil olan NACA 2412, sıklıkla temel (baseline) geometri olarak benimsenmektedir; bununla birlikte, özellikle küçük insansız hava araçları için geçerli tasarım taşıma koşullarında performansı iyileştirmeye açıktır. Bu çalışmada, NACA 2412 kanat profilinin biçimi, belirli bir Reynolds sayısı ve hücum açısında CL/CD oranını enbüyüklemek amacıyla gradyan tabanlı bir adjoint çözücü aracılığıyla optimize edilmiştir. İlk aşamada, referans bir performans düzeyi belirlemek üzere temel profil, ANSYS Fluent ortamında Reynolds Ortalamalı Navier-Stokes çözücüsü ile analiz edilmiştir. Ardından, amaç fonksiyonunun kanat profili yüzeyine göre duyarlılığını hesaplamak için sürekli (continuous) adjoint yöntemi kullanılmış ve geometri, yakınsama sağlanana kadar yinelemeli olarak deforme edilmiştir. Optimize edilen profil, aynı akış koşulları altında yeniden analiz edilmiş ve aerodinamik özellikleri özgün profil ile karşılaştırılmıştır. Elde edilen geometri temel alınarak, NACA 2412 profiline iyileştirilmiş bir alternatif olarak yeni bir kanat profili önerilmiştir. Çalışma, adjoint tabanlı optimizasyonun sistematik kanat profili iyileştirmesi için hesaplama açısından verimli bir çerçeve sunduğunu ve aerodinamik verimliliği artırılmış bir aday profil ürettiğini ortaya koymakta; bu sonuç, ileri yüksek doğruluklu ve deneysel incelemeler için gerekçelendirilmiş bir temel oluşturmaktadır.
Anahtar kelimeler: NACA 2412, Adjoint Optimizasyon, Aerodinamik Verimlilik, Kanat Profili Tasarımı, Hesaplamalı Akışkanlar Dinamiği

BİRLEŞİK KANAT-GÖVDE (BWB) İNSANSIZ HAVA ARACI TASARIMINDA FARKLI KANAT PROFİLLERİNİN OPENVSP TABANLI DÜŞÜK DOĞRULUKLU AERODİNAMİK ANALİZİ VE KARŞILAŞTIRILMASI

OPENVSP-BASED LOW-FIDELITY AERODYNAMIC ANALYSIS AND COMPARISON OF DIFFERENT AIRFOILS FOR A BLENDED WING BODY (BWB) UNMANNED AERIAL VEHICLE DESIGN

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Abstract
Blended Wing Body (BWB) configurations have attracted increasing attention in unmanned aerial vehicle (UAV) design owing to their potential for higher lift-to-drag ratios, reduced wetted area and improved volumetric efficiency compared with conventional tube-and-wing layouts. However, the strong coupling between the lifting surface and the centre body makes the aerodynamic performance highly sensitive to the selected airfoil and to the planform parameters. In this study, a parametric BWB UAV geometry is generated in OpenVSP, and the aerodynamic behaviour of several candidate airfoils is investigated and compared at a low-fidelity level by means of the vortex lattice method. For each configuration, the effects of geometric parameters such as twist, dihedral and sweep angle on the lift coefficient, drag coefficient, lift-to-drag ratio and longitudinal static stability are evaluated under identical flow conditions. The comparison aims to identify, among the examined airfoils and planform settings, the configuration offering the most favourable balance between aerodynamic efficiency and static stability for the intended mission profile. It should be emphasised that the present work is limited to low-fidelity analyses and does not include high-fidelity computational or experimental validation; rather, it constitutes a systematic screening and comparison stage intended to reduce the design space prior to subsequent high-fidelity studies. The results provide a justified baseline for the selection of an airfoil and planform combination to be carried forward into detailed analyses.
Keywords: Blended Wing Body, Unmanned Aerial Vehicle, OpenVSP, Low-Fidelity Analysis, Airfoil

Özet
Birleşik kanat-gövde (Blended Wing Body, BWB) konfigürasyonları; geleneksel gövde-kanat düzenlerine kıyasla daha yüksek taşıma/sürükleme oranı, daha küçük ıslak alan ve daha iyi hacimsel verimlilik potansiyeli nedeniyle insansız hava aracı (İHA) tasarımında giderek artan bir ilgi görmektedir. Ancak taşıyıcı yüzey ile merkez gövde arasındaki güçlü etkileşim, aerodinamik performansı seçilen kanat profiline ve plan formu parametrelerine karşı oldukça duyarlı kılmaktadır. Bu çalışmada, parametrik bir BWB İHA geometrisi OpenVSP ortamında oluşturulmuş ve aday kanat profillerinin aerodinamik davranışları, girdap kafes yöntemi (vortex lattice method) kullanılarak düşük doğruluklu düzeyde incelenmiş ve karşılaştırılmıştır. Her konfigürasyon için burulma (twist), dihedral ve ok (sweep) açısı gibi geometrik parametrelerin taşıma katsayısı, sürükleme katsayısı, taşıma/sürükleme oranı ve boyuna statik kararlılık üzerindeki etkileri aynı akış koşulları altında değerlendirilmiştir. Karşılaştırmanın amacı, incelenen kanat profilleri ve plan formu ayarları arasından, hedeflenen görev profili için aerodinamik verimlilik ile statik kararlılık arasında en uygun dengeyi sunan konfigürasyonun belirlenmesidir. Bu çalışmanın yalnızca düşük doğruluklu analizlerle sınırlı olduğu ve yüksek doğruluklu sayısal veya deneysel doğrulama içermediği vurgulanmalıdır; çalışma, sonraki yüksek doğruluklu incelemeler öncesinde tasarım uzayını daraltmayı amaçlayan sistematik bir eleme ve karşılaştırma aşaması niteliğindedir. Elde edilen sonuçlar, ileri analizlere taşınacak kanat profili ve plan formu bileşiminin seçimi için gerekçelendirilmiş bir temel sunmaktadır.
Anahtar kelimeler: Birleşik Kanat-Gövde, İnsansız Hava Aracı, OpenVSP, Düşük Doğruluklu Analiz, Kanat Profili

NEW RESEARCH TRENDS ON THE MACHINIBILITY OF SUPERALLOYS USING THE WEDM METHOD

SÜPER ALAŞIMLARIN WEDM YÖNTEMİ İLE İŞLENEBİLİRLİĞİ ÖZELİNDE YENİ ARAŞTIRMA TRENDLERİ

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ABSTRACT

The utilization of superalloys based on nickel, cobalt, and iron is steadily increasing across the aerospace, medical, and automotive sectors. This is primarily driven by their exceptional strength at high temperatures along with remarkable wear and corrosion resistance. However, the inherent high hardness and low thermal conductivity of these materials pose significant challenges for conventional machining techniques. This limitation inevitably necessitates the adoption of unconventional manufacturing processes, particularly Wire Electrical Discharge Machining (WEDM). This paper investigates the current research trends in the literature regarding the WEDM machinability of superalloys. Within the scope of this study, selected recent publications focusing on superalloys with nickel, cobalt, and iron matrices have been systematically analyzed. The reviewed literature evaluates the complex relationships between critical machinability indicators and fundamental machining parameters. These indicators include material removal rate (MRR), surface roughness (R_a), kerf width (KW), and recast layer formation. The evaluated machining parameters consist of pulse on time (T_{on}), pulse off time (Toff), peak current (Ip), wire feed rate, and gap voltage. Based on the synthesized data and subsequent analyses, it is evident that emerging research trends heavily revolve around statistical experimental design and optimization frameworks, notably the Taguchi method, Analysis of Variance (ANOVA), and Response Surface Methodology (RSM). By presenting a comparative overview of the WEDM performance of superalloys with varying matrix structures, this study aims to serve as a comprehensive reference guide for both future experimental investigations and practical industrial applications.

Keywords: Wire Electrical Discharge Machining, Superalloys, Nickel Based, Cobalt Based, Iron Based

ÖZET

Havacılık, uzay, tıp ve otomotiv endüstrilerinde üstün yüksek sıcaklık dayanımı, aşınma ve korozyon direnci sunan nikel, kobalt ve demir esaslı süper alaşımların kullanımı giderek artmaktadır. Fakat bu malzemelerin yüksek sertlikleri ve düşük ısıl iletkenlikleri geleneksel talaşlı imalat yöntemleriyle işlenmelerini zorlaştırmakta olup bu durum Tel Erozyon (WEDM) gibi geleneksel olmayan imalat yöntemlerini zorunlu kılmaktadır. Bu yazıda süper alaşımların WEDM yöntemiyle işlenebilirliği üzerine literatürde yer alan güncel araştırma trendleri incelenmiştir. Çalışma kapsamında; nikel, kobalt ve demir esaslı süper alaşımların her biri için seçilmiş güncel çalışmalar analiz edilmiştir. İncelenen çalışmalarda materyal kaldırma oranı (MRR), yüzey pürüzlülüğü (R_a), kerf genişliği (KW) ve yeniden katılaşma tabakası oluşumu gibi kritik işlenebilirlik çıktılarının darbe açık süresi (T_{on}), darbe kapalı süresi (Toff), tepe akımı (Ip), tel besleme hızı ve boşluk voltajı gibi işleme parametreleriyle olan ilişkileri değerlendirilmiştir. Elde edilen veriler ile yapılan analizler sonucunda yeni araştırma trendlerinin özellikle Taguchi, ANOVA ve Yanıt Yüzey Metodolojisi (RSM) gibi istatistiksel deneysel tasarım ve optimizasyon teknikleri etrafında şekillendiği görülmektedir. Bu çalışma farklı matris yapılarına sahip süper alaşımların WEDM performanslarını karşılaştırmalı olarak sunarak gelecekteki deneysel araştırmalar ve endüstriyel uygulamalar için kapsamlı bir referans kaynağı oluşturmayı amaçlamaktadır.

Anahtar Kelimeler: Tel Erozyon, Süper Alaşımlar, Nikel Esaslı, Kobalt Esaslı, Demir Esaslı

HAVACILIK BAĞLANTI ELEMANLARINA YÖNELİK SLM YÖNTEMİYLE ÜRETİLEN 316L PASLANMAZ ÇELİK MALZEME YÜZEYİNE KAPLANAN POLİMER VE KOMPOZİTLERİN KOROZYON DAVRANIŞINA ETKİSİ

EFFECT OF POLYMER AND COMPOSITE COATINGS ON THE CORROSION BEHAVIOR OF SLM-MANUFACTURED 316L STAINLESS STEEL FOR AEROSPACE FASTENERS

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Abstract
Selective Laser Melting (SLM) technology, which enables the fabrication of complex geometries compared to conventional manufacturing methods, is increasingly gaining ground in the production of critical components within the aerospace sector. In this study, the electrochemical corrosion behavior of 316L stainless steel materials manufactured via the SLM method for utilization in standard aerospace fasteners such as screws, nuts, and pins was comprehensively investigated. To minimize the adverse effects of microstructural features and inherent porosity resulting from the additive manufacturing process on corrosion resistance, advanced surface modification processes were applied to the specimen surfaces. Accordingly, pure epoxy coatings and polymer-ceramic hybrid/composite structured epoxy/TiO_2 nanoparticle coatings were deposited onto the surfaces of the as-built SLM specimens via the sol-gel coating method. The corrosion performances of both the coated and uncoated specimens were evaluated in a 3.5 wt.% NaCl solution utilizing potentiodynamic polarization (Tafel extrapolation) and electrochemical impedance spectroscopy (EIS) methods.
The experimental findings revealed that both coating configurations significantly enhanced the corrosion resistance and reduced the corrosion rate compared to the bare SLM 316L substrate. However, the homogeneous incorporation of TiO_2 nanoparticles into the epoxy matrix synergistically improved the mechanical and barrier properties of the coating. The TiO_2 ceramic phase effectively filled the micro-voids within the polymer matrix, thereby blocking the electrolyte diffusion pathways (tortuous capillary paths) that allow corrosive ions (Cl^-) to reach the surface of the 316L stainless steel substrate. Consequently, the highest polarization resistance, the most stable open-circuit potential (OCP), and the lowest corrosion current density (i_{corr}) were achieved with the epoxy/TiO_2 composite-coated specimens. This study demonstrates that epoxy/TiO_2 composite coatings hold high industrial potential for preserving structural integrity and extending the service life of SLM-manufactured aerospace fasteners exposed to harsh and corrosive operational environments.
Keywords: Selective Laser Melting (SLM), 316L Stainless Steel, Aerospace Fasteners, Composite Coating, Electrochemical Corrosion

Özet
Geleneksel imalat yöntemlerine kıyasla karmaşık geometrili parçaların üretimine olanak tanıyan Seçici Lazer Ergitme (SLM) teknolojisi, havacılık sektöründe kritik bileşenlerin imalatında giderek daha fazla zemin kazanmaktadır. Bu çalışmada, havacılık standartlarına uygun bağlantı elemanlarının (vida, somun ve pim) imalatında kullanılmak üzere SLM yöntemiyle üretilen 316L paslanmaz çelik malzemelerin elektrokimyasal korozyon davranışları kapsamlı bir şekilde incelenmiştir. Katmanlı imalat sürecinden kaynaklanan mikroyapısal özelliklerin ve gözenekliliğin korozyon direncine olan olumsuz etkilerini en aza indirmek amacıyla, numune yüzeylerine gelişmiş yüzey modifikasyon işlemleri uygulanmıştır. Bu doğrultuda, SLM ile üretilen işlemsiz numune yüzeylerine saf epoksi kaplama ile polimer-seramik hibrit/kompozit yapıda epoksi/TiO2 nanopartikül kaplamalar sol-jel kaplama yöntemiyle uygulanmıştır.

Kaplamalı ve işlemsiz numunelerin korozyon performansları, %3,5'luk NaCl çözeltisi içerisinde, potansiyodinamik polarizasyon (Tafel ekstrapolasyonu) ve elektrokimyasal empedans spektroskopisi (EIS) yöntemleriyle test edilmiştir. Elde edilen deneysel bulgular, her iki kaplama tipinin de yalın SLM 316L numunesine kıyasla korozyon direncini önemli ölçüde artırdığını ve korozyon hızını düşürdüğünü göstermiştir. Ancak, epoksi matris içerisine TiO2 nanopartiküllerinin homojen şekilde dahil edilmesi, kaplamanın mekanik ve bariyer özelliklerini sinerjik olarak geliştirmiştir. TiO2
seramik fazı, polimer matris içindeki mikro boşlukları doldurarak korozif iyonların (Cl^-) 316L paslanmaz çelik malzeme yüzeyine ulaşmasını sağlayan elektrolit difüzyon yollarını (kılcal kanalları) etkili bir şekilde tıkamıştır. Sonuç olarak, en yüksek polarizasyon direnci, en kararlı açık devre potansiyeli (OCP) ve en düşük korozyon akım yoğunluğu (icorr) epoksi/TiO2 kompozit kaplamalı numunelerde elde edilmiştir. Bu çalışma, epoksi/TiO2 kompozit kaplamaların, zorlu ve korozif çalışma koşullarına maruz kalan SLM üretimi havacılık bağlantı elemanlarının yapısal bütünlüğünü korumak ve servis ömürlerini uzatmak adına yüksek bir endüstriyel potansiyele sahip olduğunu ortaya koymaktadır.

Anahtar kelimeler: Seçici Lazer Ergitme (SLM), 316L Paslanmaz Çelik, Havacılık Bağlantı Elemanları, Kompozit Kaplama, Elektrokimyasal Korozyon

HERFENE GELENEĞİNİN TOPLUMSAL BELLEK MEKÂNI OLARAK İŞLEVİ *(GÜMÜŞHANE ÖRNEĞİ)*[1]

THE FUNCTION OF THE HERFENE TRADITION AS A SITE OF SOCIAL MEMORY (THE CASE OF GÜMÜŞHANE)

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Abstract
Social memory is one of the fundamental mechanisms through which a society transmits its knowledge, experiences, values, and cultural practices related to the past from one generation to another. This transmission occurs not only through written sources but also through specific social settings, rituals, and cultural practices. Traditional gathering and conversation meetings, which constitute an important element of intangible cultural heritage, play a significant role in the preservation and reproduction of social memory. Sustained under different names in various regions of Anatolia, these gatherings function as social spaces where individuals come together around a shared past and where cultural knowledge and experiences are exchanged. In this respect, the Herfene tradition maintained in Gümüşhane serves not only as an occasion for entertainment and communal dining but also as a site of social memory where local cultural knowledge is produced, transmitted, and kept alive.
This study aims to examine the Herfene tradition practiced in Gümüşhane within the framework of social memory and to reveal its functions in preserving and transmitting cultural memory. The study draws upon Maurice Halbwachs' concept of collective memory and Jan Assmann's theory of cultural memory. Within this framework, the role of Herfene gatherings in transmitting knowledge and experiences related to the past, their contribution to fostering a sense of belonging among community members, and their function in reproducing local identity are evaluated.
Based on a qualitative research design, the study utilizes data obtained through semi-structured interviews, oral history records, participant observation notes, and audio-visual documents collected during fieldwork conducted in the city center of Gümüşhane and several districts of the province. The data were analyzed using thematic analysis. Memories narrated during Herfene gatherings, local historical narratives, examples of social solidarity, transmissions concerning traditional ways of life, and processes of intergenerational communication were evaluated within the context of social memory. The findings reveal that the Herfene tradition plays a significant role in maintaining cultural continuity in Gümüşhane. Through the narratives shared and experiences exchanged during these gatherings, the collective past of the community is kept alive, while local values, social norms, and cultural identity are transmitted to younger generations. Furthermore, Herfene functions as a sphere of social solidarity that mitigates the cultural disruptions caused by modernization and migration. Therefore, the Herfene tradition can be regarded not only as a traditional social activity but also as an important site of social memory that preserves and reproduces the cultural heritage of Gümüşhane. In this regard, the study aims to contribute to the relevant literature by highlighting the role of intangible cultural heritage elements in the construction of cultural memory and identity.
Keywords: Herfene, Social Memory, Cultural Memory, Intangible Cultural Heritage, Gümüşhane.

Özet
Toplumsal bellek; bir toplumun geçmişe ilişkin bilgi, deneyim, değer ve kültürel pratiklerini kuşaktan kuşağa aktarmasını sağlayan temel mekanizmalardan biridir. Bu aktarım, yazılı kaynakların yanında belirli sosyal ortamlar, ritüeller ve kültürel uygulamalar vasıtasıyla da gerçekleşmektedir. Somut olmayan kültürel miras unsurları arasında yer alan geleneksel sohbet toplantıları, toplumsal belleğin

1 Bu çalışma, Gümüşhane Üniversitesi Bilimsel Araştırma Projeleri Koordinatörlüğü tarafından desteklenen 26.F1217.02.01 numaralı ve "Herfene Geleneğinin Somut Olmayan Kültürel Miras Bağlamında Belgelenmesi ve Dijital Arşivlenmesi (Gümüşhane Örneği)" isimli projeden hareketle oluşturulmuştur.

korunması ve yeniden üretilmesinde önemli işlevler üstlenmektedir. Anadolu'nun çeşitli bölgelerinde farklı adlarla yaşatılan bu toplantılar, bireylerin ortak geçmiş etrafında bir araya geldiği, kültürel bilgi ve deneyimlerin paylaşıldığı sosyal mekânlar olarak dikkat çekmektedir. Gümüşhane'de sürdürülen Herfene geleneği de bu yönüyle hem bir eğlence veya yemek paylaşımı etkinliği hem de yerel kültürel hafızanın üretildiği, aktarıldığı ve canlı tutulduğu bir toplumsal bellek mekânı niteliği taşımaktadır.
Gümüşhane'de yaşatılan Herfene geleneğini toplumsal bellek çerçevesinde inceleyerek geleneğin kültürel hafızanın korunması ve aktarılmasındaki işlevlerini ortaya koymayı amaçlayan çalışmada, Maurice Halbwachs'ın kolektif bellek yaklaşımı ile Jan Assmann'ın kültürel bellek kuramından yararlanılmıştır. Bu doğrultuda Herfene toplantılarının geçmişe ilişkin bilgi ve deneyimlerin aktarılmasındaki rolü, topluluk üyeleri arasındaki aidiyet duygusunun oluşumuna katkısı ve yerel kimliğin yeniden üretilmesindeki işlevleri değerlendirilmiştir.
Nitel araştırma yöntemine dayanan araştırmada veriler, Gümüşhane merkez ve ilin çeşitli ilçelerinde gerçekleştirilen alan araştırmaları kapsamında yapılan yarı yapılandırılmış görüşmeler, sözlü tarih kayıtları, katılımlı gözlem notları ve görsel-işitsel belgeler aracılığıyla elde edilmiştir. Elde edilen veriler, tematik analiz yöntemiyle çözümlenmiş; Herfene toplantılarında anlatılan hatıralar, yerel tarih anlatıları, toplumsal dayanışma örnekleri, geleneksel yaşam biçimlerine ilişkin aktarımlar ve kuşaklar arası iletişim süreçleri toplumsal bellek bağlamında değerlendirilmiştir. Çalışma sonucunda Herfene geleneğinin Gümüşhane'de kültürel sürekliliğin sağlanmasında önemli bir işlev üstlendiği tespit edilmiştir. Toplantılar sırasında aktarılan anlatılar ve paylaşılan deneyimler aracılığıyla topluluğun ortak geçmişi canlı tutulmakta; yerel değerler, toplumsal normlar ve kültürel kimlik yeni kuşaklara aktarılmaktadır. Bunun yanında Herfene'nin modernleşme ve göç süreçlerinin neden olduğu kültürel kopuşları azaltan bir toplumsal dayanışma alanı oluşturduğu görülmüştür. Herfene geleneği; geleneksel bir sosyal etkinlik, aynı zamanda Gümüşhane'nin kültürel hafızasını koruyan ve yeniden üreten önemli bir toplumsal bellek mekânı olarak değerlendirilebilir. Bu açıdan çalışma, somut olmayan kültürel miras unsurlarının kültürel bellek ve kimlik inşasındaki rolünü ortaya koyarak ilgili literatüre katkı sunmayı hedeflemektedir.

Anahtar kelimeler: Herfene, Toplumsal Bellek, Kültürel Bellek, Somut Olmayan Kültürel Miras, Gümüşhane.

HERFENE SOHBETLERİNDE ANLATICI TİPLERİ VE SÖZLÜ PERFORMANS *(GÜMÜŞHANE ÖRNEĞİ)*[1]

NARRATOR TYPES AND ORAL PERFORMANCE IN HERFENE GATHERINGS (THE CASE OF GÜMÜŞHANE)

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Abstract
Oral culture settings are not only spaces where cultural products are transmitted but also performance arenas in which interaction takes place among the narrator, the audience, and the narrative itself. While traditional conversation gatherings play a significant role in the transmission of oral culture from one generation to another, the personal characteristics of narrators, their narrative strategies, and their modes of performance directly influence the process of cultural transmission. The Herfene tradition, which is among the traditional conversation gatherings maintained under different names in various regions of Anatolia, continues to exist in Gümüşhane as an important venue for social solidarity, cultural sharing, and the transmission of oral culture. The narratives performed during Herfene gatherings not only facilitate the transmission of knowledge but also contribute to the preservation of social memory, the reproduction of local identity, and the maintenance of cultural values.
This study aims to identify the narrator types that emerge within the Herfene tradition practiced in Gümüşhane and to examine their oral performance characteristics. The research draws upon theories of oral culture and performance, particularly Richard Bauman's performance theory and narrator-centered approaches developed within oral narrative studies. Within this framework, the roles assumed by narrators in Herfene gatherings, their modes of narration, their relationships with audiences, and the processes through which narratives are performed are evaluated. In addition, the effects of factors such as age, experience, social status, and cultural knowledge on performance are examined.
The dataset of the study consists of oral narratives, performance recordings, and field observations obtained from informants who perform narratives during Herfene gatherings. During fieldwork conducted in the city center of Gümüşhane and several districts of the province, narrators' behaviors within performance settings, narrative strategies, interactions with audiences, and performance characteristics were observed, and the data were supported by audio and video recordings. Accordingly, the roles undertaken by narrators and the formation processes of oral performance within the Herfene tradition were analyzed through a context-centered approach. The findings reveal the existence of various narrator types in Herfene gatherings. Among these are elderly narrators who recount past events, bearers of local history and cultural knowledge, narrators specializing in humor and anecdotes, and memory narrators who share their personal experiences within the community. It was observed that narrators employ a variety of expressive techniques, including body language, tone of voice, gestures, and facial expressions, in order to enhance audience participation. Furthermore, the study demonstrates that performance constitutes a collective communicative environment shaped by the reactions, questions, and contributions of the audience. Herfene gatherings can therefore be regarded as vibrant cultural spaces that accommodate narrators and performance practices playing an essential role in the transmission of oral culture. In this respect, the study seeks to provide new insights into the functioning of traditional narrative settings by making visible the cultural roles assumed by narrators and the dynamics underlying the formation of oral performance in Herfene gatherings.
Keywords: Herfene, Oral Culture, Narrator Types, Performance, Gümüşhane.

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Özet
Sözlü kültür ortamları, kültürel ürünlerin aktarıldığı alanlar olmasının yanında anlatıcı, dinleyici ve anlatı arasındaki etkileşimin gerçekleştiği performans mekânlarıdır. Geleneksel sohbet toplantıları, sözlü kültürün kuşaktan kuşağa aktarılmasında önemli işlevler üstlenirken anlatıcıların bireysel özellikleri, anlatım stratejileri ve performans biçimleri de kültürel aktarım sürecini doğrudan etkilemektedir. Anadolu'nun çeşitli bölgelerinde farklı adlarla sürdürülen geleneksel sohbet toplantıları arasında yer alan Herfene geleneği, Gümüşhane'de toplumsal dayanışma, kültürel paylaşım ve sözlü kültür aktarımının önemli mekânlarından biri olarak varlığını sürdürmektedir. Herfene toplantılarında gerçekleştirilen anlatılar hem bilgi aktarımını sağlamamakta hem de toplumsal belleğin korunmasına, yerel kimliğin yeniden üretilmesine ve kültürel değerlerin yaşatılmasına katkıda bulunmaktadır.
Gümüşhane'de yaşatılan Herfene geleneğinde ortaya çıkan anlatıcı tiplerini belirlemeyi ve sözlü performans özelliklerini incelemeyi amaçlayan çalışmada, sözlü kültür ve performans kuramlarından yararlanılmıştır. Özellikle Richard Bauman'ın performans kuramı ile sözlü anlatı araştırmalarında geliştirilen anlatıcı merkezli yaklaşımlar, kuramsal çerçeve olarak benimsenmiştir. Bu doğrultuda Herfene toplantılarında anlatıcıların üstlendikleri roller, anlatım biçimleri, dinleyiciyle kurdukları ilişkiler ve anlatıların icra süreçleri değerlendirilmiştir. Ayrıca anlatıcıların yaş, deneyim, toplumsal statü ve kültürel birikim gibi özelliklerinin performans üzerindeki etkileri de incelenmiştir.
Araştırmanın veri seti, Herfene sohbetlerinde anlatı icra eden kaynak kişilerden elde edilen sözlü anlatılar, performans kayıtları ve saha gözlemlerinden oluşturulmuştur. Gümüşhane merkez ve ilin çeşitli ilçelerinde yürütülen alan araştırmaları sırasında anlatıcıların icra ortamındaki davranışları, anlatı stratejileri, dinleyiciyle etkileşimleri ve performans özellikleri gözlemlenmiş; elde edilen veriler, ses ve görüntü kayıtlarıyla desteklenmiştir. Böylece Herfene geleneğinde anlatıcıların üstlendikleri roller ile sözlü performansın oluşum süreçleri bağlam merkezli bir yaklaşımla incelenmiştir. Çalışma sonucunda Herfene sohbetlerinde farklı anlatıcı tiplerinin bulunduğu tespit edilmiştir. Bunlar arasında geçmiş olayları aktaran yaşlı anlatıcılar, yerel tarih ve kültürel bilgi taşıyıcıları, mizah ve fıkra anlatıcıları ile topluluk içindeki deneyimlerini paylaşan hatıra anlatıcıları öne çıkmaktadır. Anlatıcıların performansları sırasında beden dili, ses tonu, jest ve mimikler ile dinleyici katılımını artırmaya yönelik çeşitli anlatım tekniklerinden yararlandıkları görülmüştür. Bunun yanı sıra performansın dinleyicilerin tepkileri, soruları ve katkılarıyla birlikte şekillenen kolektif bir iletişim ortamı oluşturduğu belirlenmiştir. Herfene toplantıları, sözlü kültürün aktarımında önemli işlevler üstlenen anlatıcıları ve performans pratiklerini barındıran canlı kültürel mekânlar olarak değerlendirilebilir. Bu yönüyle çalışma, Herfene sohbetlerinde anlatıcıların üstlendikleri kültürel rolleri ve sözlü performansın oluşum dinamiklerini görünür kılarak geleneksel anlatı ortamlarının işleyişine ilişkin yeni değerlendirmeler sunmayı hedeflemektedir.
Anahtar kelimeler: Herfene, Sözlü Kültür, Anlatıcı Tipleri, Performans, Gümüşhane.

KOLEKTİF BELLEK BAĞLAMINDA GAZİANTEP HAMAMLARINDA KADINLARIN KÜLTÜREL AKTARIMLARI

CULTURAL TRANSMISSIONS OF WOMEN IN GAZIANTEP BATHHOUSES IN THE CONTEXT OF COLLECTIVE MEMORY

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Abstract
Existing studies on Anatolian bathhouses have generally been shaped by material and historical approaches focusing on their historical development, numerical distribution, architectural characteristics, roles in urbanization processes, and representations in Orientalist paintings. In addition, elements of intangible cultural heritage such as bridal bath rituals, postpartum purification practices (kırklama), food traditions, folk medicine practices, entertainment culture, and oral narratives occupy a significant place in the literature. This study examines how women in Gaziantep use bathhouses as spaces of traditional purification, ritual-based social gathering, and cultural transmission, with particular emphasis on the ways in which bathhouse customs, folk beliefs, and cultural continuity grounded in collective memory are maintained. The Naip, Tabak, and İki Kapılı bathhouses of Gaziantep continue to serve as venues where ritual and traditional practices such as bridal bath ceremonies, kırklama, şamşırak practices, bathhouse-specific culinary traditions, and dowry preparations are sustained. In contrast, Şıh Bathhouse stands out as a distinctive site of memory associated with folk narratives and the belief systems shaped by them, where oral traditions that influence women's motivations for attending the bathhouse remain particularly vibrant. Collectively, these bathhouses function as cultural memory spaces in which memory is embodied on both material and spiritual levels. In this context, bathhouses serve as social spaces where women gather collectively, share experiences, strengthen social bonds, and transmit traditions across generations. Through rituals, symbols, oral cultural practices, and intergenerational interactions, these spaces contribute to the continuity of communal life. The symbolic meanings attributed to water and purification, beliefs concerning healing and fertility, and the empathy and solidarity cultivated among women create environments in which memory is continuously embodied. As memory acquires meaning through its rootedness in specific places, bathhouses emerge as cultural settings where remembrance is naturally sustained through rituals, oral traditions, and intergenerational exchange. The aim of this study is to evaluate the data obtained through field research conducted in these bathhouses in Gaziantep within the theoretical framework of Maurice Halbwachs' concept of collective memory and Pierre Nora's notion of lieux de mémoire (sites of memory), and to reveal the role of bathhouses in the transmission of women's cultural memory. According to Halbwachs, memory is not an individual phenomenon but one that is socially constructed and maintained within collective frameworks and spatial contexts. Nora, in turn, defines sites of memory as symbolic spaces where collective memory becomes embodied and where connections between the past and the present are established. Drawing on this theoretical perspective, the study demonstrates that the bathhouses of Gaziantep function as sites of memory through which cultural memory is produced, preserved, and transmitted across generations by means of rituals, oral cultural practices, and social interaction among women.
Keywords: Memory, Space, Bathhouse, Women, Intangible Cultural Heritage

Özet
Anadolu hamamlarına ilişkin mevcut araştırmalar genellikle hamamların tarihsel gelişimi, sayı ve dağılımları, mimari özellikleri, şehirleşme sürecindeki rolleri ve oryantalist resimlerdeki temsilleri gibi maddi ve tarihsel odaklı yaklaşımlarla şekillenmiştir. Bunun yanında gelin hamamı, kırklama, yeme-içme gelenekleri, halk hekimliği uygulamaları, eğlence kültürü ve sözlü anlatılar gibi somut olmayan kültürel miras unsurları da literatürde belirgin bir yer tutmaktadır. Bu çalışma, Gaziantep'te kadınların hamamları geleneksel arınma, ritüel temelli bir araya gelme ve kültürel aktarım mekânı olarak kullanma

biçimlerini incelemekte; kadınlar tarafından hamam adetlerinin, halk inançlarının ve kolektif belleğe dayalı kültürel sürekliliğin nasıl sürdürüldüğüne odaklanmaktadır. Gaziantep'in Naip, Tabak ve İki Kapılı hamamları; gelin hamamı, kırklama, şamşırak uygulamaları, hamama özgü yemek kültürü ve çeyiz hazırlığı gibi ritüel ve geleneksel uygulamaların sürdürüldüğü mekânlar arasında yer almaktadır. Buna karşılık Şıh Hamamı, halk anlatılarıyla ilişkili olan ve bu anlatılar doğrultusunda biçimlenen halk inançlarının yoğunluk kazandığı; kadınların hamama gitme nedenlerini şekillendiren sözlü kültürün belirgin biçimde yaşatıldığı özgün bir hafıza odağı olarak öne çıkmaktadır. Bu hamamların tümü, belleğin hem maddi hem de manevi düzeyde somutlaştığı kültürel hafıza mekânları niteliği taşımaktadır. Bu bağlamda hamamlar, kadınların topluluk hâlinde bir araya gelerek deneyim paylaştıkları, sosyal ilişkilerini güçlendirdikleri ve gelenekleri kuşaktan kuşağa aktardıkları mekânlar olarak; ritüeller, semboller, sözlü kültür unsurları ve kuşaklar arası etkileşimlerin süreklilik kazandırdığı toplumsal alanlar hâline gelmektedir. Suya ve arınmaya yüklenen sembolik anlamlar, şifa ve bereket inançları, kadınlar arasındaki duygudaşlık ve dayanışma, bu mekânlarda belleğin somutlaştığı alanlar yaratmaktadır. Belleğin özel mekânlarda kendiliğinden kök salarak anlam kazandığı düşünüldüğünde, hamamlar kadınların ritüeller, sözlü kültür unsurları ve kuşaklar arası etkileşim aracılığıyla hatırlamayı doğal biçimde sürdürdükleri kültürel alanlar hâline gelmektedir.

Bu çalışmanın amacı, Gaziantep'teki söz konusu hamamlarda gerçekleştirilen alan araştırması sonucunda elde edilen verileri Maurice Halbwachs'ın kolektif bellek ve Pierre Nora'nın hafıza mekânları kavramları çerçevesinde değerlendirmek ve hamamların kadınların kültürel bellek aktarımındaki rolünü ortaya koymaktır. Halbwachs'a göre bellek, bireysel değil toplumsal çerçeveler içinde şekillenen ve mekânsal bağlamlarda sürdürülen bir olgudur. Nora ise hafıza mekânlarını, geçmişle bugün arasında bağ kuran ve toplumsal belleğin somutlaştığı sembolik alanlar olarak tanımlar. Bu kuramsal yaklaşım doğrultusunda çalışma, Gaziantep hamamlarının kadınlar tarafından gerçekleştirilen ritüeller, sözlü kültür pratikleri ve toplumsal etkileşimler aracılığıyla kültürel belleğin üretildiği, korunduğu ve kuşaklar arasında aktarıldığı hafıza mekânları olarak işlev gördüğünü ortaya koymaktadır.

Anahtar kelimeler: Bellek, Mekân, Hamam, Kadın, Somut Olmayan Kültürel Miras

İSLAM FELSEFESİ SÖZLÜK GELENEĞİNDE FELSEFE TARİFLERİ

PHILOSOPHICAL DEFINITIONS IN THE TRADITION OF ISLAMIC PHILOSOPHY DICTIONARIES

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Abstract
Philosophy has been a discipline that cannot be reduced to a single definition throughout history; rather, it has been interpreted in different ways according to the era in which thinkers lived, the methods they adopted, and their understanding of truth. This situation is also clearly evident in the history of Islamic thought. The definitions found in the dictionary tradition are particularly important in revealing the meanings that philosophers attributed to philosophy. This study examines the philosophical understandings of some prominent thinkers within the dictionary tradition of Islamic philosophy. While Kindî defined philosophy as the love of wisdom, the purification of the soul, and the pursuit of truth to the extent of human capacity, Fârâbî considered it a systematic intellectual activity that enables human beings to attain happiness. Ibn Sînâ interpreted philosophy as the perfection of the human being through knowing the truth of existence and emphasized its metaphysical dimension. Ibn Rushd argued that there was no conflict between reason and revelation, accepting philosophy as a legitimate path to understanding religious truths. Zakarīya al-Rāzī centered rational inquiry and critical thinking, whereas Ibn Rāwandī followed a rationalist path that questioned traditional patterns of belief. While Suhrawardī considered intuition and inner enlightenment to be the fundamental elements of acquiring knowledge, Ghazālī critically evaluated philosophy and employed the method of doubt in his search for certain knowledge. In conclusion, philosophy in Islamic intellectual history did not develop as a one-dimensional field, but rather as a rich area of inquiry in which reason, revelation, intuition, morality, and metaphysics intersect. These various definitions put forward by philosophers demonstrate the intellectual depth and dynamism of Islamic philosophy.
Keywords: Islamic Philosophy, Dictionary Tradition, Definitions of Philosophy.

Özet
Felsefe, tarih boyunca tek bir tanıma indirgenemeyen, düşünürlerin yaşadıkları çağ, benimsedikleri yöntem ve hakikat anlayışlarına göre farklı biçimlerde yorumlanan bir disiplin olmuştur. Bu durum İslâm düşünce tarihinde de açıkça görülmektedir. Özellikle sözlük geleneğinde yer alan tarifler, filozofların felsefeye yükledikleri anlamı ortaya koyması bakımından önem taşır. Bu çalışmada, İslâm felsefesi sözlük geleneği çerçevesinde öne çıkan bazı düşünürlerin felsefe anlayışları ele alınmıştır. Kindî, felsefeyi hikmet sevgisi, nefsin arındırılması ve insanın gücü ölçüsünde hakikati araştırması şeklinde tanımlarken; Fârâbî, onu insanın mutluluğa ulaşmasını sağlayan sistemli bir bilgi faaliyeti olarak değerlendirmiştir. İbn Sînâ ise felsefeyi varlığın hakikatini bilerek insanın yetkinleşmesi şeklinde yorumlamış ve metafizik boyutunu öne çıkarmıştır. İbn Rüşd, akıl ile vahiy arasında çatışma bulunmadığını savunarak felsefeyi dinî hakikatleri kavramada meşru bir yol kabul etmiştir. Zekeriyyâ er-Râzî, aklî araştırmayı ve eleştirel düşünceyi merkeze almış; İbn Râvendî ise geleneksel inanç kalıplarını sorgulayan rasyonalist bir çizgi izlemiştir. Sühreverdî, sezgi ve içsel aydınlanmayı bilgiye ulaşmada temel unsur sayarken, Gazzâlî ise felsefeyi eleştirel biçimde değerlendirerek kesin bilgi arayışında şüphe metodunu kullanmıştır.

Sonuç olarak, İslâm düşünce tarihinde felsefe tek yönlü bir alan olarak değil, akıl, vahiy, sezgi, ahlâk ve metafizik gibi farklı unsurların kesiştiği zengin bir araştırma sahası olarak gelişmiştir. Filozofların ortaya koyduğu bu çeşitli tanımlar, İslâm felsefesinin fikrî derinliğini ve dinamizmini göstermektedir.

Anahtar Kelimeler: İslam Felsefesi, Sözlük Geleneği, Felsefe Tarifleri.

ZENGİNLEŞEN DİNDAR İNSANLARIN DÜNYA NİMETLERİYLE İMTİHANI BAĞLAMINDA HARUT VE MARUT KISSASI

THE NARRATIVE OF HARUT AND MARUT IN THE CONTEXT OF THE TRIAL OF WEALTHY PIOUS PEOPLE WITH WORLDLY BLESSINGS

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Abstract

The Holy Quran describes the world as a place of trial for humanity and specifically emphasizes the role of appealing material blessings in this testing process. The verse in Surah Al Imran, "The enjoyment of ʿworldlyʾ desires -women, children, treasures of gold and silver, fine horses, cattle, and fertile land- has been made appealing to people. These are the pleasures of this worldly life, but with Allah is the finest destination." (3/14) expresses this truth. By drawing attention to humanity's natural inclinations, the verse indicates that the worldly trial does not only happen through poverty or hardship, but also through wealth, power, and prosperity. Therefore, just as a person is tested with fear, hunger, physical illness, or loss of wealth (Al-Baqarah, 2/155), they are also tested with the worldly blessings granted to them.

This paper focuses on the "wealth and prosperity" dimension of the trial. Within this framework, the trial of devout individuals who have grown wealthy through worldly blessings will be examined in the context of the narrative of Harut and Marut in the Quran.

Although this account was narrated by hadith scholars such as Ahmad b. Hanbal and Al-Bayhaqi, it has been criticized by many scholars and researchers in terms of both isnad (chain of transmission) and matn (text) criticism. However, rather than focusing on the debates regarding the infallibility of angels or the authenticity of the narration, this study addresses the subject within the context of its moral lesson.

According to the narration, angels condemned humanity's potential to make mistakes. Upon this, God commanded them to choose the two most virtuous angels, and they chose Harut and Marut. Sent down to earth, these two angels were burdened with human worldly desires. In time, a flower took the form of a very beautiful woman and presented herself to them. When both angels inclined towards her, the woman said she would only accept them on the condition that they associate partners with God. When Harut and Marut refused this, the woman asked them to kill a human being. When they refused this as well, she made it a condition for them to drink a glass of wine. Seeing drinking wine as a smaller and more innocent sin compared to the others, the "humanized angels" accepted this condition. However, once they were drunk, they committed all the sins they had previously avoided.

The narrative holds deep meanings showing how sins perceived as small can drag a person into great disasters, and that a person should not condemn those who fall into a mistake with which they themselves have not yet been tested. Furthermore, it serves as a very strong warning about how even individuals as innocent as angels can undergo a transformation when faced with worldly temptations and desires.

Keywords: Sufism, Kalam, Nafs, Angel, Wealth

Özet

Kur'an-ı Kerîm, dünyayı insanın imtihan yurdu olarak tanımlarken, nefse hoş gelen maddi nimetlerin bu sınanma sürecindeki rolüne özel bir vurgu yapmaktadır. Âl-i İmrân Sûresi'ndeki, "Nefsânî arzulara, (özellikle) kadınlara, oğullara, yığın yığın biriktirilmiş altın ve gümüşe, soylu atlara, sağmal hayvanlara ve ekinlere düşkünlük insanlara çekici kılınmıştır. İşte bunlar dünya hayatının geçici menfaatleridir. Hâlbuki varılacak güzel yer, Allah'ın katındadır." (3/14) ayeti bu gerçeği ifade etmektedir. Ayette insanın fıtrî eğilimlerine dikkat çekilerek, dünyadaki imtihanın yalnızca yokluk veya meşakkatlerle değil, sahip olunan refah, güç ve zenginlikle de gerçekleşebileceği belirtilmektedir. Dolayısıyla insan, korku, açlık, bedensel rahatsızlıklar veya mülklerindeki eksikliklerle imtihan edildiği gibi (Bakara, 2/155), kendisine bahşedilen dünyevî nimetlerle de sınanmaktadır.

Bu tebliğde, imtihan kavramının "zenginlik ve varlık" boyutu merkeze alınmaktadır. Bu çerçevede, zenginleşen dindar insanların dünya nimetleriyle sınanması konusu Kur'an-ı Kerim'deki Harut ve Marut kıssası bağlamında ele alınacaktır.

Söz konusu kıssa, Ahmed b. Hanbel ve Beyhakî gibi muhaddisler tarafından aktarılmış olsa da hem sened ve hem de metin kritiği açısından birçok alim ve araştırmacı tarafından tenkit edilmiştir. Ancak bu çalışmada konu, meleklerin ismeti veya rivayetin sıhhati tartışmalarından ziyade barındırdığı ahlaki "hisse" bağlamında ele alınmaktadır.

Rivayete göre melekler, insanoğlunun hata yapma potansiyelini kınamışlardır. Bunun üzerine Allah Teâlâ, meleklerden en faziletli ikisinin seçilmesini emretmiş, melekler de Harut ve Marut'u seçmişlerdir. Yeryüzüne indirilen bu iki meleğe, insana özgü nefsanî arzu ve istekler yüklenmiştir. Süreç içerisinde bir çiçek, çok güzel bir kadın suretine bürünerek kendisini onlara arz etmiştir. İki melek de ona meyledince kadın, ancak Allah'a şirk koşmaları şartıyla bu isteği kabul edeceğini söylemiştir. Harut ve Marut bunu reddedince kadın bir insanı öldürmelerini istemiştir, onlar bunu da reddettiklerinde bir kadeh şarap içmelerini şart koşmuştur. Şarap içmeyi diğer günahlara kıyasla daha küçük ve masum gören "insansı melekler" bu şartı kabul etmiş, ancak sarhoş olduklarında yapmaktan kaçındıkları günahların hepsine düşmüşlerdir.

Kıssa, küçük görülen günahların insanı nasıl büyük felaketlere sürükleyebileceğini ve kişinin henüz sınanmadığı bir hataya düşenleri kınamaması gerektiğini gösteren derin anlamlar barındırmaktadır. Ayrıca, melek kadar masum kimselerin bile dünyevî cazibeler ve nefsanî arzularla karşılaştıklarında nasıl bir dönüşüm geçirebileceklerine dair çok güçlü bir uyarı niteliği taşımaktadır.

Anahtar kelimeler: Tasavvuf, Kelam, Nefis, Melek, Zenginlik

İLAHİYAT VE İSLAMİ İLİMLER İSİMLENDİRMELERİNİN ÖĞRENCİLERİN KARİYER PLANLAMASI ÜZERİNDEKİ ETKİSİ (GAZİANTEP ÖRNEĞİ)

THE EFFECT OF "THEOLOGY" AND "ISLAMIC SCIENCES" NAMING ON STUDENTS' CAREER PLANNING (THE CASE OF GAZIANTEP)

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Abstract
Faculty naming significantly influences academic identity, social perception, and post-graduation employment processes. In Türkiye, although most faculties applying the same curriculum have been standardized under uniform names, the Faculties of Theology and Islamic Sciences have remained outside this practice. The extent to which this naming difference affects students' faculty choices, sense of institutional belonging, and career expectations has not yet been systematically addressed in academic literature. Especially during the university preference stage, the structural associations triggered by a faculty's name have the potential to shape students' orientations and career visions.
This study aims to examine the perceptions of employment and social prestige among students of "Theology" and "Islamic Sciences" faculties, which serve similar academic purposes but have different names. Through a survey conducted in Gaziantep, the impact of faculty naming on post-graduation employment processes was analysed using quantitative research methods. The primary research problem is whether the type of faculty a student is enrolled in creates a statistically significant difference in their perception of prestige and employment opportunities within the Presidency of Religious Affairs and the Ministry of National Education.
Research findings indicate that the "Theology" name holds a more dominant institutional and social credibility compared to "Islamic Sciences". When asked about employment advantages within the Presidency of Religious Affairs, 53.2% of Theology students viewed their own faculty as advantageous, while this rate dropped to 23.7% among Islamic Sciences students, with a high uncertainty rate of 43%. Similarly, the view that Theology graduates are more advantageous in Ministry of National Education recruitment was accepted by 51.9% of the total participants. Regarding academic progression, 61% of Theology students prioritized their own faculty name, as did 62.1% regarding social prestige. The fact that more than half (53%) of Islamic Sciences students themselves find Theology graduates more prestigious confirms the perceptual disadvantage created by naming. In conclusion, while the name "Theology" offers an established brand value despite curriculum similarities, the "Islamic Sciences" naming is found to trigger career anxiety and uncertainty among students.
Keywords: Theology, Islamic Sciences, Career Planning, Employment.

Özet
Fakülte isimlendirilmesi, akademik kimlik, toplumsal algı ve mezuniyet sonrası iş bulma süreçlerini etkilemektedir. Türkiye'de aynı müfredatı uygulayıp, farklı isimlerle adlandırılan fakültelerde isim birliği yapılmış olmasına rağmen, İlahiyat ve İslami İlimler Fakülteleri henüz bu uygulamanın dışında

tutulmuştur. İlahiyat ve İslami İlimler isim farklılığının, öğrencilerin fakülte tercihlerine, kurumsal aidiyet algılarına ve mezuniyet sonrası beklentilerine ne ölçüde etki ettiği konusu henüz akademik olarak sistematik biçimde ele alınmış değildir. Özellikle üniversite tercih sürecinde fakülte adının çağrıştırdığı yapının, öğrencilerin yönelimlerini ve kariyer tasavvurlarını şekillendirme potansiyeli bulunmaktadır.
Bu çalışma, dini yükseköğretimde benzer akademik amaçlara hizmet eden fakat farklı isimlendirmelere sahip olan "İlahiyat" ve "İslami İlimler" fakültesi öğrencilerinin bu fakültelerden mezun olanlara yönelik istihdam ve toplumsal prestij algılarını incelemeyi amaçlamaktadır. Gaziantep örneğinde uygulanan anket çalışması üzerinden, fakülte isimlendirmesinin mezuniyet sonrası iş bulma süreçlerine etkisi nicel araştırma yöntemleri ile analiz edilmiştir. Araştırmanın temel problemi, öğrencilerin kayıtlı oldukları fakülte türünün; Diyanet İşleri Başkanlığı, Milli Eğitim Bakanlığı istihdamı ve halk nezdindeki prestij algısı üzerinde istatistiksel olarak anlamlı bir farklılık yaratıp yaratmadığıdır.
Araştırma bulguları, "İlahiyat" isminin kurumsal ve toplumsal karşılığının "İslami İlimler" ismine göre daha baskın olduğunu göstermektedir. Diyanet bünyesinde iş bulma avantajı sorulduğunda, İlahiyat öğrencilerinin %53,2'si kendi fakültelerini avantajlı görürken, İslami İlimler öğrencilerinde bu oran %23,7'ye düşmekte ve %43 gibi yüksek bir kararsızlık oranı gözlemlenmektedir. Benzer şekilde, MEB istihdamında İlahiyat mezunlarının daha avantajlı olduğu görüşü genel toplamda %51,9 ile kabul görmüştür. Akademik ilerleme noktasında İlahiyat öğrencilerinin %61'i, halk nezdindeki prestij algısında ise %62,1'i kendi fakülte isimlerini ön planda görmektedir. İslami İlimler öğrencilerinin yarısından fazlasının (%53) dahi halk nezdinde İlahiyat mezunlarını daha prestijli bulması, isimlendirme farkının yarattığı algısal dezavantajı açıkça ortaya koymaktadır. Sonuç olarak, müfredat benzerliğine rağmen "İlahiyat" ismi kariyer planlaması açısından daha güvenilir bulunurken, "İslami İlimler" isimlendirmesinin öğrencilerde gelecek kaygısı ve belirsizlik yarattığı tespit edilmiştir.
Anahtar kelimeler: İlahiyat, İslami İlimler, Kariyer Planlaması, İstihdam

KOKOPELLİ: KIZILDERİLİLERİN KAMBUR TANRISI

KOKOPELLI: THE HUNCHBACK GOD OF THE NATIVE AMERICANS

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Abstract
Every people has its own mythology, consisting of stories about the gods, heroes, and various creatures they believe in. Just as there are Greek, Egyptian, Indian, and Mesopotamian mythologies, there are also mythologies of primitive communities. One of these is the Pueblo people, a Native American tribe. Mythologies represent a dynamic order in ancient societies. Every narrative and character has a meaning and a function. This study focuses on the significance of Kokopelli, the hunchbacked god who holds a very important place in Pueblo mythology, and the roles he embodies. Additionally, the potential significance of Kokopelli's hunchback in relation to disability is examined. After all, disability has historical, cultural, social, and even mythological dimensions. Almost every mythology contains various symbols, gods, and stories related to disability. Examples of such mythological deities include Hephaistos in ancient Greek mythology, Bes in Egyptian mythology, Hiruko in Japanese mythology, and Odin in Norse mythology. Each of their narratives contains significant references to disability. This study aims to evaluate how disability is portrayed through the representation of the hunchbacked god Kokopelli. In this context, the hunchbacked god Kokopelli occupies a central place in the Pueblo people's beliefs regarding many vital aspects of life. Kokopelli is a symbol of rain, fertility, and abundance, and possesses the power to influence the natural world. With his music, he soothes the earth, drives away winter, and brings spring. He scatters the seeds he carries on his hump, crops grow, and animals multiply. In light of these symbolic meanings, it can be said that the Pueblo people's attitude toward disability is positive, as reflected in the figure of the hunchbacked god Kokopelli.
Keywords: Disability, Mythology, the Pueblo People, Kokopelli

Özet
Her halkın; inandığı tanrıların, kahramanların, çeşitli yaratıkların hikâyelerinden oluşan mitolojisi bulunur. Yunan, Mısır, Hint ve Mezopotamya mitolojileri olduğu gibi, ilkel toplulukların da mitolojileri vardır. Bunlardan biri de yerli Kızılderili halkı olan Pueblo halkıdır. Mitolojiler antik toplumlarda dinamik bir düzeni temsil eder. Her anlatının ve karakterin bir anlamı ve işlevi bulunmaktadır. Bu çalışmada, Pueblo halkının mitolojisinde oldukça önemli bir yeri olan kambur tanrı Kokopelli'nin önemi ve üstlendiği hususlar konu edinilmiştir. Ayrıca Kokopelli'nin kambur oluşundan dolayı engellilik için taşıdığı muhtemel anlamı üstünde de durulmaktadır. Zira engelliliğin tarihsel, kültürel, sosyal hatta mitolojik boyutları mevcuttur. Neredeyse her mitolojide engelliliğe dair çeşitli semboller, tanrılar ve öyküler bulunmaktadır. Antik Yunan mitolojisinde Hephaistos, Mısır mitolojisinde Bes, Japon mitolojisinde Hiruko, İskandinav mitolojisinde Odin bu mitolojik tanrılara örnektir. Her birinin anlatısında engelliliğe dair önemli işaretler mevcuttur. Bu çalışmada da kambur tanrı Kokopelli'nin temsili üstünden engelliliğin nasıl sunulduğu hakkında bir değerlendirme hedeflenmiştir. Bu doğrultuda kambur tanrı Kokopelli Pueblo halkının hayatında önemli birçok yaşamsal konuda inancın merkezinde bulunmaktadır. Kokopelli yağmur, bereket ve doğurganlık sembolüdür, doğal dünyayı etkileme gücüne sahiptir. Müziği ile yeryüzünü yatıştırır, kışı kovar ve baharı getirir. Kamburunda taşıdığı tohumları atar, mahsuller büyür ve hayvanları ürer. Bu anlam yüklemeler doğrultusunda kambur tanrı Kokopelli'nin temsili üstünden Pueblo halkının engelliliğe ilişkin yaklaşımlarının olumlu olduğu dile getirilebilir.
Anahtar kelimeler: Engellilik, Mitoloji, Pueblo Halkı, Kokopelli

EĞİTİM FELSEFESİ VE FELSEFİ ANTROPOLOJİ BAĞLAMINDA TASAVVUFTA İNSAN YETİŞTİRME ANLAYIŞI: İRFAN, TERBİYE VE KÂMİL İNSAN MODELİ

THE SUFI UNDERSTANDING OF HUMAN CULTIVATION IN THE CONTEXT OF PHILOSOPHY OF EDUCATION AND PHILOSOPHICAL ANTHROPOLOGY: IRFAN, TARBIYA, AND THE MODEL OF THE PERFECT HUMAN BEING

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Özet
Bu çalışmanın amacı, tasavvuf geleneğinde insan yetiştirme anlayışını eğitim felsefesi ve felsefi antropoloji bağlamında irfan, terbiye ve kâmil insan modeli ekseninde incelemektir. Çalışma, modern eğitim anlayışında çoğu zaman bilgi, beceri ve mesleki yeterlilik merkezli biçimde ele alınan insan tasavvuruna karşı, tasavvufun insanı ahlaki, manevi, kültürel ve toplumsal boyutlarıyla bütüncül bir varlık olarak nasıl konumlandırdığını ortaya koymayı hedeflemektedir. Araştırma, nitel ve kuramsal bir inceleme olarak tasarlanmıştır. Çalışmanın verilerini tasavvuf düşüncesi, eğitim felsefesi, insan anlayışı, irfan, terbiye ve kâmil insan kavramlarına ilişkin akademik literatür oluşturmaktadır. Bu kapsamda doğrudan saha örneklemi yerine, konuya ilişkin temel kavramsal ve kuramsal metinler çalışma materyali olarak değerlendirilmiştir. Veriler, doküman incelemesi ve kavramsal analiz yaklaşımıyla ele alınmış; irfanın bilgi ve hikmet boyutu, terbiyenin ahlaki karakter inşasındaki rolü ve kâmil insan modelinin bireysel olgunlaşma ile toplumsal sorumluluk arasındaki ilişkisi analiz edilmiştir. Bulgular, tasavvufi insan yetiştirme anlayışının yalnızca bireyin manevi gelişimini değil, aynı zamanda etik duyarlılık, değer bilinci, öz disiplin, toplumsal fayda ve kültürel süreklilik gibi alanları da kapsadığını göstermektedir. Sonuç olarak çalışma, tasavvufun eğitim felsefesi açısından insanı araçsallaştırmayan, değer merkezli ve bütüncül bir eğitim modeli sunduğunu ileri sürmektedir. Bu yönüyle araştırma, çağdaş değerler eğitimi, ahlak felsefesi ve insan değeri tartışmalarına kuramsal katkı sağlamaktadır.
Anahtar Kelimeler: Eğitim felsefesi, felsefi antropoloji, tasavvuf, irfan, kâmil insan.

Abstract
This study aims to examine the Sufi understanding of human cultivation within the framework of philosophy of education and philosophical anthropology, focusing on the concepts of irfan, tarbiya, and the model of the perfect human being. The study seeks to reveal how Sufism positions the human being as a holistic entity with moral, spiritual, cultural, and social dimensions, in contrast to modern educational approaches that often reduce education to knowledge transmission, skill acquisition, and professional competence. The research is designed as a qualitative and theoretical inquiry. The data of the study consist of academic literature on Sufi thought, philosophy of education, the conception of the human person, irfan, tarbiya, and the perfect human being. Therefore, rather than relying on an empirical field sample, the study evaluates fundamental conceptual and theoretical texts as its main research material. The data are analyzed through document review and conceptual analysis. Within this framework, the wisdom-oriented dimension of irfan, the role of tarbiya in moral character formation, and the relationship between individual maturation and social responsibility in the model of the perfect human being are examined. The findings indicate that the Sufi model of human cultivation is not limited to spiritual development, but also includes ethical sensitivity, value consciousness, self-discipline, social benefit, and cultural continuity. As a result, the study argues that Sufism offers a value-centered and holistic educational model that does not instrumentalize the human being. In this respect, the research contributes theoretically to contemporary discussions on values education, moral philosophy, philosophical anthropology, and human dignity.
Keywords: Philosophy of education, philosophical anthropology, Sufism, irfan, perfect human being.

DEMAND-DRIVEN URBAN ARCHITECTURE: BALANCING DENSITY, FUNCTION, AND SPATIAL QUALITY IN CONTEMPORARY CITIES

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Abstract
This paper examines the imperative convergence of the demand-based city architecture and its ability to balance the enhanced density, functionality, and space quality in the modern urban settings. As the growth of the urban centers and the shifts in population are unprecedented, the study will deal with the acute issue of intertwining these three basic elements into the unified design strategies. The study, which employs a mixed-methods design, with the combination of qualitative evaluation, quantitative case-study, and user-satisfaction surveys, reveals that an efficient urban architecture not only improves the quality of space but also serves the functions and contributes to the welfare of a community. The major discoveries made are that designs that incorporate flexible spaces, greenery and community-based designs are more successful in enhancing user satisfaction as well as supporting increased density. Moreover, the health care implications are also significant; improved urban conditions will help to achieve better health outcomes by increasing physical activity, decreasing stress, and improving access to essential services. This paper will present policy proposals that place the user at the center of the city and which will require a multidisciplinary response that coordinates the architectural practices with the increasing needs of the urban populations. The findings are therefore useful in guiding urban planners, architects and policymakers striving to build sustainable and habitable cities and the need to balance density and quality in the establishment of healthier urban communities is highlighted.
Keywords: Demand-driven design; Urban density optimization; Spatial quality; Mixed-use development; Urban morphology.

USER-CENTERED HOUSING DESIGN: INTEGRATING OCCUPANT NEEDS INTO CONTEMPORARY RESIDENTIAL ARCHITECTURE

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Abstract
This paper explores the possibility of better incorporating occupancy requirements into modern residential buildings, with the goal of achieving a user-based approach to design, which would promote livability and satisfaction. Based on the extensive qualitative data collected by means of occupant surveys and interviews, as well as, quantitative research of the design elements associated with the occupant well-being, the study reveals vital information about the preferences and daily life experiences of the occupants. Results suggest that focus on design features, including spatial flexibility, natural light accessibility, and community interaction areas, plays an important role in enhancing the level of resident satisfaction and quality of life. The implications of such findings are also relevant in the area of healthcare, indicating that the more appropriate housing design is, the better mental and physical health outcomes such occupants have, and thus, decreasing healthcare costs and enhancing the overall healthcare system in the population. By highlighting the immediate connection between the design of housing and the well-being of its occupants, this study reveals the crucial importance of architecture in creating healthier living conditions. The general implications of this research project include the need to change the paradigm of residential architecture towards a more inclusive and user-focused model that not only focuses on aesthetic and functional considerations, but also considers health and well-being of occupants, which will eventually contribute to the discourse in the field of architecture as well as public health.
Keywords: User-centered design; Residential architecture; Occupant satisfaction; Spatial adaptability; Environmental comfort.

ORGANIC URBANISM IN CONTEMPORARY CITIES: INTEGRATING NATURAL SYSTEMS INTO ARCHITECTURAL AND URBAN DESIGN

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Abstract
This paper explores how the principles of organic urbanism can be applied to modern architectural and urban design with a focus on the disastrous lack of a connection between the built environments and the natural systems which impact urban livability and health. The study employs a mixed-method design whereby the qualitative data collected is based on case studies of successful examples of organic urbanism, and quantitative data on environmental effects and other measures of urban livability. The results indicate that cities that implement organic urbanism do not only increase the level of biodiversity and ecosystem services, but also the mental and physical health of the inhabitants. It is important to note that the study indicates that the availability of natural spaces, air quality, and community health show a strong relationship, which indicates the transformative nature of the natural system integration that takes place in urban planning. These findings do not only have implications in architecture and urban design, but they also provide an interesting case to policymakers and healthcare professionals to work together to create an environment that values human health by adopting sustainable urban practices. Through depicting the underlying connections between urban form, environmental health and community resilience, this research offers beneficial perspectives to the current debate on urban sustainability and community health, arguing that it is time to shift the paradigm of the conceptualization and the formation of cities towards the challenges of urbanization and climate change.
Keywords: Organic Urbanism; Nature-Based Solutions (NBS); Biophilic Design; Ecological Urban Design; Urban Resilience.

ORGANIC ARCHITECTURE IN CONTEMPORARY PRACTICE: INTEGRATING NATURAL FORM AND ENVIRONMENTAL PERFORMANCE.

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Abstract
This paper examines how organic architectural forms can be incorporated with environmental performance in modern design, in the critical question of whether it is possible to attain sustainable architecture which is in harmony with natural ecosystems. The study, through the use of mixed-method design, examines qualitative data in the form of cases studies that are targeted to reflect the successful cases of organic integration in recent architectural projects as well as quantitative evaluation of their environmental impact and performance indicators. The evidence shows that organic forms designs contribute greatly to the well-being of occupants, lessen the use of energy, and diminish carbon footprint, thus, attaining greater sustainability scores than the conventional architectural designs. These findings suggest that organic approach is not only possible but beneficial to the development of healthy living environments which allow physical and mental health, especially in healthcare facilities. The current study has far-reaching implications that go beyond the aesthetic value, and it is possible to propose that the implementation of organic architectural principles can result in better patient outcomes and operational efficiencies in health facilities. Finally, the research suggests a paradigm shift in architectural practice, which would require the professionals to adopt organic design approaches as part and parcel of sustainable development and, therefore, create ecologically sound and human health-friendly environments. This study is a valuable addition to the understanding of the interplay of architecture, sustainability, and healthcare introducing a framework of future projects in which environmental stewardship and human-oriented design principles will be prioritized.
Keywords: Organic Architecture; Biomimicry in Design; Environmental Performance; Sustainable Building Design; Parametric Design.

RETAIL ARCHITECTURE AND SPATIAL ECONOMICS: OPTIMIZING DESIGN FOR CONSUMER ENGAGEMENT AND SALES PERFORMANCE

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Abstract
This paper delves into the delicate interrelationship between architectural design of retail outlets and its role in consumer interaction and sales outcomes, especially in the framework of how the spatial arrangements can be optimized to improve consumer shopping experiences. The research incorporates a mixed-methods approach, combining quantitative data on consumer behavior patterns, sales data, and spatial configurations with qualitative data obtained through consumer feedback and interviews with experts in the industry. The results indicate that the environment planned strategically can make a vast difference in terms of consumer interaction and result in the improvement of sales outcomes; namely, the layouts with the encouragement of a free movement and accessibility are associated with a high level of consumer satisfaction and buying behavior. This research highlights the significance of new retail architecture in the development of spaces that are not only consumer friendly, but also efficient in their operations. In the general context of healthcare, the results of this study indicate that the same principles of spatial optimization might be implemented in healthcare facilities and potentially enhance patient interaction and satisfaction within health-related retailers, including pharmacies and wellness centers. Thus, the implications of this research are not limited to the retail sector as they provide worthwhile insights into how the architectural design, in its turn, can stimulate consumer interactions, in turn, spearheading economic vitality and customer loyalty in a range of sectors, including healthcare.
Keywords: Retail Architecture; Spatial Economics; Commercial Design Optimization; Customer Engagement; Sales Performance.

ABANDONED SITES IN URBAN AREAS: AN UNTAPPED POTENTIAL FOR SOCIO-ECONOMIC DEVELOPMENT

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Abstract
Cities are dynamic in nature and as it grows to support modern day needs, the activity centers of the older city that were once a base of social and business structure, slowly turn into 'dysfunctional areas' or 'abandoned sites'. This has a negative impact on the city's social and economic environment. Abandoned sites are classified into two types: 'Greyfield' - previously developed land but not contaminated and 'Brownfield' - previously developed contaminated land. Studies across the global typologies of abandoned/dysfunctional sites indicate their predominant land use to be 'industrial'. Most of these industrial areas exist in a landlocked and dilapidated state, leading to loss of livelihood and valuable resources. This article presents two such case studies for each of the four Indian cities - Ahmedabad, Chennai (erstwhile Madras), Kolkata (erstwhile Calcutta) and Mumbai (erstwhile Bombay). These eight case studies indicate how private initiatives helped to bring back the abandoned industrial sites successfully into the mainstream urban economics and contribute to the respective cities' growth trajectories. There is also a strong alignment between these positive examples and achievement of several sustainable development goals.
Keywords: Dysfunctional areas, livelihood, resources, sustainable development, urban economics

ANALYSING THE IRREVERSIBILITY AND OPTIMAL FLOW OF UNSTEADY FLUID IN MAGNETOHYDRODYNAMIC SYSTEM WITH HEAT AND MASS TRANSFER

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Abstract
This research explores the unsteady magnetohydrodynamic (MHD) flow of an electrically conductive fluid while considering simultaneous heat and mass transfer. The study is driven by the increasing significance of MHD systems in various industrial applications, including energy conversion, cooling technologies, and metallurgical processes. To achieve this, a mathematical model is developed that takes into account the effects of an external magnetic field, thermal diffusion, and variations in species concentration on the motion of the fluid. The governing nonlinear equations that describe momentum, energy, and mass transport are transformed into a dimensionless format and solved numerically with the appropriate boundary conditions. Special focus is placed on analysing entropy generation and the mechanisms of irreversibility linked to heat transfer, fluid friction, mass diffusion, and the effects of the magnetic field. The study investigates how key physical parameters, such as the magnetic parameter, Prandtl number, Schmidt number, Eckert number, and unsteady parameter, affect the profiles of velocity, temperature, concentration, entropy generation, and Bejan number. Additionally, it identifies conditions that lead to optimal flow behaviour by examining the trade-off between improved transport phenomena and minimized thermodynamic losses. The results indicate that stronger magnetic fields reduce fluid velocity while enhancing thermal energy within the flow area. The characteristics of heat and mass transfer play a crucial role in entropy production, and appropriate combinations of parameters can lead to reduced irreversibility and enhanced system efficiency. These findings aid in optimizing MHD-based engineering systems, highlighting the importance of effective thermal management and the reduction of energy losses.
Keywords: Magnetohydrodynamics (MHD); Unsteady Fluid Flow; Heat Transfer; Mass Transfer; Entropy Generation; Irreversibility Analysis; Bejan Number; Flow Optimization; Thermodynamic Efficiency; Numerical Simulation.

LOCAL STABILITY ANALYSIS OF AN INFECTION-AGE MATHEMATICAL MODEL FOR COVID-19 DISEASE DYNAMICS

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Abstract
The infectiousness of infected individuals is known to depend on the time since the individual was infected, called the age of infection. An infection age structured mathematical model for COVID-19 disease dynamics is investigated in this paper. The infectious population is structured according to time and age of infection. An explicit formula for the basic reproductive number $\Re_0$ of the model is obtained using the condition for the local stability of the disease-free equilibrium (DFE). The DFE state is showed to be locally asymptotically stable if $\Re_0 < 1$ and unstable if $\Re_0 > 1$. Numerical simulations were performed to validate the analytical results, revealing disease extinction for $\Re_0 < 1$ and COVID-19 outbreak persistence for $\Re_0 > 1$. The normalized functional sensitivity density revealed that the early infectious stage contributes most significantly to the spread of COVID-19. The numerical simulation peaked around the third day after infection, highlighting the importance of rapid testing, early isolation, and prompt treatment during the peak infectious period. Overall, this study demonstrates that infection-age modeling combined with functional sensitivity analysis provides deeper insight into COVID-19 transmission dynamics and supports the design of timely public health intervention strategies.
Keywords: Basic reproduction number, Covid-19, Infection-age, Local Stability, Functional sensitivity analysis.

RELIABILITY MODELING OF PARALLEL TUBULAR AND PLATE HEAT EXCHANGERS USING REGENERATIVE POINT TECHNIQUE

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Abstract
The aim of the study is to analyses the reliability of a parallel-configured system comprising two single-unit repairable heat exchangers: a Plate Heat Exchanger (PHE) and a Tubular Heat Exchanger (THE). The system remains operational as long as at least one system functions. In the event of a failure, a skilled server promptly repairs the damaged component, assuming constant failure rates and exponentially distributed repair times. The study employs the semi-Markov Process and Regenerative Point Technique (RPT) to evaluate system availability and Mean Time to System Failure (MTSF). By leveraging these methods, the study provides a more flexible and accurate evaluation of system performance compared to traditional Markov models. Additionally, the proposed model integrates cost–benefit analysis, providing insights into the financial viability of different maintenance strategies. Sensitivity analysis is performed to quantify the impact of failure and repair rates on system performance, aiding in the optimization of resource allocation. The results of this study have significant practical implications for sectors like manufacturing, energy, and healthcare that depend on highly dependable systems that are made up of and necessitate parallel systems.
Keywords: Parallel system · Reliable heat exchangers · Efficient Heat Transfer Technologies · Tubular heat exchanger · Regenerative point technique · Semi-Markov process

ENVIRONMENTAL INCIDENTS, WASTE MANAGEMENT, REGULATORY COMPLIANCE DISCLOSURES AND MARKET VALUE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

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ABSTRACT
The study examined how environmental incident, waste management and regulatory compliance disclosures affect the market value of consumer goods companies in Nigeria. The variables of EIWMRC disclosures were regressed on the market value (tobins'q). Purposive sampling technique was used to select 13 consumer goods companies out of the study's population of 21 companies. Secondary data was extracted from selected 13 annual reports of quoted consumer goods companies from 2015 to 2024. The study applied descriptive statistics and panel data estimation regression. The findings showed that environmental incidents disclosure had a favorable and substantial effect on the market value (Tobin's Q) of listed consumer goods companies, however, waste management and regulatory compliance disclosure had an inverse but substantial effect on market value. Hence, the study concluded that EIWMRC disclosures substantially influences the market value of listed consumer products businesses in Nigeria. According to the study, companies should include EIWMRC disclosures in their annual reports because it has a long-term effect on market value and should integrate it into their long-term strategic objectives for sustainable growth.
Keywords: Consumer Goods Companies, Environmental Incidents, Waste management, and Regulatory Compliance, Market value, Tobins'Q,

CORPORATE GOVERNANCE CHARACTERISTICS AND THE MARKET VALUE OF CONSUMER GOODS COMPANIES IN NIGERIA

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ABSTRACT
The sustainability and general financial health of any organization are directly impacted by the efficacy of corporate governance procedures. Examining the impact of corporate governance characteristics on the value of consumer products companies listed on the Nigerian Exchange Group between 2015 and 2024 was the primary goal of this study. The independent variable being corporate governance characteristics was proxied by board size, board independence, board gender diversity while the dependent variable market value was proxied by market value. The research design adopted for this study was the ex post facto research as the secondary data were employed. The population of this study was 21 consumer goods firms. The method of data analysis employed was the panel least square regression analysis and the statistical package employed was STATA version 16. The data analysis revealed that the market value of listed consumer goods firms in Nigeria is significantly impacted negatively by board size, positively by board independence, and positively by board gender diversity. Thus, it was concluded that corporate governance attributes have a significant effect on market value of listed consumer goods firms in Nigeria. It was therefore recommended that board size should not be too large as boards that are too large are hampered by coordination and communication costs and prone to free-riding among board members. It was also recommended that the management of consumer goods companies should actively promote gender diversity on their boards as the inclusion of more female directors can lead to broader perspectives, enhanced decision-making processes, and ultimately, improved market value.
Keywords: corporate governance, market value, board size, board independence, board diversity

THE EFFECT OF TAX REVENUE ON GOVERNMENT SOCIAL SPENDING AND ITS IMPACT ON SOCIETY

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ABSTRACT

Introduction and Purpose: Taxes are the main way governments raise money, but does that money actually help people? This study looks at Indonesia specifically, asking whether spending on education, healthcare, and social aid leads to real improvements in poverty, inequality, and human development. The gap between collecting taxes and seeing results on the ground is still a very open question.

Materials and Methods: This study reviews fiscal data and academic literature published between 2019 and 2024. Sources include government budget reports, national poverty statistics, HDI data, and peer-reviewed studies on Indonesian public finance. Secondary data was used throughout.

Results: The findings are cautiously hopeful. Education spending showed a real link to poverty reduction when funds were used effectively, and healthcare access expanded a lot through the JKN program. By 2023, Indonesia's HDI had reached 74.39. That said, regional gaps and bureaucratic inefficiencies still limit how far social spending can go.

Discussion and Conclusion: More social spending, backed by stronger tax collection, does push Indonesia toward more inclusive growth. But spending more alone is not enough. The quality and targeting of expenditure matters just as much, and smarter allocation is what will actually close the gaps at scale.

Keywords: Tax Revenue; Social Spending; Human Development Index; Poverty Reduction; Indonesia

THE ECONOMIC CONSEQUENCES OF INDONESIA WITHOUT THE TAXATION SECTOR

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ABSTRACT

Introduction and Purpose: Taxation constitutes a fundamental pillar of fiscal sustainability and national development in Indonesia. In addition to serving as the primary source of government revenue, taxation supports public service provision, infrastructure development, income redistribution, and macroeconomic stability. Nevertheless, taxes are often perceived as a financial burden that reduces household purchasing power and business profitability. Therefore, this study aims to analyze the potential economic consequences of Indonesia operating without a taxation sector.

Materials and Methods: This study employed a qualitative literature review and descriptive-hypothetical approach. Secondary data were collected from academic journal articles, government publications, and reports from reputable institutions concerning taxation, fiscal policy, public finance, economic growth, and social welfare. The collected literature was analyzed descriptively to examine the potential implications of tax elimination on fiscal sustainability, public service provision, macroeconomic stability, social welfare, and long-term economic development in Indonesia.

Results: The findings indicate that although the elimination of taxation may generate short-term economic benefits through increased disposable income and reduced business operating costs, these advantages are outweighed by substantial systemic risks. The absence of tax revenue would create a significant funding gap in the State Budget (APBN), increase dependence on government borrowing, reduce fiscal flexibility, weaken public service delivery, and constrain infrastructure development. Furthermore, the removal of taxation's redistributive function would likely increase income inequality and negatively affect lower-income households that rely on publicly funded social protection programs.

Discussion and Conclusion: The study demonstrates that taxation remains essential for maintaining fiscal sustainability, supporting economic stability, financing public goods, and promoting social welfare. While a taxation-free system may appear economically attractive in the short term, its long-term consequences could undermine sustainable development and national competitiveness. Therefore, rather than eliminating taxation, policymakers should focus on improving tax efficiency, fairness, transparency, and taxpayer compliance to ensure sustainable economic development in Indonesia.

Key Words: Fiscal Policy; Taxation; APBN; Public Goods; Indonesian Economy.

ARTIFICIAL INTELLIGENCE IN FINANCE AND FINANCIAL TECHNOLOGY

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ABSTRACT
AI and financial services are two of the most compelling technological advances of the twenty-first century, changing the game for many financial institutions in their approach to risk assessment, fraud prevention, customer service, and regulatory reporting. This structural rearrangement is not just about the operational efficiency but also has deep implications for the institutional design, competitive position and for socioeconomic and welfare justice in both advanced and emerging economies. This conceptual paper is a holistic theoretical model to understand the impact of AI on finance and financial technology (FinTech). Building on disruptive innovation theory (Christensen, 1997), the diffusion model (Rogers, 2003), and institutional economics framework (North, 1990), the paper develops a multi-level analytical framework that encompasses technological, organizational and institutional aspects of AI adoption. The framework addresses the six fields of application of AI: credit assessment and lending, fraud detection and cyber security, algorithmic trading and portfolio management, regulatory compliance and RegTech, payment systems and digital financial services, as well as AI-based supervisory technology (SupTech). The work on the adoption of AI is framed within three interrelated pillars: technological readiness (data infrastructure, algorithms and data science), institutional maturity (culture, human resources and governance), and regulatory framework (prudential regulation, financial inclusion policy and data protection law). The paper's key points are that progress should happen on all three fronts to integrate AI sustainably, and misalignment leads to predictable failures such as regulatory arbitrage and digital exclusion. In addition to operational improvement, the paper sets the scene that AI is a systemic enabler that changes the competitive landscape from balance sheet scale to data assets and platform reach, having implications for distributional power in markets and financial access. Sri Lanka and the South Asian region are singled out for attention in terms of the speed of the growth of their adoption of FinTech, in the face of an emerging regulatory environment and a variable digital infrastructure. With the support of projects like LankaQR and apps like eZ Cash and FriMi, and in light of the work of the HNB genie app, the paper illustrates how the conceptual framework can be used as a compass for examining the AI readiness in other emerging economies in similar areas of practical application. Finally, the paper highlights the research gaps regarding AI governance, algorithmic credit equity, monetary transmission, and financial disintermediation, and suggests a research agenda that needs to be developed at the nexus of AI, financial systems, and socioeconomic development.
Keywords: Artificial Intelligence, FinTech, Digital Finance, Financial Intermediation, Emerging Economies, Sri Lanka

IMPACT OF INVENTORY MANAGEMENT ON THE FINANCIAL PERFORMANCE OF PUBLIC LISTED MANUFACTURING COMPANIES IN SRI LANKA

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ABSTRACT

Inventory management is a crucial component of working capital management that directly influences the profitability and operational efficiency of firms. This study examines the impact of inventory management on the financial performance of manufacturing companies listed on the Colombo Stock Exchange (CSE) in Sri Lanka. The study utilizes a sample of 30 listed manufacturing firms over a seven-year period from 2019 to 2025. Financial performance is measured using Return on Assets (ROA), while Inventory Turnover Ratio (ITO), Number of Inventory Days (NID), and Operating Cycle (OC) are employed as indicators of inventory management. Firm Size (FS) and Sales Growth (SG) are incorporated as control variables.

Secondary data were collected from the annual reports of the selected firms. Descriptive statistics, correlation analysis, and multiple regression analysis were conducted using EViews software to examine the relationship between inventory management and firm performance. The empirical findings reveal that Inventory Turnover Ratio has a significant positive impact on Return on Assets, indicating that firms with higher inventory turnover tend to achieve superior financial performance. Conversely, the Number of Inventory Days demonstrates a significant negative relationship with ROA, suggesting that prolonged inventory holding periods adversely affect profitability. Although the Operating Cycle exhibits a negative association with ROA, the relationship is statistically insignificant. Furthermore, the results indicate that Firm Size positively and significantly influences financial performance, while Sales Growth shows a positive but statistically insignificant relationship with ROA.

The study concludes that effective inventory management plays a significant role in enhancing the financial performance of listed manufacturing firms in Sri Lanka. Specifically, maintaining optimal inventory levels and improving inventory turnover can contribute to increased profitability. The findings provide valuable insights for managers, investors, and policymakers regarding the importance of efficient inventory management practices in achieving sustainable financial performance and competitive advantage.

Keywords: Inventory Management, Financial Performance, Return on Assets, Inventory Turnover Ratio, Number of Inventory Days, Operating Cycle, Manufacturing Firms, Sri Lanka.

TAX TRANSPARENCY AND GOVERNMENT ACCOUNTABILITY IN BUILDING PUBLIC TRUST

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ABSTRACT

Introduction and Purpose: Public trust, tax transparency, and government accountability are commonly acknowledged as important factors that shape citizens' perceptions of tax governance. Public trust influences citizens' willingness to comply with tax obligations and support the financing of public goods and services. Therefore, we argue that transparent and accountable tax management can strengthen citizens' confidence in the government. However, transparency may not always increase trust, especially when the disclosed information reveals weak performance, corruption, or misuse of public resources. Therefore, the objective of the present study is to examine the relationship between tax transparency, government accountability, and public trust in tax governance.

Materials and Methods: This study employed a qualitative literature review approach. Data were collected from academic journals, research articles, and institutional reports related to tax transparency, government accountability, and public trust. The selected literature was analyzed descriptively to identify the relationship between transparency, accountability, and citizens' trust in government institutions. The findings from previous studies were compared and synthesized to draw conclusions regarding the impact of tax governance on public trust.

Results and Discussion: Synthesizing public sector accounting reforms and multi-level empirical data reveals a complex, non-linear relationship between fiscal transparency, government accountability, and public trust. While the institutional transition to accrual-based accounting and IPSAS adoption builds the baseline architecture for fiscal openness, its ultimate efficacy is tightly bounded by human resource capacity and heavily contingent upon both micro and macro-level dynamics. At the micro-governance level, empirical data from village budget management exposes a distinct paradox where formal transparency and administrative accountability fail to influence public trust, which is instead exclusively propelled by immediate, tangible government responsiveness ($t = 2.209$). On a global macro scale, analysis of the World Values Survey Wave 7 similarly shatters linear assumptions by demonstrating that the direct correlation between the Open Budget Index and tax morale is statistically insignificant. Crucially, this macro-relationship is severely moderated by corruption perception; once public skepticism crosses the critical threshold of 2.93, increasing fiscal transparency triggers a cognitive dissonance that completely boomerangs, causing cynical citizens to weaponize open budgetary data as concrete proof of mismanagement, which ultimately degrades societal tax morale. Consequently, tax transparency cannot serve as a standalone panacea for building public trust unless it is structurally paired with real-time operational responsiveness and aggressive anti-corruption enforcement.

Conclusion: Tax transparency and government accountability are important factors in building public trust. The literature reviewed shows that transparency is more effective when supported by accountability, responsiveness, and good governance. The findings indicate that effective transparency and accountability can strengthen public trust, improve tax compliance, and increase citizens' confidence in government institutions. Therefore, governments should ensure that transparency initiatives are accompanied by responsible and accountable public financial management to achieve sustainable public trust.

Keywords: tax transparency, government accountability, public trust, tax governance, public financial management.

ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION: FROM LEARNING SUPPORT TO REDEFINING THE ROLE OF THE UNIVERSITY PROFESSOR

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Abstract
This study explores the impact of artificial intelligence (AI) on higher education, focusing on its role in supporting learning and redefining the responsibilities of university professors. The research adopts a mixed-method approach, combining quantitative and qualitative data. The quantitative phase involved a survey distributed to 147 faculty members from the Faculties of Education in private universities in Beirut. Additionally, five in-depth interviews were conducted with university experts to gain deeper insights into faculty perceptions and institutional strategies regarding AI integration. The findings reveal that AI tools are increasingly utilized to enhance teaching effectiveness, facilitate personalized learning, and support administrative tasks. However, the study also highlights challenges, including faculty readiness, ethical considerations, and the need for professional development to effectively leverage AI technologies. The results suggest that the role of university professors is evolving from traditional lecturing toward a more facilitative, mentoring, and technology-guided approach. Overall, the study contributes to understanding how AI can be strategically applied in higher education while emphasizing both the opportunities and challenges it presents for faculty members and educational institutions.
Keywords: Artificial Intelligence; Higher Education; University Professors; Learning Support; Educational Technology; Teaching Innovation; Digital Transformation; Academic Roles; Pedagogical Strategies.

ROLE OF RAJSHAHI UNIVERSITY IN LOCAL AND REGIONAL DEVELOPMENT

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Abstract
Rajshahi University (RU), one of the oldest and most influential higher education institutions in Bangladesh, serves as a dynamic hub for learning, innovation, and socio-economic transformation in the country's northern region. As a large public university with thousands of students and staff, RU's activities extend far beyond education, influencing the local economy, social structures, and regional development. This study examines how RU functions as a catalyst for innovation-driven growth, with particular attention to its role in generating knowledge, fostering entrepreneurship, and addressing regional disparities. Using a mixed-methods approach, data were collected through surveys, stakeholder interviews, and analysis of secondary sources, including university reports, government statistics, and development plans. Findings reveal that RU contributes significantly to the regional economy through direct employment, business creation, and student-driven spending, which supports local markets and services. Beyond its economic footprint, RU plays a critical role in advancing social progress by expanding access to higher education, promoting gender equality, and leading community-based initiatives in health, education, and poverty alleviation. Innovation emerges as a key driver of RU's developmental impact. Research initiatives in agriculture, biotechnology, and renewable energy have begun to translate into practical solutions for local industries and rural communities. However, barriers such as inadequate infrastructure, limited technology transfer, and weak university-industry linkages hinder the full realization of this potential. The study concludes by emphasizing the need for strategic investment in research facilities, entrepreneurship programs, and digital infrastructure, alongside policy reforms that encourage innovation partnerships. Strengthening RU's capacity to generate and apply knowledge can accelerate sustainable development and reduce regional inequalities. By positioning itself as a leader in research and innovation, RU has the potential to drive inclusive growth and contribute significantly to Bangladesh's long-term vision for equitable and sustainable regional development.
Keywords: Rajshahi University, Regional development, Innovation, Socio-economic transformation, University-industry linkage, Bangladesh.

EXAMINE THE INFLUENCE OF GOVERNMENT REMOVAL OF FUEL SUBSIDY ON SECONDARY SCHOOL TEACHERS' PRODUCTION AND UTILISATION OF INSTRUCTIONAL MATERIAL, IN PLATEAU STATE

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ABSTRACT
This study examined the influence of the Nigerian government's removal of fuel subsidy on the production and utilization of instructional materials by Senior Secondary School teachers in Plateau State. The removal of fuel subsidy is hypothesized to negatively impact teachers' instructional practices due to increased fuel costs, which affect transportation, electricity access especially for those dependent on generators because of unstable power supply and high cost of procurement of materials. Specifically, the study assessed the effects on the production and use of visual, audio, audio-visual, improvised, and realia instructional materials. The research employed a descriptive survey design with a sample of 201 teachers, selected through random sampling. All 201 questionnaires were returned after administration. Data was collected using a researcher-developed instrument titled *Teachers' Production and Utilization of Instructional Materials (TPUIM)*, consisting of 30 close-ended questionnaire items. The reliability and validity of the instrument were confirmed through expert review and pilot testing. Data were analyzed using mean and standard deviation, and hypotheses were tested at the 0.05 level of significance. The findings revealed a negative influence of fuel subsidy removal on teachers' ability to produce and utilize all five categories of instructional materials, particularly due to higher costs of production and reduced accessibility. Based on these findings, it is recommended that the government allocate additional resources to support teachers, provide subsidies or grants for instructional material development, and implement targeted professional development programs to enhance teachers' production skills despite economic challenges.
Keywords: fuel subsidy removal, instructional materials, secondary school teachers, Nigeria, production, utilization, education policy

TO SUCCEED IN ONE'S EXPERIENCE, TO SUCCEED IN ONE'S UNIVERSITY STUDIES

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ABSTRACT

At university, and more specifically in lecture halls, practical work rooms, or tutorials, teaching was not and will not be easy. Students seek to understand during lectures. Seeking understanding is not limited to exercises or theories. Now, students want to understand the real-life aspects of their society—economic, environmental, and social. Teaching solely to find solutions to exercises is insufficient. Finding a solution to a societal problem through academic and empirical frameworks, while remaining confined to calculation exercises that are far removed from reality, will not aid student comprehension. To this end, university education must bring students closer to professional life, helping them find solutions to problems that are both theoretical and societal. Problems should not be confined to a document, locked away only for exams or tutorials. Instead, students should work through a problem in the lecture hall and then apply the solution to society, addressing its various problems and obstacles.

Our view is that education should prepare students for a profession, not leave the solutions to problems confined to the lecture hall or their grades.

For this reason, the professional experience of the instructor provides solutions for students. The professional experience of a university professor bridges the gap between theory and business, connecting academic solutions to societal realities. The real challenge lies in addressing the questions of citizens in society at various levels through the lens of academic theory. Our perspective is that university teaching should focus on finding solutions for society, not on confining those solutions to the lecture hall or a document.

Keywords: university, education, society, business.

INTERCULTURAL INSTRUCTION TEACHING MĀORI CULTURE IN A NEW ZEALAND BUSINESS COURSE

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Abstract
This paper describes teaching a revised undergraduate Organization and Management (O&M) curriculum in Aotearoa New Zealand. The curriculum change enables an invitational style of teaching to create bridges between Indigenous (Māori) students and White (Pākehā) majority students. Bhabha's concepts of hybridity, third space and enunciation are used here to elucidate this new learning. This teaching innovation promotes cultural adjustment to localize business knowledge often assumed in western business discourse to be universal and without context. Creating an intermediate teaching space builds students' business competence and to reach across cultures with greater business effectiveness in Aotearoa new Zealand's bicultural society for which they are training for their future employment.

SUFISM AND MORAL SELF-REFORM: A STUDY IN THE INTELLECTUAL AND SOCIAL CONTEXT OF SOUTH ASIA

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Abstract
This paper will focus on the connection between Sufism and moral reform in intellectual and social South Asian setting. Based on classical Sufi texts and current interpretations, the paper explores the way Sufi thought has focused on inner purification, ethical discipline, and spiritual transformation as the key elements of human development. Historically, Sufism in South Asian countries has been a critical force in terms of not just being a spiritual tradition but also a social agent to local harmony, tolerance and moral values. The paper places the Sufi practices of self-accountability (*muhasaba*), remembrance of God (*dhikr*), and spiritual mentorship (*murshid-disciple* relationship) in the context of larger socio-cultural processes. It claims that such practices help in creating an individual with moral consciousness to handle personal and social issues. Moreover, the paper brings to the fore the response of Sufi institutions and teachings to shifting intellectual trends, colonial experiences, and contemporary socio-political realities in South Asia. Through the combination of textual analysis and socio-historical approaches, this study explains that Sufism provides a living system of ethical self-reform that is not obsolete in the current debate on morality, identity and social integration. The research has finally added to the debate on religious studies today by making Sufism both an individual spiritual practice and a socially institutionalised practice of moral change.
Keywords: Sufism; Moral Self-Reform; South Asia; Islamic Ethics; Spirituality; Tazkiyah al-Nafs; Tasawwuf; Social Transformation; Ethical Development; Sufi Practices; Religious Thought; Mysticism; South Asian Islam

HUMAN RIGHTS IN ISLAMIC JURISPRUDENCE: AN ANALYSIS OF CLASSICAL SOURCES AND CONTEMPORARY DISCOURSE

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Abstract
This study examines the concept of human rights in Islamic jurisprudence through an analytical exploration of classical Islamic sources and contemporary scholarly discourse. Islam presents a comprehensive framework for the protection of human dignity, justice, equality, and social welfare, grounded primarily in the Qur'an, Sunnah, and the rich tradition of Islamic legal thought. The research investigates the foundational principles of human rights in Islamic jurisprudence, including the right to life, freedom, justice, property, religious practice, education, and protection of honor and dignity. It further analyzes how classical jurists developed these principles within the broader objectives of Islamic law (Maqāṣid al-Sharīʿah). The study also critically engages contemporary debates regarding the compatibility of Islamic jurisprudence with modern international human rights frameworks. Particular attention is given to issues such as gender rights, freedom of expression, minority rights, religious freedom, and social justice within present-day Muslim societies. By comparing classical interpretations with contemporary reformist and traditionalist perspectives, the research highlights both areas of convergence and tension between Islamic legal traditions and modern human rights discourse. Using qualitative and analytical methods, the paper argues that Islamic jurisprudence contains dynamic ethical and legal principles capable of contributing meaningfully to contemporary human rights discussions when interpreted through contextual and balanced approaches. The study concludes that a deeper engagement with the objectives and spirit of Islamic law can facilitate constructive dialogue between Islamic and international human rights paradigms while addressing modern social and legal challenges faced by Muslim societies.
Keywords: Human Rights, Islamic Jurisprudence, Sharīʿah, Maqāṣid al-Sharīʿah, Qur'an, Sunnah, Contemporary Discourse, Islamic Law, Social Justice

APPLICATION OF ARTIFICIAL INTELLIGENCE TOOLS FOR IMPROVING TROUBLESHOOTING SKILLS IN ELECTRONIC SYSTEMS AMONG TECHNICIANS IN RIVERS STATE

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Abstract
The study investigated on the application of artificial intelligence tools for improving troubleshooting skills in electronic systems among technicians in Rivers State. A descriptive survey research design was adopted for the study. The population consist of 70 craftsmen and 30 industrial technicians in River State. A total of 100 respondents were used for the study which was the entire population of the study. Three research questions were posed and three hypotheses were formulated for this study. A structured four point Likert rating scale questionnaire were used for this study. The instrument was validated by three experts. The reliability of the instrument was carried out using Cronbach Alpha and score obtained was 0.84, making the instrument reliable. Data collected from the research questions were analyzed using mean and standard deviation, while T-test was used to test the null hypotheses at 0.05 level of significance. The findings revealed that, applying Artificial intelligence tools among technicians in Rivers State would improve troubleshooting skills in electronic systems by reducing human errors, extend device life span, and enhance automation control. The study concluded that applying artificial intelligence tools for improving troubleshooting skills in electronic system are best applied when the technicians are well trained on the application of the artificial intelligence tools in repairing, troubleshooting, tracing of faults and servicing of electronic systems. The following recommendations were also made, there is need for adequate modern facilities, equipment and tools in electronic workshop for diagnosing, repairing, and servicing of electronic system.
Keyword: Artificial Intelligence, Electronic System, Troubleshooting Skills, Technicians

CUMHURİYET DÖNEMİ EĞİTİM POLİTİKALARININ ZONGULDAK İLİNE OLAN YANSIMALARI

THE IMPACT OF REPUBLICAN ERA EDUCATION POLICIES ON ZONGULDAK PROVINCE

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Abstract
Education, one of the fundamental instruments of political policy, plays a key role in political, economic and social change. In Türkiye, where individual, social and economic transformation was targeted with the proclamation of the Republic in 1923, education policies began to be aligned with Republican goals, and these policies shifted to a different course with the Planned Development Period that began in 1963. As the first province of the Republic of Türkiye, Zonguldak holds a distinctive place for observing the local implementation of central education policies owing to its industrial economy based on the hard coal basin, its dense worker population and its early industrialization experience. This study aims to examine the socio-economic and educational impact of Republican era education policies on Zonguldak province. Adopting a qualitative approach, the study employed document analysis; the data were obtained from 135 documents identified in six fonds of the Republican Archives of the Presidency of State Archives, official statistical yearbooks, Ministry of Education correspondence, local periodicals and the relevant literature, and the findings were interpreted within the framework of the socio-political and economic policies of the period. The findings indicate that the education policies implemented between 1923 and 1963 had a marked transformative impact on education in Zonguldak province. In this period, alongside increases in student numbers, teacher numbers and literacy rates, the types and numbers of secondary and vocational-technical education institutions, which did not exist in 1923, also increased. In the context of socio-economic impact, the technical labour demand of the coal basin generated an institutional continuity chain extending from the Higher School of Mining and Industrial Engineering, opened in 1924, to the Mining Technical School, while state economic enterprises such as EKİ and Etibank became direct partners in education financing by opening schools and constructing school buildings. Although central education policies produced varying outcomes at the intersection of local economic structures and social needs, such as teacher shortages and insufficient school buildings, Zonguldak emerged as one of the provincial cases in which the outcomes of these policies could be observed most clearly.
Keywords: Republican Era Education Policies, Education Policies, Education

Özet
Siyasi politikanın temel araçlarından olan eğitim, politik, ekonomik ve toplumsal değişimlerde temel rol oynar. 1923'de Cumhuriyetin ilanıyla bireysel-toplumsal-ekonomik düzlemde değişimlerin hedeflendiği Türkiye'de eğitim politikaları Cumhuriyet hedefleriyle bağdaştırılmaya başlanmış ve söz konusu politikalar, 1963'de başlayan Planlı Kalkınma Dönemi ile farklı bir mecraya kaymıştır. Türkiye Cumhuriyeti'nin ilk ili olan Zonguldak; taşkömürü havzasına dayalı sanayi ekonomisi, yoğun işçi nüfusu ve erken sanayileşme deneyimiyle merkezî eğitim politikalarının yerel düzeydeki uygulamalarını gözlemlemek açısından özgün bir yere sahiptir. Bu araştırmada, Cumhuriyet dönemi eğitim politikalarının Zonguldak iline sosyo-ekonomik ve eğitsel yansımalarının incelemek amaçlanmıştır. Nitel araştırma yaklaşımının benimsendiği araştırmada, belge (doküman) incelemesi kullanılmış, veriler, Devlet Arşivleri Başkanlığı Cumhuriyet Arşivi'nin altı fonunda tespit edilen 135 belge; Başbakanlık İstatistik Umum Müdürlüğü yıllıkları, Maarif Vekâleti yazışmaları, yerel süreli yayınlar ve ilgili alanyazından alınmıştır. Araştırma verilerinden elde edilen bulgular, dönemin sosyo-politik ve ekonomi politikaları çerçevesinde yorumlanmaya çalışılmıştır. Bulgular, 1923–1963 arası dönemde

uygulanan eğitim politikalarıyla Zonguldak ilindeki eğitimsel yansımalarında belirgin bir dönüşüme işaret ettiğini göstermektedir. İlgili dönemde öğrenci sayısı, öğretmen sayısı ve okuryazarlık oranlarında artışlar yanı sıra 1923'te bulunmayan ortaöğretim ve mesleki-teknik eğitimi kurumlarının tür ve sayılarında da artışlar olduğunu göstermektedir. Öte yandan sosyo-ekonomik yansımalar bağlamında, kömür havzasının teknik iş gücü talebi, 1924'de açılan Yüksek Maadin ve Sanayi Mühendisi Mektebi'nden (1924) Maden Teknik Okulu'na uzanan bir kurumsal süreklilik zinciri doğurmuş; EKİ ve Etibank gibi kamu iktisadi teşebbüsleri okul açarak ve okul binası inşa ettirerek eğitim finansmanına doğrudan ortak olmuştur. Araştırmada incelendiği kadarıyla, merkezî eğitim politikalarının yerel ekonomik yapı ve toplumsal ihtiyaçlarla kesişme çabasına karşın öğretmen açığı, yeterince okul binasının olmaması gibi farklı sonuçlar üretmekle birlikte, Zonguldak'ın, uygulanan eğitim politikalarının sonuçlarının en belirgin biçimde gözlemlenebildiği taşra örneklerinden biri olduğu görülmüştür.

Anahtar kelimeler: Cumhuriyet Dönemi Eğitim Politikaları, Eğitim Politikaları, Eğitim

OKUL ÖNCESİ EĞİTİM KURUMLARI İÇİN ALTERNATİF BİR YÖNETİM MODEL ÖNERİSİ: UZMAN GÖRÜŞLERİNE DAYALI TEMATİK BİR ÇÖZÜMLEME

PROPOSAL FOR AN ALTERNATIVE MANAGEMENT MODEL FOR PRESCHOOL EDUCATION INSTITUTIONS: A THEMATIC ANALYSIS BASED ON EXPERT OPINIONS

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Abstract
Although Although early childhood is a critical period for cognitive, affective, and social development, the management of preschool education institutions remains a relatively underexplored area in the literature. This study was conducted to address this need by developing a flexible and participatory alternative management model specific to preschool education institutions. The findings reported in this study belong to the first round of a multi-round Delphi process. Adopting the e-Delphi method, two open-ended questions were directed to 66 participants comprising academics, school principals, assistant principals, teachers, branch managers, educational inspectors, and teacher representatives from private schools. Data were collected through online forms and analyzed using content analysis with MAXQDA 2022 software. As a result of the analyses conducted on a total of 1125 codes, six main themes were identified: purpose of management, management structure, management processes, organization, school culture and climate, and principal characteristics. The findings reveal the necessity of a flexible, dynamic, and democratic management approach that prioritizes pedagogical leadership, the holistic development of children, and stakeholder participation in the management of preschool institutions. The study aims to make an original contribution to the literature regarding a child-centered and sustainable alternative management model suitable for the conditions of Türkiye.
Keywords: preschool education, school management, alternative management model, Delphi technique

Özet
Okul öncesi eğitim dönemi, bireyin bilişsel, duyusal ve sosyal gelişimi açısından kritik bir evre olmasına karşın okul öncesi eğitim kurumlarının yönetimi, alınyazında görece sınırlı bir araştırma alanı olarak kalmaktadır. Bu çalışma, söz konusu gereksinimden hareketle okul öncesi eğitim kurumlarına özgü, esnek ve katılımcı bir alternatif yönetim modeli geliştirmek amacıyla yürütülmüştür. Araştırmada çok turlu Delphi tekniğinin birinci turuna ait bulgular raporlanmıştır. e-Delphi yöntemi benimsenerek; akademisyen, okul müdürü, müdür yardımcısı, öğretmen, şube müdürü, eğitim müfettişi ve özel okullarda çalışan öğretmen temsilcilerinden oluşan 66 katılımcıya iki temel açık uçlu soru yöneltilmiştir. Veriler çevrimiçi formlar aracılığıyla toplanmış ve MAXQDA 2022 yazılımı kullanılarak içerik analizi ile çözümlenmiştir. Toplam 1125 kodlama üzerinden gerçekleştirilen analizler sonucunda altı ana tema belirlenmiştir: yönetimin amacı, yönetim yapısı, yönetim süreçleri, örgüt, okul kültürü ve iklimi ile yönetici özellikleri. Bulgular; okul öncesi kurumlarının yönetiminde pedagojik liderliği, çocuğun bütüncül gelişimini ve paydaş katılımını ön plana çıkaran esnek, dinamik ve demokratik bir yönetim anlayışının gerekliliğini ortaya koymaktadır. Araştırma; Türkiye koşullarına uygun, çocuk merkezli ve sürdürülebilir bir alternatif yönetim modeline ilişkin alınyazına özgün bir katkı sunmayı hedeflemektedir.
Anahtar Kelimeler: okul öncesi eğitim, okul yönetimi, alternatif yönetim modeli, Delphi tekniği,

ORTAOKUL ÖĞRENCİLERİNİN DİJİTAL OYUN OYNAMA DENEYİMLERİNİN SWOT İLE ANALİZİ

AN ANALYSIS OF SECONDARY SCHOOL STUDENTS' EXPERIENCES OF PLAYING DIGITAL GAMES USING THE SWOT ANALYSIS

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Abstract
The rapid transformation currently taking place in information technology has radically altered the ways in which individuals interact socially and spend their leisure time. Among the groups most affected by this change are secondary school pupils, who have grown up immersed in technology This study aims to examine middle school students' digital gaming habits and the impact of these habits on their daily life practices in depth, within the framework of a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. The study, which adopts the case study design from qualitative research methods, comprises a sample of 10 secondary school students selected using criterion sampling, a form of purposive sampling. Data were collected using a semi-structured interview form prepared with expert input and analysed using content analysis. The analyses identified 4 main themes, 16 sub-themes and 37 codes. The findings indicate that digital games possess strengths in terms of cognitive development, emotional relief and social skills, and provide opportunities for social communication. However, it was also found that they have weaknesses in terms of academic problems and physical effects, and pose threats in terms of cyberbullying and family relationships. In line with the research findings, students should be guided to develop strategies for coping with cyberbullying and improving their family relationships. More comprehensive studies could also be conducted to investigate the effects of digital games on students.
Keywords: Digital Games, SWOT Analysis, Middle School Students

Özet
Günümüzde bilişim teknolojilerinde yaşanan hızlı dönüşüm, bireylerin sosyal etkileşim biçimlerini ve serbest zaman aktivitelerini kökten değiştirmiştir. Bu değişimden en çok etkilenen grupların başında, teknolojiyle iç içe büyüyen ortaokul çağı öğrencileri gelmektedir. Bu çalışma, ortaokul öğrencilerinin dijital oyun oynama alışkanlıklarını ve bu alışkanlıkların günlük yaşam pratikleri üzerindeki etkilerini SWOT (Güçlü Yönler, Zayıf Yönler, Fırsatlar ve Tehditler) analizi çerçevesinde derinlemesine incelemeyi amaçlamaktadır. Nitel araştırma yöntemlerinden durum çalışması (case study) deseninin benimsendiği araştırmanın çalışma grubunu, amaçlı örnekleme yöntemlerinden ölçüt örnekleme ile belirlenen 10 ortaokul öğrencisi oluşturmaktadır. Veriler, uzman görüşü alınarak hazırlanan yarı yapılandırılmış görüşme formu ile toplanmış ve içerik analizi yöntemiyle çözümlenmiştir. Yapılan analizler sonucunda 4 ana tema, 16 alt tema ve 37 kod belirlenmiştir. Bulgular dijital oyunların bilişsel gelişim, duygusal rahatlama ve sosyal beceriler açısından güçlü yönleri barındırdığı ve sosyal iletişim açısından fırsatlar sağladığını göstermektedir.

Bununla birlikte akademik sorunlar ve fiziksel etkiler açısından zayıf yönler barındırdığı ile siber zorbalık ve aile ilişkileri açısından tehditler barındırdığı bulgusuna ulaşılmıştır. Araştırma sonuçları doğrultusunda öğrencilerin siber zorbalıkla baş etme stratejilerini ve aile ilişkilerini geliştirmelerine yönelik yönelik eğitim verilebilir. Aynı zamanda dijital oyunların öğrenciler üzerindeki etkilerini araştıran daha kapsamlı çalışmalar yapılabilir.
Anahtar kelimeler: Dijital Oyun, SWOT Analizi, Ortaokul Öğrencileri

ORTAOKUL ÖĞRENCİLERİNİN FİNANSAL OKURYAZARLIK DÜZEYLERİ İLE BİLİNÇLİ TÜKETİM DAVRANIŞLARI ARASINDAKİ İLİŞKİNİN İNCELENMESİ

AN EXAMINATION OF THE RELATIONSHIP BETWEEN SECONDARY SCHOOL STUDENTS' LEVELS OF FINANCIAL LITERACY AND THEIR CONSCIOUS CONSUMPTION BEHAVIOURS

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Abstract
The globalising economy and the process of digitalisation have made it necessary for individuals to make financial decisions from an early age. The international literature emphasises that financial literacy is a multidimensional construct and that individuals' financial behaviour cannot be explained by cognitive knowledge alone. The aim of this study is to examine the relationship between secondary school pupils' levels of financial literacy and their conscious consumption behaviours. In this study, the correlational survey model (correlational design) was employed from among quantitative research methods. The research was conducted during the 2025–2026 academic year at a secondary school in Eskişehir. A total of 120 pupils in Year 6 participated in the study. Data for the study were collected using the Financial Literacy Scale and the Conscious Consumer Scale. The Pearson Product-Moment Correlation Coefficient was used to analyse the data. The findings indicate a positive and moderately significant relationship between financial literacy and conscious consumption ($r = .61$, $p < .01$). As a result of the study, it is recommended that efforts be made to strengthen financial literacy education at secondary school level and to improve financial literacy levels in lessons.
Keywords: Financial Literacy, Conscious Consumption, Correlational Survey Model

Özet
Küreselleşen ekonomi ve dijitalleşme süreci, bireylerin erken yaşlardan itibaren ekonomik kararlar almasını gerekli kılmıştır. Uluslararası literatürde finansal okuryazarlığın çok boyutlu bir yapı olduğu ve bireylerin finansal davranışlarının yalnızca bilişsel bilgiyle açıklanamayacağı vurgulanmaktadır. Bu araştırmanın amacı, ortaokul öğrencilerinin finansal okuryazarlık düzeyleri ile bilinçli tüketim davranışları arasındaki ilişkiyi incelemektir. Bu araştırmada nicel araştırma yöntemlerinden ilişkisel tarama modeli (korelasyonel desen) kullanılmıştır. Araştırma 2025-2026 eğitim öğretim yılında Eskişehir'de bir ortaokulda gerçekleşmiştir. Araştırmaya 6. Sınıfta okuyan 120 öğrenci katılmıştır. Araştırmanın verileri Finansal Okuryazarlık Ölçeği ile Bilinçli Tüketici Ölçeği kullanılarak toplanmıştır. Verilerin analizinde Pearson Momentler Çarpımı Korelasyon Katsayısı kullanılmıştır. Bulgulara göre finansal okuryazarlık ile bilinçli tüketim arasında pozitif yönlü ve orta düzeyde anlamlı ilişki bulunmuştur ($r = .61$, $p < .01$). Araştırma sonucunda finansal okuryazarlık eğitiminin ortaokul düzeyinde güçlendirilmesine ve derslerde finansal okuryazarlık düzeyinin geliştirilmesine yönelik çalışmalar yapılması önerilmektedir.
Anahtar kelimeler: Finansal Okuryazarlık, Bilinçli Tüketim, İlişkisel Tarama Modeli

İŞİTME YETERSİZLİĞİ OLAN ORTAOKUL ÖĞRENCİLERİNİN CİSİMLERİN FARKLI YÖNLERDEN GÖRÜNÜMLERİNE İLİŞKİN ALAN BİLGİLERİNİN İNCELENMESİ

INVESTIGATION OF FİELD KNOWLEDGE OF MIDDLE SCHOOL STUDENTS WITH HEARING IMPAIRMENT REGARDING THE VIEWS OF OBJECTS FROM DIFFERENT DIRECTIONS

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Abstract
The main objective of this research is to examine the spatial knowledge of hearing-impaired middle school students regarding the views of objects from different perspectives. This study, designed using quantitative research methodology, adopted a correlational survey design. The study group consisted of 28 middle school students attending Tülay Aktaş Middle School for the Hearing Impaired in Bornova district of İzmir province during the 2025-2026 academic year, who voluntarily participated in the study. The data collection tool used was a 15-item "Views of Objects from Different Perspectives Achievement Test," prepared by the researcher based on expert opinions, to determine the students' performance and achievement levels regarding the views of geometric shapes from different perspectives. SPSS 16.0 statistical package program was used for the analysis of the collected raw data; after determining that the data showed a normal distribution, descriptive statistics such as frequency, percentage, arithmetic mean, and standard deviation, as well as Independent Samples t-Test and Pearson Product-Moment Correlation Coefficient analyses, were applied.
According to the findings of the study, it was determined that the participants' ability to transform verbal problem descriptions from daily life into formal mathematical concepts remained at a limited level. In light of the findings and results, strategic recommendations for implementation and future research have been developed to improve the quality of mathematics education for students with hearing impairments. These recommendations include concept-focused curriculum adaptations that consider their linguistic needs, concrete 3D modeling and material support, and professionally enhancing the sign language competencies of subject teachers.
Keywords: Hearing Impairment, Views of Objects from Different Directions, Relational Screening.

Özet
Bu araştırmanın temel amacı, işitme yetersizliği olan ortaokul öğrencilerinin cisimlerin farklı yönlerden görünümlerine ilişkin alan bilgilerini incelemektir. Nicel araştırma metodolojisiyle kurgulanan bu çalışmada, araştırmanın deseni olarak tarama modellerinden ilişkisel tarama modeli benimsenmiştir. Araştırmanın çalışma grubunu, 2025-2026 Eğitim-Öğretim yılında İzmir ili Bornova ilçesinde yer alan Tülay Aktaş İşitme Engelliler Ortaokulunda öğrenim gören ve çalışmaya gönüllü olarak katılım sağlayan 28 ortaokul öğrencisi oluşturmaktadır. Araştırmada veri toplama araçları olarak; öğrencilerin geometrik cisimlerin farklı yönlerden görünümleri konusundaki performans ve başarı seviyelerini saptamak amacıyla araştırmacı tarafından uzman görüşleri doğrultusunda hazırlanan 15 maddelik "Cisimlerin Farklı Yönlerden Görünümleri Başarı Testi" kullanılmıştır. Toplanan ham verilerin analiz süreçlerinde SPSS 16.0 istatistik paket programı kullanılmış; verilerin normal dağılım gösterdiği belirlendikten sonra frekans, yüzde, aritmetik ortalama ve standart sapma gibi betimsel istatistiklerin yanı sıra Bağımsız Örneklemler t-Testi ve Pearson Çarpım Momentler Korelasyon Katsayısı analizlerine başvurulmuştur.
Araştırmadan elde edilen bulgulara göre, katılımcıların günlük hayata ait sözel problem betimlemelerini zihinlerinde yapılandırarak formal matematiksel kavramlara dönüştürme becerilerinin ise sınırlı düzeyde kaldığı saptanmıştır.

Elde edilen bulgular ve sonuçlar ışığında; işitme yetersizliği olan öğrencilerin matematik eğitimindeki niteliğini artırmak amacıyla dilsel ihtiyaçları gözeten kavram odaklı müfredat uyarlamaları, somutlaştırıcı 3B modelleme ve materyal destekleri, branş öğretmenlerinin işaret dili yetkinliklerinin profesyonel düzeyde artırılması gibi uygulamaya ve gelecek araştırmalara yönelik stratejik öneriler geliştirilmiştir.

Anahtar kelimeler: İşitme Yetersizliği, Cisimlerin Farklı Yönlerden Görünümü, İlişkisel Tarama.

İŞİTME YETERSİZLİĞİ OLAN ORTAOKUL ÖĞRENCİLERİNİN CİSİMLERİN FARKLI YÖNLERDEN GÖRÜNÜMLERİNE İLİŞKİN MATEMATİKSEL DİL KULLANIMLARININ İNCELENMESİ

INVESTIGATION OF MATHEMATICAL LANGUAGE USE OF MIDDLE SCHOOL STUDENTS WITH HEARING IMPAIRMENT REGARDING THE VIEWS OF OBJECTS FROM DIFFERENT DIRECTIONS

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Abstract
The primary objective of this study is to systematically investigate the mathematical language use of middle school students with hearing impairment regarding the views of objects from different directions, as well as their general opinions toward this language. Formulated within a quantitative research methodology, the study adopted the relational screening model, which is a subtype of survey models. The study group consisted of 28 middle school students who were enrolled in the Tülay Aktaş Secondary School for the Deaf in the Bornova district of İzmir during the 2025–2026 academic year and participated in the study on a voluntary basis. Two data collection instruments were utilized in the research: the 15-item "Achievement Test on Views of Objects from Different Directions," developed by the researcher in line with expert opinions to determine students' performance and achievement levels regarding the perspectives of geometric objects, and the 21-item 5-point Likert-type "Mathematical Language Scale," employed to assess their perceptions and opinions toward the domain-specific language. The SPSS 16.0 statistical software package was used for the analysis of the collected raw data. After ensuring that the data followed a normal distribution, descriptive statistics such as frequency, percentage, arithmetic mean, and standard deviation were examined, and Independent Samples t-Test and Pearson Product-Moment Correlation Coefficient analyses were conducted.
The findings obtained from the study reveal that the levels of understanding and using the mathematical language regarding the views of objects from different directions among middle school students with hearing impairment are generally concentrated at a moderate level. It was determined that the participants' ability to transform (code) verbal daily-life problem descriptions into formal mathematical concepts by structuring them in their minds remained limited. According to the statistical analysis results, a positive, moderate, and significant relationship was identified between the students' domain-specific mathematical language achievement levels and their general mathematics achievement ($r = 0.428$, $p < 0.05$). On the other hand, the mean scores of the students on the mathematical language use opinion scale fell into the "Undecided" (moderate) level, and it was established that these affective opinions followed a course independent of the students' achievement test scores and their general mathematics grades in the school environment. Finally, it was concluded that the gender variable did not create a statistically significant difference on either the mathematical language achievement levels of students with hearing impairment or the opinions and attitudes they developed toward this language. In light of the findings and conclusions obtained, strategic recommendations for both educational practice and future research have been developed, such as concept-oriented curriculum adaptations that consider linguistic needs, concrete 3D modeling and material support, and professionally enhancing the sign language competencies of branch teachers to improve the quality of mathematics education for students with hearing impairment.
Keywords: Hearing Impairment, Views of Objects from Different Directions, Mathematical Language, Relational Screening.

Özet

Bu araştırmanın temel amacı, işitme yetersizliği olan ortaokul öğrencilerinin cisimlerin farklı yönlerden görünümlerine ilişkin matematiksel dil kullanımlarını ve bu dile yönelik genel görüşlerini sistematik bir yaklaşımla incelemektir. Nicel araştırma metodolojisiyle kurgulanan bu çalışmada, araştırmanın deseni olarak tarama modellerinden ilişkisel tarama modeli benimsenmiştir. Araştırmanın çalışma grubunu, 2025-2026 Eğitim-Öğretim yılında İzmir ili Bornova ilçesinde yer alan Tülay Aktaş İşitme Engelliler Ortaokulunda öğrenim gören ve çalışmaya gönüllü olarak katılım sağlayan 28 ortaokul öğrencisi oluşturmaktadır. Araştırmada veri toplama araçları olarak; öğrencilerin geometrik cisimlerin farklı yönlerden görünümleri konusundaki performans ve başarı seviyelerini saptamak amacıyla araştırmacı tarafından uzman görüşleri doğrultusunda hazırlanan 15 maddelik "Cisimlerin Farklı Yönlerden Görünümleri Başarı Testi" ile alan diline yönelik algı ve görüşlerini saptamak amacıyla 21 ifadeden oluşan 5'li Likert tipi "Matematiksel Dil Ölçeği" işe koşulmuştur. Toplanan ham verilerin analiz süreçlerinde SPSS 16.0 istatistik paket programı kullanılmış; verilerin normal dağılım gösterdiği belirlendikten sonra frekans, yüzde, aritmetik ortalama ve standart sapma gibi betimsel istatistiklerin yanı sıra Bağımsız Örneklemler t-Testi ve Pearson Çarpım Momentler Korelasyon Katsayısı analizlerine başvurulmuştur.

Araştırmadan elde edilen bulgular, işitme yetersizliği olan ortaokul öğrencilerinin cisimlerin farklı yönlerden görünümleri konusundaki matematiksel dili anlayabilme ve kullanabilme düzeylerinin genel olarak orta seviyede yoğunlaştığını ortaya koymaktadır. Katılımcıların günlük hayata ait sözel problem betimlemelerini zihinlerinde yapılandırarak formal matematiksel kavramlara dönüştürme becerilerinin ise sınırlı düzeyde kaldığı saptanmıştır. İstatistiki analiz sonuçlarına göre, öğrencilerin konuya özgü matematiksel dil başarı düzeyleri ile genel matematik dersi başarıları (okul notları) arasında pozitif yönde, orta düzeyde ve anlamlı bir ilişki tespit edilmiştir ($r = 0.428$, $p < 0.05$). Buna karşın, öğrencilerin matematiksel dil kullanımına ilişkin görüş ölçeği puan ortalamaları genel olarak "Kararsızım" (orta düzey) seviyesinde çıkmış olup, bu duyuşsal görüşlerin öğrencilerin başarı testi puanlarından ve okul ortamındaki genel matematik notlarından bağımsız bir seyir izlediği belirlenmiştir. Son olarak, cinsiyet değişkeninin işitme yetersizliği olan öğrencilerin gerek matematiksel dil başarı düzeyleri gerekse bu dile yönelik geliştirdikleri görüş ve tutumları üzerinde istatistiksel olarak anlamlı bir farklılık oluşturmadığı sonucuna ulaşılmıştır. Elde edilen bulgular ve sonuçlar ışığında; işitme yetersizliği olan öğrencilerin matematik eğitimindeki niteliğini artırmak amacıyla dilsel ihtiyaçları gözeten kavram odaklı müfredat uyarlamaları, somutlaştırıcı 3B modelleme ve materyal destekleri, branş öğretmenlerinin işaret dili yetkinliklerinin profesyonel düzeyde artırılması gibi uygulamaya ve gelecek araştırmalara yönelik stratejik öneriler geliştirilmiştir.

Anahtar kelimeler: İşitme Yetersizliği, Cisimlerin Farklı Yönlerden Görünümü, Matematiksel Dil, İlişkisel Tarama

FEN BİLİMLERİ EĞİTİMİNDE GRUP ÇALIŞMASI DENEYİMLERİNİN HATIRLANMA BİÇİMLERİ: ÖĞRETMENLER VE ÖĞRETMEN ADAYLARININ ANILARINA FENOMENOLOJİK BİR BAKIŞ

HOW GROUP WORK EXPERIENCES ARE REMEMBERED IN SCIENCE EDUCATION: A PHENOMENOLOGICAL PERSPECTIVE ON THE MEMORIES OF IN-SERVICE TEACHERS AND PRE-SERVICE TEACHERS

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ÖZET
İşbirlikli öğrenme, öğrencilerin hem akademik gelişimlerine hem de sosyal becerilerinin olgunlaşmasına katkı sunan temel öğretim yaklaşımlarından biri olarak kabul görmektedir. Öğrencilik yıllarında yaşanan grup çalışması deneyimlerinin bireylerin belleğinde nasıl yapılandığını ve bu deneyimlerin mesleki kimlik gelişimine yönelik olası yansımalarını anlamak, öğretmen eğitimi araştırmalarında önem taşıyan ancak yeterince incelenmemiş bir alan olmaya devam etmektedir. Bu araştırma, fen bilimleri alanındaki hizmet içi öğretmenler ile öğretmen adaylarının öğrencilik yıllarındaki grup çalışması deneyimlerine ilişkin anılarını fenomenolojik bir yaklaşımla karşılaştırmalı biçimde incelemeyi amaçlamaktadır. Araştırmanın çalışma grubu, İç Anadolu Bölgesi'nde bir devlet üniversitesinin fen bilgisi öğretmenliği programının son sınıfında öğrenim gören 12 öğretmen adayı ile aynı ilde devlet ortaokullarında görev yapan ve en az 10 yıllık mesleki kıdeme sahip 12 fen bilimleri öğretmeninden oluşmaktadır. Veriler yarı yapılandırılmış görüşme tekniğiyle toplanmış, elde edilen veriler fenomenolojik desenin yorumlayıcı yönelimiyle uyumlu biçimde tümevarımsal içerik analizi yöntemiyle çözümlenmiştir. Bulgular her iki grupta da grup çalışmalarının başlıca "karşılıklı etkileşim", "akran öğrenmesi", "işbirlikli öğrenmeye katkı" ve "yaratıcılık" kavramları ekseninde olumlu biçimde değerlendirildiğini ortaya koymaktadır. Bununla birlikte öğretmenler "heterojen grup yapılanması" ve "uygulanabilirlik sınırlılıkları" gibi pratik kaygıları ön plana taşırken, öğretmen adaylarından bir kısmı "sosyal beceri gelişimi"ni vurgularken bir diğer kesimi "olumsuz grup deneyimi" ve "sorumluluk dağılımındaki adaletsizlik" gibi eleştirel noktalara dikkat çekmiştir. Sonuçlar fen öğretmenliği eğitiminde işbirlikli öğrenme uygulamalarının teorik değerinin ötesinde, yapılandırılmış ve bilinçli bir süreç yönetimi anlayışıyla hayata geçirilmesi gerektiğine işaret etmektedir.
Anahtar Kelimeler: Fen eğitimi, grup çalışması, işbirlikli öğrenme, öğretmen anıları, öğretmen adayları, olgubilim.

ABSTRACT
Cooperative learning is recognized as one of the fundamental instructional approaches that contributes to both the academic development and the maturation of social skills among students. Understanding how group work experiences during student years are represented in individuals' memories, and the potential reflections of these experiences on professional identity development, remains an important yet insufficiently explored area in teacher education research. This study aims to examine, through a phenomenological approach and in a comparative manner, the memories of in-service science teachers and pre-service teacher candidates regarding their group work experiences during their student years. The study group consisted of 12 pre-service teacher candidates enrolled in the final year of a science teacher education program at a state university in the Central Anatolia Region, and 12 in-service science teachers working in state secondary schools in the same province with at least 10 years of professional experience. Data were collected through a semi-structured interview technique and analyzed using inductive content analysis, consistent with the interpretive orientation of the phenomenological design.

The findings reveal that in both groups, group work was predominantly evaluated positively along the axes of “mutual interaction”, “peer learning”, “contribution to cooperative learning”, and “creativity”. However, while in-service teachers foregrounded practical concerns such as “heterogeneous group formation” and “limitations of applicability”, some pre-service teacher candidates emphasized “social skill development”, whereas others drew attention to critical issues such as “negative group experience” and “unfairness in the distribution of responsibilities”. The results indicate that cooperative learning practices in science teacher education need to be implemented with a structured and conscious process management approach, beyond their theoretical value.
Keywords: Science education, group work, cooperative learning, teachers’ memories, pre-service teachers, phenomenology.

** Bu çalışma, birinci yazarın ikinci yazar danışmanlığında hazırladığı yüksek lisans tezinden üretilmiştir.*

FEN BİLİMLERİ ÖĞRETMENLERİNİN AÇIK UÇLU SORU HAZIRLAMA VE DEĞERLENDİRME SÜREÇLERİNDE YAŞADIKLARI GÜÇLÜKLER

CHALLENGES ENCOUNTERED BY SCIENCE TEACHERS IN THE PREPARATION AND EVALUATION OF OPEN-ENDED QUESTIONS

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ÖZET

Fen bilimleri eğitiminde öğrencilerin üst düzey düşünme becerilerini geliştirme ve değerlendirme amacına hizmet eden açık uçlu sorular, Türkiye'de Millî Eğitim Bakanlığı'nın 2023 yılında gerçekleştirdiği ölçme ve değerlendirme yönetmeliği değişikliğiyle birlikte zorunlu bir uygulama boyutu kazanmıştır. Bu politika değişikliği, açık uçlu soruların etkin biçimde kullanılabilmesi için öğretmenlerin bu soru türünü hazırlama ve değerlendirme süreçlerinde ne düzeyde yetkin olduklarını ve hangi güçlüklerle karşılaştıklarını sorgulamayı zorunlu kılmaktadır. Bu çalışma fen bilimleri öğretmenlerinin açık uçlu soru hazırlama ve değerlendirme süreçlerinde yaşadıkları güçlükleri fenomenolojik bir yaklaşımla derinlemesine betimlemeyi amaçlamaktadır. Araştırma, 2024-2025 eğitim-öğretim yılında Kayseri il merkezindeki devlet ortaokullarında görev yapan ve ölçüt örnekleme yöntemiyle belirlenen 10 fen bilimleri öğretmeni ile yürütülmüştür. Veriler yarı yapılandırılmış görüşmeler aracılığıyla toplanmış, fenomenolojik desenin yorumlayıcı yönelimiyle uyumlu biçimde tümevarımsal içerik analizi yöntemiyle iki araştırmacı tarafından bağımsız biçimde kodlanmış ve kodlayıcılar arası uyum Cohen kappa katsayısı (κ = .84) ile doğrulanmıştır. Bulgular hazırlama sürecindeki güçlüklerin başında dilsel ve anlamsal açıklık sağlama, soru kökü kurgusu oluşturma, üst düzey becerileri ölçecek soru yazımı ve öğrenci bilişsel düzeyine uygun soru geliştirme sorunlarının geldiğini ortaya koymaktadır. Değerlendirme sürecinde ise öğretmenler en ağır güçlük olarak zaman yönetimi ve iş yükünü belirtmekte; bunu değerlendirme öznelliği (sübjektiflik), öğrencilerin ifade yeteneği eksiklikleri ve kötü el yazısından kaynaklanan fiziksel okunabilirlik sorunları izlemektedir. Bulgular öğretmenlerin açık uçlu soruların önemini kavramalarına karşın bu sorularla etkin ölçme yapabilmek için nitelikli ve uygulamalı mesleki gelişim desteğine ihtiyaç duyduklarını göstermektedir.
Anahtar Kelimeler: Açık uçlu sorular, fen eğitimi, soru hazırlama güçlükleri, değerlendirme güçlükleri, öğretmen mesleki gelişimi, fenomenoloji.

ABSTRACT

Open-ended questions, which serve the purpose of developing and assessing students' higher-order thinking skills in science education, have become a mandatory assessment practice in Türkiye following the amendment to the Ministry of National Education's assessment and evaluation regulation in 2023. This policy change necessitates questioning the extent to which teachers are competent in preparing and evaluating open-ended questions and what challenges they encounter in doing so. This study aims to describe in depth, using a phenomenological approach, the challenges experienced by science teachers in the processes of preparing and evaluating open-ended questions. The research was conducted with 10 science teachers working in state secondary schools in central Kayseri during the 2024–2025 academic year, selected through criterion sampling. Data were collected through semi-structured interviews and analyzed through inductive content analysis, consistent with the interpretive orientation of the phenomenological design; coded independently by two researchers, inter-rater agreement was verified through a Cohen's kappa coefficient (κ = .84). Findings reveal that the primary challenges in the preparation process include ensuring linguistic and semantic clarity, constructing question stems, writing items that measure higher-order thinking skills, and developing questions appropriate to students' cognitive levels. In the evaluation process, teachers identify time management and workload

as the most burdensome difficulty, followed by assessment subjectivity, students' difficulties in expressing their ideas, and physical legibility problems arising from poor handwriting. The findings indicate that although teachers recognize the importance of open-ended questions, they require high-quality and practice-oriented professional development support to conduct effective assessment using this type of question.
Keywords: Open-ended questions, science education, question preparation challenges, assessment challenges, teacher professional development, phenomenology.

** Bu çalışma, birinci yazarın ikinci yazar danışmanlığında hazırladığı yüksek lisans tezinden üretilmiştir.*

DEEP Q-NETWORK KULLANARAK DİNAMİK ANESTEZİ DOZAJ OPTİMİZASYONU VE ÇOKLU FİZYOLOJİK PARAMETRELERİN BIS STABİLİZASYONUNA ETKİLERİNİN İNCELENMESİ

DYNAMIC ANESTHESIA DOSE OPTIMIZATION USING DEEP Q-NETWORK AND INVESTIGATION OF THE EFFECTS OF MULTIPLE PHYSIOLOGICAL PARAMETERS ON BIS STABILIZATION

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Abstract
In this study, a Deep Q-Network (DQN)-based reinforcement learning approach was proposed to provide safe, balanced, and controlled management of anesthesia depth during surgical operations. While conventional anesthesia control methods generally consider only basic parameters such as age, weight, and gender, this study additionally included physiological variables such as liver function, acute blood loss, and body temperature that may directly affect the patient's condition during surgery. Therefore, the developed structure differs from classical dosage calculation systems by offering a more dynamic and intelligent control mechanism capable of making decisions according to the patient's instantaneous physiological changes during the operation. Within the scope of the study, clinically important effects such as the slowing of drug elimination during hypothermia and the increase in drug sensitivity caused by blood loss were mathematically modeled, and the effects of these variables on BIS values were investigated. Thanks to the Dueling DQN architecture used in the proposed system, the state-value and advantage functions were learned separately in order to obtain more stable and reliable dosage decisions. Patient information including age, weight, current BIS value, administered drug dosage, body temperature, blood loss, and liver function was transferred to the system as a state vector, and the artificial intelligence agent generated appropriate dosage decisions by evaluating these parameters. In addition, the designed reward function considered not only maintaining the BIS value within the target range, but also preserving temperature balance and patient safety. The obtained results demonstrated that the proposed DQN-based approach could adapt to sudden physiological changes and provide a more flexible control structure compared to traditional PID-based methods. Especially in critical patient scenarios involving intense metabolic changes, the system was observed to make more controlled decisions. Based on these findings, it is believed that artificial intelligence-supported closed-loop anesthesia control systems may play an important role in future personalized medical applications and contribute to further studies in this field.
Keywords : Reinforcement learning, DQN, anesthesia control, BIS stabilization, artificial intelligence

Özet
Bu çalışmada, ameliyat sırasında hastanın anestezi derinliğini güvenli, dengeli ve kontrollü bir şekilde yönetebilmek amacıyla Deep Q-Network (DQN) tabanlı bir pekiştirmeli öğrenme yaklaşımı önerilmiştir. Günümüzde kullanılan klasik anestezi kontrol yöntemlerinde genellikle yaş, kilo ve cinsiyet gibi temel bilgiler dikkate alınırken, bu çalışmada hastanın durumunu doğrudan etkileyebilecek karaciğer fonksiyonu, akut kan kaybı ve vücut sıcaklığı gibi fizyolojik parametreler de sisteme dahil edilmiştir. Böylece geliştirilen yapı, yalnızca standart doz hesaplamaları yapan klasik sistemlerden farklı olarak, hastanın ameliyat sırasındaki anlık değişimlerine göre karar verebilen daha dinamik ve akıllı bir kontrol mekanizması hâline getirilmiştir.

Çalışma kapsamında özellikle hipoterminin ilaç eliminasyonunu yavaşlatması ve kan kaybının ilaç duyarlılığını artırması gibi klinik açıdan önemli etkiler matematiksel olarak modellenmiş ve bu değişkenlerin BIS değeri üzerindeki etkileri incelenmiştir. Önerilen sistemde kullanılan Dueling DQN mimarisi sayesinde durum değeri ve avantaj fonksiyonları ayrı ayrı öğrenilerek daha kararlı ve güvenilir dozaj kararları elde edilmesi amaçlanmıştır. Hastanın yaş, kilo, mevcut BIS değeri, uygulanan ilaç dozu, vücut sıcaklığı, kan kaybı ve karaciğer fonksiyonu gibi bilgileri durum vektörü olarak sisteme aktarılmış ve yapay zekâ ajanı bu verileri değerlendirerek uygun dozaj kararları üretmiştir. Ayrıca geliştirilen ödül fonksiyonu ile yalnızca BIS değerinin hedef aralıkta tutulması değil, aynı zamanda sıcaklık dengesi ve hasta güvenliği de dikkate alınmıştır. Çalışmada elde edilen sonuçlar, önerilen DQN tabanlı yaklaşımın ani fizyolojik değişimlere uyum sağlayabildiğini ve geleneksel PID tabanlı yöntemlere göre daha esnek bir kontrol yapısı sunduğunu göstermektedir. Özellikle metabolik değişimlerin yoğun olduğu kritik hasta senaryolarında sistemin daha kontrollü kararlar verebildiği gözlemlenmiştir. Elde edilen bulgular doğrultusunda, yapay zekâ destekli kapalı döngü anestezi kontrol sistemlerinin gelecekte kişiselleştirilmiş tıbbi uygulamalarda önemli bir yere sahip olabileceği ve bu alandaki çalışmalara katkı sağlayabileceği düşünülmektedir.

Anahtar Kelimeler : Pekiştirmeli öğrenme, DQN, anestezi kontrolü, BIS stabilizasyonu, yapay zekâ

SINGLE EVENT EFFECT IN UART COMMUNICATION INTERFACE

UART HABERLEŞME ARAYÜZÜNDE TEKİL OLAY ETKİSİ

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Abstract
Single Event Effect (SEE) plays a significant role in the aerospace and defense industries. In the aerospace sector, SEE refers to the failure of FPGAs in electronic equipment due to exposure to high levels of radiation, cosmic rays, and other harmful radiation at altitudes of 40,000 feet. These errors occurring in the FPGA as a result of SEE temporary or permanent failure in avionics equipment. These failures can be fatal. Therefore, safety and reliability are crucial concepts for aviation. FPGAs use communication protocols for data transfer. Therefore, in addition to failures that may occur in the FPGA itself, the protocols with which the FPGA communicates can also be subject to SEE and corruptions can occur in these communication interfaces. This study aims to demonstrate that the Single Event Effect creates failures in communication interfaces other than FPGAs, and to suggest methods to reduce these failures. In this study, the UART communication interface was chosen and analyzed due to its cost, flexibility, and reliability. In this study, scenarios were examined by comparing UART communication parameters (baudrate, datawidth, parity, and stop bit). The relationship between the Single Event Effect and the Poisson distribution was also investigated. The study was conducted using the XSIM simulation environment in Vivado software. Graphs were generated in MATLAB program to compare the simulation results. In the study, failures and risks that may occur in the UART communication protocol under the Single Event Effect were examined according to UART parameters, error reduction methods that could be taken for precautionary purposes were studied and the "Average Method" was proposed. The study concluded that the Averaging Method can reduce the Single Event Effect.
Keywords: Single Event Effect, UART, FPGA, Vivado, SEE, Aerospace, Defense

Özet
Tekil Olay Etkisi (TOE) havacılık ve savunma sanayisinde büyük bir yere sahiptir. TOE, havacılık sektöründe kullanılan elektronik donanıma sahip ekipmanların 40000 fit yükseklikte yüksek radyasyon, kozmik ışın ve ağır radyasyon gibi zararlı radyasyonlar sonucu elektronik donanımda kullanılan FPGA'lerin bozulmalara uğraması demektedir. TOE sonucu FPGA'de oluşan bu hatalar aviyonik ekipmanlarda geçici veya kalıcı bozulmaların yaşanmasına sebep olmaktadır. Yaşanılan bu bozulmalar ölümle sonuçlanabilmektedir. Bundan dolayı havacılık için güvenlik ve güvenilirlik kavramları çok önemlidir. FPGA'ler veri transferleri amacı ile haberleşme protokollerini kullanırlar. Bu yüzden FPGA'de yaşanabilecek hataların dışında FPGA'in haberleştiği protokollerde TOE'ye maruz kalabilir ve bu haberleşme arayüzlerinde de bozulmalar gerçekleşebilmektedir. Bu çalışmada, Tekil Olay Etkisin, FPGA dışında haberleşme arayüzlerinde de hatalar yarattığını göstermek ve bu hataları azaltabilecek yöntem önerilerinde bulunmak amaçlanmıştır. Çalışmada, maliyet, esneklik ve güvenilirliğinden dolayı UART haberleşme arayüzü seçilerek analiz edilmiştir. Çalışmada, UART haberleşme parametreleri (veri atım hızı, veri genişliği, parite ve sonlandırma biti) karşılaştırılarak senaryolar incelenmiştir. Aynı zamanda, Tekil Olay Etkisi ve Poisson dağılımının ilişkisi de çalışmada incelenmiştir. Çalışma, Vivado programında XSIM simülasyon ortamında gerçekleştirilmiştir. Simülasyon sonucu çıktıları karşılaştırabilmek amacı ile MATLAB programında grafikler oluşturulmuştur.

Çalışmada, Tekil Olay Etkisi altında UART haberleşme protokolünde yaşanabilecek hatalar, riskler UART parametrelerine göre incelenmiş, önlem amaçlı alınabilecek hata azaltma yöntemleri üzerinde çalışılmış ve "Ortalama Yöntemi" önerilmiştir. Çalışmanın sonucunda Ortalama Yönteminin Tekil Olay Etkisini azaltabileceği görülmüştür.
Anahtar kelimeler: Tekil Olay Etkisi, UART, FPGA, Vivado, TOE, Havacılık, Savunma

ÖRNEK BİR DAĞITIM SİSTEMİNDE ELEKTRİKLİ ARAÇ ŞARJ VE DEŞARJ YÖNETİM STRATEJİLERİNİN OPTİMUM PLANLANMASI

OPTIMAL PLANNING OF ELECTRIC VEHICLE CHARGING AND DISCHARGING STRATEGIES IN A TEST DISTRIBUTION SYSTEM

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Abstract
The increasing number of electric vehicles (EVs) has led to higher electricity demand in distribution networks, especially during peak load periods. Uncontrolled charging of EVs may cause higher power demand, increased line loading and voltage-related issues in the distribution system. Therefore, smart charging strategies are needed to reduce the negative impacts of EV integration on power networks. In this study, a Mixed-Integer Linear Programming (MILP)-based approach is proposed for the optimal scheduling of EV charging and Vehicle-to-Grid (V2G) operations. 50 electric vehicles with 50 kWh battery capacity were considered in the IEEE 13-Node distribution system. The vehicles were represented as an aggregated battery model with a total capacity of 2500 kWh, The optimization model considers charging and discharging power limits, battery State-of-Charge (SOC) constraints, and the daily load profile of the network. The objective of the proposed method is to encourage EV charging during low-demand periods and utilize V2G support during peak-load hours. In this way, the overall load profile of the distribution system can be improved. Simulation studies are carried out in the MATLAB environment. The results indicate that the proposed method improves electric vehicle integration, reduces peak load levels, and enhances the performance of the distribution system. Future work may focus on evaluating the proposed approach under different distribution network scenarios and through detailed power flow studies.
Keywords: Electric Vehicles, Vehicle-to-Grid (V2G), Mixed Integer Linear Programming (MILP), Smart Charging, IEEE 13-Node Distribution System.

Özet
Elektrikli araçların yaygınlaşmasıyla birlikte dağıtım şebekeleri üzerindeki yük talebinin artması, özellikle pik tüketim saatlerinde işletme problemlerini beraberinde getirmektedir. Kontrolsüz şarj uygulamaları, dağıtım sistemlerinde hat yüklenmelerinin artmasına, gerilim profilinin bozulmasına ve toplam güç talebinin yükselmesine neden olabilmektedir. Bu nedenle elektrikli araçların şebekeye etkilerinin azaltılmasına yönelik akıllı enerji yönetim stratejilerine ihtiyaç duyulmaktadır. Bu çalışmada, elektrikli araç şarj ve araçtan şebekeye (V2G) operasyonlarının optimum zamanlaması için Karma Tamsayılı Doğrusal Programlama (KTDP) tabanlı bir yaklaşım önerilmiştir. Çalışmada IEEE 13 baralı dağıtım sistemi üzerinde her biri 50 kWh batarya kapasitesine sahip 50 elektrikli araçtan oluşan bir filo ele alınmıştır. Elektrikli araçlar, toplam 2500 kWh depolama kapasitesine sahip toplulaştırılmış bir batarya sistemi olarak modellenmiştir. Geliştirilen optimizasyon modelinde elektrikli araçların şarj ve deşarj güçleri, batarya doluluk oranı (SOC) kısıtları ve şebeke yük profili birlikte değerlendirilmiştir. Amaç fonksiyonu, düşük yük saatlerinde şarj işlemlerini teşvik ederken pik yük saatlerinde V2G desteği sağlayarak şebekenin net yük profilini iyileştirmeyi hedeflemektedir. MATLAB ortamında gerçekleştirilen benzetim çalışmaları sonucunda, önerilen yöntemin elektrikli araçların şebekeye entegrasyonunu daha verimli hale getirdiğini, pik yükleri azalttığını ve dağıtım sistemi işletme performansını iyileştirdiğini göstermektedir.

Ayrıca önerilen yaklaşımın farklı dağıtım sistemi senaryolarında ve ayrıntılı güç akışı analizleri ile değerlendirilmesi gelecekteki çalışmalar için önemli bir araştırma alanı oluşturmaktadır.

Anahtar kelimeler: Elektrikli Araçlar, (V2G), Karma Tamsayılı Doğrusal Programlama (KTDP), Akıllı Şarj Yönetimi, IEEE 13-Baralı Dağıtım Sistemi.

FARKLI HİSTOLOJİK BOYAMA TEKNİKLERİ İLE HAZIRLANAN OVARYUM KESİTLERİNİN DERİN EVRİŞİMSEL SİNİR AĞLARI ARACILIĞIYLA OTOMATİK SINIFLANDIRILMASI

DEEP CONVOLUTIONAL NEURAL NETWORK-BASED AUTOMATIC CLASSIFICATION OF OVARIAN SECTIONS WITH DIFFERENT HISTOLOGICAL STAINING TECHNIQUES

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Abstract
Accurate and reliable classification of ovarian images is considered a fundamental requirement for the development of clinical decision support systems and the rigorous monitoring of treatment processes. Identifying structural changes in ovarian tissue, particularly those caused by drug use, is critical for evaluating treatment efficacy and creating patient-specific treatment plans. This study presents a deep learning-based classification approach for analyzing ovarian follicle images from female rats. The histological sections used in this study were prepared using Hematoxylin-Eosin (H&E), Anti-Müllerian Hormone (AMH) immunohistochemical staining, and Masson trichrome techniques to highlight different morphological features of tissue and cellular structures. This comprehensive dataset, generated from experimental processes, underwent a series of preprocessing steps prior to the classification stage to improve image quality and optimize model performance. Accordingly, image cropping was applied, and data-balancing methods were used to address class imbalance. These preparation processes resulted in a dataset that is suitable and standardized for deep learning analyses. In the classification phase, the transfer learning strategy was adopted, and the ResNet50, EfficientNetB0, and InceptionResNetV2 architectures were trained. The performance of these models was then analyzed comparatively. Academically accepted metrics, including accuracy, precision, sensitivity, F1 score, macro-average F1 score, and ROC-AUC, were used to evaluate the models' performance. Examining the experimental results, it was determined that the ResNet50 model achieved the highest overall classification performance, with 66.94% accuracy and a macro F1 score of 65.91%. The EfficientNetB0 model achieved superior inter-class discrimination, with an ROC-AUC of 0.9115. In contrast, the InceptionResNetV2 architecture performed worse than the other two models. These findings confirm that structural similarities between classes make the classification of over images a complex problem. However, deep learning models have been found to be competent in learning distinctive features despite this complexity. This study highlights the potential of deep learning approaches for automated analysis of drug-induced ovarian changes and provides a scientific basis for future research in digital pathology. These data, which reveal the effects of different staining techniques on model performance, serve as an important reference for the development of clinical decision support mechanisms.
Keywords: Ovarian follicles, Deep learning, Multi-class classification, Transfer learning, Histological staining techniques

Özet

Over görüntülerin doğru ve güvenilir bir biçimde sınıflandırılması, klinik karar destek sistemlerinin geliştirilmesi ve tedavi süreçlerinin titizlikle izlenmesi açısından temel bir gereklilik olarak kabul edilmektedir. Özellikle ilaç kullanımına bağlı olarak over dokusunda meydana gelen yapısal değişikliklerin tanımlanması, tedavi etkinliğinin değerlendirilmesi ve hastaya özgü tedavi planlarının oluşturulması noktasında kritik bir öneme sahiptir. Bu çalışma, dişi sıçanlardan elde edilen over folikül görüntülerinin analizinde derin öğrenme temelli bir sınıflandırma yaklaşımı sunmaktadır. Çalışma kapsamında kullanılan histolojik kesitler; doku ve hücresel yapıların farklı morfolojik özelliklerini belirginleştirmek amacıyla Hematoksilen-Eozin (H&E), Anti-Müllerian Hormon (AMH) immünohistokimyasal boyama ve Masson trikrom teknikleri ile hazırlanmıştır. Deneysel süreçler neticesinde elde edilen bu kapsamlı veri seti, sınıflandırma aşamasından önce görüntü kalitesini artırmak ve model performansını optimize etmek amacıyla bir dizi ön işleme aşamasından geçirilmiştir. Bu doğrultuda, görüntüler üzerinde kırpma işlemleri uygulanmış ve sınıflar arasındaki dengesizliği gidermek amacıyla veri dengeleme yöntemlerine başvurulmuştur. Bu hazırlık süreçleri, veri setini derin öğrenme analizleri için uygun ve standart bir forma kavuşturmuştur. Sınıflandırma aşamasında, transfer öğrenme stratejisi benimsenerek ResNet50, EfficientNetB0 ve InceptionResNetV2 mimarileri eğitilmiş ve bu modellerin performansları karşılaştırmalı olarak analiz edilmiştir. Modellerin başarısını ölçümlemek için doğruluk, kesinlik, duyarlılık, F1 skoru, makro-ortalama F1 skoru ve ROC-AUC gibi akademik literatürde kabul görmüş metrikler kullanılmıştır. Deneysel sonuçlar incelendiğinde; ResNet50 modelinin %66,94 doğruluk ve %65,91 makro F1 skoru ile genel klasmanda en yüksek performansı sergilediği tespit edilmiştir. EfficientNetB0 modeli ise 0,9115'lik ROC-AUC değeri ile sınıflar arası ayırt edicilikte üstün bir başarı göstermiştir. Buna karşın, InceptionResNetV2 mimarisinin diğer iki modele oranla daha düşük performans sergilediği gözlemlenmiştir. Elde edilen deneysel sonuçlar, ovaryum görüntülerinin sınıflandırılmasının sınıflar arasındaki yapısal benzerlikler nedeniyle karmaşık bir problem olduğunu doğrulamaktadır. Ancak derin öğrenme modellerinin bu benzerlikler içerisindeki ayırt edici özellikleri öğrenme konusunda yetkin olduğu gözlemlenmiştir. Bu çalışma, özellikle ilaç kullanımına bağlı ovaryum değişimlerinin otomatik analizinde derin öğrenme yaklaşımlarının potansiyel kullanım alanlarına işaret etmekte ve klinik karar destek uygulamaları için bilimsel bir temel sunmaktadır. Çalışma sonucunda ulaşılan veriler, farklı boyama tekniklerinin derin öğrenme modelleri üzerindeki etkisinin anlaşılmasına katkı sağlarken, gelecekteki dijital patoloji çalışmaları için de önemli bir referans niteliği taşımaktadır.

Anahtar kelimeler: Yumurtalık folikülleri, Derin öğrenme, Çok sınıflı sınıflandırma, Transfer öğrenme, Histolojik boyama teknikleri

RADAR DARBELERİNİN YOĞUNLUK TABANLI UZAMSAL KÜMELENME İLE AYRIŞTIRILMASI

DEINTERLEAVING RADAR PULSES BY DENSITY-BASED SPATIAL CLUSTERING

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Abstract
In the modern battlefield, electronic support (ED) and radar warning receiver (RWR) systems operate in complex electromagnetic environments with high signal density. The overlapping of signals from different sources in the time domain, coupled with environmental noise, makes real-time signal classification and deinterleaving extremely difficult. Traditional parametric decomposition methods are insufficient to handle today's agile and intelligent radar signals. This study analyzes the use and performance of the Density-Based Spatial Clustering (DBSCAN) algorithm for successfully deinterleaving pulse sequences from different radar sources in complex electromagnetic environments. In this study, Pulse Description Word (PDW) parameters such as Carrier Frequency (RF) and Pulse Width (PW) of the signals obtained from radars are modeled as a multi-dimensional feature space. Unlike traditional methods such as K-Means, the proposed approach performs grouping based on density clusters without requiring prior information about the number of sources (clusters) in the environment. Simulation studies have shown that the DBSCAN algorithm can successfully separate complex radar emitters with variable Carrier Frequency (RF) and Pulse Repetition Interval (PRI) modulations.
Keywords: Radar pulse train deinterleaving, electronic support, clustering

Özet
Modern muharebe sahasında elektronik destek (ED) ve radar ikaz alıcı (RWR) sistemleri, sinyal yoğunluğunun yüksek olduğu, karmaşık elektromanyetik ortamlarda görev icra etmektedir. Farklı kaynaklardan gelen sinyallerin zaman düzleminde üst üste binmesi, çevresel gürültü faktörü de eklendiğinde, sinyallerin gerçek zamanlı olarak tasnif edilmesini ve kaynaklarına göre ayrıştırılmasını (deinterleaving) güçleştirmektedir. Bu nedenle, geleneksel parametrik ayrıştırma yöntemleri günümüzün çevik ve akıllı radar sinyalleri karşısında yetersiz kalmaktadır. Bu çalışmada, karmaşık elektromanyetik ortamlardaki farklı radar kaynaklarına ait darbe dizilerinin başarıyla ayrıştırılması amacıyla Yoğunluk Tabanlı Uzamsal Kümeleme (DBSCAN) algoritmasının kullanımı ve performansı analiz edilmiştir. Çalışma kapsamında, radarlardan elde edilen sinyallere ait Taşıyıcı Frekansı (RF) ve Darbe Genişliği (PW) gibi Darbe Tanımlama Kelimesi (PDW) parametreleri çok boyutlu bir öznitelik uzayı olarak modellenmiştir. Önerilen yaklaşım, K-Ortalamalar gibi geleneksel yöntemlerin aksine, ortamdaki kaynak (küme) sayısına dair ön bir bilgiye ihtiyaç duymadan, yoğunluk kümeleri üzerinden gruplama yapmaktadır. Gerçekleştirilen benzetim çalışmalarında; DBSCAN algoritmasının değişken Taşıyıcı Frekans (RF) ve Darbe Tekrarlama Aralığı (PRI) modülasyonlarına sahip karmaşık radar yayıncılarını başarıyla ayrıştırabildiği tespit edilmiştir.
Anahtar kelimeler: Radar darbe dizisi ayrıştırma, elektronik destek, kümeleme

CDS/CDTE GÜNEŞ PİLLERİNDE YENİLİKÇİ ÜRETİM TEKNİĞİNİN PERFORMANSA ETKİSİNİN İNCELENMESİ

INVESTIGATION OF THE IMPACT OF INNOVATIVE MANUFACTURING TECHNIQUES ON PERFORMANCE IN CDS/CDTE SOLAR CELLS

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Abstract
In this study, CdS thin films were evaporated onto the Mo/p-CdTe binary structure surface using two different techniques, and an n-CdS/p-CdTe solar cell structure was formed. In the first stage of the study, CdTe powder (99.99% purity) was evaporated onto molybdenum substrates heated at 473 K in a 10^{-7} Torr vacuum environment, and a 3 micrometer thick CdTe film was coated. Then, the resulting binary structure was annealed in a $CdCl_2$ vapor environment at 430 °C for 15 minutes, and p-type electrically charged CdTe was obtained. The structural and optical properties of the produced CdTe films were investigated. The experimental results showed that the CdTe film grew in a cubic structure in the plane (111). The CdS film, used as an optical window in solar cell design, was evaporated onto the CdTe surface at two different temperatures (300 and 200 K). FESEM images showed that the CdS film produced at a substrate temperature of 300 K occurred via an island growth mechanism. Additionally, the CdS film produced at a substrate temperature of 200 K showed growth via a soliton growth mechanism, as expected from cryogenic coating methods. This indicated that the CdS produced at 200 K had higher optical transparency compared to the CdS produced at 300 K. The photovoltaic parameters of solar cells with optical window layers produced using two different techniques were investigated in dark and light (100 mW/cm^2) environments. The results showed that the CdS/CdTe solar cell with an optical window layer produced at a substrate temperature of 200 K had higher photovoltaic parameters. Defect densities in the displacement region were determined from the $1/C^2$ graphs of the samples. The results showed that the defect densities of solar cells produced at substrate temperatures of 300 K and 200 K were calculated to be 1.5 x 10^{14} cm^{-3} and 8.4 x 10^{12} cm^{-3}, respectively. Furthermore, the efficiency values of CdS/CdTe solar cells with CdS layers produced at substrate temperatures of 300 K and 200 K were found to be 1.15% and 4.23%, respectively. These results indicate that producing semiconductor layers used as optical windows in solar cells via cryogenic coating is more suitable.

Özet
Bu çalışmada iki farklı teknikle Mo/p-CdTe ikili yapı yüzeyine CdS ince filmleri buharlaştırıldı ve n-CdS/p-CdTe güneş pili yapısı oluşturuldu. Çalışmanın ilk aşamasında 10^{-7} Torr vakum ortamında 473 K sıcaklıkta ısıtılmış molibden altlıklar yüzeyine CdTe tozu (%99,99 saflıkta) buharlaştırıldı ve 3 mikrometre kalınlığında CdTe filmi kaplandı. Daha sonra elde edilen ikili yapı $CdCl_2$ buharı ortamında 430 °C'de 15 dakika süre ile tavlandı ve p tipi elektriksel özellikli CdTe elde edildi. Üretilen CdTe filmlerin yapısal ve optik özellikleri incelendi. Elde edilen deneysel sonuçlar CdTe filminin kübik yapıda (111) düzleminde büyüdüğünü gösterdi. Güneş pili tasarımında optik pencere olarak kullanılan CdS filmi iki farklı sıcaklıkta (300 ve 200 K) CdTe yüzeyine buharlaştırıldı. FESEM görüntüleri 300 K altlık sıcaklığında üretilen CdS filminin adacık büyüme mekanizması ile gerçekleştiğini gösterdi. Buna ek olarak 200 K altlık sıcaklığında üretilen CdS filminin ise kriyojenik kaplama yönteminden beklenen soliton büyüme mekanizması ile büyüdüğünü gösterdi. Bu durum 300 K'de üretilen CdS'e kıyasla 200 K de üretilen CdS'ün daha yüksek optik şeffaflığı sahip olduğunu gösterdi. İki farklı teknikle üretilen optik pencere katmanına sahip güneş pillerinin fotovoltaik parametreleri karanlık ve aydınlık (100

mW/cm^2) ortamlarda incelendi. Elde edilen sonuçlar 200 K altlık sıcaklığında üretilen optik pencere katmanlı CdS/CdTe güneş pilinin daha yüksek fotovoltaik parametrelere sahip olduğunu gösterdi. Örneklere ait 1/C^2 grafiklerinden deplasman bölgesine ait kusur yoğunlukları tespit edildi. Elde edilen sonuçlar 300 K ve 200 K altlık sıcaklığında üretilen güneş pillerine ait kusur yoğunluklarının sırasıyla 1,5x10^{14} cm^{-3} ve 8,4x10^{12} cm^{-3} değerlerinde olduğu hesaplandı. Ayrıca 300 K ve 200 K altlık sıcaklıklarında üretilen CdS katmanlarına ait CdS/CdTe güneş pillerinin verim değerlerinin sırasıyla %1,15 ve %4,23 olduğu görüldü. Elde edilen sonuçlar güneş pillerinde optik pencere olarak kullanılan yarıiletken katmanların kriyojenik kaplama yöntemi ile üretilmesinin daha uygun olduğunu gösterdi.
Anahtar kelimeler: Kriyojenik kaplama, ince film, soliton model, güneş pili.

$CD_{1-X}PB_XS$ FİLMLERİN KİMYASAL PÜSKÜRTME YÖNTEMİ İLE ÜRETİLMESİ VE İNCELENMESİ

PRODUCTION AND ANALYSIS OF $CD_{1-X}PB_XS$ FILMS BY CHEMICAL SPRAYING METHOD

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Abstract

In this study, $Cd_{1-x}Pb_xS$ films with different Pb content ($0 \leq x \leq 0.175$) were produced on glass substrates heated to 450°C by chemical sputtering. $CdCl_2$ was used as the cadmium source, $Pb(NO_3)_2$ as the lead source, and $CS(NH_2)_2$ as the sulfur source in film formation. The sputtering rate was set to 50 ml per minute, and the film growth rate was achieved at 50 Å per minute. From the XRD spectrum results, it was observed that all samples doped with different Pb ratios (0, 0.05, 0.125, and 0.175) grew predominantly in a hexagonal structure in the (101) plane. However, weak reflection peaks due to Pb doping were also observed in the XRD patterns. Optical transparency (%T) values were examined depending on the Pb ratio by optical measurements, and it was observed that the optical transparency decreased between 65% and 15%. The band gap (Eg) values of all samples were calculated from the optical absorption spectra, and it was determined that the band gaps (2.44-2.38 eV) decreased depending on the Pb content. AFM measurements showed that the average surface roughness (Ra) values (24.25-103.12 nm) of the samples increased depending on the Pb doping. It was understood that the photoluminescence spectra of $Cd_{1-x}Pb_xS$ films consisted of two different parts (1.61 eV - 2.82 eV) and exhibited sensitivity over a wide wavelength range. The peak in the 1.70-1.73 eV range of the spectrum was found to originate from the passage of electrons into deep energy levels formed by cadmium (Cdí) interstitial spaces and sulfur vacancies (Vs). However, it was understood that the peak exhibited in the spectrum at approximately 2.46 eV wavelength originated from exciton-exciton interactions in the $Cd_{1-x}Pb_xS$ crystal. The resistivity values of the obtained Cd1-xPbxS thin films were examined as a function of the Pb ratio, and it was observed that these values varied between 3.72 x 10^5 Ω·cm and 1.60 x 10^7 Ω·cm. This variation in resistivity was understood to be due to the formation of CdO, PbO, and some phase derivatives belonging to these phases in the crystal structure because the film production took place in a room environment.

Özet

Bu çalışmada farklı Pb içerikli ($0 \leq x \leq 0,175$) $Cd_{1-x}Pb_xS$ filmler kimyasal püskürtme yöntemiyle 450° C'de ısıtılmış cam altlıklar üzerinde üretildi. Film oluşumunda kadmiyum kaynağı olarak $CdCl_2$, kurşun kaynağı olarak $Pb(NO_3)_2$ ve kükürt kaynağı olarak ise $CS(NH_2)_2$ tuzları kullanıldı. Püskürtme hızı dakikada 50 ml olarak ayarlandı ve film büyüme hızının dakikada 50 Å olması sağlandı. XRD spektrum sonuçlarından farklı oranlarda (0, 0,05, 0,125 ve 0,175) Pb katkılandırılmış tüm örneklerin baskın olarak (101) düzleminde hekzagonal yapıda büyüdüğü görüldü. Bununla birlikte XRD desenlerinde Pb katkısından kaynaklı zayıf yansıma piklerine de rastlandı. Optik ölçümlerle Pb oranına bağlı olarak optik şeffaflık (%T) değerleri incelendi ve optik şeffaflığın % 65 ile % 15 arasında azaldığı görüldü. Optik soğurma spektrumlarından tüm örneklerin yasak enerji aralığı (Eg) değerleri hesaplandı ve Pb oranına bağlı olarak yasak band aralıklarının (2,44-2,38 eV) azaldığı tespit edildi. AFM ölçümleri ile Pb katkısına bağlı olarak örneklerin ortalama yüzey pürüzlülük (Ra) değerlerinin (24,25-103.12 nm) arttığı gözlemlendi. $Cd_{1-x}Pb_xS$ filmlerine ait fotolüminesans spektrumlarının iki farklı kısımdan oluştuğu (1.61 eV - 2.82 eV) ve geniş dalga boyu aralıklarında duyarlılık sergilediği anlaşıldı. Spektrumun 1.70-1.73 eV aralıklarında var olan pikin elektronların kadmiyum (Cd_i) ara yerlerinin ve kükürt boşluklarının (V_s)

oluşturduğu derin enerji seviyelerine geçitlerinden kaynaklı olduğu anlaşıldı. Bununla birlikte spektrumun yaklaşık 2.46 eV dalga boyunda sergilediği pikin $Cd_{1-x}Pb_xS$ kristalinde eksiton eksiton etkileşimlerinden kaynaklandığı anlaşıldı. Elde edilen $Cd_{1-x}Pb_xS$ ince filmlerin özdirenç değerleri Pb oranına bağlı olarak incelendi ve bu değerlerin 3,72 $x10^5$ Ω·cm ile 1,60$x10^7$ Ω·cm aralığında değiştiği görüldü. Özdirençteki bu değişimin film üretiminin oda ortamında gerçekleşmesinden dolayı kristal yapıda CdO, PbO ve bu fazlara ait bazı faz türevlerinin meydana gelmesinden kaynaklı olduğu anlaşıldı.

Anahtar kelimeler: Kimyasal püskürtme, ince film, Pb katkı, XRD, AFM

EPIDEMIOLOGY OF DISSOCIATIVE IDENTITY DISORDER: PRELIMINARY RESULTS

DİSSOSİYATİF KİMLİK BOZULUĞUNUN EPİDEMİYOLOJİSİ: ÖN SONUÇLAR

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Özet
Dissosiyatif Kimlik Bozukluğu (DKB), iki veya daha fazla farklı kişilik durumunu içeren bir kimlik bozukluğu ve bilinç, bellek ve duygusal durumdaki süreksizlik ile karakterizedir. Uluslararası literatürde genel nüfusta %1,5 ile %3,1 arasında bir yaygınlık oranı bildirilirken, Türkiye'de yapılan önceki çalışmalarda bu oran %0,4 ile %1,1 arasında bulunmuştur. Ancak bu çalışmalar 17 yıl önce ve ağırlıklı olarak doğu bölgelerinde gerçekleştirilmiş olup, güncel metropol verilerinde bir boşluk bırakmıştır. DKB sıklıkla yanlış teşhis edilir; bu durum hastaların yaşam kalitesini olumsuz etkiler ve sağlık hizmetleri maliyetlerini artırır. Bu çalışma, İstanbul'un Kayabaşı, Başak ve Şahintepe mahallelerinde temsili bir örneklemde DKB, dissosiyasyon ve Çoukluk Çağı Olumsuz Yaşantılar (ACE) prevalansını tahmin etmeyi amaçlamaktadır. Bu çalışma, rastgele örnekleme yoluyla seçilen 132 katılımcının iki aşamalı taramasını içermektedir. Birinci Aşamada, Disosiyatif Yaşantılar Ölçeği (DES) ve Çoukluk Çağı Olumsuz Yaşantılar Ölçeği (ACEQ) uygulanacaktır. İkinci Aşamada, DES eşik değerinin üzerinde puan alan katılımcılar (>17) ile DES eşik değerinin altında puan alan katılımcılar, DSM-IV Disosiyatif Bozukluklar için Yapılandırılmış Klinik Görüşme (SCID-D) kullanılarak tanısal doğrulamadan geçmiştir. Ayrıca, SCID-D için değerlendiriciler arası güvenilirlik çalışması, bu alanda 30 yıllık deneyime sahip bir psikiyatrist tarafından kör bir şekilde gerçekleştirilmiştir. Çalışma, Türkiye'deki bir büyükşehir bağlamında DKB hakkında güncel epidemiyolojik veriler sunmayı amaçlamaktadır. Ön bulgular, DKB ve Başka Şekilde Tanımlanamayan Disosiyatif Bozukluk (DDNOS) prevalanslarının sırasıyla %3,7 ve %2,9 olduğunu göstermiştir, bu da DKB'nin toplum örneklemlerinde nadir olmadığını ve rutin psikiyatrik değerlendirmelere dahil edilmesi gerektiğini ortaya koymaktadır. Önceki çalışmalarla karşılaştırıldığında, DKB prevalansının yüksek olması, rutin psikiyatrik değerlendirmelerde DKB tanısının gözden kaçmasıyla açıklanabilir. Gelecekteki çalışmaların daha büyük örneklem büyüklükleri ve daha çeşitli gruplar ile DKB prevalansını araştırmaya odaklanması önerilmektedir.
Anahtar kelimeler: ruh sağlığı, psikopatoloji, dissosiyatif bozukluklar

Abstract
Dissociative Identity Disorder (DID) is characterized by a disruption of identity involving two or more distinct personality states and discontinuity in consciousness, memory, and affect. While international literature reports prevalence rates between 1.5% and 3.1% in the general population, previous Turkish studies found rates between 0.4% and 1.1%. However, these studies were conducted over 17 years ago and primarily in eastern regions, leaving a gap in current metropolitan data. DID is frequently misdiagnosed, which negatively impacts patients' quality of life and increases healthcare costs. This study aims to estimate the prevalence of DID, dissociation, and Adverse Childhood Experiences (ACEs) in a representative sample in the Kayabaşı, Başak and Şahintepe neighborhoods of Istanbul.

The quantitative phase involves a two-stage screening of 135 participants selected via random sampling. In Phase One, the Dissociative Experiences Scale (DES) and the Adverse Childhood Experiences Questionnaire (ACEQ) will be administered. In Phase Two, participants scoring above the DES cut-off (>17), along with those scoring below the DES cut-off, underwent diagnostic confirmation using the Structured Clinical Interview for DSM-IV Dissociative Disorders (SCID-D). Furthermore, inter-rater reliability for the SCID-D is performed blindly by a psychiatrist with 30 years of experience in the field. The study expects to provide updated epidemiological data on DID in a Turkish metropolitan context. Preliminary findings demonstrated that the prevalence of DID and Dissociative Disorder Not Otherwise Specified (DDNOS) was found to be 3.7 % and 2.9 % which indicates that DID is not rare in community samples, advocating for its inclusion in routine psychiatric assessments. Compared to previous studies, high prevalence of DID could be explained by overlooking the diagnosis of DID in routine psychiatric assessment. It is recommended that future studies focus on investigating DID prevalence, utilising larger sample sizes and more diverse cohorts.
Keywords: mental health, psychopathology, dissociative disorders

ÜNİVERSİTE ÖĞRENCİLERİNDE AKILLI TELEFON BAĞIMLILIĞI: SOSYAL MEDYA KULLANIMI VE DEMOGRAFİK DEĞİŞKENLER AÇISINDAN BİR İNCELEME

SMARTPHONE ADDICTION AMONG UNIVERSITY STUDENTS: AN EXAMINATION IN TERMS OF SOCIAL MEDIA USE AND DEMOGRAPHIC VARIABLES

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Özet

Bu araştırma, üniversite öğrencilerinin akıllı telefon bağımlılık düzeylerini belirlemeyi ve bağımlılığın çeşitli değişkenler açısından farklılık gösterip göstermediğini incelemeyi amaçlamaktadır. Tarama modeline dayalı olarak yürütülen çalışma, Sivas Cumhuriyet Üniversitesi Edebiyat Fakültesi'nin farklı bölümlerinde öğrenim gören 296 öğrenci ile gerçekleştirilmiştir. Katılımcıların %81,8'i (n=238) kadın, %18,2'si (n=53) erkektir. Öğrencilerin %13,7'si (n=40) birinci sınıf, %34,7'si (n=101) ikinci sınıf, %18,6'sı (n=54) üçüncü sınıf ve %33'ü (n=96) dördüncü sınıftır.Katılımcıların %83,8'i (n=244) telefonlarında sosyal medya uygulamalarının bulunduğunu ifade etmiştir. Günlük telefon kullanım süresi incelendiğinde, %7,2'si (n=21) iki saatten az, %43,3'ü (n=126) 3–5 saat arası, %39,2'si (n=114) ise 6–8 saat arasında telefon kullandığını belirtmiştir. Öğrenciler akıllı telefonlarını en çok sosyal medyayı takip etmek amacıyla kullanmaktadır (%83,8, n=244). Bu kullanım amacını sırasıyla müzik dinlemek (%72,5, n=211), arkadaşlarla mesajlaşmak (%69,1, n=201), aile bireyleriyle iletişim kurmak (%66, n=192), video izlemek (%56,7, n=165) ve derslerle ilgili internet araştırması yapmak (%55,7, n=162) takip etmektedir.Araştırmada kullanılan "Nomofobi Ölçeği"nden elde edilen ortalama puan 61,61 ± 15,36'dır. Bu puan, öğrencilerin akıllı telefon bağımlılığı düzeylerinin ortalamanın üzerinde olduğunu göstermektedir. Bağımsız örneklem t-testi sonuçlarına göre, akıllı telefon bağımlılığı cinsiyete göre anlamlı farklılık göstermektedir ($t(289) = -4,254$; $p < 0.05$). Kadın öğrencilerin bağımlılık düzeyi (63,33 ± 14,84), erkek öğrencilere (53,92 ± 15,19) kıyasla daha yüksektir. Spearman rho korelasyon testi sonuçlarına göre, akıllı telefon bağımlılığı ile günlük telefon kullanım süresi arasında pozitif yönlü anlamlı bir ilişki bulunmaktadır ($r = 0,219$; $p < 0.01$). Ayrıca, telefonunda sosyal medya uygulaması bulunan öğrencilerin bağımlılık düzeyi (61,80 ± 15,24), uygulama bulundurmayanlara (43,33 ± 14,22) göre daha yüksektir ($t(289) = 2,090$; $p < 0.05$). Sosyal medya takibi amacıyla kullanımda da benzer şekilde daha yüksek bağımlılık düzeyi saptanmıştır. Bulgular kapsamında üniversite öğrencilerinin akıllı telefon bağımlılığını azaltmak için farkındalık çalışmaları, dijital detoks eğitimleri ve sosyal etkinliklerin artırılması önerilmektedir.

Anahtar kelimeler: Akıllı telefon bağımlılığı, sosyal medya, üniversite öğrencileri

Abstract

This study aims to determine the levels of smartphone addiction among university students and to examine whether addiction differs across various variables. The study was conducted using a survey model with 296 students enrolled in different departments of the Faculty of Letters at Sivas Cumhuriyet University. Of the participants, 81.8% (n = 238) were female and 18.2% (n = 53) were male. In terms of class level, 13.7% (n = 40) were first-year students, 34.7% (n = 101) second-year, 18.6% (n = 54) third-year, and 33% (n = 96) fourth-year students. A total of 83.8% (n = 244) of the participants reported having social media applications on their smartphones. Regarding daily phone use, 7.2% (n = 21) reported using their phones for less than two hours, 43.3% (n = 126) for 3–5 hours, and 39.2% (n = 114) for 6–8 hours per day. Students primarily used their smartphones to follow social media (83.8%, n = 244). This was followed by listening to music (72.5%, n = 211), messaging with friends (69.1%, n =

201), communicating with family members (66%, n = 192), watching videos (56.7%, n = 165), and conducting internet research related to coursework (55.7%, n = 162). The mean score obtained from the Nomophobia Scale was 61.61 ± 15.36, indicating that students' addiction levels were above average. Independent samples t-test results revealed a significant gender difference ($t(289) = -4.254$, $p < 0.05$), with female students (63.33 ± 14.84) showing higher levels of addiction than male students (53.92 ± 15.19). Spearman rho correlation analysis indicated a positive and significant relationship between smartphone addiction and daily usage duration ($r = 0.219$, $p < 0.01$). Additionally, students with social media applications on their phones had significantly higher addiction levels than those without ($t(289) = 2.090$, $p < 0.05$). Similarly, students who primarily used their smartphones for social media exhibited higher addiction levels. Based on these findings, it is recommended to implement awareness programs, digital detox interventions, and increased social activities to reduce smartphone addiction among university students.

Keywords: Smartphone addiction, social media, university student

DİJİTAL TASAVVUF: ZİKİR, TEKRAR VE PLATFORM RİTÜELLERİ ARASINDA RUHSAL DENEYİMİN DÖNÜŞÜMÜ

DIGITAL TASAVVUF: TRANSFORMATION OF SPIRITUAL EXPERIENCE BETWEEN DHIKR, REPETITION AND PLATFORM RITUALS

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Özet
Bu çalışma, tasavvufî pratikler ile dijital platform davranışları arasındaki yapısal benzerlikleri derinlemesine inceleyerek modern insanın ruhsal deneyiminin geçirdiği dönüşümü analiz etmektedir. Tasavvuf geleneğinde zikir, tekrar ve ritmik eylemler, bireyin ilahi hakikate yönelmesini sağlayan bilinçli, niyet temelli ve farkındalık içeren pratikler olarak kabul edilir. Bu pratikler, sadece tekrarın kendisiyle değil, aynı zamanda kalbin yönelimi ve anlamın derinleşmesiyle değer kazanır. Buna karşılık dijital platformlarda ortaya çıkan tekrar biçimleri, çoğunlukla algoritmalar tarafından yönlendirilen, farkındalık düzeyi düşük ve otomatikleşmiş davranış kalıpları olarak karşımıza çıkar. Sosyal medyada sürekli kaydırma, bildirim kontrol etme ve içerik tüketme alışkanlıkları zamanla bireyin gündelik hayatında seküler bir ritüel düzeni oluşturmaktadır. Bu bağlamda çalışma, "dijital tasavvuf" kavramını önererek, ekran aracılığıyla kurulan deneyimlerin gerçekten ruhsal bir derinlik taşıyıp taşımadığını sorgular. Tekrarın hem kutsal hem de seküler bağlamda anlam üretimindeki rolü karşılaştırmalı olarak ele alınırken, niyet, bilinç ve yönelim kavramları merkeze alınmaktadır. Sonuç olarak, dijital çağda ritüel anlayışının dönüşerek yeni bir varoluş biçimine evrildiği ve insanın anlam arayışının farklı araçlar üzerinden sürmeye devam ettiği ileri sürülmektedir.
Anahtar kelimeler: dijital tasavvuf, zikir, tekrar, ritüel, platform davranışı, ruhsal deneyim

Abstract
This study provides an in-depth analysis of the structural similarities between Sufi practices and digital platform behaviors, focusing on how the spiritual experience of the modern individual is undergoing a significant transformation. In the Sufi tradition, practices such as dhikr, repetition, and rhythmic actions are regarded as intentional, conscious, and awareness-driven acts that guide the individual toward divine truth. These practices derive their value not merely from repetition itself, but from the orientation of the heart and the deepening of meaning. In contrast, repetitive behaviors observed on digital platforms are largely shaped by algorithmic systems and tend to operate at a low level of awareness, often becoming automatic and habitual. Activities such as endless scrolling, checking notifications, and continuous content consumption gradually form a secular ritual structure within everyday life. Within this context, the study introduces the concept of "digital Sufism" and questions whether experiences mediated through screens can genuinely carry spiritual depth. By comparatively examining the role of repetition in both sacred and secular contexts, the study emphasizes the central importance of intention, consciousness, and direction. Ultimately, it argues that in the digital age, the notion of ritual is being transformed into a new mode of existence, while the human search for meaning continues through evolving mediums.
Keywords: digital Sufism, dhikr, repetition, ritual, platform behavior, spiritual experience

KAMU SPOTLARINDA ÜNLÜ KULLANIMI: NİTEL BİR ARAŞTIRMA

CELEBRITY USE IN PUBLIC SERVICE ANNOUNCEMENTS: A QUALITATIVE STUDY

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Özet
Kamu spotları, kamu yararına ilişkin konularda toplumu bilgilendirmek ve hedef kitlede olumlu yönde davranış değişikliği oluşturmak amacıyla hazırlanan kısa ve bilgilendirici içeriklerdir. Söz konusu içeriklerde mesajın etkililiğini artırmaya yönelik çeşitli iletişim ve ikna stratejilerinden yararlanılmaktadır. Bu stratejiler arasında ünlü kullanımı en sık başvurulan yöntemlerden biri olarak öne çıkmaktadır. Ünlülerin sahip oldukları tanınırlık, güvenilirlik ve toplumsal görünürlük, kamu spotlarında iletilen mesajın dikkat çekiciliğini ve inandırıcılığını güçlendiren bir unsur olarak değerlendirilmektedir. Bu çalışma, kamu spotlarında ünlü kullanımını tematik bir bakışla çözümlemeyi amaçlamaktadır. Nitel araştırma geleneğine uygun biçimde tasarlanan araştırmada, kamu spotları tematik analiz yöntemiyle kod, kategori ve tema düzeyinde incelenmiştir. Araştırmanın örneklemini, Radyo ve Televizyon Üst Kurulu'nun (RTÜK) kurumsal YouTube sayfasında 2022-2026 yılları arasında yer alan kamu spotları oluşturmaktadır. Bu kapsamda izlenen 699 kamu spotu arasından tekrar eden içerikler ayıklanmış ve 521 kamu spotu değerlendirmeye alınmıştır. Yürütülen çözümleme sonucunda bu spotlardan 44'ünün ünlü kullanımı içerdiği belirlenmiş ve ilgili içerikler ayrıntılı biçimde incelenmiştir. Araştırma verileri MAXQDA nitel veri analiz programı aracılığıyla çözümlenmiştir. Elde edilen bulgular, ünlü kullanımının ağırlıklı olarak sağlık, farkındalık ve güvenlik alanlarında yoğunlaştığını ortaya koymaktadır. Sağlık alanında Covid-19, farkındalık alanında yardım kampanyaları ve güvenlik alanında siber güvenlik en sık öne çıkan konular olarak belirmektedir. Bu doğrultuda çalışmanın, ilgili alanyazına ve ardıl araştırmalara katkı sunması beklenmektedir.
Anahtar kelimeler: Kamu Spotu, Ünlü Kullanımı, İkna, Kaynak Güvenilirliği, Tematik Analiz.

Abstract
Public service announcements are short and informative contents that are produced in order to inform society about matters of public interest and to foster positive behavioral change among target audiences. A range of communication and persuasion strategies are employed in these contents with the aim of enhancing the effectiveness of the message. Among these strategies, the use of celebrities stands out as one of the most frequently preferred methods. The recognition, credibility and social visibility that celebrities possess are regarded as elements that strengthen the salience and persuasiveness of the message conveyed in public service announcements. This study aims to analyze the use of celebrities in public service announcements from a thematic perspective. Designed in line with the qualitative research tradition, the study examines public service announcements at the level of codes, categories and themes through thematic analysis. The sample of the study consists of public service announcements published on the official YouTube page of the Radio and Television Supreme Council (RTÜK) between 2022 and 2026. Within this scope, 699 public service announcements were watched, repeated contents were eliminated and 521 announcements were taken into consideration. As a result of the analysis, 44 of these announcements were found to include the use of celebrities and the relevant contents were examined in detail. The research data were analyzed through the MAXQDA qualitative data analysis software.

The findings reveal that the use of celebrities is predominantly concentrated in the fields of health, awareness and security. Covid-19 in the field of health, aid campaigns in the field of awareness and cyber security in the field of security emerge as the most prominent topics. Accordingly, the study is expected to contribute to the relevant literature and to subsequent research.
Keywords: Public Service Announcement, Celebrity Use, Persuasion, Source Credibility, Thematic Analysis.

DİJİTAL KÜLTÜRDE DUYGUSAL ETKİLEŞİM VE GERÇEK ZAMANLI PAZARLAMA: MAYMUN PUNCH VİRAL TRENDİ ÜZERİNE BİR ANALİZ1

EMOTIONAL ENGAGEMENT AND REAL TIME MARKETING IN DIGITAL CULTURE: AN ANALYSIS OF THE VIRAL TREND OF PUNCH THE MONKEY

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Özet
Dijitalleşme, kültürel ve ekonomik pratiklerin yanı sıra markaların hedef kitleleriyle kurduğu iletişim biçimlerini de dönüştürmüştür. Bu dönüşümün sunduğu hız ve etkileşim olanakları, markaların gündemdeki gelişmelere eş zamanlı karşılık vermesine dayanan gerçek zamanlı pazarlama yaklaşımının öne çıkmasına zemin hazırlamıştır. Bu çalışma, gerçek zamanlı pazarlamayı 2026 yılının başında sosyal medyada viral hale gelen Punch isimli makak yavrusu vakası üzerinden çözümlemeyi amaçlamaktadır. Araştırma, nitel araştırma geleneğine uygun olarak tasarlanmış ve Punch trendini kullanan markalı içerikler betimsel analiz yöntemiyle incelenmiştir. Bulgular, perakende, teknoloji ve kültür-sanat gibi geniş bir yelpazede yer alan markaların Punch trendini birbirinden farklı stratejilerle kendi iletişim gündemlerine taşıdığını ortaya koymaktadır. Markaların büyük bölümünün, Punch'un temsil ettiği yalnızlık, aidiyet ve şefkat gibi evrensel duygular üzerinden hedef kitleyle bağ kurmaya yöneldiği anlaşılmaktadır. Trendin en çarpıcı ticari yansıması ise viral içerikteki peluş oyuncağı doğrudan sahiplenen IKEA örneğinde gözlemlenmiştir. Sonuç olarak viral bir trendin gerçek zamanlı pazarlama aracılığıyla ölçülebilir ticari çıktılara ve sürdürülebilir bir dijital ilgiye dönüşebildiği, ancak bu sürecin marka kimliğiyle uyumlu ve anlamlı bir iletişimi gerektirdiği değerlendirilmektedir. Bu yönüyle çalışmanın, gerçek zamanlı pazarlama ile dijital kültür ve duygusal etkileşim arasındaki ilişkiyi güncel bir vaka üzerinden ele alarak literatüre katkı sunması beklenmektedir.
Anahtar kelimeler: Gerçek Zamanlı Pazarlama, Dijital Kültür, Viral Pazarlama, Marka İletişimi, Duygusal Etkileşim, Punch.

Abstract
Digitalization has transformed not only cultural and economic practices but also the ways in which brands communicate with their target audiences. The speed and interaction opportunities offered by this transformation have paved the way for the prominence of the real time marketing approach, which is based on brands responding simultaneously to current developments. This study aims to analyze real time marketing through the case of Punch, a baby macaque that went viral on social media at the beginning of 2026. The research was designed in line with the qualitative research tradition, and branded content using the Punch trend was examined through descriptive analysis. The findings reveal that brands across a wide spectrum such as retail, technology and culture and arts incorporated the Punch trend into their own communication agendas through different strategies. It is understood that most brands sought to connect with their target audiences through universal emotions such as loneliness, belonging and compassion represented by Punch. The most striking commercial reflection of the trend was observed in the case of IKEA, which directly embraced the plush toy featured in the viral content.

1 Bu çalışma, Ege Üniversitesi Bilimsel Araştırma Projeleri Koordinatörlüğü tarafından desteklenmiştir. Proje Numarası: 33099.

As a result, it is evaluated that a viral trend can turn into measurable commercial outcomes and sustainable digital interest through real time marketing, yet this process requires meaningful communication aligned with brand identity. In this respect, the study is expected to contribute to the literature by addressing the relationship between real time marketing and digital culture and emotional engagement through a current case.
Keywords: Real Time Marketing, Digital Culture, Viral Marketing, Brand Communication, Emotional Engagement, Punch.

LİDER İLE ÇALIŞAN ARASINDAKİ İLİŞKİ KALİTESİNİN YENİLİKÇİ İŞ DAVRANIŞI ÜZERİNDEKİ ETKİSİNDE PSİKOLOJİK GÜVEN İKLİMİN ROLÜ

THE ROLE OF PSYCHOLOGICAL SAFETY CLIMATE IN THE EFFECT OF LEADER–EMPLOYEE RELATIONSHIP QUALITY ON INNOVATIVE WORK BEHAVIOR

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Abstract
This study aims to examine the effect of leader-member exchange (LMX) on employees' innovative work behaviors through the mediating role of psychological safety climate. In contemporary organizations, innovative work behavior is not merely an outcome of individual creativity; rather, it is also shaped by the relational and psychological context in which employees operate. In this regard, the study seeks to reveal how the quality of the relationship between leaders and employees influences innovative work behavior both directly and indirectly through psychological safety climate.
The theoretical foundation of the study is based on Social Exchange Theory and the LMX approach. Social Exchange Theory suggests that interpersonal relationships develop according to the principle of reciprocity and that employees tend to reciprocate the support and trust they receive (Blau, 1964). LMX theory emphasizes that the quality of the relationship between leaders and employees is a key determinant of employees' organizational attitudes and behaviors (Graen & Uhl-Bien, 1995). In high-quality LMX relationships, employees are believed to receive greater support, trust, and resources from their leaders, which not only creates a direct motivational effect but also contributes to employees perceiving the work environment as safer and more supportive. The concept of psychological safety climate refers to employees' ability to express their ideas without fear of taking risks or making mistakes in the workplace (Edmondson, 1999). Therefore, it is positioned as a critical mediating mechanism in the emergence of behaviors involving uncertainty and risk, such as innovative work behavior (Kark & Carmeli, 2009).
Accordingly, the study assumes that leader-member exchange may influence innovative work behavior and also create an indirect effect through psychological safety climate. In other words, LMX is considered not only as a factor that directly encourages employees' innovative behaviors, but also as a dual mechanism that indirectly shapes these behaviors by influencing the psychological climate in which employees operate.
This study offers two main contributions to the literature. First, it proposes a more comprehensive model by addressing the relationship between LMX and innovative work behavior in terms of both direct and indirect effects. Second, it positions psychological safety climate not merely as a contextual variable, but as a critical mechanism through which relational processes are translated into behavior. In this respect, the study is expected to provide meaningful contributions to both the theoretical and practical dimensions of the leadership and innovation literature.
Keywords: Leader–Member Exchange (LMX), Psychological Safety Climate, Innovative Work Behavior, Social Exchange Theory

Özet
Bu çalışma, lider-üye etkileşiminin (leader-member Exchange-LMX) çalışanların yenilikçi iş davranışları üzerindeki etkisini, psikolojik güven ikliminin aracılık rolü üzerinden incelemeyi amaçlamaktadır. Günümüz örgütlerinde yenilikçi iş davranışı, yalnızca bireysel yaratıcılığın bir çıktısı değil; aynı zamanda çalışanların içinde bulundukları ilişkisel ve psikolojik bağlamın bir sonucudur.

Bu doğrultuda araştırma, lider ile çalışan arasındaki ilişkinin niteliğinin hem doğrudan hem de psikolojik güven iklimi üzerinden dolaylı olarak yenilikçi iş davranışını nasıl şekillendirdiğini ortaya koymayı hedeflemektedir.

Araştırmanın kuramsal temeli Sosyal Değişim Teorisi ve LMX yaklaşımına dayanmaktadır. Sosyal Değişim Teorisi, bireyler arası ilişkilerin karşılıklılık ilkesine göre geliştiğini ve çalışanların gördükleri destek ve güvene karşılık verme eğiliminde olduklarını ileri sürmektedir (Blau, 1964). LMX teorisi ise lider ile çalışan arasındaki ilişkinin kalitesinin, çalışanların örgütsel tutum ve davranışlarını belirleyen temel bir unsur olduğunu vurgular (Graen & Uhl-Bien, 1995). Yüksek kaliteli LMX ilişkilerinde çalışanların liderlerinden daha fazla destek, güven ve kaynak elde ettiklerini vurgularken bu durumun hem doğrudan motivasyonel bir etki yarattığı hem de çalışanların iş ortamını daha güvenli ve destekleyici olarak algılamalarına katkı sağladığı değerlendirilmektedir. Psikolojik güven iklimi kavramı ise, bireylerin iş ortamında risk almaktan çekinmeden fikirlerini ifade edebilmeleri ve hata yapma korkusu yaşamadan katkı sunabilmeleri ile ilişkilidir (Edmondson, 1999). Bu nedenle, yenilikçi iş davranışı gibi belirsizlik ve risk içeren davranışların ortaya çıkmasında kritik bir ara mekanizma olarak konumlanmaktadır (Kark & Carmeli, 2009).

Bu doğrultuda çalışmada, lider-üye etkileşiminin yenilikçi iş davranışını etkileyebileceği ve aynı zamanda psikolojik güven iklimi aracılığıyla dolaylı bir etki oluşturduğu varsayılmaktadır. Başka bir ifadeyle, LMX yalnızca çalışanların yenilikçi davranışlarını doğrudan teşvik eden bir faktör olarak değil; aynı zamanda çalışanların içinde bulundukları psikolojik iklimi şekillendirerek bu davranışları dolaylı yoldan da etkileyen çift yönlü bir mekanizma olarak ele alınmaktadır.

Bu çalışma, literatüre iki temel katkı sunmaktadır. İlk olarak, LMX ve yenilikçi iş davranışı arasındaki ilişkiyi doğrudan ve dolaylı etkiler çerçevesinde ele alarak daha bütüncül bir model önermektedir. İkinci olarak, psikolojik güven iklimini yalnızca bir bağlamsal değişken olarak değil, ilişkisel süreçlerin davranışa dönüşmesinde kritik bir mekanizma olarak konumlandırmaktadır. Bu yönüyle çalışma, hem teorik hem de uygulamaya dönük olarak liderlik ve yenilikçilik literatürüne anlamlı katkılar sunması beklenmektedir.

Anahtar kelimeler: Lider-Üye Etkileşimi (LMX), Psikolojik Güven İklimi, Yenilikçi İş Davranışı, Sosyal Değişim Teorisi

HIV/AIDS MODEL INCORPORATING HOLLING TYPE II SATURATED INCIDENCE WITH STABILITY AND SENSITIVITY ANALYSIS

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Abstract
This study develops and analyzes a deterministic compartmental model for the transmission dynamics of HIV/AIDS using a Holling type II saturated incidence function of the form

$$[\beta (I_1 + \eta_1 I_2 + \eta_2 T)]/[1 + \omega (I_1 + I_2 + T)]$$

The model distinguishes between asymptomatic infected individuals I_1, symptomatic infected I_2, and the treated individuals T, allowing for different levels of infectiousness through the modification parameter ω reflects behavioral changes and limited contact rates as the number of infected individuals increases. We show that the model solutions remain positive and bounded, ensuring biological realism. The system exhibits both a disease free equilibrium and endemic equilibrium. Using the next generation matrix approach, the basic reproduction number R_0 is derived. Stability analysis shows that the disease free equilibrium is locally asymptotically stable when $R_0<1$, while an outbreak occurs when $R_0>1$.
Finally, sensitivity analysis and numerical simulations are used to explore how key parameters influence disease spread and to evaluate potential control strategies for reducing HIV transmission.
Keywords: Holling type II saturated incidence, basic reproduction number R_0, stability analysis, sensitivity analysis.

MATHEMATICAL MODELLING OF COVID-19 TRANSMISSION DYNAMICS

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Abstract
This study presents a mathematical model for the transmission dynamics of COVID-19 in Nigeria. The total population is divided into seven epidemiological compartments: susceptible individuals (S), vaccinated individuals (V), exposed individuals (E), asymptomatic infectious individuals (I_A), symptomatic infectious individuals (I_S), hospitalized individuals (H), and recovered individuals (R). The model is formulated as a system of nonlinear ordinary differential equations to describe the spread and progression of COVID-19 within the population.
The qualitative properties of the model are investigated to ensure its epidemiological relevance. The positivity and boundedness of the solutions are established, showing that all state variables remain non-negative and biologically meaningful for all time. In addition, the feasible region of the model is shown to be positively invariant, indicating that the total population remains bounded within a realistic epidemiological domain.
The disease-free equilibrium point of the model is determined and analyzed to describe the state in which COVID-19 is absent from the population. The basic reproduction number, (R_0), is derived using the next-generation matrix method and serves as a threshold parameter for assessing the potential spread of the disease. The endemic equilibrium point is also obtained to describe the long-term persistence of COVID-19 in the population.
Furthermore, stability analysis of both the disease-free and endemic equilibrium points is carried out. The results reveal that the disease-free equilibrium is locally asymptotically stable when ($R_0 < 1$), indicating that the disease will eventually die out. Conversely, when ($R_0 > 1$), the endemic equilibrium exists and remains stable, suggesting sustained disease transmission within the population. The findings provide valuable insights into the dynamics and control of COVID-19.
Keywords: COVID-19, Mathematical Modelling, Positivity and Boundedness, Disease-Free Equilibrium, Endemic Equilibrium, Basic Reproduction Number, Stability Analysis.

THE ASPECTS OF SPIDER WEB: TYPES AND STRUCTURES

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ABSTRACT
Spider silk possesses extraordinary properties, such as strength, heftiness and flexibility. In spider webs, these properties provide protection, housing, and facilitate foraging. The structure of spider webs varies among species, influenced by factors such as foraging strategies. This study focuses on the structure and identification of spider webs. preliminary survey was conducted to categorize and identify spider web types in Chhattisgarh, India. Sampling was performed over three years, from March 2023 to February 2026, with data collected on a monthly basis. Spider webs were documented using photography and manual diagramming techniques. The study concluded that a total of seven types of spider webs were collected. The most prevalent web type observed was circular orb webs. Web density was found to be dependent on the species, available prey, and surrounding vegetation.
Keywords: Spider, Web, Foraging strategies

PHYTOCHEMICAL CHARACTERIZATION AND EVALUATION OF THE HEPATOPROTECTIVE EFFECT OF BRASSICA OLERACEA SEEDS METHANOLIC EXTRACT IN PARACETAMOL-INDUCED HEPATOTOXICITY

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ABSTRACT
In response to the growing interest in natural approaches for the prevention of liver disorders, this study investigated the biological properties of broccoli (Brassica oleracea), a plant recognized for its richness in bioactive compounds. Phytochemical analysis of the seed methanolic extract revealed high levels of polyphenols and flavonoids. HPLC phytochemical screening disclosed a rich array of biologically active secondary metabolites. Antioxidant and anti-inflammatory activities were evaluated *in vitro*. The Brassica oleracea seeds extract exhibited strong antioxidant activity with an IC_{50} value of 42.7 µg/mL and significant anti-inflammatory activity (IC_{50} = 68.4 µg/mL). The *in vivo* study, conducted on Wistar rats with paracetamol-induced hepatotoxicity, confirmed its hepatoprotective effect, characterized by a marked a marked restoration of hepatic architecture and a significant reduction in tissue damage. *In silico* molecular analysis of sulforaphane, the major bioactive compound identified, demonstrated satisfactory oral bioavailability and a favorable toxicological profile.
Collectively, these findings highlight the potential of broccoli seeds as a promising natural source of bioactive compounds for the prevention of oxidative stress-related liver damage and hepatotoxicity, warranting further investigation into their therapeutic applications.
Keywords: Brassica oleracea seeds, hepatoprotection, oxidative stress, paracetamol toxicity, polyphenols, sulforaphane, *in silico* analysis.

MARINE BIOFILM INHIBITION VIA QUORUM SENSING

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ABSTRACT
We examined that whether patulin and penicillic acid, two well-known quorum sensing inhibitors (QSI) for human pathogen *Pseudomonas aeruginosa* PAO1, can prevent biofilm formation. study aims for amplification of a putative *luxS* gene homologue in the marine microorganism *H. pacifica* ATCC 27122, as well as monitoring AI-2 QS in marine organisms. Degenerated primers were designed based on the *luxS* protein sequence of ten gram-negative, □-, □- and □- proteobacteria, and used for *luxS* gene amplification in *H. pacifica*. AI-2 assays were carried out using the well-established *Vibrio harveyi* BB170 AI-2 bioluminescence assay. Effect of penicillic acid on AI-2 induction of *H. pacifica* showed strong inhibitory effect at non-growth inhibitory concentrations compared to patulin having adverse effect at the highest concentration (25 μM) tested in our study. QSIs effect on biofilm forming capability of marine isolates was isolate specific. Detection of bioluminescence in the autoinducer bioassay and the presence of a putative *luxS* gene orthologue are biochemical and genetic evidence for the production of a signalling molecule(s) and provide a first step in characterizing *H. pacifica* quorum sensing. Our study emphasize that QSI compounds must be selected in the specific system in which they are to function and they cannot easily be transferred from one QS system to another.
Keywords: Biofilm formation, *H. pacifica*, AI-2 assay, *LuxS* gene, Patulin, Penicillic acid

ECOTOXICOLOGICAL IMPACT OF POLYSTYRENE NANOPLASTICS ON THE PROTOZOAN *TETRAHYMENA PYRIFORMIS:* CYTOTOXICITY, BEHAVIORAL DISRUPTIONS, AND OXIDATIVE STRESS

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Abstract
Background: Nanoplastics (NPs) contaminate aquatic ecosystems, threatening primary consumers that form the base of trophic webs. Among these consumers, ciliated protozoans are vulnerable to this pollution. This study aimed to investigate the cytotoxicity, behavioral disruptions, and oxidative stress biomarker responses induced by polystyrene nanoplastics (PS-NPs) in *Tetrahymena pyriformis (T. pyriformis)*, comparing single and repeated exposure.
Methods: Cultures were exposed to a wide concentration gradient under single and repeated exposure conditions. Population kinetics, cell viability, behavioral and morphological alterations were monitored. Biochemical profiling at 40 and 80 mg/L evaluated enzymatic superoxide dismutase (SOD) and catalase (CAT) defenses, non-enzymatic DPPH scavenging, nitric oxide (NO), and lipid peroxidation malondialdehyde (MDA) biomarkers.
Results: Toxicity was more pronounced under repeated exposure conditions compared to single exposure conditions, with IC50=34.95 and 75.50 mg/L, respectively. At 80 mg/L under single exposure, cell survival and biomass collapsed by over 65% and 80%, triggering morphological rounding, swelling, erratic circular swimming, and stress vacuolation. Biochemical profiling revealed a dose dependent response to PS-NPs. At a single dose of 40 mg/L, cellular defenses effectively counteracted nitrosative stress (78.87 µM), maintaining stable lipid peroxidation levels comparable to the control. However, exposure to a single dose of 80 mg/L induced a depletion of antioxidant defenses, resulting in a 78.40% reduction in SOD specific activity, a 66.55% inhibition of CAT activity, and a 25.06% loss in total DPPH. Nitrosative stress escalated at 80 mg/L, evidenced by a 60.64% surge in NO production, which triggered uncontrolled lipid peroxidation, causing a 341.71% accumulation of MDA.
Conclusion: These findings demonstrate that PS-NPs exert cytotoxicity, oxidative and nitrosative stress on ciliated protozoans, disrupting cellular homeostasis and highlighting potential systemic risks to aquatic trophic webs.

OPTIMIZING OUTCOMES IN PSORIASIS: IMPACT OF DENIPLANT NUTRACEUTICALS

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ABSTRACT

Background A growing body of evidence highlights that intestinal dysbiosis is associated with the development of psoriasis. The gut–skin axis is the novel concept of the interaction between skin diseases and microbiome through inflammatory mediators, metabolites and the intestinal barrier. The gut microbiome affects skin homeostasis through its influence on the signaling pathways that coordinate epidermal differentiation.

The objective of this study was to synthesize current data on the Deniplant natural modulator of the gut microbiome in patients with psoriasis.

Materials and methods All studies confirmed the association of psoriasis and gut microbiota dysbiosis. We describe the recent advances regarding the interplay between gut microbiota and the skin. Thus, the microbiome can be considered an effective therapeutical target for treating this disorder.

Results This presentation provides a detailed and comprehensive systematic study regarding gut microbiome in patients with psoriasis. These results are supported by clinical observations based on a case serie showing improvement in psoriatic skin lesions after Deniplant natural modulator. It is still not clear whether psoriasis is an effect or a cause of the observed disbalance between beneficial and pathogenic microbes. In this context, the study provides very interesting results, showing significantly greater changes in the gut microbiome of patients with psoriasis treated Deniplant natural modulator

Conclusion There is a significant association between alterations in gut microbial composition and psoriasis. Intestinal dysbiosis is a state of imbalanced gut microbiome that eventually has a negative impact on skin function and integrity. Deniplant natural modulator is a potential therapeutic strategy in patients with psoriasis

Keywords: dysbiosis, microbiome, psoriasis, gut-skin axis, gut barrier, Deniplant nutraceuticals

AUTOMATED CUSTOMS DECISION-MAKING AND CORPORATE DUE PROCESS RIGHTS: A COMPARATIVE LEGAL ANALYSIS OF ALGORITHMIC TRADE GOVERNANCE IN INDIA, THE EUROPEAN UNION AND SINGAPORE

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ABSTRACT
Artificial intelligence (AI) is significantly reshaping customs administration through the implementation of automated systems designed for risk assessment, tariff classification, customs valuation, and compliance monitoring. Although these technological advancements promise enhanced efficiency, consistency, and facilitation of trade, they simultaneously engender substantial legal concerns pertaining to procedural fairness, transparency, accountability, and the safeguarding of corporate rights. The growing dependence on algorithmic decision-making by customs authorities has engendered intricate challenges for conventional principles of administrative law, particularly in instances where automated determinations influence the legal and economic interests of corporate entities engaged in international trade. In light of this context, the study scrutinizes the sufficiency of existing legal frameworks that regulate automated customs decision-making and their ramifications for corporate due process rights. Special emphasis is placed on the principles of transparency, explainability, reasoned decision-making, access to remedies, and judicial review within the purview of algorithmically assisted customs enforcement. Utilizing a comparative doctrinal methodology, the analysis assesses the regulatory strategies employed in India, the European Union, and Singapore, which epitomize disparate stages of digital governance and technological integration in customs administration. The study posits that prevailing legal frameworks have not sufficiently adapted to mitigate the procedural risks associated with algorithmic trade governance. Notable deficiencies remain regarding the disclosure of decision-making criteria, accountability for automated determinations, and the existence of effective mechanisms for contesting erroneous or opaque outcomes. By critically evaluating emerging regulatory responses across the selected jurisdictions, the study formulates a normative framework aimed at protecting corporate due process rights in the era of AI-driven customs regulation. The findings enrich contemporary discourse on administrative accountability, digital governance, and international trade regulation, while also advancing legal scholarship at the nexus of artificial intelligence and public decision-making.

Keywords: Artificial Intelligence, Automated Customs Decision-Making, Corporate Due Process Rights, Algorithmic Trade Governance, Comparative Administrative Law.

WAR CRIMES UNDER INTERNATIONAL HUMANITARIAN LAW: LEGAL FOUNDATIONS, JURISPRUDENCE, AND CONTEMPORARY.

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Abstract
International Humanitarian Law (IHL) provides the legal framework governing the conduct of armed conflict, with the primary aim of limiting human suffering and protecting individuals who are not, or are no longer, participating in hostilities. Within this framework, war crimes constitute serious violations of the laws and customs of war that give rise to individual criminal responsibility under international law. This chapter examines the legal foundations of war crimes under IHL, focusing on treaty law, customary international law, and the fundamental principles that regulate armed conflict, including distinction, proportionality, necessity, and humanity. The study further analyzes the jurisprudential contributions of international criminal tribunals, particularly the International Criminal Tribunal for the former Yugoslavia, the International Criminal Tribunal for Rwanda, and the International Criminal Court, which have significantly shaped the interpretation and development of war crimes law. These institutions have clarified key concepts such as the classification of armed conflicts, command responsibility, and the protection of civilians, while expanding accountability for serious violations including genocide, sexual violence, and the use of child soldiers. In addition, the chapter addresses contemporary challenges in the enforcement of war crimes law, including jurisdictional limitations, reliance on state cooperation, evidentiary constraints, and the evolving nature of modern armed conflicts involving non-state actors and hybrid warfare. By integrating legal frameworks, jurisprudence, and enforcement realities, this study provides a comprehensive overview of the development and current challenges of war crimes law within International Humanitarian Law.
Keywords: International humanitarian law; war crimes; international criminal law; Geneva Conventions; Rome Statute; command responsibility; civilian protection; accountability

CONFLICT, DIPLOMACY, AND INTERNATIONAL LAW: LEGAL TOOLS FOR GLOBAL STABILITY

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ABSTRACT

Conflict and diplomacy are two central pillars of international relations, and international law serves as the regulatory framework that connects and structures their interaction. In the absence of a centralized global authority, states rely on legal norms, diplomatic practices, and institutional mechanisms to manage disputes and maintain global stability. This chapter examines the legal tools available under international law for conflict prevention, diplomatic resolution, and peace maintenance. It explores how treaties, customary international law, and international organizations contribute to regulating state behavior and reducing the likelihood of armed conflict. The role of diplomatic instruments such as negotiation, mediation, arbitration, and judicial settlement is analyzed in relation to their legal foundations. The chapter also highlights the challenges of enforcement, state sovereignty, and political power dynamics that limit the effectiveness of international legal systems. It argues that while international law provides essential mechanisms for global stability, its success depends on political will, institutional strength, and compliance by states. The study concludes that diplomacy and law must operate together as complementary systems to achieve sustainable peace in international relations.

THE CHIEF SCIENTIST OF HUMAN RIGHTS: EVIDENCE-BASED RESEARCH IN ACTION AT CEARÁ'S HUMAN RIGHTS SECRETARIAT

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Abstract
In 2024, the state of Ceará launched an innovative project entitled "Law, Innovation, and Citizenship in the State of Ceará," designed to bridge academic research and public management. The project was structured around three core objectives: (1) producing empirical data on the policies of the Human Rights Secretariat of Ceará (SEDIH); (2) formulating evidence-based public policies for the defense of human rights; and (3) formulating evidence-based public policies for the promotion of human rights.
This article focuses on the first objective, presenting the findings of an empirical investigation into SEDIH's priority policies. Despite the project's short timeframe, data were collected and analyzed on key policy areas, with particular emphasis on policies targeting elderly people and individuals with physical disabilities.
Employing a qualitative research design, this study utilizes a methodology grounded in the systematic analysis of official documents, legislation, institutional reports, and quantitative data provided by the Secretariat. The findings indicate that current policies for the elderly effectively promote citizenship through initiatives such as short-term training courses, as well as educational and health-oriented activities.
These evidence-based findings offer critical insights for the improvement of existing policies and can guide the state toward a more efficient allocation of public resources, ensuring that interventions are both effective and socially responsive.
Keywords: Human Rights. Elderly People. Public Policy. Evidence-Based Research. Empirical Investigation. Ceará. SEDIH.

SILENT WITNESSES, HIDDEN VICTIMS: EXAMINING THE IMPACT OF DOMESTIC VIOLENCE ON CHILDREN IN PUNJAB, PAKISTAN

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Abstract
Domestic violence remains a pervasive public health and human rights crisis in Pakistan, yet children who witness or experience its consequences within the household continue to occupy the margins of both scholarly inquiry and policy intervention. This study examines children as hidden victims of domestic violence in Punjab, Pakistan, exploring the direct and indirect pathways through which exposure to intimate partner violence (IPV) shapes children's psychological, developmental, and social outcomes. Drawing on an ecological-feminist theoretical framework, the study argues that children's victimhood is systematically rendered invisible by patriarchal household structures, cultural norms of silence, and institutional failures to recognize witnessing violence as a form of childhood trauma. Data were drawn from qualitative interviews with mothers, community health workers, and school teachers across peri-urban and rural districts of Punjab. Findings reveal that children exposed to domestic violence manifest elevated rates of anxiety, behavioral dysregulation, and academic disengagement, while simultaneously being compelled to adopt protective or mediating roles within the abusive household a burden disproportionately borne by girls. The study further identifies how poverty, social isolation, and limited access to mental health services compound these vulnerabilities. The findings call for a rights-based, child-centered expansion of domestic violence frameworks in Pakistani law and social policy, alongside community-level sensitization programs that recognize children not merely as collateral casualties but as direct rights-holders deserving targeted protection and psychosocial support.
Keywords: domestic violence, child witnesses, intimate partner violence, Punjab, Pakistan, childhood trauma, coercive control

SOCIO-ECONOMIC INTEGRATION OF ASYLUM SEEKERS IN ALBANIA FROM THEIR EXPERIENCES-IS THE NEW LEGISLATION ENOUGH?

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ABSTRACT

Albania, since 2021, has adopted a new legislation and policies regarding asylum and foreigners regarding the provision of temporary protection, standards and procedures for grantimg and withdrawing international protection, a unified status for refugees or for persons eligible for subsidiary protection, family reunification right, standards for the reception of applicants for international protection, social protection and their integration in the society. The study aimed to explore the socio-economic integration of asylym seekers and those with refugee status according to their perspective, their experiences navigating the system in Albania, after the changes in legislation and other regulations that took place. It was used a qualitative methed and the sample consisted in 26 regugee and subsidary protection grated persons in the territory of Albania and 60 experienced professionals working in central (11 participants) and local government (27 participants) as well as in non for profit sector (19 participants) and few in private sector (6 participants) in areas related with study. Results show that they have problems with almost all services that are considered the package of social integration services (social protection and social care services). Education services, medical assistance, social protection, social housing and employment and vocational services are very little or not at all provided to persons of concern of this study. Although, all entry-border municipalities included in this study (Bilisht, Gjirokastra, Tirana, Shkodra and Kukes) have approved Social Plans, in none of these plans are identified asylum seekers, asylum and refugee granted persons, as vulnerable groups with needs to be addressed. The conclusion of the study is that the new legislation lays the basics of a new policy but without specific pro-active actions by local institutions the situation regarding the socio-economic integration of asylum seekers and refugees is hardly to improve.

Keywords: asylum, policy, socio-economic integration, Albania.

OLTAN FORTRESS (OLTAN QALASI) AND ITS ROLE IN THE FORMATION OF CULTURAL IDENTITY IN THE MUGHAN REGION

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Abstract
The Mughan Plain, a strategically significant cultural and historical zone in northwestern Iran, has long served as a crossroads of civilizations and ethnic groups. At its heart lies Oltan Fortress (Oltan Qalasi), covering approximately 70 hectares and ranking as the largest mudbrick archaeological site in northwestern Iran, widely recognized as one of the most prominent Sasanian-period settlements along the empire's northwestern frontiers. However, recent salvage excavations have fundamentally transformed the site's chronology by uncovering an Iron Age cemetery (first millennium BCE) – the first tangible evidence of organized human presence at this location, predating the main Parthian and Sasanian fortifications by several centuries. This discovery, corroborated by stratigraphic evidence, demonstrates that the occupational sequence of the site is considerably more complex and enduring than previously assumed, with later defensive structures and urban layouts built directly upon these earlier settlement deposits, revealing a remarkable pattern of long-term historical continuity. The site reached its zenith during the Sasanian period (224–651 CE), when the Mughan Plain formed part of the empire's strategic borderlands. Fortified cities such as Oltan Qalasi, with their advanced irrigation systems and regular urban planning, epitomize a dynamic administrative-economic structure and a diverse population, as attested by surface finds – including coins, ceramics, and architectural remains – which confirm the region's full integration into broader imperial networks. This article investigates the role of Oltan Fortress in the formation and continuity of cultural identity among the inhabitants of the Mughan Plain, elucidating the connection between this historical monument and contemporary regional identity through two complementary lenses: archaeology and folk culture. Adopting a descriptive-analytical methodology, the study draws on library resources, archaeological reports, and ethnographic data. The findings reveal that the site functioned as a civilizational hub that, over two millennia, facilitated economic, social, and cultural interactions among diverse ethnic groups. Simultaneously, it has been deeply embedded in the collective memory and folk culture of the Mughan people – persisting through legends, popular beliefs, local songs, and symbolic rituals – thereby playing a pivotal role in shaping intangible heritage. The article concludes by identifying major conservation challenges alongside opportunities such as UNESCO World Heritage nomination and international research collaboration, emphasizing the urgent need to redefine the site's position within regional cultural policy as a vital step toward strengthening cultural identity and reconnecting present generations with their historical roots.
Keywords: Oltan Fortress, Oltan Qalasi, Mughan Plain, Cultural Identity, South Caucasus.

FINANCIAL DECISION-MAKING POWER AND FREEDOM: A QUANTITATIVE ANALYSIS OF MARRIED COUPLES

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Abstract

Objective:
This study aims to investigate the level of financial decisions making and freedom among spouses and its influence on marital relationships, with a focus on gender equality, autonomy, and decision-making.

Material and Methods:
A quantitative research design was employed, using a structured questionnaire administered to 250 married respondents from diverse socio-economic backgrounds. The survey measured variables such as financial decision-making power, access to personal income, savings autonomy, and satisfaction with financial arrangements. Data were analyzed using descriptive statistics and regression analysis to identify patterns and associations between financial freedom and marital harmony.

Results:
The findings reveal that couples with higher levels of financial autonomy reported stronger marital satisfaction, trust, and cooperation. Family type influence, where spouses maintain both joint and individual resources, was most strongly correlated with positive relationship outcomes. However, significant gender disparities were observed, with women reporting lower access to independent financial resources compared to men.

Conclusion:
Financial freedom plays a critical role in promoting equality and stability within marital relationships. Encouraging equitable income opportunities, financial literacy programs, and balanced decision-making structures can strengthen spousal relationships and contribute to social development.

Keywords: Financial freedom, marital harmony, gender equality, autonomy, and decision-making.

THE DISCOURSE OF POWER AND TRUTH IN POETIC WORKS (LITERATURE AND ART): AN INTRODUCTION

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Abstract
Friedrich Nietzsche argued that truth is nothing but "a mobile army of metaphors and metonyms" and that knowledge is one of the forms of "the will to power." Following Nietzsche, Foucault (pragmatist philosopher as Nietzsche) created his archaeology out of this specific point. Truth is what is considered true if reinforced by the discourse of power. For Rorty, another pragmatist philosopher, truth is high esteem, approval, and "social commendation." That is, truth is a social construct that lacks any obligation or necessity that might be inherent in the nature of things.
Therefore, it can be concluded that whomever does not exercise power, does not possess the truth either. However, examining power relations as a comprehensive network that encompasses all aspects of human activity, leads the pragmatist to strip the ethical distinction between the oppressor and the oppressed of its meaning. This is because every individual's will, is subsumed under the will to power. Although initially, we follow Rorty's model—which replaces objectivity with two methods, 'ironism' versus solidarity, i.e., adopting concepts and values through the creation of the self by individual freedom of choice, we still in this paper insist on challenging the pragmatic method through discussing the following question:
What about the truth (reflected in poetic works) that is, in its essence, an absolute rejection of the will to power?
Keywords: Nietzsche, Foucault, Rorty, truth, power, pragmatic method.

''EL MAWAQIF'' OF *EL EMIR ABDELKADER* AND THE RELIGIOUS SPIRIT IN ALGERIAN REVULUTIONS

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Abstract
In writing his masterpiece *''El Mawaqif''*, *the Emir Abdelkader*, left a legacy for Sufi thought to remember in Algeria. Indeed, *the Prince* had shown that a great leader must have the ability to blend religious thought to military strategy and by then, Abdelkader made his genuine stamp for a struggler and a leader. In balancing both the mind and the faith, the *Emir* not only gave a political vision for a modern Algeria alongside his 'resistance spirit' but also taught what is a real *Ummah* and how to make a real nation. This research aims at investigating the impact of the Sufi thought of *El Emir* on the fight against colonialism and how the religious spiritual education made of Abdelkader the philosopher who guided people how to rise from ashes, attain knowledge and ascend divine truths. *The Emir Abdelkader* founded a modern Algeria with a governing system that could unify all Algerians on the basis of equitable religious principles. This achievement shows his attention that his authority might be upheld by the agreement of the majority of Algerians without any exclusion or subjugation in order to found a recent Algerian state that might be able to interact with the surrounding circumstances. The principle of legal allegiance was widely accepted because it was a known Islamic tradition. Hence, Emir acquired most Algerians' consent, but surely left a Sufi legacy to remember.
Keywords: Legal Allegiance, Modern Algeria, Sufi Thought, Military Strategy, Resistance Spirit.

THE ETHNOGRAPHIC ELEMENT IN THE PHOTOGRAPHY OF THE ALBANIAN NATIONAL RENAISSANCE

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ABSTRACT

This paper examines the photographic creativity of the period of the Albanian National Renaissance. Albanian photography of this period drew extensively upon various elements of Albanian cultural heritage, particularly traditional folk costumes and other ethnographic features.

The research process was conducted using a qualitative methodology, involving the review of major scholarly literature in both Albanian and foreign languages. The study is based on archival materials, as well as sources published by the National Museum of Photography "Marubi" in Shkodra and the Library of the Academy of Sciences of Albania.

Traditional folk costumes represent one of the most significant testimonies and creative manifestations of Albanian folk art. They are distinguished by their ornamental richness, originality, beauty, diversity, and harmonious color balance.

In the photographic art of the National Renaissance period, a rigorous treatment of folkloric and ethnographic themes can be observed, with particular attention given to the details of traditional costumes and other cultural phenomena. This approach reflects the emotional and conceptual sensitivity of photographers of the time toward cultural heritage, which they regarded as an essential component of national pride and identity.

In conclusion, this paper argues that the works of Albanian photographers should be understood as a fundamental element in the history of Albanian art, as they contributed significantly to the construction of national identity, the preservation of collective memory, and the development of photographic aesthetics in Albania.

Keywords: ethnography, Albanian National Renaissance, Albania, Albanian photography, photographic heritage.

AN ANALYSIS OF ERRORS IN THE USE OF THE SIMPLE PAST TENSE IN EMAILS WRITTEN BY NON-ENGLISH MAJOR SENIORS AT A UNIVERSITY IN DA LAT

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Abstract
The simple past tense plays an essential role in written communication, particularly in academic and professional email correspondence. However, many English as a Foreign Language (EFL) learners continue to experience difficulties in using this tense accurately in authentic writing contexts. This study aims to investigate common errors in the use of the simple past tense in emails written by non-English major senior students at a university in Da Lat, Vietnam, and to identify possible factors contributing to these errors. A quantitative case study design was employed, involving 44 final-year students from various academic disciplines. Data were collected through questionnaires and analyses of student-produced email texts. The findings indicate that the most frequent errors involve incorrect verb conjugation, misuse of irregular verbs, accidental use of present tense forms, and difficulties with negative and interrogative structures. Despite reporting relatively high confidence in using the past tense and frequently checking grammar before sending emails, many students still demonstrated persistent grammatical inaccuracies. These findings suggest a gap between learners' explicit grammatical knowledge and their ability to apply it effectively in real-world writing tasks. The study highlights the importance of contextualized grammar instruction, task-based writing activities, and targeted feedback to enhance learners' grammatical competence and improve the quality of email writing among Vietnamese EFL students.
Keywords: simple past tense, error analysis, email writing, EFL learners, non-English majors, grammatical errors.

APPLYING CONTEXT OF CULTURE AND CONTEXT OF SITUATION IN ANALYZING THE WORK "THU PHỐ CA" BY LI BAI

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Abstract
"Thu phố ca" is a Tang poem that is difficult to teach and research. There have been many ways to analyze Tang poetic works, but for a more in-depth and multi-dimensional analysis, we consider the poem as a utterance and conduct critical discourse analysis. By using selective context of culture and situation appropriate to analyzing works along the lines of integrate critical discourse analysis, we have clarified semantics, grammar and lexical units in analyzing context of culture along with elements of speech situation, speaker, mode of speech, meaning of speech, topic of speech, target audience of speech, speech act and the effectiveness of those speech acts. This helps research and teach the work more in-depth in terms of linguistics.
Keywords: Context of culture, context of situation, integrate critical discourse analysis, Thu phố ca, Tang poetry.

IMPACT OF ARTIFICIAL INTELLIGENCE TOOLS ON INFORMATION RETRIEVAL EFFICIENCY AND USER SATISFACTION IN NIGERIAN COLLEGE LIBRARIES: A CASE STUDY OF THE FEDERAL COLLEGE OF EDUCATION (TECHNICAL) ISU, EBONYI STATE, NIGERIA

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Abstract
The rapid development of Artificial Intelligence (AI) tools has transformed information retrieval processes in academic libraries worldwide. In Nigeria, however, the extent to which these tools improve retrieval efficiency and user satisfaction is unknown. This study examines the effect of AI-powered efficiency and user satisfaction in Nigerian college libraries. This study adopted a descriptive survey research design. The population of this study comprises all the 200 registered library users of Federal College of Education (Technical) Isu, Ebonyi State. Three research questions were posed, and three hypotheses were formulated for this study. Data were collected using a structured four-point Likert-scale questionnaire. Three experts validated the instrument. The reliability of the instrument was carried out using Cronbach's Alpha, and the score obtained was 0.84, making the instrument reliable. Data collected from the research questions were analyzed using means and standard deviations. The findings indicate that the adoption of AI tools significantly reduced average search time and improved the relevance of retrieved information. Users reported higher satisfaction with AI-enhanced systems than with traditional methods. Major challenges include inadequate infrastructure, limited AI literacy, data privacy concerns, and high implementation costs. The study concludes that strategic integration of AI tools has the potential to transform the library services of colleges of education in Nigeria. These findings add to the growing body of research on AI applications in library and information science in developing countries.
Keywords: Artificial Intelligence, Information Retrieval, User Satisfaction, Academic Libraries, Federal College of Education (Technical), Isu, Nigeria.

CONSUMER PROTECTION IN INDONESIA: THEORY, DATA, REGULATION, AND EDUCATION

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Abstract
This paper examines consumer protection from theoretical, regulatory, institutional, and educational perspectives. Drawing upon theories of market failure and information asymmetry, the discussion highlights the necessity of consumer protection in addressing imbalances between consumers and business actors. It reviews the development of consumer rights at the international level and analyzes Indonesia's legal framework, particularly Law No. 8 of 1999 concerning Consumer Protection, supported by regulations on food safety, halal product assurance, electronic transactions, financial services, and personal data protection. It further explores consumer rights, institutional mechanisms, digital consumer protection, and persistent challenges related to enforcement, consumer literacy, online fraud, and data privacy. The study also discusses the prospects, opportunities, and challenges of integrating consumer protection education into formal education, vocational training, community programs, and digital learning platforms. The findings suggest that effective consumer protection requires a multidimensional approach involving strong legal frameworks, institutional collaboration, market supervision, and comprehensive consumer education. Strengthening consumer literacy is essential for fostering informed consumers, ethical business conduct, fair competition, and sustainable economic development in Indonesia.
Keywords: consumer protection, consumer education, consumer rights, consumer laws.

MİKROSKOP DESTEKLİ SNUFF-BOX ARTERİYOVENÖZ FİSTÜL OLUŞTURULMASININ ERKEN DÖNEM SONUÇLARA ETKİSİ: TEK MERKEZ DENEYİMİ

EARLY CLINICAL OUTCOMES OF MICROSCOPE-ASSISTED SNUFF-BOX ARTERIOVENOUS FISTULA CREATION: A SINGLE-CENTER EXPERIENCE

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Abstract
Snuff-box arteriovenous fistulas (AVFs) are an important distal vascular access option for hemodialysis patients; however, small vessel diameter may increase the risk of early thrombosis and maturation failure. Microsurgical techniques may improve anastomotic precision and vascular patency. This study aimed to evaluate the early clinical outcomes of microscope-assisted snuff-box AVF creation. Medical records of patients who underwent snuff-box AVF creation between January 2023 and March 2026 were retrospectively reviewed. Patients were categorized according to the use of an operating microscope during surgery. Primary failure, maturation success, and fistula patency outcomes were evaluated. A total of 17 patients were included. Conventional snuff-box AVF creation was performed in 7 patients, whereas 10 patients underwent microscope-assisted surgery. Primary failure developed in 1 patient (14.3%) in the conventional group and was not observed in the microscope-assisted group. Functional maturation was achieved in 6 of 7 patients (85.7%) in the conventional group and 9 of 10 patients (90%) in the microscope-assisted group. At the last follow-up, 6 fistulas (85.7%) remained functional in the conventional group, whereas all fistulas (100%) were functional in the microscope-assisted group. Although the sample size was limited, microscope-assisted snuff-box AVF creation appeared to provide favorable early clinical outcomes with lower primary failure rates and high functional patency. Larger studies with longer follow-up are needed to confirm these findings.
Keywords: Snuff-box fistula, Microsurgery, Hemodialysis access, Arteriovenous fistula

Özet
Snuff-box arteriyovenöz fistüller (AVF), hemodiyaliz hastalarında distal vasküler erişim seçeneği olarak önem taşımaktadır. Ancak damar çaplarının küçük olması nedeniyle erken tromboz ve maturasyon başarısızlığı riski artabilmektedir. Mikroskop destekli cerrahi tekniklerin anastomoz hassasiyetini ve damar açıklığını artırabileceği düşünülmektedir. Bu çalışmada mikroskop destekli snuff-box AVF oluşturulmasının erken dönem klinik sonuçlarının değerlendirilmesi amaçlandı. Ocak 2023 ile Mart 2026 tarihleri arasında snuff-box AVF oluşturulan hastaların tıbbi kayıtları retrospektif olarak incelendi. Hastalar ameliyat sırasında mikroskop kullanılıp kullanılmamasına göre gruplandırıldı. Primer başarısızlık, maturasyon başarısı ve fistül açıklık sonuçları değerlendirildi. Çalışmaya toplam 17 hasta dahil edildi. Yedi hastaya konvansiyonel yöntemle snuff-box AVF oluşturulurken, 10 hastaya mikroskop destekli cerrahi uygulandı. Primer başarısızlık konvansiyonel grupta 1 hastada (%14,3) görülürken, mikroskop grubunda izlenmedi. Fonksiyonel maturasyon konvansiyonel grupta 7 hastanın 6'sında (%85,7), mikroskop grubunda ise 10 hastanın 9'unda (%90) sağlandı. Son kontrolde konvansiyonel grupta 6 fistül (%85,7) çalışır durumdayken, mikroskop grubundaki tüm fistüller (%100) fonksiyoneldi. Medyan takip süresi konvansiyonel grupta daha uzundu (18 aya karşı 4 ay). Hasta sayısının sınırlı olmasına rağmen, mikroskop destekli snuff-box AVF oluşturulmasının daha düşük primer başarısızlık oranları ve yüksek fonksiyonel açıklık ile ilişkili olduğu gözlendi. Bulguların doğrulanabilmesi için daha geniş seriler ve daha uzun takip süreleri gereklidir.
Anahtar Kelimeler: Snuff-box fistül, Mikroskopik cerrahi, Hemodiyaliz erişimi, Arteriyovenöz fistül

DEV BAZİLLER ARTER ANEVRİZMASI VE BUERGER HASTALIĞI OLAN OLGUDA MULTİDİSİPLİNER YOĞUN BAKIM YÖNETİMİ

MULTIDISCIPLINARY INTENSIVE CARE MANAGEMENT IN A PATIENT WITH GIANT BASILAR ARTERY ANEURYSM AND BUERGER'S DISEASE

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Abstract
The simultaneous coexistence of Buerger's disease (Thromboangiitis Obliterans), a rare vasculitis, and intracranial giant aneurysms carries an extremely high risk of mortality and morbidity in clinical management. In this study, we present the intensive care management of a 33-year-old male patient who underwent endovascular coil embolization and flow-diverting stent surgery due to a giant basilar tip aneurysm and developed pulmonary complications, cerebral embolic abscesses, thrombosed vascular occlusions, and acute respiratory failure on the basis of Buerger's disease during the follow-up period. The patient, who developed sudden desaturation (: 91%), tachypnea, and conscious confusion while being followed up under empirical antibiotic therapy in the neurology and infectious diseases departments, was admitted to the Anesthesia Intensive Care Unit (ICU). Due to deep hypoxemia (26.7 mmHg) in arterial blood gas at admission and the prediction of prolonged ventilator dependency, an emergency surgical tracheostomy was performed. Advanced neuroradiological examinations revealed an acute embolic abscess in the right frontal lobe, segmentary occlusion of the left vertebral artery, and a giant 2.5 cm thrombosed aneurysmal mass effect compressing the pons. Broad-spectrum combination antibiotic therapies and intensive neuro-critical palliative care were administered. The critical role of aggressive intensive care support and multidisciplinary monitoring in increasing survival in such complex vasculitis cases has been emphasized.
Keywords: Basilar Aneurysm, Buerger's Disease, Intensive Care, Cerebral Abscess, Tracheostomy.

Özet
Nadir görülen bir sistemik vaskülit olan Buerger hastalığı (Tromboanjitis Obliterans) ile intrakranial dev anevrizmaların eş zamanlı birlikteliği, klinik yönetim süreçlerinde son derece yüksek mortalite ve morbidite riski taşımaktadır. Bu çalışmada, dev baziller tepe anevrizması nedeniyle endovasküler coil embolizasyonu ve akım yönlendirici stent cerrahisi uygulanan, takip sürecinde Buerger hastalığı zemininde pulmoner komplikasyonlar, serebral embolik abseler, tromboze vasküler oklüzyonlar ve akut solunum yetmezliği gelişen 33 yaşında bir erkek hastanın yoğun bakım yönetimi sunulmuştur. Nöroloji ve enfeksiyon servislerinde ampirik antibiyotik tedavisi altında takip edilirken ani desatürasyon (: %91), taşipne ve bilinç konfüzyonu gelişen hasta, Anestezi Yoğun Bakım Ünitesi'ne (YBÜ) kabul edilmiştir. Kabul anında arteryel kan gazında derin hipoksemi (26.7 mmHg) saptanması ve uzamış ventilatör bağımlılığı öngörüsü nedeniyle hastaya acil şartlarda cerrahi trakeostomi açılmıştır. İleri nöroradyolojik incelemelerinde sağ frontal lobda embolik kaynaklı akut apsesi, sol vertebral arter segmenter oklüzyonu ve ponsa bası yapan 2.5 cm'lik dev tromboze anevrizmatik kitle etkisi izlenen hastaya geniş spektrumlu kombinasyon antibiyoterapileri ve yoğun nöro-kritik palyatif bakım uygulanmıştır.

Bu tür kompleks nörovasküler patolojileri olan vaskülit olgularında, agresif yoğun bakım desteğinin ve multidisipliner takibin sağkalım üzerindeki kritik rolü vurgulanmıştır.

Anahtar Kelimeler: Baziller Anevrizma, Buerger Hastalığı, Yoğun Bakım, Serebral Apse, Trakeostomi.

RİNOPLASTİ OPERASYONLARINDA KULLANILAN ADRENALİNLİ LOKAL ANESTEZİKLERE BAĞLI GELİŞEN TOKSİSİTE OLGUSU

A CASE OF TOXICITY INDUCED BY LOCAL ANESTHETICS WITH ADRENALINE USED IN RHINOPLASTY OPERATIONS

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Abstract
Local anesthetics are widely used in minor and major surgical procedures. In rhinoplasty operations, local anesthetics containing adrenaline are frequently preferred for vasoconstriction to reduce bleeding of the nasal mucosa. However, these agents have a broad side effect profile, and their most serious complications are observed in the cardiovascular system. In this case report, a 35-year-old female patient who developed acute toxicity and cardiac arrest following the injection of local anesthetics containing adrenaline and lidocaine during rhinoplasty surgery, and was successfully resuscitated and monitored in the intensive care unit, is presented. Following local infiltration during surgery, the patient suddenly developed cyanosis, tachycardia (185 bpm), hypertension (180-190 mmHg), and subsequent pulseless ventricular tachycardia (VT). The patient, whose sinus rhythm was restored via cardiopulmonary resuscitation (CPR) and defibrillation, was monitored in the Anesthesia Intensive Care Unit with therapeutic hypothermia, anti-edema, and inotropic therapies, and was successfully extubated on the 17th day and discharged. It is emphasized that maximum attention should be paid to the risk of systemic toxicity of local anesthetics containing adrenaline in clinical practices.
Keywords: Local Anesthesia, Toxicity, Rhinoplasty, Cardiac Arrest, Intensive Care.

Özet
Lokal anestezikler, minör ve majör cerrahi işlemlerde yaygın olarak kullanılmaktadır. Rinoplasti operasyonlarında ise burun mukozasının kanlanmasını azaltmak ve vazokonstrüksiyon sağlamak amacıyla adrenalin içeren lokal anestezikler sıklıkla tercih edilmektedir. Ancak bu ajanlar geniş bir yan etki profiline sahip olup, en ciddi komplikasyonları kardiyovasküler sistem üzerinde görülmektedir. Bu vaka sunumunda, rinoplasti ameliyatı sırasında adrenalin ve lidokain içeren lokal anestezik enjeksiyonu sonrası akut toksisite ve kardiyak arrest gelişen, başarılı resüsitasyon ve yoğun bakım takibiyle taburcu edilen 35 yaşında bir kadın hasta sunulmuştur. Ameliyat esnasında lokal infiltrasyon sonrası hastada aniden siyanoz, taşikardi (185 atım/dk), hipertansiyon (180-190 mmHg) ve ardından nabızsız ventriküler taşikardi (VT) gelişmiştir. Kardiyopulmoner resüsitasyon (CPR) ve defibrilasyon uygulamalarıyla sinüs ritmi sağlanan hasta, Anestezi Yoğun Bakım Ünitesi'nde terapötik hipotermi, antiödem ve inotrop tedavileriyle takip edilmiş ve 17. günde ekstübe edilerek şifayla taburcu edilmiştir. Klinik uygulamalarda adrenalin içerikli lokal anesteziklerin sistemik toksisite riskine karşı azami dikkat gösterilmesi gerektiği vurgulanmıştır.
Anahtar Kelimeler: Lokal Anestezi, Toksite, Rinoplasti, Kardiyak Arrest, Yoğun Bakım.

ÜÇÜNCÜ BASAMAK BİR ÜNİVERSİTE HASTANESİNDE 2015-2025 YILLARI ARASINDA BİLGİSAYARLI TOMOGRAFİ KULLANIM EĞİLİMLERİ: ÇEVRESEL OLAYLARIN RADYOLOJİK İŞ HACMİNE ETKİSİ

COMPUTED TOMOGRAPHY UTILIZATION TRENDS IN A TERTIARY UNIVERSITY HOSPITAL BETWEEN 2015 AND 2025: THE IMPACT OF ENVIRONMENTAL EVENTS ON RADIOLOGICAL WORKLOAD

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Abstract
With technological advancements, computed tomography (CT) has become an indispensable component of modern diagnostic imaging. Large-scale epidemiological events and general healthcare policies can substantially affect the workload and examination distribution profiles of radiology departments. This study aimed to evaluate the shifts in CT imaging utilization at the Radiology Department of Gaziantep University Şahinbey Research and Application Hospital from 2015 to 2025, investigating their relationships with the COVID-19 pandemic and the newly opened city hospital in the region. For this purpose, the number of CT examinations were retrieved retrospectively from the Picture Archiving and Communication System (PACS) and categorized by anatomical regions. The number of patient visits to the emergency department and outpatient clinics for the same years, obtained from the Hospital Information Management System, was also recorded. The findings were interpreted taking into account the COVID-19 pandemic that began in 2020, and the opening of Gaziantep City Hospital in October 2023. Throughout all years, there were 2 CT scanners in the Radiology department. The total number of CT scans increased from 24,872 in 2015 to 39,680 in 2025, showing an increase of approximately 60%. During the same period, the total number of patients visiting our hospital also increased by 68%. In 2020, during the pandemic, although the total number of patient admissions to our hospital decreased by 33% compared to the previous year, the number of CT scans increased by 22%. The main reason for this extraordinary increase was that the number of thoracic CT scans increased by 121% during this period. By 2021, hospital admissions rebounded near 2019 levels; during this year, despite a 13% drop in chest CTs, sharp increases in all other CT categories propelled the total CT volume to an all-time high of 44,994 scans. In 2024, following the opening of Gaziantep City Hospital, the number of outpatient visits decreased by 14% and the total number of CT scans decreased by 15% compared to 2023. Despite the absence of a decline in dynamic CT examinations and an increase of 1,048 in the number of CT angiography examinations, reductions in brain CT (4,347), thoracic CT (2,058), and upper abdominal CT (993) were the primary drivers of the overall decline in CT volume. Overall, changes in CT utilization over the 11-year study period could not be explained solely by changes in patient volume. During the COVID-19 pandemic, thoracic CT utilization increased markedly despite a decline in total patient visits. In the following year, all CT subgroups except thoracic CT showed an increase in examination numbers. The opening of the city hospital reduced the burden of routine CT scans at the university hospital, allowing greater capacity to be allocated to more specialized examinations such as CT angiography and dynamic CT.
Keywords: Computed Tomography, Workload, COVID-19.

Özet
Teknolojik gelişmelerle birlikte, bilgisayarlı tomografi (BT) modern tanısal görüntülemenin vazgeçilmez bir bileşeni haline gelmiştir. Büyük ölçekli epidemiyolojik olaylar ve genel sağlık politikaları, radyoloji departmanlarının iş yükünü ve tetkik dağılım profillerini önemli ölçüde etkileyebilmektedir. Bu çalışmada, Gaziantep Üniversitesi Şahinbey Araştırma ve Uygulama Hastanesi Radyoloji Departmanında 2015-2025 yılları arasında gerçekleştirilen BT incelemelerindeki değişimlerin COVID-19 pandemisi ve bölgede yeni açılan şehir hastanesi ile ilişkisinin araştırılması amaçlandı. Bunun için hastanemizin Görüntü Arşivleme ve İletişim Sisteminden (PACS) elde edilen

BT tetkik sayıları retrospektif olarak değerlendirildi ve tetkik tiplerine göre gruplandırıldı. Hastane Bilgi Yönetim Sisteminden elde edilen, aynı yıllara ait acil servise ve polikliniğe yapılan hasta başvuru sayıları da kaydedildi. Bulgular 2020 yılında başlayan COVID-19 pandemisi ve Ekim 2023'te Gaziantep Şehir Hastanesi'nin açılması da dikkate alınarak yorumlandı. Tüm yıllarda Radyoloji bölümünde iki adet BT cihazı bulunmaktaydı. Toplam BT tetkik sayısı 2015 yılında 24.872 iken 2025 yılında 39.680'e yükselerek yaklaşık %60 artış gösterdi. Aynı dönemde toplam muayene sayısında da %68 artış izlendi. Pandemi dönemi olan 2020 yılında, bir önceki yıla göre hastanemize toplam hasta girişi %33 azalmasına rağmen BT tetkik sayısı %22 arttı. BT sayısındaki bu sıra dışı artışın en önemli sebebi de bu dönemdeki toraks BT sayısının %121 artarak pik yapmasıydı. Takip eden 2021 yılında ise hastane başvuru sayısı 2019 yılına tekrar yaklaştı. Bu sene toraks BT sayısında %13 azalmaya rağmen diğer tüm tetkiklerdeki artış nedeniyle toplam tetkik sayısı 44.994 ile zirveye ulaştı. Gaziantep Şehir Hastanesi'nin Ekim 2023'te açılmasını takip eden 2024 yılında, bir önceki yıla kıyasla, poliklinik başvuru sayısı %14, toplam BT sayısı da %15 azaldı. Bu dönemde dinamik BT sayısında azalma olmayışı ve BT anjiyografi sayısında kaydedilen 1.048 artışa rağmen, beyin BT sayısının 4.347 adet, toraks BT'nin 2.058 adet, üst abdomen BT'nin 993 adet azalması toplam BT sayısındaki azalmanın başlıca sebebi olarak izlendi. Sonuç olarak, 11 yıllık süreçte BT kullanımındaki değişimlerin yalnızca hasta başvuru sayılarıyla açıklanamayacağı görülmektedir. COVID-19 pandemisinde azalan toplam hasta girişine rağmen toraks BT kullanımı belirgin şekilde artmıştır. Takip eden yılda toraks BT hariç, diğer tüm BT alt gruplarının sayılarında artış izlenmiştir. Şehir hastanesinin açılması ise üniversite hastanesindeki rutin BT tetkik yükünü hafifleterek, BT anjiyografi ve dinamik BT gibi daha özellikli çekimlere daha fazla kapasite ayrılmasına olanak tanımıştır.

Anahtar Kelimeler: Bilgisayarlı Tomografi, İş Yükü, COVID-19.

AKREDİTASYON SÜRECİNDE KLİNİK EĞİTİCİLERE YÖNELİK YAPILANDIRILMIŞ BİR EĞİTİCİ GELİŞİMİ PROGRAMININ KIRKPATRICK MODELİ İLE DEĞERLENDİRİLMESİ

EVALUATION OF A STRUCTURED FACULTY DEVELOPMENT PROGRAM FOR CLINICAL EDUCATORS DURING THE ACCREDITATION PROCESS USING THE KIRKPATRICK MODEL

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Abstract
In medical education, it is critical to enhance the pedagogical competencies of faculty members alongside their clinical expertise to improve educational quality and achieve institutional objectives. Rapid advancements in the field necessitate that teaching staff be well-equipped with contemporary educational methods and techniques. This study aims to evaluate a faculty development program (FDP) implemented for faculty members in the departments of General Surgery, Urology, Obstetrics and Gynecology, ENT, Internal Medicine, and Pediatrics during the accreditation process, utilizing the Kirkpatrick model for evaluation.
The program was developed following systematic program development steps, beginning with a comprehensive needs assessment. In-depth interviews were conducted with faculty members from the relevant departments to identify their specific educational requirements. Based on these findings, a curriculum grounded in adult learning principles was designed to address the needs of clinical educators. Knowledge gain was measured through identical pre-tests and post-tests administered to each group. The program was evaluated at the first two levels of the Kirkpatrick model: "Reaction" (satisfaction) and "Learning" (knowledge gain).
Post-program evaluations revealed exceptionally high satisfaction and achievement rates among participants. Comparison of pre-test and post-test scores demonstrated a statistically significant increase in the participants' knowledge levels regarding medical education concepts ($p<0.05$). Faculty members indicated that the tailored content effectively addressed their roles as clinical educators and successfully met their professional expectations.
This study underscores that accreditation processes serve as a significant opportunity for enhancing educator competencies beyond mere formal compliance. Faculty development programs designed through rigorous needs analysis and evaluated using structured frameworks like the Kirkpatrick model contribute substantially to the quality and sustainability of clinical education. The success of this program is attributed to aligning the training content with the actual clinical needs of the educators and adhering to the principles of adult education.
Keywords: Faculty Development, Kirkpatrick Model, Accreditation, Medical Education, Needs Assessment.

Özet
Tıp eğitiminde kaliteyi artırmak ve kurumsal hedeflere ulaşmak için eğiticilerin, kendi alanlarındaki uzmanlıklarının yanı sıra eğiticilik yetkinliklerini de geliştirmeleri kritik bir öneme sahiptir. Tıp eğitimindeki hızlı gelişmeler, öğretim üyelerinin eğitim yöntem ve teknikleri konusunda donanımlı olmalarını zorunlu kılmaktadır. Bu çalışma, akreditasyon süreci kapsamında Genel Cerrahi, Üroloji, Kadın Hastalıkları ve Doğum, KBB, Dahiliye ve Pediatri anabilim dallarında görev yapan öğretim üyelerine yönelik gerçekleştirilen eğitici gelişimi programının, Kirkpatrick modeli kullanılarak değerlendirilmesini amaçlamaktadır.
Programın geliştirilmesinde literatürde önerilen gereksinim analizi ve program geliştirme basamakları izlenmiştir. İlk aşamada, ilgili branşlardaki öğretim üyelerinin eğitim gereksinimlerini belirlemek amacıyla derinlemesine görüşmeler yapılmıştır. Bu görüşmelerden elde edilen veriler ışığında, yetişkin eğitimi ilkelerine dayalı ve klinik eğiticilerin ihtiyaçlarına yanıt veren bir müfredat oluşturulmuştur.

Eğitim süreci boyunca katılımcılara aynı sorulardan oluşan ön test ve son testler uygulanarak bilgi düzeylerindeki değişim ölçülmüştür. Programın değerlendirilmesi Kirkpatrick modelinin ilk iki seviyesi olan "Reaksiyon" (Memnuniyet) ve "Öğrenme" (Bilgi Artışı) basamaklarında gerçekleştirilmiştir.
Program sonunda yapılan değerlendirmelerde, katılımcıların genel memnuniyet oranlarının ve başarı puanlarının yüksek olduğu saptanmıştır. Ön test ve son test sonuçları karşılaştırıldığında, eğitim sonrasında öğretim üyelerinin tıp eğitimi konularındaki bilgi düzeylerinde istatistiksel olarak anlamlı bir artış kaydedilmiştir ($p<0.05$). Katılımcılar, özellikle ihtiyaçlarına yönelik hazırlanan içeriğin klinik ortamdaki eğitici rollerine katkı sağladığını ve programın beklentilerini karşıladığını belirtmişlerdir.
Bu çalışma, tıp eğitiminde akreditasyon süreçlerinin sadece bir belge alma süreci değil, aynı zamanda eğitici yetkinliklerini geliştirmek için önemli bir fırsat olduğunu göstermektedir. İhtiyaç analizi yapılarak tasarlanan ve Kirkpatrick modeli gibi yapılandırılmış yöntemlerle değerlendirilen gelişim programları, klinik eğitim kalitesinin sürdürülebilirliğine önemli katkılar sunmaktadır. Programın başarısı, eğitimin eğiticilerin gerçek klinik ihtiyaçlarına dayandırılmasının ve yetişkin eğitimi prensiplerine uygun olarak yürütülmesinin bir sonucudur.
Anahtar Kelimeler: Eğitici Gelişimi, Kirkpatrick Modeli, Akreditasyon, Tıp Eğitimi, İhtiyaç Analizi.

KRONİK TROMBOEMBOLİK HASTALIĞI TAKLİT EDEN PULMONER ARTER HİDATİK HASTALIĞI: LİTERATÜR TARAMASI VE TEMSİLİ BİR VAKA ÖRNEĞİ

PULMONARY ARTERY HYDATID DISEASE MIMICKING CHRONIC THROMBOEMBOLIC DISEASE: A REVIEW OF THE LITERATURE ACCOMPANIED BY A REPRESENTATIVE CASE

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ABSTRACT

Background

Hydatid disease remains an important health problem in endemic areas and most frequently involves the liver and lungs. Pulmonary arterial involvement is uncommon, yet when present it may result in non-thrombotic pulmonary embolism, chronic vascular obstruction, and pulmonary hypertension. Because both clinical presentation and imaging findings can resemble chronic thromboembolic pulmonary hypertension (CTEPH), the diagnosis is often overlooked or delayed.

Literature Review and Clinical Findings

Previously reported cases of hydatid pulmonary embolism have largely been associated with rupture of hepatic or right-sided cardiac hydatid cysts into the vascular system. Isolated pulmonary arterial endovascular involvement appears to be considerably rarer. We evaluated a 21-year-old male patient with chronic cough, recurrent hemoptysis, and pleuritic chest pain that had persisted for nearly two years. Pulmonary CT angiography demonstrated multiloculated cystic filling defects within the left pulmonary arterial circulation. Positive hydatid serology supported the diagnosis of non-thrombotic hydatid pulmonary embolism. The patient subsequently underwent left lower lobectomy and remains clinically stable without complications after one year of follow-up.

Conclusion

Hydatid disease should be considered in patients with atypical pulmonary arterial filling defects, especially in endemic regions and in cases mimicking chronic thromboembolic disease. Early recognition and appropriate surgical management may prevent progressive pulmonary vascular complications.

Keywords: Hydatid pulmonary embolism, Endovascular hydatid disease, Non-thrombotic pulmonary embolism, Pulmonary artery hydatid cyst, Chronic pulmonary vascular obstruction

ÖZET

Giriş

Hidatik hastalık, endemik bölgelerde önemli bir sağlık sorunu olmaya devam etmekte olup en sık karaciğer ve akciğerleri tutmaktadır. Pulmoner arter tutulumu nadir görülmekle birlikte geliştiğinde non-trombotik pulmoner emboli, kronik vasküler obstrüksiyon ve pulmoner hipertansiyona neden olabilmektedir. Klinik ve görüntüleme bulgularının kronik tromboembolik pulmoner hipertansiyon (KTEPH) ile benzerlik gösterebilmesi nedeniyle tanı sıklıkla gözden kaçmakta veya gecikmektedir.

Literatür Derlemesi ve Klinik Bulgular

Literatürde bildirilen hidatik pulmoner emboli olgularının büyük kısmı, hepatik veya sağ kalp yerleşimli hidatik kistlerin vasküler sisteme rüptürü ile ilişkilidir. Buna karşılık izole pulmoner arter endovasküler tutulumu oldukça nadir görünmektedir. Kliniğimizde değerlendirilen 21 yaşındaki erkek hastada yaklaşık iki yıldır devam eden kronik öksürük, tekrarlayan hemoptizi ve plöritik göğüs ağrısı mevcuttu. Pulmoner BT anjiyografide sol pulmoner arteriyel sistem içerisinde multiloküle kistik dolum defektleri izlendi. Pozitif hidatik seroloji sonucuyla birlikte hastaya non-trombotik hidatik pulmoner emboli tanısı konuldu. Hasta daha sonra sol alt lobektomi operasyonu geçirdi ve bir yıllık takip sürecinde komplikasyonsuz klinik stabilite gösterdi.

Sonuç
Özellikle endemik bölgelerde, atipik pulmoner arter dolum defektleri ve kronik tromboembolik hastalığı taklit eden klinik tablolar varlığında hidatik hastalık ayırıcı tanıda düşünülmelidir. Erken tanı ve uygun cerrahi yaklaşım, progresif pulmoner vasküler komplikasyonların önlenmesine katkı sağlayabilir.
Anahtar Kelimeler: Hidatik pulmoner emboli, Endovasküler hidatik hastalık, Non-trombotik pulmoner emboli, Pulmoner arter hidatik kisti, Kronik pulmoner vasküler obstrüksiyon

FIGURE

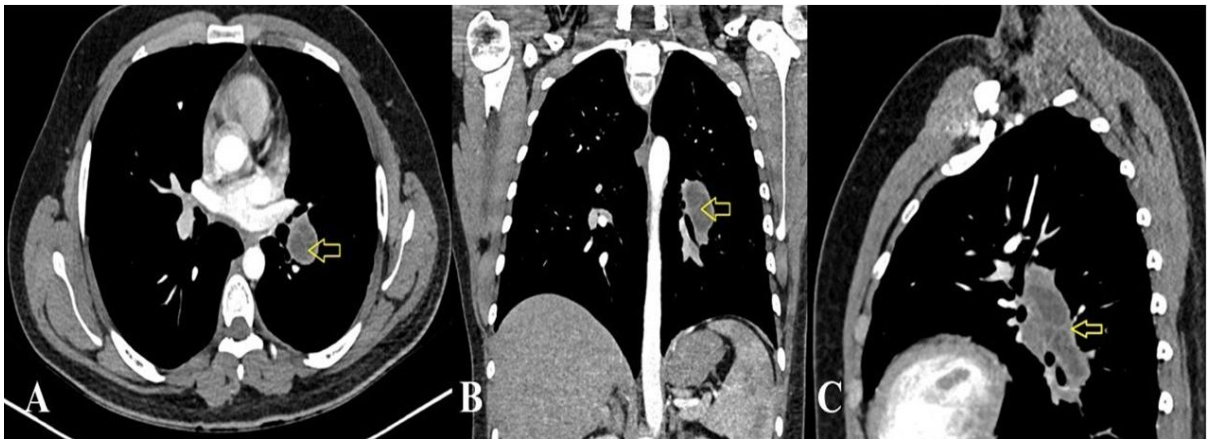


Figure 1. Pulmonary artery hydatid embolism caused by an endovascular hydatid cyst. (A) Axial CT angiographic image showing a spherical intraluminal cystic lesion within the left pulmonary artery (arrowhead). (B,C) Coronal and sagittal reformatted images demonstrating distal vascular extension.

MICROPLASTIC CONTAMINATION IN PACKAGED FOODS: SOURCES, SPREAD ROUTES AND EFFECTS ON HUMAN HEALTH

PAKETLİ GIDALARDA MİKROPLASTİK KONTAMİNASYONU: KAYNAKLAR, YAYILIM YOLLARI VE İNSAN SAĞLIĞINA ETKİLERİ

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ABSTRACT
Microplastics (MPs), defined as plastic particles smaller than 5 mm, have emerged as a global threat to food safety and environmental health. This review comprehensively examines the sources of microplastic contamination in packaged foods, their distribution pathways, occurrence across different food groups, transfer through the food chain, and potential effects on human health, drawing on current scientific literature. Mechanical abrasion from packaging materials, thermal exposure, industrial processing, and environmental contamination are identified as the primary factors contributing to microplastic accumulation in food products. Microplastic presence has been documented across a wide range of food categories, including bottled water, dairy products, seafood, salt, honey, and cereals. Beyond acting as physical contaminants, microplastics also pose a chemical hazard by serving as carriers for toxic substances such as plastic additives (BPA, phthalates) and heavy metals. Laboratory studies indicate that microplastic exposure may induce intestinal inflammation, oxidative stress, and endocrine disruption, while nanoplastics have been reported to enter the bloodstream and accumulate in organs such as the liver and kidneys. Sensitive population groups, including children, pregnant women, and the elderly, are considered to be at particularly elevated risk. The findings discussed in this review highlight the urgent need for standardised analytical methods, wider adoption of sustainable packaging technologies, and the strengthening of regulatory policies to mitigate human exposure to microplastics through packaged food.
Keywords: Microplastics, packaged food, food safety, plastic packaging, human health

ÖZET
Mikroplastikler (MP), 5 mm'den küçük plastik parçacıklar olarak tanımlanmakta ve günümüzde gıda güvenliği ile çevre sağlığı açısından küresel bir tehdit oluşturmaktadır. Bu derleme çalışmasında, paketli gıdalarda mikroplastik kontaminasyonunun kaynakları, yayılım yolları, gıda gruplarındaki varlığı, besin zincirine taşınımı ve insan sağlığı üzerindeki olası etkileri güncel literatür eşliğinde kapsamlı biçimde ele alınmaktadır. Ambalaj kaynaklı mekanik aşınma, ısı etkisi, üretim süreçleri ve çevresel maruziyet; gıdalarda mikroplastik birikimine yol açan başlıca faktörler olarak öne çıkmaktadır. Şişelenmiş sular, süt ürünleri, deniz ürünleri, tuz, bal ve tahıllar dahil olmak üzere geniş bir gıda yelpazesinde mikroplastik varlığı belgelenmiştir. Mikroplastikler fiziksel kirletici olmalarının yanı sıra, plastik katkı maddeleri (BPA, ftalatlar) ve ağır metaller gibi toksik kimyasalların taşıyıcısı olarak da insan sağlığını tehdit etmektedir. Laboratuvar çalışmaları, mikroplastik maruziyetinin bağırsak inflamasyonu, oksidatif stres ve endokrin sistem bozukluklarına yol açabileceğine işaret etmekte; nanoplastiklerin ise kan dolaşımına geçerek karaciğer ve böbrek gibi organlarda birikebildiği belirtilmektedir. Çocuklar, hamileler ve yaşlılar gibi hassas popülasyonların bu kirleticilere karşı daha yüksek risk altında olduğu düşünülmektedir. Mevcut bulgular, risk değerlendirmesi ve çözüm önerileri bağlamında tartışılmakta; standart analiz yöntemlerinin geliştirilmesi, sürdürülebilir ambalaj teknolojilerinin yaygınlaştırılması ve düzenleyici politikaların güçlendirilmesi önerilmektedir.
Anahtar Kelimeler: Mikroplastik, paketli gıda, gıda güvenliği, plastik ambalaj, insan sağlığı

SUSAM SÜTÜ VE SUSAM SÜTÜ TOZUNUN ÜRETİMİ VE KARAKTERİZASYONU

PRODUCTION AND CHARACTERIZATION OF SESAME MILK AND SESAME MILK POWDER

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Abstract
Sesame, traditionally used in the production of tahini and sesame oil, has emerged in recent years as a potential raw material for plant-based milk alternatives. The growing demand for plant-based milks is driven by lactose intolerance, health-conscious dietary trends, environmental sustainability requirements, the increasing prevalence of vegan diets, and a shift toward alternative protein sources. Plant-based milks are emulsion-based beverages obtained by extracting legumes, grains, nuts, or oilseeds with water. However, these products exhibit physicochemical properties that vary depending on raw materials and processing conditions and may present physical stability issues, particularly due to their high water content and emulsion structures. In contrast, sesame-based milk systems have been the subject of only a limited number of studies in the literature compared to other plant-based milk alternatives. In this study, sesame milk was produced through water-based extraction of sesame at a 1:4 (w/w; sesame:water) ratio, followed by homogenization and filtration. Subsequently, the obtained sesame milk was converted into powder form by freeze-drying without the addition of emulsifiers or stabilizers. The moisture, ash, and total fat contents of the raw sesame material were determined, while the produced sesame milk was characterized in terms of pH, titratable acidity, °Brix, refractive index, color (L*, a*, b*), moisture, ash, water activity, and viscosity. The pH and titratable acidity of sesame milk were determined as 7.34 and 0.05% (expressed as oleic acid), respectively, indicating that the product exhibited a near-neutral and low-acid character. At 25°C, the viscosity, °Brix value, and refractive index of sesame milk were measured as 1.68 mPa·s, 0.2, and 1.333, respectively. The moisture and ash contents were found to be 88.29% and 0.10%, respectively, while the water activity at 25°C was determined as 0.93, indicating a high-moisture system. In color analysis, the L*, a*, and b* values were measured as 76.86, −1.69, and 5.68, respectively. Freeze-drying successfully produced sesame milk powder; however, the resulting product exhibited a sticky structure, indicating the need for formulation optimization. The use of emulsifiers and carrier agents may improve the physical stability and powder properties of the product. Overall, sesame was identified as a potential raw material for the production of plant-based milk and sesame milk powder.
Keywords: Sesame Milk, Plant-Based Milk, Freeze-Drying, Physicochemical Properties

Özet
Geleneksel olarak tahin ve susam yağı üretiminde kullanılan susam, son yıllarda bitkisel süt alternatifleri için potansiyel bir hammadde olarak öne çıkmaktadır. Bitkisel sütlere yönelik artan talep; laktoz intoleransı, sağlık odaklı beslenme eğilimleri, çevresel sürdürülebilirlik gereksinimleri, vegan beslenme eğiliminin yaygınlaşması ve alternatif protein kaynaklarına yönelimin artmasıyla ilişkilendirilmektedir. Bitkisel sütler, baklagiller, tahıllar, kuruyemişler veya yağlı tohumların su ile ekstraksiyonu sonucu elde edilen emülsiyon yapılı içeceklerdir. Ancak bu ürünler, hammadde ve proses koşullarına bağlı olarak değişen fizikokimyasal özellikler sergilemekte ve özellikle yüksek su içeriği ile emülsiyon yapıları nedeniyle fiziksel stabilite sorunları gösterebilmektedir.

Bununla birlikte, susam bazlı süt sistemleri literatürde diğer bitkisel süt alternatiflerine kıyasla sınırlı sayıda çalışmaya konu olmuştur. Bu çalışmada, susam sütü; susamın 1:4 (a/a; susam; su) oranında su bazlı ekstraksiyonu, ardından homojenizasyon ve filtrasyon işlemlerinin uygulanmasıyla elde edilmiştir. Sonraki aşamada, formülasyona herhangi bir emülgatör veya stabilizatör ilave edilmeksizin susam sütü dondurarak kurutma yöntemi ile toz hâline dönüştürülmüştür. Hammaddenin nem, kül ve toplam yağ miktarları analiz edilirken, üretilen susam sütünün ise pH, titrasyon asitliği, °Brix, kırılma indisi, renk (L*, a*, b*), nem, kül, su aktivitesi ve viskozite değerleri analiz edilmiştir. Susam sütünün pH değerinin 7,34 ve titrasyon asitliğinin ise oleik asit cinsinden %0,05 olduğu tespit edilmiş olup, ürünün nötr karaktere yakın ve düşük asidik bir yapıda olduğu belirlenmiştir. Susam sütünün 25°C'de viskozitesi 1,68 mPa·s, °Brix değeri 0,2 ve kırılma indisi ise 1,333 olarak ölçülmüştür. Nem ve kül içerikleri sırasıyla %88,29 ve %0,10 iken 25°C'deki su aktivitesi ise 0,93 olarak hesaplanmıştır. Renk analizinde L*, a* ve b* değerleri sırasıyla 76,86, -1,69 ve 5,68 olarak bulunmuştur. Dondurarak kurutma işlemi ile üretilen susam sütü tozunun yapışkan bir yapıya sahip olması nedeni ile formülasyon geliştirme ihtiyacı ortaya çıkmıştır. Elde edilen toz ürünün fiziksel özelliklerinin iyileştirilmesi amacıyla emülgatör ve taşıyıcı ajan kullanımının ürün stabilitesini artırmada önemli olabileceği değerlendirilmiştir. Sonuç olarak susamın bitkisel süt ve süt tozu üretimi için potansiyel bir hammadde olduğu belirlenmiştir.
Anahtar kelimeler: Susam Sütü, Bitkisel Süt, Dondurarak Kurutma, Fizikokimyasal Özellikler

ISPARTA GÜL LOKUMU: GELENEKSEL MİRASIN BİLİMSEL KARAKTERİZASYONU

ISPARTA ROSE TURKISH DELIGHT: SCIENTIFIC CHARACTERIZATION OF A TRADITIONAL HERITAGE

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Abstract
Isparta Rose Turkish Delight is a traditional confectionery produced through a unique manufacturing method using sugar, water, starch, and rose paste (“gül mayası”) derived from the flowers of *Rosa damascena* Mill., a locally cultivated rose registered with a protected designation of origin (PDO). This study aims to characterize Isparta rose Turkish delight by determining its microbial, physicochemical, and sensory properties. The production formulation consists of granulated sugar, water, starch, citric acid, and 6% by weight of Isparta rose paste. Supported by the Isparta Chamber of Commerce and Industry, samples were collected from different production batches of four well-known traditional manufacturers in Isparta. The samples were analyzed for acidity, dry matter, moisture, color, total mesophilic aerobic bacteria, coliforms, yeast, and mold, alongside a descriptive sensory analysis. The transition of the aroma profile from the rose paste to the final product was determined using a Gas Chromatography-Mass Spectrometry (GC-MS) system, with mass spectra verified against the NIST and Wiley libraries (90% and above). The findings revealed similar characteristic attributes across the samples obtained from different manufacturers. Coliform bacteria and mold were not detected in any of the samples. In the sensory evaluation, descriptive attributes such as "lingering rose aftertaste", "intensity of natural rose aroma", "aroma profile balance", and "melt in the mouth texture" received high scores from the panelists. According to the GC-MS aroma profile analysis, phenylethyl alcohol, one of the dominant volatile compounds of rose aroma, was determined to range between 60.47% and 61.06% in the collected samples. Furthermore, key characteristic rose components such as citronellol, geraniol, and nerol were successfully identified. No synthetic flavor compounds were detected in the products. These findings provide a critical reference point for protecting Isparta rose Turkish delight against food fraud and adulteration. Preserving its natural ingredients and traditional production techniques is of paramount importance for protecting this unique cultural heritage, transferring it to future generations, and enhancing its international recognition.
Keywords: Isparta rose Turkish delight, aroma profile, characteristic properties

Özet
Isparta Gül Lokumu; şeker, su, nişasta ve Isparta’da yetiştirilen Isparta gülü, *Rosa damascena Mill* çiçeklerinden elde edilen gül mayası kullanılarak, kendine özgü üretim metoduyla üretilen geleneksel bir şekerleme ürünüdür. Isparta gülü, “menşe adı” ile tescilli olup karakteristik özelliklerini buradan almaktadır. Bu araştırmanın amacı Isparta gül lokumunun mikrobiyal, fizikokimyasal ve duyusal özelliklerinin tespit edilerek ürünün karakterize edilmesidir. Üretimde toz şeker, su, nişasta, sitrik asit ve ağırlıkça %6 oranında Isparta gül mayası kullanılmaktadır. Bu araştırmada, Isparta Ticaret ve Sanayi Odasının sağladığı destekle, Isparta’da uzun yıllardır geleneksel üretim yapan 4 firmadan farklı parti üretimlerinden gül lokumu örnekleri toplanmıştır. Örneklerin asitlik, kuru madde, rutubet, renk, toplam mezofilik aerobik bakteri, koliform, maya ve küf analizleriyle tanımlayıcı duyusal analizi yapılmıştır. Gül mayasından, Isparta gül lokumuna geçen aroma profilin belirlenmesi, GC-MS sistemi kullanılarak, kütle spektrumlarının NIST ve Wiley kütüphaneleriyle karşılaştırılmasıyla (%90 ve üzeri eşleşme) gerçekleştirilmiştir.

Isparta gül lokumunun farklı firmalardan sağlanan örneklerinden benzer karakteristik bulgular elde edilmiştir. Örneklerde Koliform bakteri ve küfe rastlanmamıştır. Duyusal analizlerde “ağızda kalan gül aroması”, “doğal gül kokusu yoğunluğu”, “aroma profil dengesi” ve “ağızda eriyen yapı” tanımlayıcı kelimeleri panelistler tarafından yüksek skorlar almıştır. Isparta gül lokumuna özgü aroma profili analizinde, GC-MS bulgularına göre baskın gül aroması bileşenlerinden olan fenil etil alkol, toplanan örneklerde %61.06 ile %60.47 aralığında tespit edilmiştir. Ayrıca sitronellol, geraniol, nerol bileşenleri de güle özgü karakteristik bileşenler olarak örneklerde tespit edilmiştir. Ürünlerde yapay aroma bileşenlerine rastlanmamıştır. Elde edilen veriler, Isparta gül lokumunun taklit ve tağşişten korunması adına kritik bir referans teşkil etmektedir. Doğal içeriklerin ve geleneksel üretim tekniklerinin korunması, bu eşsiz kültürel mirasın gelecek nesillere aktarılması ve uluslararası tanıtımı açısından büyük önem taşımaktadır.
Anahtar Kelimeler: Isparta gül lokumu, aroma profili, karakteristik özellikler

AQUAFABA TEMELLİ YENİLEBİLİR FİLM VE KAPLAMALAR: ATIKTAN AMBALAJA

EDIBLE FILMS AND COATINGS BASED ON AQUAFABA: FROM WASTE TO PACKAGING

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Abstract
Aquafaba (legume cooking water), an innovative ingredient that has attracted attention in food technology in recent years, is gaining increasing interest. This by-product, derived particularly from legumes such as chickpeas, possesses emulsifying, foaming, and stabilising properties. The drive to reduce food waste and the growing demand for plant-based products have rapidly expanded the scope of research into aquafaba.
The literature reports that aquafaba has been successfully used in various food systems. Its use as an egg substitute in vegan and gluten-free products has been shown to enhance the structural and sensory quality of items such as cakes and mayonnaise. Additionally, aquafaba has contributed to the development of edible films when used in combination with plant-based polymers. This demonstrates that aquafaba can be used as a food ingredient and can also be considered as a functional carrier system.
Research in the literature has investigated the significant potential of aquafaba in active packaging systems. In particular, it has been found that when combined with essential oils, it reduces rancidity and extends the shelf life of foods.
However, there are still many key areas where aquafaba needs to be developed further. These include the standardisation of its functional properties and its sensory acceptability.
Aquafaba is generally regarded as an important alternative ingredient for the future, both in terms of environmental sustainability and food innovation.
Keywords: Aquafaba, Edible film, Waste, Coating, Legume

Özet
Son yıllarda gıda teknolojisinde dikkat çeken yenilikçi bir bileşen olan aquafaba, (baklagil pişirme suyu) giderek ilgi görmektedir. Özellikle nohut gibi baklagillerden elde edilen bu yan ürün, emülsifiye edici, köpük oluşturucu ve stabilite sağlayıcı özelliklere sahiptir. Gıda israfının azaltılması ve bitkisel bazlı ürünlere olan talebin artması, aquafabanın araştırma alanını hızla genişletmiştir.
Literatürde aquafabanın farklı gıda sistemlerinde başarılı şekilde kullanıldığı rapor edilmiştir. Vegan ve glutensiz ürünlerde yumurta yerine kullanımı, kek ve mayonez gibi ürünlerde yapısal ve duyusal kaliteyi desteklediği gösterilmiştir. Ayrıca aquafaba bitkisel polimerlerle birlikte kullanılarak yenilebilir filmlerin geliştirilmesine katkı sağlamıştır. Bu durum, aquafabanın bir gıda bileşeni olarak kullanılabileceğini, aynı zamanda fonksiyonel bir taşıyıcı sistem olarak da değerlendirilebileceğini göstermektedir. Literatürde, aquafabanın aktif ambalaj sistemlerinde önemli bir potansiyele sahip olduğu araştırılmıştır. Özellikle esansiyel yağlarla kombine edildiğinde ransiditeyi azaltarak gıdaların raf ömrünü uzattığı tespit edilmiştir.
Bununla birlikte, aquafabanın halen geliştirilmesi gereken birçok temel alan bulunmaktadır. Bunlar bazıları fonksiyonel özelliklerinin standardizasyonu, duyusal kabul edilebilirliğidir. Genel olarak aquafaba, hem çevresel sürdürülebilirlik hem de gıda inovasyonu açısından gelecekte önemli bir alternatif bileşen olarak değerlendirilmektedir.
Anahtar Kelimeler: Aquafaba, Yenilebilir film, Atık, Kaplama, Baklagil

OPTIMIZING THE COLORATION AND COMPLEXATION KINETICS OF REACTIVE-DYED WOOL FABRICS: A COMPARATIVE STUDY OF METALLIC AND BIO-MORDANTING METHODOLOGIES

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Abstract
This study elucidates the role of coordination chemistry and ligand exchange kinetics in modulating the colorimetric profiles, fixative stability, and macro-performance fastness properties of 100% wool gabardine fabrics dyed with reactive colorants. Although reactive dyes traditionally achieve fixation via the establishment of covalent linkages with the nucleophilic domains (-NH_2, -OH, and -SH) of the amphoteric keratin matrix, their fundamental wet and photostability profiles can be systematically re-engineered through secondary chelation pathways using polyvalent metal ions and macromolecular organic ligands. Herein, three distinct processing configurations pre-mordanting, meta-mordanting and post-mordanting were comparatively evaluated using a matrix of Potassium Aluminum Sulphate, Ferrous Sulfate, Zinc Sulphate, and Tannic Acid. To maximize dye exhaustion while mitigating the risk of structural polypeptide hydrolysis, hydrothermal fixation was executed under pressurized conditions at 105C° within a stabilized buffer system maintained at pH 5. Spectrophotometric characterization and quantitative colorimetric analyses were performed utilizing the CIELAB color space to track multi-directional, rigorous vectors of change in lightness (L*), chroma (C*), and hue angle (h°) following standardized accelerated laundering (ISO 105-C06) and high-intensity xenon-arc light exposure (ISO 105-B02). The empirical outcomes demonstrate that the chronological sequencing of mordant introduction dictates the competitive bath kinetics and the spatial distribution of the resulting dye-metal coordination complexes within the amorphous and crystalline regions of the fiber. This research provides a critical methodological framework for synthesizing high-performance, structurally optimized supramolecular color networks on technical protein substrates.
Keywords: wool, reactive dyes, mordants, bio mordants, light fastness, wet fastness

KUMAŞ BOYAMADA SÜPREM VE ELASTAN KARIŞIMLI KUMAŞLARDA KULLANILAN BOYA, KİMYASAL VE ENZİM MİKTARINA GÖRE FİRE ARAŞTIRMASI

INVESTIGATION OF WASTE RATES ACCORDING TO DYE, CHEMICAL, AND ENZYME DOSAGES USED IN THE DYEING OF SINGLE JERSEY AND ELASTANE-BLENDED FABRICS

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Abstract
Controlling waste rates during dyeing processes is of great importance for reducing production costs and achieving sustainability goals in the textile industry. In particular, the dyeing of single jersey and elastane (spandex)-blended knitted fabrics requires more precise process management than conventional cotton fabrics due to the sensitive nature of elastane fibers. Improper dye, chemical, and enzyme dosages may lead to quality deterioration, increased waste rates, and significant economic losses.
This study investigates the effects of dye, chemical, and enzyme dosages used in the dyeing processes of single jersey and elastane-blended fabrics on production waste rates. In the first stage, existing production processes are analyzed, and waste rates together with relevant process parameters are systematically recorded. Subsequently, controlled dyeing trials are conducted using different dye, chemical, and enzyme concentrations, and the collected data are evaluated through statistical analysis. The study aims to identify the process parameters that have the greatest impact on waste generation and to determine the optimum dyeing conditions that minimize production losses.
Based on the findings, effective dyeing recipes and process recommendations that both preserve fabric quality and reduce waste rates are expected to be developed. The outcomes of this research are anticipated to contribute to cost reduction, improved production efficiency, and the promotion of sustainable manufacturing practices within the textile industry. Furthermore, the study will provide practical guidance for optimizing dyeing processes in elastane-containing knitted fabrics and support continuous improvement efforts in textile production.
Keywords: Single Jersey Fabric, Elastane (Spandex), Production Waste Rate, Dyeing Process

Özet
Tekstil sektöründe üretim maliyetlerinin azaltılması ve sürdürülebilir üretim hedeflerinin gerçekleştirilmesi açısından boyama süreçlerinde oluşan fire oranlarının kontrol altına alınması büyük önem taşımaktadır. Özellikle süprem ve elastan (spandeks) karışımlı örme kumaşların boyanması, elastan liflerinin hassas yapısı nedeniyle standart pamuklu kumaşlara kıyasla daha dikkatli proses yönetimi gerektirmektedir. Uygun olmayan boya, kimyasal ve enzim dozajları; kumaş kalitesinde düşüşe, yüksek fire oranlarına ve ekonomik kayıplara neden olabilmektedir.
Bu çalışmada, süprem ve elastan karışımlı kumaşların boyama süreçlerinde kullanılan boya, kimyasal ve enzim miktarlarının üretim sırasında oluşan fire oranlarına etkisi araştırılmıştır. İlk aşamada mevcut üretim süreçleri incelenerek fire oranları ve proses parametreleri kayıt altına alınmıştır. Daha sonra farklı boya, kimyasal ve enzim dozajları kullanılarak kontrollü deneme boyamaları gerçekleştirilmiş ve elde edilen veriler istatistiksel yöntemlerle analiz edilmiştir. Analizler sonucunda fire oluşumuna en fazla etki eden parametrelerin belirlenmesi ve optimum proses koşullarının ortaya konulması hedeflenmiştir. Elde edilen bulgular doğrultusunda, hem kumaş kalitesini koruyan hem de üretim kayıplarını azaltan boyama reçeteleri ve proses önerileri geliştirilmesi amaçlanmaktadır. Çalışmanın, tekstil işletmelerinde maliyetlerin düşürülmesine, üretim verimliliğinin artırılmasına ve sürdürülebilir üretim uygulamalarının desteklenmesine katkı sağlayacağı öngörülmektedir.
Anahtar kelimeler: Süprem Kumaş, Elastan (Spandeks), Fire Oranı ,Boyama prosesi

SAVUNMA HAVACILIK ÜRETİMİNDE SINIRLI VERİ KOŞULLARINDA İŞÇİLİK SÜRESİ TAHMİNİ: MODEL KARARLILIĞI VE GENELLEME GÜVENİLİRLİĞİ ÜZERİNE BİR DEĞERLENDİRME

LABOR TIME ESTIMATION UNDER LIMITED DATA CONDITIONS IN DEFENSE AVIATION MANUFACTURING: AN EVALUATION OF MODEL STABILITY AND GENERALIZATION RELIABILITY

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Abstract
Estimating part-level labor hours in defense aviation manufacturing can support budget preparation and capacity planning by reducing uncertainty in production-related decisions. However, in institutional production datasets, the limited number of observations and the indirect representation of manufacturing characteristics through available variables may weaken the generalization reliability of predictive models. This study evaluates model stability and generalization behavior under limited data conditions using an anonymized dataset consisting of 135 parts from a defense aviation project. Labor hours were treated as the target variable, while unit price, cumulative historical orders, total order frequency, and ATA Chapter were used as explanatory variables. Before model development, the distributional characteristics of numerical variables were examined; transformation and scaling procedures were applied where necessary, and the categorical variable was encoded appropriately. Linear Regression, Ridge Regression, Random Forest Regression, and a Multilayer Perceptron-based neural network were compared using both a train-test split and five-fold cross-validation results. The findings indicate that more complex model structures do not necessarily provide more reliable results in small-sample settings. The relatively balanced error behavior of Ridge Regression, together with the unstable performance observed in the MLP model, highlights the importance of aligning model complexity with data size and variable quality. The study emphasizes that labor time estimation in defense aviation manufacturing should not be assessed only through algorithm selection. Instead, predictive performance should be interpreted together with data scope, explanatory variable relevance, and generalization stability. In this respect, the study provides a focused methodological evaluation for improving data-driven decision-support practices in labor time estimation.
Keywords: Labor Time Estimation, Limited Data, Model Stability, Generalization Reliability, Defense Aviation.

Özet
Savunma havacılık üretiminde parça düzeyinde işçilik saatinin tahmin edilmesi, bütçe hazırlama ve kapasite planlama süreçlerinde belirsizliği azaltmaya yardımcı olmaktadır. Bununla birlikte, bu tür kurumsal üretim verilerinde gözlem sayısının sınırlı olması ve açıklayıcı değişkenlerin üretim sürecini doğrudan değil dolaylı biçimde temsil etmesi, tahmin modellerinin genelleme güvenilirliğini tartışmalı hale getirmektedir. Bu çalışmada, anonimleştirilmiş bir savunma havacılık projesinden elde edilen 135 parçalık veri seti kullanılarak sınırlı veri koşullarında farklı model yapılarına ait kararlılık ve genelleme davranışı değerlendirilmiştir. İşçilik saati hedef değişken olarak ele alınmış; birim fiyat, toplam geçmiş sipariş, toplam sipariş sıklığı ve ATA Chapter değişkenleri açıklayıcı değişken olarak kullanılmıştır. Modelleme öncesinde sayısal değişkenlerin dağılım özellikleri incelenmiş, gerekli dönüşüm ve ölçekleme işlemleri uygulanmış, kategorik değişkenler uygun biçimde kodlanmıştır. Doğrusal regresyon, Ridge regresyon, Random Forest regresyon ve çok katmanlı algılayıcı tabanlı yapay sinir ağı modelleri eğitim-test ayrımı ve beş katlı çapraz doğrulama sonuçları üzerinden karşılaştırılmıştır.

Bulgular, daha karmaşık model yapılarının küçük örneklem koşullarında her zaman daha güvenilir sonuç üretmediğini göstermektedir. Ridge regresyonun daha dengeli hata davranışı sergilemesi, buna karşılık MLP modelinin performansındaki değişkenlik, veri büyüklüğü ile model karmaşıklığı arasındaki uyumun önemini ortaya koymaktadır. Çalışma, savunma havacılık üretiminde işçilik süresi tahmini için model başarısının yalnızca algoritma seçimine değil, veri kapsamı, değişken niteliği ve genelleme kararlılığına bağlı olarak değerlendirilmesi gerektiğini vurgulamaktadır.
Anahtar kelimeler: İşçilik Süresi Tahmini, Sınırlı Veri, Model Kararlılığı, Genelleme Güvenilirliği, Savunma Havacılık.

BULANIK AHP-TOPSIS YÖNTEMLERİ İLE ALÜMİNYUM KÜLÇE TEDARİKÇİSİ SEÇİMİ

ALUMINUM INGOT SUPPLIER SELECTION USING FUZZY AHP-TOPSIS METHODS

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Abstract
Supplier selection is one of the strategic decision-making problems that directly affects the cost, quality, and production performance of enterprises. Particularly in the aluminum casting industry, the timely, sustainable, and quality-compliant procurement of raw materials is of critical importance for the efficiency of production processes. In this study, the most suitable supplier of aluminum ingots used in the melting process of an enterprise operating in the metal industry and engaged in aluminum casting production was selected.Within the scope of the study, six different aluminum ingot suppliers were evaluated based on twelve criteria: product quality, cost, delivery time, production capacity, technical capability, defect rate, logistics suitability, flexibility, references, communication, financial stability, and R&D competence. In order to reflect the uncertainty and linguistic assessments of decision-makers in the model, an integrated approach combining the Fuzzy Analytic Hierarchy Process (Fuzzy AHP) and Fuzzy TOPSIS methods was employed.In the first stage, criterion weights were calculated using the Fuzzy AHP method, and product quality, cost, defect rate, delivery time, and technical capability were identified as the most important criteria in the decision-making process. In the second stage, supplier ranking was conducted using the Fuzzy TOPSIS method. According to the findings, Supplier B achieved the highest closeness coefficient and ranked first, making it the most suitable aluminum ingot supplier for the enterprise.The study contributes to both the literature and practitioners by comprehensively evaluating supplier selection criteria specific to the aluminum casting industry and presenting a real industrial application.
Keywords: Fuzzy AHP, Fuzzy TOPSIS, Supplier Selection, Aluminum Ingot, Multi-Criteria Decision Making (MCDM).

Özet
Tedarikçi seçimi, işletmelerin maliyet, kalite ve üretim performansını doğrudan etkileyen stratejik karar problemlerinden biridir. Özellikle alüminyum döküm sektöründe kullanılan hammaddelerin uygun kalite seviyesinde, zamanında ve sürdürülebilir şekilde temin edilmesi üretim süreçlerinin etkinliği açısından kritik önem taşımaktadır. Bu çalışmada, metal sektöründe faaliyet gösteren ve alüminyum döküm üretimi gerçekleştiren bir işletmede eritme prosesinde kullanılan alüminyum külçe için en uygun tedarikçi seçimi yapılmıştır. Çalışma kapsamında altı farklı alüminyum külçe tedarikçisi; ürün kalitesi, maliyet, teslimat süresi, üretim kapasitesi, teknik yeterlilik, hata oranı, lojistik uygunluk, esneklik, referans, iletişim, finansal istikrar ve Ar-Ge yetkinliği olmak üzere toplam on iki değerlendirme kriteri kapsamında değerlendirilmiştir. Karar vericilerin değerlendirmelerindeki belirsizlikleri ve sözel ifadeleri modele yansıtabilmek amacıyla Bulanık Analitik Hiyerarşi Prosesi (Bulanık AHP) ve Bulanık TOPSIS yöntemleri bütünleşik olarak kullanılmıştır. İlk aşamada kriter ağırlıkları Bulanık AHP yöntemi ile hesaplanmıştır ve ürün kalitesi, maliyet, hata oranı, teslimat süresi ve teknik yeterlilik kriterlerinin karar sürecinde en önemli kriterler olduğu belirlenmiştir. İkinci aşamada Bulanık TOPSIS yöntemi ile tedarikçi sıralaması yapılmıştır ve elde edilen bulgulara göre Tedarikçi B en yüksek yakınlık katsayısına sahip olarak ilk sırada yer almış ve işletme için en uygun alüminyum külçe tedarikçisi olarak belirlenmiştir. Çalışma, alüminyum döküm sektörüne özgü tedarikçi seçim kriterlerini bütüncül bir yaklaşımla değerlendirmesi ve gerçek bir endüstriyel uygulama sunması bakımından literatüre ve uygulayıcılara katkı sağlamaktadır.
Anahtar Kelimeler: Bulanık AHP, Bulanık TOPSIS, Tedarikçi Seçimi, Alüminyum Külçe, Çok Kriterli Karar Verme.

İŞYERİNİN ÖTESİ: ILO C190 VE R206 ÇERÇEVESİNDE TÜRK HUKUKUNDA ŞİDDET VE TACİZ KARŞISINDA KORUMANIN YENİDEN DÜŞÜNÜLMESİ

BEYOND THE WORKPLACE: RETHINKING PROTECTION AGAINST VIOLENCE AND HARASSMENT IN TURKISH LAW UNDER ILO C190 AND R206

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Abstract
This paper examines, within the framework of ILO Convention No. 190 (C190) and Recommendation No. 206 (R206), examines the existing legal basis in Turkish law for combating violence and harassment in the world of work, identifies areas where there is potential for alignment, and explores why protection must be addressed beyond the narrow, location- and status-centred frameworks. The study's central argument is that the internal dynamics of Turkish labour law and judicial precedent provide a foundation that aligns with the relationship-centred and universal protection approach of C190 and R206. The Supreme Court defines the workplace not merely as a physical space, but as a work organisation structured on the basis of unity of purpose and management. Article 2 of the Labour Code No. 4857 also conceptualises the workplace as a whole, including affiliated locations, annexes and vehicles. This approach aligns substantially with the concept of the 'world of work' adopted by C190. The declaration argues that the same protective logic must be extended to the concept of the "worker" and the personal scope of protection. When Article 417 of the Turkish Code of Obligations is considered alongside the Occupational Health and Safety Act No. 6331 and constitutional foundations, it is evident that a strong normative core compatible with C190 already exists within Turkish law. The main shortcoming lies in the failure to interpret this core sufficiently comprehensively and holistically, as well as in the gaps in procedural and institutional safeguards such as protection against complaints, investigations and reprisals. Consequently, this study positions C190 and R206 not as texts imposed on Turkish law from the outside, but as a framework that deepens the existing protective potential in line with human rights and the principles of good governance. The duty of public authorities and public employers is not merely to react to violations after the fact, but to build a preventive, transparent, accountable and effective protection framework.
Keywords: ILO Convention No. 190, ILO Recommendation No. 206, violence and harassment, world of work, Turkish labour law

Özet
Bu bildiri, ILO'nun 190 Sayılı Sözleşmesi (C190) ve 206 Sayılı Tavsiye Kararı (R206) çerçevesinde, çalışma hayatında şiddet ve tacizle mücadelenin Türk hukuku bakımından hangi mevcut dayanaklara sahip olduğunu, hangi alanlarda uyum potansiyeli bulunduğunu ve korumanın neden mekân ile statü merkezli dar kalıpların ötesinde ele alınması gerektiğini incelemektedir. Çalışmanın temel argümanı, Türk iş hukukunun kendi iç dinamiğinin ve yargısal içtihadının, C190 ve R206'nın ilişki merkezli ve evrensel koruma anlayışıyla örtüşen bir zemin sunduğu yönündedir. Yargıtay, işyerini salt fiziksel bir mekân olarak değil, amaç ve yönetim birliği temelinde örgütlenen bir iş organizasyonu olarak tanımlamaktadır. 4857 sayılı İş Kanunu'nun 2. maddesi de işyerini, bağlı yerler, eklentiler ve araçlarla birlikte bir bütün olarak kurgulamaktadır. Bu yaklaşım, C190'ın benimsediği "iş dünyası/ekosistemi" (world of work) kavramıyla esaslı biçimde örtüşmektedir. Bildiri, aynı koruyucu mantığın "işçi" kavramına ve korumanın kişisel kapsamına taşınması gerektiğini savunmaktadır. Türk Borçlar Kanunu'nun 417. maddesi, 6331 sayılı İş Sağlığı ve Güvenliği Kanunu ile anayasal dayanaklar bir arada değerlendirildiğinde, Türk hukukunda C190 ile uyumlu güçlü bir normatif çekirdeğin halihazırda mevcut olduğu görülmektedir. Asıl eksiklik, bu çekirdeğin yeterince kapsayıcı ve bütüncül yorumlanmayışında ile başvuru, soruşturma ve misillemeye karşı koruma gibi usul ve kurum güvencelerindeki boşluklarda yatmaktadır.

Sonuç itibarıyla çalışma, C190 ve R206'yı Türk hukukuna dışarıdan dayatılan metinler olarak değil; mevcut koruyucu potansiyeli insan hakları ve iyi idare ilkeleri yönünde derinleştiren bir çerçeve olarak konumlandırmaktadır. Kamusal makamların ve kamu işverenlerinin görevi yalnızca ihlale sonradan tepki vermek değil; önleyici, şeffaf, hesap verebilir ve etkili bir koruma mimarisi inşa etmektir.

Anahtar Kelimeler: ILO 190 Sayılı Sözleşme, ILO 206 Sayılı Tavsiye Kararı, şiddet ve taciz, çalışma hayatı, Türk iş hukuku

PROTECTION OF WOMEN'S RIGHT TO BODILY AUTONOMY AND THE FETUS'S RIGHT TO LIFE

KADININ BEDENSEL ÖZERKLİK HAKKININ KORUNMASI VE FETÜSÜN YAŞAMA HAKKI

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Abstract
The principle of bodily autonomy, which refers to an individual's authority to make decisions concerning their own body, is one of the fundamental principles of liberal legal theory. According to this principle, no individual may be compelled to make their body available for the use of another without their free and informed consent. No one can be legally required to donate an organ or provide blood in order to save another person's life. Even when another person's life is at risk, the law generally prioritizes the protection of an individual's bodily integrity. During pregnancy, however, the fetus's existence depends directly upon the woman's body. Fetal development is made possible through the mother's organs, metabolism, and biological resources. The continuation of pregnancy requires the continuous use of the woman's bodily labor and biological capacities throughout the gestational process. The fact that the woman's body does not belong to the fetus and that she retains primary authority over her own life is a natural consequence of the right to life. In particular, reproductive rights are widely recognized as an integral component of the right to life, encompassing a woman's freedom to make decisions regarding her own fertility and reproductive capacity. This understanding places the interests of the pregnant woman and those of the fetus in direct tension within the framework of the right to life. The conflict between the pregnant woman's right to life and the fetus's right to life cannot be resolved simply through a hierarchy of human rights. Even if the fetus is recognized as possessing a right to life, this does not automatically confer upon it a legal entitlement to use the woman's body. In situations involving competing fundamental rights, priority should be given to the right that carries greater normative weight. In this context, the woman's authority to make decisions concerning her own body constitutes the higher-order right. As a manifestation of the principle of bodily autonomy, this authority safeguards the woman's exclusive control over her own body. Accordingly, the moral legitimacy of abortion should not be assessed solely in terms of the moral or legal status of the fetus, but also with due regard to the woman's liberty, dignity, and bodily integrity. Compelling a woman to continue an unwanted pregnancy constitutes a restriction—and potentially a violation—of her fundamental human rights. Consequently, defending the right to abortion is grounded not in the denial of the value of fetal life, but rather in the recognition of the woman as an autonomous bearer of rights.
Keywords: Bodily Autonomy; Protection of Women's Bodily Autonomy; Fetal Right to Life; compelled bodily use; Moral Legitimacy of Abortion.

Özet
Bireyin kendi bedeni üzerinde karar verme yetkisini anlatan bedensel özerklik ilkesi, Liberal hukuk teorisinin temel ilkelerinden biridir. Bu ilkeye göre hiçbir birey, kendi rızası olmaksızın bedenini başkasının kullanımına sunmaya zorlanamaz. Hiç kimse bir başkasının yaşamını kurtarmak amacıyla zorla organ bağışına veya kan vermeye mecbur tutulamaz. Başka bir kişinin yaşamı tehlikede olsa bile hukuk, bireyin bedensel bütünlüğünü korumayı tercih etmektedir. Gebelik durumunda, fetüsün yaşamı doğrudan annenin bedenine bağlıdır.

Fetüsün gelişimi annenin organları, metabolizması ve biyolojik kaynakları sayesinde mümkün olmaktadır. Gebeliğin sürdürülmesi, kadının bedensel emeğini ve biyolojik kapasitesini sürekli olarak kullanmayı gerektiren bir süreçtir. Kadın bedeninin fetüse ait olmaması ve kadının öncelikle kendi yaşamı üzerinde söz sahibi olması, yaşama hakkının doğal bir sonucudur. Özellikle üreme hakları, yaşama hakkı kapsamında kadının kendi doğurganlığı üzerinde karar verme özgürlüğünün ayrılmaz bir parçası olarak kabul edilmektedir. Bu kabul, anne ile fetüsü, yaşama hakkı bağlamında karşı karşıya getirir. Anne ile fetüs arasındaki yaşama hakkı çatışması, insan hakları hiyerarşisi içinde kolayca çözülemez. Fetüsün yaşama hakkının kabul edilmesi, fetüse doğrudan annenin bedeni üzerinde kullanım hakkı doğurtmaz. İnsan haklarının çatışması durumunda yüksek değer taşıyan insan hakkının önceliği bulunmaktadır. Hakların çatışması durumunda, annenin kendi bedeni üzerinde karar verme yetkisi daha yüksek bir değerdir. Annenin kendi bedeni üzerinde karar verme yetkisi, bedensel özerklik ilkesinden doğan bir hak olarak, annenin kendi bedeni üzerinde karar verme yetkisini korur. Bu yüzden kürtajın ahlaki meşruiyeti, yalnızca fetüsün statüsü üzerinden değil, aynı zamanda kadının özgürlüğü, onuru ve bedensel bütünlüğü dikkate alınarak değerlendirilmelidir. Kadının istemediği bir gebeliği sürdürmeye zorlanması, onun temel insan haklarının sınırlandırılması ve ihlali anlamına gelirken, kürtaj hakkının savunulması, fetüsün değerinin reddedilmesinden ziyade kadının özerk bir hak öznesi olarak tanınmasına dayanmaktadır.

Anahtar Kelimeler: Bedensel Özerklik Hakkı, Kadının Bedensel Özerklik Hakkının Korunması, fetüsün yaşama hakkı, zorunlu beden kullanımı**,** Kürtajın ahlaki meşruiyeti.

THE INVISIBILITY OF POWER AND PANOPTIC SURVEILLANCE IN FOUCAULT

FOUCAULT'DA İKTİDARIN GÖRÜNMEZLİĞİ VE PANOPTİK DENETİM

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Abstract
Power occupies a central position in Michel Foucault's understanding of social control. While traditional political theories generally explain power through relations of sovereignty and coercion, Foucault argues that power possesses a productive character. According to Foucault, power does not merely restrict individuals; it also produces knowledge, constructs identities, and shapes patterns of behavior. Social control is therefore not limited to processes of prohibition and punishment. Rather, power directs mechanisms of social control by producing systems of knowledge that define what individuals perceive as normal, legitimate, and acceptable. Foucault further argues that modern societies have developed a variety of institutions to discipline individuals. Schools, hospitals, military barracks, factories, and prisons represent the principal institutions of disciplinary power. The primary objective of disciplinary power is to produce obedient, productive, and governable individuals. To achieve this goal, individuals' behaviors are continuously observed, measured, and evaluated. The use of time, bodily movements, and levels of performance are meticulously regulated. Contemporary examples of disciplinary mechanisms include the assessment of students through examinations in educational institutions, the classification of individuals within healthcare systems, and performance evaluation practices in workplaces. Surveillance occupies a central place in Foucault's analysis of social control. In this context, the concept of the Panopticon serves as a crucial analytical framework. Originally designed by Jeremy Bentham as an architectural model for prisons, the Panopticon was reinterpreted by Foucault as a metaphor for the functioning of modern society. Within the panoptic system, individuals live under the constant possibility of being observed. Whether surveillance is continuous is less important than the individual's belief that they may always be watched. Consequently, individuals begin to regulate their own behavior without the need for external coercion, disciplining themselves even in the absence of direct intervention. According to Foucault, the effectiveness of modern societies largely depends on the widespread internalization of this mechanism of self-discipline. Social control is thus exercised less through overt repression than through participation, self-regulation, and internalized surveillance, confirming Foucault's analysis of the invisibility of power.
Keywords: Disciplinary Society, Institutionalization of Control, Surveillance Society, Panoptic Surveillance, Invisibility of Power.

Özet
Michel Foucault'nun toplumsal kontrol anlayışının merkezinde iktidar kavramı bulunmaktadır. Geleneksel siyaset teorilerinde iktidar çoğunlukla egemenlik ve baskı ilişkileri üzerinden açıklanırken, Foucault iktidarın üretken bir karaktere sahip olduğunu savunmaktadır. Foucault'ya göre iktidar bireyleri yalnızca sınırlandırmaz; aynı zamanda bilgi üretir, kimlikler oluşturur ve davranış kalıpları meydana getirir. Toplumsal kontrol sadece yasaklama ve cezalandırma süreçlerinden oluşmaz. İktidar bireylerin neyi normal, doğru veya kabul edilebilir olarak göreceklerini belirleyen bilgi sistemleri de üreterek toplumsal kontrol mekanizmalarına yön verir. Foucault, modern toplumlarda iktidarın bireyleri disiplin altına almak amacıyla çeşitli kurumlar geliştirdiğini belirtmektedir.

Okullar, hastaneler, kışlalar, fabrikalar ve hapishaneler bu disiplin mekanizmalarının başlıca örnekleridir. Disiplinci iktidarın temel amacı itaatkâr, üretken ve denetlenebilir bireyler oluşturmaktır. Bunun için bireylerin davranışları sürekli gözlemlenmekte, ölçülmekte ve değerlendirilmektedir. Bu süreçte zamanın kullanımı, beden hareketleri ve performans düzeyleri ayrıntılı biçimde düzenlenmektedir. Eğitim kurumlarında öğrencilerin başarılarının sınavlarla ölçülmesi, sağlık kurumlarında bireylerin çeşitli kategorilere ayrılması veya iş yerlerinde performans değerlendirme sistemlerinin uygulanması disiplinci kontrol mekanizmalarının güncel örnekleri olarak değerlendirilebilir. Foucault'nun toplumsal kontrol analizlerinde gözetim merkezi bir yere sahiptir. Bu bağlamda panoptikon kavramı önemli bir açıklayıcı araç olarak kullanılmaktadır. Bentham tarafından geliştirilen panoptikon modeli, Foucault tarafından modern toplumun işleyişini açıklayan bir metafor olarak yeniden yorumlanmıştır. Panoptik sistemde bireyler sürekli gözetlenme ihtimali altında yaşamaktadır. Gözetimin sürekli olup olmadığı önemli değildir; önemli olan bireyin sürekli izlenebileceğini düşünmesidir. Böylece birey dışsal bir baskıya gerek kalmaksızın kendi davranışlarını denetlemeye başlamakta ve kuralların uygulanmasını beklemeden kendi kendilerini disipline etmektedirler. Foucault'ya göre modern toplumların başarısı da tam olarak bu öz denetim mekanizmasının yaygınlaşmasına dayanmakta ve bu toplumlarda kontrol, baskıdan çok katılım ve öz denetim yoluyla gerçekleşmekte ve Foucault'nun iktidarın görünmezliğine ilişkin analizlerini doğrulamaktadır.

Anahtar kavramlar: Disiplin Toplumu, Kontrolün Kurumsallaşması, Gözetim toplumu, Panoptik Denetim, İktidarın görünmezliği.

ANONİM ŞİRKETLERDE HAKLI SEBEPLE FESİH DAVASININ USUL HUKUKU BOYUTU

THE PROCEDURAL ASPECT OF THE ACTION FOR DISSOLUTION OF JOINT-STOCK COMPANIES FOR JUST CAUSE

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Abstract
The action for dissolution for just cause with alternative solutions, granted to minority shareholders in joint-stock companies pursuant to Article 531 of the Turkish Commercial Code No. 6102, is an important legal instrument that prevents the violation of minority rights by exerting pressure on the majority. This action possesses a unique structure not only in its substantive law foundations but also in its functioning within the framework of civil procedure rules.
In the context of the conditions of action, while shareholders representing at least ten percent of the basic capital in closed joint-stock companies, and five percent in publicly held companies can bear the plaintiff status; the passive legitimation (capacity to be sued) of the action must imperatively be directed to the legal entity of the company. The fact that the decision to be rendered is of a nature to affect a wide circle of interests related to the company enables other shareholders who are not in the position of plaintiff and employees to participate in the dispute as accessory interveners. During the adjudication process, the determination of the existence of just cause is directly a matter of substantive law concerning the merits of the case, rather than a procedural examination.
The decision to dissolve the joint-stock partnership bears the nature of a last resort (*ultima ratio*). It is necessary for the court to primarily evaluate alternative solutions. This situation also constitutes an important exception to the principle of being bound by the claims in civil procedure law. Indeed, the court, without remaining bound by the claims of the parties, may rule for the exclusion of the plaintiff from the company or for other alternative solutions fitting the characteristics of the concrete event. The court's authority to rule for outcomes different from dissolution restricts the principle of party presentation prevailing in procedural law; and requires the court to act in accordance with the principle of investigation, whereby it does not merely content itself with the case material presented by the parties, but can personally investigate and gather the substantive facts and evidence regarding the dispute. Furthermore, due to the formative (constitutive) nature of the action, the dissolution or alternative solution decisions established by the court only produce their legal consequences and become executable upon becoming final.
Keywords: Joint-Stock Company, Dissolution for Just Cause, Alternative Solutions, Civil Procedure Law.

Özet
6102 sayılı Türk Ticaret Kanunu m. 531 uyarınca anonim şirketlerde azınlık pay sahiplerine tanınan alternatif çözümlü haklı sebeple fesih davası, çoğunluk üzerinde baskı oluşturarak azınlık haklarının ihlal edilmesini engelleyen önemli bir hukuki imkândır. Bu dava, maddi hukuk temelleri kadar medeni usul hukuku kuralları çerçevesindeki işleyişiyle de özgün bir yapıya sahiptir.
Dava şartları bağlamında, kapalı anonim şirketlerde esas sermayenin en az yüzde onunu, halka açık şirketlerde ise yüzde beşini temsil eden pay sahipleri davacı sıfatını taşıyabilirken; davanın pasif husumeti zorunlu olarak şirket tüzel kişiliğine yöneltilmelidir. Verilecek kararın şirketle ilişkili geniş bir menfaat çevresini etkileyecek mahiyette olması, davacı konumunda olmayan diğer pay sahiplerinin ve işçilerin uyuşmazlığa feri müdahil olarak katılabilmelerini olanaklı kılar. Yargılama sürecinde haklı sebebin varlığının tespiti, usuli bir incelemeden ziyade, doğrudan davanın esasıyla ilgili maddi hukuka ilişkin bir sorundur.
Anonim ortaklığın feshine karar verilmesi bir son çare (ultima ratio) niteliği taşır. Mahkemenin öncelikle alternatif çözümleri değerlendirmesi gereklidir.

Bu durum, medeni usul hukukundaki taleple bağlılık ilkesinin de önemli bir istisnasını oluşturur. Zira mahkeme tarafların talepleriyle bağlı kalmaksızın davacının şirketten çıkarılmasına veya somut olayın özelliklerine uygun düşen başkaca alternatif çözümlere hükmedebilir. Mahkemenin fesihten farklı sonuçlara hükmedebilme yetkisi, usul hukukuna egemen olan taraflarca getirilme ilkesini sınırlandırmakta; mahkemenin salt tarafların sunduğu dava malzemesiyle yetinmeyip, uyuşmazlığa ilişkin maddi olguları ve delilleri bizzat araştırıp toplayabileceği araştırma ilkesine göre hareket etmesini gerektirmektedir. Ayrıca davanın yenilik doğuran (inşai) niteliği gereği, mahkemece tesis edilen fesih veya alternatif çözüm kararları ancak kesinleşmesiyle birlikte hukuki sonuçlarını doğurur ve icra edilebilir hâle gelir.

Anahtar kelimeler: Anonim Şirket, Haklı Sebeple Fesih, Alternatif Çözümler, Medeni Usul Hukuku.

POLİS BİYOPOLİTİKANIN ÖZNESİ Mİ? MODERN İKTİDARIN BEDEN ÜZERİNDEN İNŞASI

IS THE POLICE THE SUBJECT OF BIOPOLITICS? THE CONSTRUCTION OF MODERN POWER THROUGH THE BODY

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Abstract
This study revisits the figure of the police within Michel Foucault's framework of biopolitics through the question of whether the police should be understood as a subjector an instrument of power. Modern power operates not only through laws, legal systems, and institutional sanctions, but also through bodies, behaviors, and forms of subjectivity. To explain this process, Foucault distinguishes between two interconnected dimensions of power: anatomo-politics, which disciplines individual bodies, and biopolitics, which regulates populations as a manageable whole. The figure of the police emerges precisely at the intersection of these two dimensions. Foucault's concept of "Polizei" refers not simply to the modern poliçe institution in its narrow sense, but to a broader governmental rationality thats ought to regulate the welfare, productivity, and order of populations in seventeenth- andeighteenth-century Europe. The modern police instituti oninherits this historical legacy. However, this study argues that the police is not merely an executor of power, but also a subject constituted through mechanisms of power itself. In this respect, Foucault's dual understanding of the "subject" (sujet) —both as an acting agent and as a subjected being (*assujetti*) — provides the principal theoretical framework for analyzing the position of the police. The study adopts a theoretical and conceptual mode of analysis. In this context, Foucault's *The Birth of Biopolitics*, *The History of Sexuality*, and *Discipline and Punish* are examined alongside Mark Neocleous's critique of police power and Didier Fassin's ethnographic studies on urban policing. The analysis demonstrates that policing practices discipline the body of the individual, rendering it functional and governable, while simultaneously transforming this disciplined body into a subject capable of governing others. Persistent discourses of risk, threat, and security enable the police subject to monitor itself and internalize relations of power. Inconclusion, the police should be understood not only as an executor of biopolitical power, but also as a subject-field produced and reproduced through that very power. Therefore, the police occupies a dual position as both the subject and the instrument of biopolitics.
Keywords: Biopolitics, Police, Subject, Body, Discipline

Özet
Bu çalışma, Michel Foucault'nun biyopolitika yaklaşımı çerçevesinde polis figürünü "özne mi yoksa araç mı?" sorusu üzerinden yeniden tartışmayı amaçlamaktadır. Modern iktidar yalnızca hukuk, yasa ve kurumsal yaptırımlar aracılığıyla değil; bedenler, davranışlar ve öznellik biçimleri üzerinden de işlemektedir. Foucault, bu işleyişi açıklamak için birbirini tamamlayan iki iktidar düzleminden söz eder: bireysel bedenleri disipline eden anatomo-politika ve nüfusu yönetilebilir bir bütün olarak düzenleyen biyopolitika. Polis figürü ise bu iki düzlemin kesişim noktasında konumlanmaktadır. Foucault'nun "Polizei" kavramsallaştırması, günümüzdeki dar anlamıyla polis teşkilatından ziyade, 17. ve 18. Yüzyıl Avrupa'sında nüfusun refahını, üretkenliğini ve toplumsal düzenini yönetmeye yönelik kapsamlı bir yönetim anlayışına işaret etmektedir. Modern polis kurumu da bu tarihsel mirasın devamı niteliğindedir. Ancak çalışma, polisin yalnızca iktidarın uygulayıcısı olmadığını; aynı zamanda iktidar mekanizmaları tarafından biçimlendirilen bir özne olduğunu ileri sürmektedir. Bu bağlamda Foucault'nun "özne" (sujet) kavramının çift anlamı — hem eyleyen/fail olmak hem de tabi kılınmak (assujetti) — polisin konumunu çözümlemek açısından temel kuramsal dayanak olarak ele alınmaktadır. Araştırma, kuramsal ve kavramsal çözümleme yöntemine dayanmaktadır.

Bu doğrultuda Foucault'nun *Biyopolitikanın Doğuşu*, *Cinselliğin Tarihi* ve *Hapishanenin Doğuşu* adlı eserleri; Mark Neocleous'un polis erki eleştirisi ve DidierFassin'in kentsel polislik çalışmalarındaki etnografik yaklaşımla birlikte değerlendirilmektedir. Çözümleme sonucunda, polislik pratiğinin bireyin bedenini disipline ederek onu işlevsel ve denetlenebilir hale getirdiği; aynı zamanda bu disipline edilmiş bedenin başkalarını denetleyen bir özneye dönüştüğü görülmektedir. Sürekli risk, tehdit ve güvenlik söylemleri, polis öznesinin kendi kendini denetlemesini ve iktidar ilişkilerini içselleştirmesini sağlamaktadır. Sonuç olarak polis, biyopolitik iktidarın yalnızca uygulayıcısı değil; aynı zamanda bu iktidar tarafından üretilen ve yeniden üretilmesini sağlayan bir özne-alan olarak değerlendirilebilir. Bu nedenle polis figürü, biyopolitikanın hem öznesi hem de aracı olarak düşünülmelidir.

Anahtar Kelimeler: Biyopolitika, Polis, Özne, Beden, Disiplin

HASTANE ÇALIŞANLARINDA KESİCİ-DELİCİ ALET YARALANMALARININ RETROSPEKTİF İNCELENMESİ: YENİLİKÇİ BİR ÇÖZÜM ÖNERİSİ

RETROSPECTIVE ANALYSIS OF SHARPS INJURIES AMONG HOSPITAL WORKERS: AN INNOVATIVE SOLUTION PROPOSAL

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Abstract
Sharps injuries (SI) are among the leading and most common occupational risks for healthcare professionals worldwide and in Turkey. These injuries occur when medical instruments such as syringe needles, scalpel blades, and ampoule fragments compromise skin integrity. They pose a serious life-threatening danger due to the risk of transmitting more than 20 bloodborne pathogens, including Hepatitis B, Hepatitis C, and HIV. Literature reviews indicate that a significant portion of these injuries, between 80-90%, can be prevented through the use of safe materials and engineering controls. The objective of this study is to retrospectively examine sharps injury (SI) cases occurring at Abdulkadir Yüksel State Hospital between 2019 and 2026 and to propose an innovative solution to the risks arising from the design of current medical waste containers.
As part of the study, occupational accident records reported to the Social Security Institution (SGK) by the occupational health and safety unit will be analyzed. Current literature and field observations demonstrate that nurses and, particularly, cleaning staff during the waste collection process are the groups at the highest risk. However, reporting rates remain insufficient, falling between 40-70%, due to factors such as fear of blame, indifference, lack of knowledge, and intense working conditions. The narrow-mouth structure and lack of a fill level indicator in current waste containers increase the risk of injury by causing instruments to fall to the floor or the container capacity to be exceeded.
The innovative design developed as a solution to this problem features a funnel-type wide mouth and a transparent fill level indicator. The wide mouth structure allows sharps to be transferred directly into the container after invasive procedures without manual handling. Meanwhile, the transparent indicator aims to prevent overflow-related accidents by facilitating the tracking of the 3/4 fill ratio. In conclusion, beyond education and administrative measures, developing engineering controls is considered of critical importance in reducing sharps injury cases.
Keywords: Sharps Injuries, Occupational Health and Safety, Innovative Design, Waste Management, Healthcare Workers.

Özet
Sağlık hizmetlerinde kesici delici alet yaralanmaları (KDAY), dünya genelinde ve Türkiye'de sağlık profesyonelleri için en büyük ve en sık karşılaşılan mesleki risklerin başında gelmektedir. Bu yaralanmalar; enjektör iğneleri, bistüri uçları ve ampul kırıkları gibi tıbbi araçların deri bütünlüğünü bozmasıyla meydana gelmekte ve Hepatit B, Hepatit C ile HIV gibi 20'den fazla kan yoluyla bulaşan patojenin iletim riski nedeniyle ciddi hayati tehlike oluşturmaktadır. Literatür çalışmaları, bu yaralanmaların %80-90 gibi büyük bir kısmının güvenli malzeme kullanımı ve mühendislik önlemleriyle önlenebileceğini göstermektedir. Bu çalışma ile, 2019-2026 yılları arasında Abdulkadir Yüksel Devlet Hastanesi'nde meydana gelen kesici delici alet yaralanmaları (KDAY) vakalarını retrospektif olarak inceleyerek, mevcut tıbbi atık kutularının tasarımından kaynaklanan risklere yönelik yenilikçi bir çözüm önerisi sunmaktır.

Çalışma kapsamında, iş sağlığı ve güvenliği birimi tarafından SGK'ya bildirimi yapılan iş kazası kayıtları analiz edilecektir. Mevcut literatür ve saha gözlemleri, hemşirelerin ve özellikle atık toplama sürecindeki temizlik personelinin en yüksek risk altındaki gruplar olduğunu; ancak suçlanma korkusu, önemsememe, bilgi eksikliği ve yoğun çalışma koşulları nedeniyle bildirim oranlarının %40-70 aralığında eksik kaldığını göstermektedir. Mevcut atık kutularının dar ağız yapısı ve doluluk göstergesinin bulunmaması, aletlerin yere düşmesine veya kutu kapasitesinin aşılmasına neden olarak yaralanma riskini artırmaktadır.

Bu soruna çözüm olarak geliştirilen yenilikçi tasarım; huni tipi geniş ağız yapısı ve şeffaf doluluk göstergesi içermektedir. Geniş ağız yapısı, invaziv işlemler sonrası kesici aletlerin el ile toplanmadan doğrudan kutuya aktarılmasını sağlarken; şeffaf gösterge, kutunun 3/4 doluluk oranının takibini kolaylaştırarak taşma kaynaklı kazaları önlemeyi hedeflemektedir. Sonuç olarak, eğitim ve idari önlemlerin ötesinde, mühendislik kontrollerinin geliştirilmesinin kesici delici alet yaralanması vakalarını azaltmada kritik öneme sahip olduğu öngörülmektedir.

Anahtar Kelimeler: Kesici-Delici Alet Yaralanmaları, İş Sağlığı ve Güvenliği, Yenilikçi Tasarım, Atık Yönetimi, Sağlık Çalışanları.

AĞIZ VE DİŞ SAĞLIĞI MERKEZİNDE SAĞLIK ÇALIŞANLARININ DİJİTAL İŞ SAĞLIĞI VE GÜVENLİĞİ SİSTEMİNE DUYDUĞU GÜVEN VE RAMAK KALA OLAYLARI BİLDİRME İSTEKLİLİĞİ

HEALTHCARE WORKERS' LEVEL OF TRUST IN THE DIGITAL OCCUPATIONAL HEALTH AND SAFETY SYSTEM AND THEIR PROPENSITY TO REPORT NEAR-MISS INCIDENTS AT THE ORAL AND DENTAL HEALTH CENTRE

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Abstract
Whilst approximately half of healthcare workers experience near-miss incidents, official reporting rates remain very low. This study aims to examine the reasons behind this reporting gap through the lens of the perception of 'trust in the system'. The originality of the study lies in the fact that it will not merely leave this gap in the literature to be addressed through survey perceptions, but will instead investigate it using a holistic approach that combines technical risk analysis with official records. Furthermore, it is expected to present an original conceptual model that will eliminate employees' reluctance to report by incorporating the "system trust" parameter into the digital OSH framework. The methodology of this research, for which the design phase has been completed and the field data collection process is ongoing, is based on a three-pronged data validation approach. Moving forward, objective risk scores for the clinical environment will be calculated using the Fine-Kinney method, staff perceptions of trust in the digital system will be measured via surveys, and the organisation's official digital records will be subjected to a comparative analysis. The literature review for the study has clearly demonstrated the theoretical need for trust-based digital OSH strategies that bridge the gap between technical risk data and human perception.
Keywords: Digital OSH, Near-miss incident, ADSM, Healthcare workers, System trust

Özet
Sağlık çalışanlarının yaklaşık yarısı ramak kala olay yaşarken, resmi bildirim oranları oldukça düşük kalmaktadır. Bu çalışma, bu bildirim boşluğunun arkasındaki nedenleri "sisteme güven" algısı üzerinden incelemeyi amaçlamaktadır. Çalışmanın özgünlüğü; literatürdeki bu boşluğu sadece anket algısıyla bırakmayıp, teknik risk analizi ve resmi kayıtları bir arada ele alan bütüncül bir yaklaşımla sorgulayacak olmasıdır. Ayrıca dijital İSG zeminine "sistem güveni" parametresini ekleyerek çalışanların bildirim çekimserliklerini ortadan kaldıracak özgün bir kavramsal model sunması beklenmektedir. Tasarım aşaması tamamlanan ve sahada veri toplama süreci devam eden bu araştırmanın metodolojisi, üçlü bir veri doğrulama yaklaşımına dayanmaktadır. Çalışma kapsamında; Fine-Kinney yöntemiyle klinik ortamın nesnel risk skorları hesaplanacak, personelin dijital sisteme güven algısı anketlerle ölçülecek ve kurumun resmi dijital kayıtları karşılaştırmalı analize tabi tutulacaktır. Araştırmanın literatür taramasında, teknik risk verileri ile insani algı arasındaki kopukluğu giderecek güven temelli dijital İSG stratejilerine olan teorik ihtiyaç net bir şekilde ortaya konulmuştur.
Anahtar Kelimeler: Dijital İSG, Ramak Kala Olay, ADSM, Sağlık Çalışanları, Sistem Güveni

GLYCAEMIC AND ANTIOXIDANT RESPONSES TO SHORT-BOUT MODERATE-INTENSITY PHYSICAL ACTIVITY IN A PREDIABETIC POPULATION: A CLINICAL PERSPECTIVE

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ABSTRACT

Objectives: To determine the effect of moderate-intensity physical activity on glycaemic control and antioxidant capacity in the prediabetic population.

Methods: This experimental study was conducted in the Physiology Department of the Institute of Basic Medical Sciences at Khyber Medical University, Peshawar, Pakistan. A total of 50 adult prediabetic subjects, 22 females and 28 males, aged 18 to 35 years, were included.

The condition was diagnosed based on glycated haemoglobin levels of 5.7% to 6.4% and impaired fasting glucose (100-125 mg/dL). Anthropometric measurements and biochemical assays were performed before and after the exercise intervention. Participants engaged in moderate exercise for 30 minutes, with a maximum heart rate of 7% ± 5%, five days a week for eight weeks, monitored with a pedometer. An enzyme-linked immunosorbent assay was used to measure individual and total antioxidants.

Results: Anthropometric parameters decreased significantly after exercise. Similar changes were observed for fasting glucose ($p < 0.001$) and glycated haemoglobin ($p < 0.001$). A slight increase was noted in uric acid ($p<0.005$) and total antioxidant concentration ($p<0.001$). However, levels of superoxide dismutase, glutathione peroxidase, vitamin C, and nitric oxide decreased ($p<0.001$).

Conclusion: Moderate physical activity for 8 weeks significantly reduced individual antioxidant levels, led to a modest increase in total antioxidant capacity and uric acid, and was associated with a significant decline in anthropometric and diabetic profiles in the prediabetic population.

Keywords: anthropometry, antioxidants, physical activity, prediabetes, total antioxidant capacity

SUCCESSFUL TREATMENT OF RECURRENT EAR KELOID WITH INTRASCAR CRYOSURGERY

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Abstract

Introduction

Keloid scars are pathological fibroproliferative lesions characterized by excessive collagen deposition and abnormal wound healing. Auricular and postauricular keloids represent a particularly challenging clinical problem because of their high recurrence rates, cosmetic significance, and the tendency toward progressive enlargement following repeated surgical interventions. Intralesional cryosurgery has emerged as a tissue-preserving therapeutic option aimed at selective destruction of pathological scar tissue while minimizing damage to surrounding structures.

Methods

We present a clinical case of a 46-year-old male patient with a recurrent postauricular true keloid that developed following otologic surgery for chronic otitis media. Initial postoperative healing was uneventful; however, progressive keloid formation developed within 3 months. Surgical excision of the lesion was followed by recurrence during the subsequent 6 months. Histopathological examination confirmed the diagnosis of a true keloid. Considering the recurrent nature of the lesion, intralesional cryosurgery using a cryoprobe with liquid nitrogen (−196 °C) was selected as the treatment modality.

Results

Immediately after treatment, local freezing, inflammatory edema, blister formation, and transient tissue swelling were observed. By postoperative day 4, marked regression of smaller lesions and softening of larger keloid tissue were noted. Continued reduction in lesion volume occurred by day 12, followed by spontaneous separation of cryodestructed tissue on day 13. During a 3-year follow-up period, no evidence of keloid recurrence was detected. The treated area demonstrated satisfactory cosmetic healing with mild residual pigmentation and no subjective discomfort.

Discussion

This clinical case demonstrates the potential effectiveness of intralesional cryosurgery in the management of recurrent postauricular keloids. The method enabled targeted destruction of pathological

tissue while preserving the epidermal surface and minimizing secondary tissue trauma. Long-term recurrence-free follow-up suggests that intralesional cryosurgery may represent a promising minimally invasive alternative for recurrent auricular keloids, particularly in cosmetically sensitive anatomical regions.

Keywords: keloid, auricular keloid, intralesional cryosurgery, cryotherapy, recurrent keloid, scar management, wound healing

ENHANCED ELECTROCHEMICAL PERFORMANCE OF BI DOPED NI_3SE_2/RGO COMPOSITE SYNTHESIZED VIA HYDROTHERMAL METHOD

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Abstract
The compositing and doping can significantly improve the electrochemical performance of metal selenides by reducing their nanoparticles agglomeration, improved the cycling stability using various dopants and carbon base materials and it is a currently a hot topic in research community. We have successfully fabricated unique heterostructure with Bi-doped Ni_3Se_2 nanoparticles and rGO using a hydrothermal process. The Bi-doped Ni_3Se_2/rGO was characterized using various electrochemical and physical techniques. Bi-doped Ni_3Se_2/rGO were evaluated by different analytical techniques. The results showed outstanding performance in energy storage applications, demonstrating the composite materials potential to improve supercapacitor efficiency. Brunner Emmett Teller determined surface area of fabricated electrode materials, which found to be that composite has greater surfacee area. The Bi doped Ni_3Se_2/rGO exhibits exceptional capacitance C_s of 1194 F g^{-1}, which calculated using GCD that showed stable behavior after the 5000^{th} cycle at 1.0 A g^{-1}. Charge transfer resistance was determined from Nyquist plot which found to be 0.02 Ω. A symmetric supercapacitor featuring Bi-doped Ni_3Se_2/rGO electrodes achieves an impressive energy density (E_d) of 15 Wh kg^{-1} and power density (P_d) of 1140 W kg^{-1}. Furthermore, composite shows the 336 F g^{-1} specific capacitance at a current density (j) of 1 A g^{-1}. The improvement in all above parameters suggested that Bi doped Ni_3Se_2/rGO has potential to utilize as an electrode for upcoming energy storage technologies.
Keywords: Bi doped Ni_3Se_2/rGO; Hydrothermal process; KOH electrolyte; Supercapacitor devices

PIEZOELECTRIC ENERGY HARVESTING FROM HUMAN FOOTSTEPS: DESIGN, DEVELOPMENT, AND EXPERIMENTAL EVALUATION OF A FOOTSTEP-BASED POWER GENERATION SYSTEM

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Abstract
The growing demand for sustainable and decentralized energy solutions has accelerated research into technologies capable of converting ambient mechanical energy into usable electrical power. Piezoelectric energy harvesting from human footsteps offers an attractive approach for powering low-energy electronic devices in high-footfall environments. In this study, a footstep-based piezoelectric energy harvesting system was designed, fabricated, and experimentally evaluated using lead zirconate titanate (PZT) transducers integrated beneath a walking platform. The harvested alternating current (AC) output was processed through a full-wave bridge rectifier, smoothing capacitor, voltage regulator, and energy storage circuit to produce stable direct current (DC) power. The electrical performance of the prototype was systematically investigated under varying user weights, walking frequencies, and impact conditions to assess its energy harvesting capability. Experimental results demonstrated a maximum output voltage of 11.7 V and a peak power generation of 76.05 mW during jumping conditions, while continuous stepping effectively charged the storage unit to power an LED load and other low-power electronic devices. The study confirms the feasibility of harvesting biomechanical energy from human locomotion and demonstrates the potential of optimized piezoelectric flooring systems as sustainable power sources for self-powered sensors, Internet of Things (IoT) devices, and smart infrastructure applications, including railway stations, airports, shopping malls, and educational institutions.
Keywords: Piezoelectric energy harvesting, Human footsteps, PZT transducers, Renewable energy, Smart infrastructure, Footstep power generation.

RENEWABLE ENERGY ADOPTION AND ENERGY TRANSITION POLICIES IN EMERGING ECONOMIES

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ABSTRACT

Due to the current issue of climate change in the world today, there is a great pressing need of switching from fossil fuels to renewable energy sources, which is highlighted by the growing global energy demand, which is being driven by industrialization and population growth. Greenhouse gas emissions from conventional energy systems that depend on coal, natural gas, and oil greatly exacerbate environmental deterioration and climate change.

Sustainable and more environmentally friendly options are provided by renewable energy sources like solar, wind, hydro, and biomass. Particularly noteworthy is the abundance and adaptability of solar energy for industrial, heating, and electricity generation applications. Despite the tremendous advancements in renewable technologies, issues with system integration, storage, and efficiency still exist.

These obstacles are being addressed by recent developments in energy storage, materials science, and smart grid technologies, which will increase the scalability and dependability of renewable energy systems. Global sustainability goals are further supported by incorporating renewable energy sources into contemporary infrastructure, such as smart devices and off-grid applications.

Keywords: Renewable energy, climate change, Fossil fuels, Sustainable energy, and Solar energy.

BIOTECHNOLOGICAL POTENTIAL OF A LACCASE-PRODUCING FUNGAL ISOLATE FOR RED WINE CLARIFICATION AND STABILIZATION

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Abstract
Enzymes have gained significant industrial significance in recent years. Because of their capacity to oxidize both phenolic and non-phenolic lignin-related chemicals, laccases play a significant role in the food industry. The multicopper enzymes known as laccases (benzenediol: oxidoreductases) are part of the family of blue oxidases that oxidize diphenols and utilize molecule oxygen as an electron acceptor. They are present in higher plants and fungi and more recently, several bacterial laccases from *Azospirillum lipoferum*. For our study, we were able to distinguish between 8 distinct fungi by employing serial dilution. They were cultivated on agar plates with the indicator component guaiacol to assess their capacity to make laccase (2-methoxyphenol). A potent laccase producer is thought to be one of the eight isolates. For additional research, the strongest strain, FL1, was employed. The pH was optimised and several nitrogen and carbon sources were employed. Laccase was found to be functional at a range of pH and temperature values. The protein determination and laccase quantification experiment showed that the best carbon supply and nitrogen source, with pH ranges of (5-6). 90% of the cloth dye decolorized when the isolated organism was present. Additionally, the isolated organism's laccase has the ability to successfully stabilise red wine. Red wine had been successfully decolored in twelve hours. Future research is now being done on the processes that cause red wine to turn brown as well as the molecular identification of strong fungus.
Keywords: Laccase, Carbon source, Red wine, *Azospirillum lipoferum*, oxidoreductases.

IN VITRO CALLUS CULTURE OF SOLENOSTEMMA ARGEL: BRIDGING PLANT BIOTECHNOLOGY AND BIOACTIVE COMPOUND PRODUCTION

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Abstract
Solenostemma argel is a medicinal plant widely used in traditional medicine and known for its rich phytochemical profile and diverse biological activities. However, the sustainable exploitation of this species is limited by environmental conditions and overharvesting. In this context, plant tissue culture represents a promising alternative for the controlled production of valuable bioactive compounds.
The present study aims to explore the in vitro callus culture of *Solenostemma argel* as a biotechnological tool for its sustainable valorization. Callus induction was achieved from selected explants cultured on nutrient media supplemented with appropriate plant growth regulators. The formation and development of callus tissues were monitored, highlighting their potential as a renewable source of plant biomass.
Beyond its scientific interest, callus culture offers significant economic and industrial perspectives. It enables continuous and controlled biomass production, independent of climatic constraints, while contributing to the conservation of natural plant populations. This approach may support future applications in the pharmaceutical, cosmetic, and nutraceutical industries through the production of bioactive secondary metabolites.
In conclusion, the in vitro callus culture of *Solenostemma argel* constitutes a promising strategy combining plant biotechnology and economic valorization, opening new perspectives for the sustainable use of medicinal plants.
Keywords: *Solenostemma argel*; callus culture; plant biotechnology; medicinal plants; sustainable valorization.

AI DRIVEN MODELS FOR PHAGE DISCOVERY AND PREDICTION

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Abstract
The swift onset of antimicrobial resistance (AMR) has evolved the integral use of bacteriophages as powerful tool to combat the bacterial expansion using the phage-host interaction (PHIs) detection procedures. Artificial intelligence (AI) has driven the focus from conventional phage screening and detection to data-driven predictive frameworks. These models include structural biology-informed prediction, protein language models, large language models and graph neural networks. The protein language models like ProtT5 and ProstT5 are successful to annotate the phage virion proteins and receptor binding proteins, facilitating the precise characterization of host recognition mechanism. The computational frameworks include multimodal deep learning modals, mixture of expert architectures and strain level host prediction modals. These modals play integral role in the prediction of phage specificity host range across taxonomically diverse bacteria. The mechanistic approaches like graph-based learning and structural embeddings integrations have evolved the PHIs insights. Further investigation of foundation modals and structure-aware AI systems is required for improvements in phage biology prediction and industrial applications. These structure-aware AI systems have groundbreaking implications in phage related discovery and next generation antimicrobial paradigm.
Keywords: phage-host interaction, graph-based learning, Phage therapy, protein language models

THE EVOLVING ECONOMIST: FROM ABSTRACT THEORY TO INTERDISCIPLINARY, DATA-DRIVEN PRACTICE

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Abstract
The discipline of economics has undergone profound structural and methodological transformation over the past century. Early economics, shaped by classical and neoclassical thinkers, focused heavily on abstract modelling, rational behaviour, and equilibrium conditions. However, the 20th and 21st centuries introduced new realities—globalization, technological disruptions, behavioural inconsistencies, financial crises, climate change, demographic shifts, and pandemics—which challenged traditional theory and expanded the role of economists. This article examines the transformation of economics as a discipline and the changing functions of economists in an increasingly interconnected, data-driven, and uncertain world. Drawing from established literature, theoretical developments, and contemporary policy debates, the paper argues that modern economists must embrace interdisciplinarity, empirical rigor, ethical responsibility, and public communication, while redefining their role as analysts, policymakers, strategists, and agents of social change.
Keywords: Economics, Economists, Behavioural Economics, Empirical Economics, Big Data, Computational Economics,

RESEARCH TRENDS AND FUTURE PERSPECTIVES IN ECONOMIC-RELATED STATISTICAL PROCESS CONTROL: EVIDENCE FROM A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT
Integrating quality improvement with economic performance by incorporating cost factors into process monitoring and control is what Economic-related Statistical Process Control (ESPC) is about. In attempts to further enhance decision-making in the field of quality management, several economic models, like the Taguchi loss function model, Duncan's economic models, and Lorenzen-Vance cost models have been used. Despite the growing body of research, a comprehensive understanding of ESPC applications, design approaches, and implementation challenges remains limited. This study presents a systematic literature review (SLR) of ESPC research using the PRISMA framework. The papers that were analysed (71 publications in total) were retrieved mainly from the Web of Science and Scopus databases. The review delves into how different industries apply ESPC, it classifies the major design approaches and it also lists the current challenges in implementation. Based on the results, the food and automotive industries represent the largest part of the application area, while Economic-Statistical Design (ESD) has been the dominant design approach recently. The main drawbacks documented in the studies are related to restrictive modelling assumptions, high analytical complexity, problems in parameter estimation, limited data availability, and difficulties in practical implementation. By combining what is already known and pointing out where the research is lacking, this review delivers a guide for researchers and practitioners and proposes further research areas, like the development of advanced economic models, the integration of sustainability, the application in different industries, comparative analyses, and longitudinal studies.
Keywords: Economic-related statistical process control; statistical process control; Control chart; Systematic literature review

FISCAL POLICY: A LITERATURE REVIEW

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Abstract
Fiscal policy is a key tool used by governments to influence economic growth, employment, and income distribution. This paper reviews the main theoretical perspectives on the relationship between fiscal policy and economic growth. The Keynesian approach highlights the role of public spending in stimulating aggregate demand, while neoclassical theory emphasizes the crowding-out effect on private investment. The Ricardian equivalence hypothesis questions the effectiveness of deficit-financed spending, whereas endogenous growth theory stresses the productive role of public investment in education, health, and infrastructure in fostering long-term growth. This review shows that no unified theoretical consensus exists, underlining the need for context-specific analysis of fiscal policy's growth effects.
Keywords: Fiscal policy, economic growth, economic theories, endogenous growth, Morocco.

ARTIFICIAL INTELLIGENCE IN THE GLOBAL ECONOMY: CHALLENGES FOR SOCIETAL ADAPTATION

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Abstract
The rapid evolution of artificial intelligence (AI) is reshaping the global economy, presenting a paradoxical blend of transformative opportunities and systemic risks. The article explores the impact of AI on the global economy, emphasizing the duality of technological progress: GDP growth coexists with the rising social inequality and ethical challenges. Economically, AI's impact is dualistic. On the one hand it could reduce market volatility but at the same time AI increases monopolistic power among tech-giants thus raising concerns about data monopolization . The article also examines risks such as labor automation, the digital divide, geopolitical competition, and environmental consequences. Adaptation strategies include educational initiatives, corporate accountability, and international collaboration. Case studies from Singapore, Finland, and some African projects highlight the need for a balanced approach to ensure sustainable development. Navigating the AI era requires harnessing its potential responsibly. By investing in education, enforcing ethical standards, and fostering global cooperation, societies can transform AI from a disruptor into a catalyst for inclusive growth. The successes of Singapore, Finland, as well as African grassroots initiatives prove that proactive, human-centric approaches are not only possible but imperative for a sustainable future.
Keywords: Artificial Intelligence; global economy; labor automation; geopolitical competition; digital divide; regulatory frameworks; environmental sustainability; societal adaptation; sustainable development

E-GOVERNMENT REFORM AND BUREAUCRATIC TRANSFORMATION IN INDONESIA THROUGH QUALITATIVE STUDY OF DIGITAL PUBLIC SERVICE INNOVATION IN ASEAN CONTEXT

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Abstract
This study examines e-government reform and bureaucratic transformation in Indonesia within the broader ASEAN digital governance context. Despite notable progress in digital government initiatives, reflected in Indonesia's SPBE index score of 3.12 in 2023, the transformation process remains partially fragmented and institutionally constrained. The persistence of more than 500 government digital applications across ministries and local governments indicates limited system integration and ongoing interoperability challenges that hinder effective digital governance implementation. This research employs a qualitative single-case study design using policy documents, government reports, and peer-reviewed literature as primary data sources. The data are analyzed using thematic analysis focusing on institutional fragmentation, bureaucratic digital capacity, interoperability constraints, and governance coordination across government levels. The findings reveal that Indonesia's e-government reform is characterized by a hybrid governance structure, where digital systems coexist with traditional bureaucratic mechanisms rather than replacing them. The study further demonstrates that technological adoption alone is insufficient to drive full bureaucratic transformation. Instead, successful digital governance depends on the alignment of institutional integration, administrative capacity, and system interoperability. Comparative insights with more digitally advanced ASEAN countries such as Singapore and Malaysia highlight that Indonesia remains in a partial integration stage of digital government maturity. This study contributes to the literature on digital government by emphasizing that e-government transformation is fundamentally an institutional process rather than a purely technological intervention. The findings provide implications for policymakers to strengthen governance coordination, reduce system fragmentation, and enhance digital capacity within public sector institutions.
Keywords: Communicative Language Teaching; Digital Pedagogy; EFL; Indonesia Higher Education; Student Engagement

GOOD GOVERNANCE AND ITS ROLE IN IMPROVING THE EFFICIENCY OF MANAGING AND INVESTING MUNICIPAL ASSETS: AN APPLIED STUDY ON GREATER AMMAN MUNICIPALITY

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Abstract
Municipal assets represent a vital economic resource that contributes to local development and supports the financial sustainability of municipalities. In light of the increasing administrative and financial challenges faced by local governments, good governance has emerged as a fundamental approach to enhancing the management and investment of public assets through the principles of transparency, accountability, participation, efficiency, and the rule of law.
This study aims to examine the role of good governance in improving the efficiency of managing and investing municipal assets, with a particular focus on the experience of Greater Amman Municipality. The study explores how governance practices contribute to enhancing investment decision-making processes, strengthening oversight and control mechanisms, improving the management of investment contracts, and reducing administrative and financial risks.
The research adopts a descriptive-analytical approach through a review of relevant literature and previous studies related to governance, public asset management, and municipal investment. It also analyzes the relationship between the implementation of governance principles and the effectiveness of municipal asset investment.
The findings are expected to indicate that the adoption of good governance principles contributes significantly to improving the efficiency of municipal asset management, enhancing the quality of investment decisions, increasing financial returns, and strengthening stakeholders' trust. The study further emphasizes the importance of developing regulatory and supervisory frameworks and promoting a governance-oriented culture within municipalities to achieve sustainable development goals.
Keywords: Good Governance, Municipal Asset Investment, Municipal Assets, Transparency, Accountability, Sustainable Development, Greater Amman Municipality.

GOVERNANCE AND STRATEGIC PLANNING OF RENEWABLE-POWERED DESALINATION SYSTEMS: IMPLICATIONS FOR PUBLIC WATER MANAGEMENT

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ABSTRACT
This study examines how wind speed modeling influences the performance assessment of renewable energy-powered desalination systems and its implications for public decision-making. Wind speed was estimated using representative wind shear scenarios reflecting typical atmospheric conditions. The results indicate that variations in the wind shear exponent can increase the mean wind speed from about 8–9 m/s to nearly 11 m/s, leading to a rise in the capacity factor from approximately 25% to above 50%. As a consequence, the estimated annual energy production may increase from around 15 GWh/year to nearly 30 GWh/year. This variation directly impacts freshwater production, which can reach on the order of 10 million m^3/year depending on the modeling assumptions. These findings show that relatively small differences in wind speed estimation can result in substantial variations in system performance.
Overall, the results highlight that uncertainties in wind modeling can significantly influence the evaluation of renewable desalination systems and may affect public water supply planning decisions. Therefore, improving the accuracy of wind speed estimation is essential to support reliable and informed decision-making in sustainable desalination projects.
Keywords: Public decision-making, Energy–water nexus, Wind speed estimation, Wind shear exponent, Renewable desalination

AI-DRIVEN HR ANALYTICS AND EMPLOYEE WELL-BEING: EXAMINING PRODUCTIVITY, WORK-LIFE BALANCE, AND JOB SATISFACTION IN THE DIGITAL WORKPLACE

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Abstract
The growing adoption of Artificial Intelligence (AI) and advanced HR analytics has significantly transformed contemporary human resource management by enabling organizations to shift from intuition-based practices to evidence-based decision-making. This study investigates the impact of AI-enabled HR analytics on employee well-being, with particular emphasis on productivity, work-life balance, and job satisfaction. The research adopts a mixed-method approach, combining primary survey data collected from 102 professionals across diverse sectors with insights from contemporary scholarly literature published between 2020 and 2026. The study is grounded in the Job Demands–Resources (JD-R) Model and Social Exchange Theory (SET), providing a theoretical lens to examine how analytics-driven HR practices shape employee experiences and organizational outcomes. The findings reveal that AI-driven HR analytics enhances the speed and accuracy of HR decision-making, improves workforce planning, and facilitates the early identification of employee well-being concerns. The findings provide practical implications for HR professionals and organizational leaders seeking to leverage AI technologies while maintaining trust, fairness, and employee well-being in the digital workplace.
Keywords: Artificial Intelligence, HR Analytics, Employee Well-Being, Job Satisfaction, Work-Life Balance, Productivity, Digital HR, Predictive Analytics**.**

BİR HALK SAĞLIĞI SORUNU OLARAK ÇOCUKLUK ÇAĞI HİPERTANSİYONU: HEMŞİRELER NE YAPABİLİR?

THE CHILDHOOD HYPERTENSION AS A PUBLIC HEALTH ISSUE: WHAT CAN NURSES DO?

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Abstract
Hypertension, a major chronic disease worldwide, is a preventable public health problem that can also occur in childhood. Literature reports that the prevalence of childhood hypertension varies between countries, while in Turkey it ranges from 5.5% to 8.5%. Childhood hypertension is defined as blood pressure values above the 95th percentile for age, gender, and height, and can develop due to primary or secondary causes. It is emphasized that the causes of childhood hypertension include individual factors such as inadequate and unbalanced nutrition, insufficient physical activity, excessive salt consumption, and overweight, as well as social determinants such as housing insecurity, food insecurity, poverty, low income, and low education level. Childhood hypertension is important not only for its consequences during childhood and adolescence but also for the cardiovascular diseases it can cause in adulthood. Nurses play crucial roles in the early diagnosis, treatment, and rehabilitation of childhood hypertension. Furthermore, nurses advocate for the community in combating health inequalities by considering the potential impact of social determinants of health on childhood hypertension. The aim of this review is to examine the prevalence, causes, consequences of childhood hypertension, and the roles and responsibilities of nurses in the prevention and treatment of childhood hypertension.
Keywords: Child, Hypertension, Nurse, Public health

Özet
Dünya genelinde önemli kronik hastalıklardan biri olan hipertansiyon, çocukluk çağında da görülebilen önlenebilir bir halk sağlığı sorunudur. Literatürde dünyada çocukluk çağı hipertansiyonu prevalansının ülkeler arası değişkenlik gösterdiği, Türkiye'de ise çocukluk çağı hipertansiyonu prevalansının %5,5-8,5 arasında değiştiği bildirilmiştir. Çocukluk çağı hipertansiyonu, yaş, cinsiyet ve boya göre ≥95. persantil üzerindeki kan basıncı değerleri ile tanımlanmakta ve primer ya da sekonder nedenlere bağlı olarak gelişebilmektedir. Çocukluk çağı hipertansiyonunun nedenleri arasında yetersiz ve dengesiz beslenme, yetersiz fiziksel aktivite, aşırı tuz tüketimi, fazla kilo gibi bireysel nedenlerin yanı sıra konut güvencesizliği, gıda güvencesizliği, yoksulluk, düşük gelir ve eğitim düzeyi gibi sosyal belirleyicilerin de olduğu vurgulanmaktadır. Çocukluk çağı hipertansiyonu sadece çocukluk ve ergenlik dönemindeki sonuçları açısından değil yetişkinlik döneminde yol açabileceği kardiyovasküler hastalıklar açısından da önemlidir. Hemşireler çocukluk çağı hipertansiyonu erken tanı, tedavi ve rehabilitasyonunda önemli roller üstlenir. Ayrıca hemşireler sağlığın sosyal belirleyicilerinin çocukluk çağı hipertansiyonu üzerindeki olası etkisini dikkate alarak sağlıkta eşitsizliklerle mücadelede toplumun savunuculuğunu yapar. Bu derlemenin amacı, çocukluk çağı hipertansiyonunun prevalansı, nedenleri, sonuçları ve çocukluk çağı hipertansiyonunun önlenmesi ve tedavisinde hemşirelerin rol ve sorumluluklarının incelenmesidir.
Anahtar kelimeler: Çocuk, Hemşire, Hipertansiyon, Halk sağlığı

MADDE BAĞIMLILIĞI VE HEMŞİRELİK YAKLAŞIMI

SUBSTANCE ADDICTION AND NURSING APPROACH

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Abstract
Substance addiction is a chronic disorder characterized by the uncontrolled use of chemical substances that harm individuals' biopsychosocial health, the inability to quit, and the development of tolerance to the substance, leading to increased dosage. Addiction is not only an individual problem but also a significant public health issue affecting family structure, social order, and economic life.
The aim of this study is to examine the biological, psychological, and social effects of substance addiction on individuals and to address nursing approaches in this process.
Many variables play a role in the emergence of addiction, including the interaction of risk and protective factors, personality traits, hereditary characteristics, social risks, living in a particular region, and social exclusion. According to the DSM-5 classification, there are many types of addiction, primarily alcohol, tobacco, opioids, cannabis, stimulants, and volatile substances. The literature indicates that the use of volatile substances, cannabis, and heroin is particularly common in young age groups.
Substance addiction can cause multiple systemic diseases in users, such as liver failure, cardiovascular and gastrointestinal diseases, respiratory diseases, cancers, and AIDS. Substance addiction does not only affect physical health; Substance addiction can also lead to mental health problems such as depression, anxiety, irritability, anhedonia, and suicidal thoughts. Its effects on social health manifest as stigma and exclusion.
A holistic assessment of the individual is crucial in substance addiction treatment. The treatment process includes detoxification, psychosocial support, rehabilitation, and relapse prevention. However, stigma, social exclusion, lack of motivation, and difficulties accessing healthcare services are the most significant obstacles to treatment. Therefore, reintegrating individuals who have completed treatment into society is only possible when they find a healthy place for themselves within society.
In this context, nurses are healthcare professionals with a critical role in combating addiction. From a nursing perspective, this struggle is managed in three main stages: preventing the development of addiction from the outset, encouraging participation in treatment, and minimizing harm in cases where recovery is impossible. Nurses have protective, educational, counseling, advocacy, and caregiving roles in the substance addiction process.
Keywords: Addiction, Nursing, Substance Use

Özet
Madde bağımlılığı; bireylerin biyopsikososyal sağlığına zarar veren kimyasal maddelerin kontrolsüz kullanılması, bırakılamaması ve maddeye karşı tolerans geliştirerek dozun artırılmasıyla seyreden kronik bir bozukluktur. Bağımlılık yalnızca bireysel bir sorun olmayıp aile yapısını, toplumsal düzeni ve ekonomik yaşamı da etkileyen önemli bir halk sağlığı problemidir.

Bu çalışmanın amacı; madde bağımlılığının birey üzerindeki biyolojik, psikolojik ve sosyal etkilerini incelemek ve bu süreçteki hemşirelik yaklaşımlarını ele almaktır.

Bağımlılığın ortaya çıkmasında risk faktörleri ve koruyucu faktörlerin etkileşimi, kişilik özelliklerinin yanı sıra kalıtımsal özellikler ve sosyal riskler, belirli bir bölgede yaşama, toplumsal dışlanma gibi pek çok değişken rol oynamaktadır. DSM-5 sınıflandırmasına göre alkol, tütün, opioid, esrar, uyarıcılar ve uçucu maddeler başta olmak üzere birçok bağımlılık türü bulunmaktadır. Literatürde özellikle uçucu maddeler, esrar ve eroin kullanımının genç yaş gruplarında yaygın olduğu belirtilmektedir.

Madde bağımlılığı kullanıcılarda karaciğer yetmezliği, kardiyovasküler ve gastrointestinal sistem hastalıkları, solunum yolu hastalıkları, kanserler, AIDS gibi çoklu sistem hastalıklarına neden olabilmektedir. Madde bağımlılığı yalnızca fiziksel sağlığı etkilememekte; depresyon, anksiyete, sinirlilik, anhedoni ve intihar düşünceleri gibi ruhsal sorunlara da yol açabilmektedir. Sosyal sağlık üzerindeki etkileri ise damgalanma ve dışlanma şeklinde ortaya çıkmaktadır.

Madde bağımlılığı tedavisinde bireyin bütüncül biçimde değerlendirilmesi önemlidir. Tedavi süreci; detoksifikasyon, psikososyal destek, rehabilitasyon ve relaps önleme aşamalarını kapsamaktadır. Ancak damgalanma, sosyal dışlanma, motivasyon eksikliği ve sağlık hizmetlerine erişimde yaşanan sorunlar tedavinin önündeki en önemli engellerdir. Bu nedenle tedavi sürecini tamamlayan bireylerin topluma kazandırılması, toplumda kendilerine sağlıklı bir yer edinmeleriyle mümkün olmaktadır.

Bu kapsamda hemşireler, bağımlılıkla mücadelede kritik role sahip sağlık profesyonelleridir. Hemşirelik perspektifinden bu mücadele; bağımlılığın gelişmesini en baştan engellemek, tedaviye katılımı teşvik etmek ve kurtulması mümkün olmayan durumlarda oluşabilecek zararları minimize etmek üzere üç temel aşamada yönetilmektedir. Madde bağımlılığı sürecinde hemşirelerin koruyucu, eğitici, danışmanlık sağlayıcı, savunucu ve bakım verici rolleri bulunmaktadır.

Anahtar Kelimeler: Bağımlılık, Hemşirelik, Madde kullanımı

İLAÇ UYGULAMA HATALARINI ÖNLEMEDE YAPAY ZEKÂ UYGULAMALARI

APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN PREVENTING DRUG ADMINISTRATION ERRORS

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Abstract
Medication errors are among the preventable medical errors that threaten patient safety and increase morbidity and mortality in healthcare. Errors occurring particularly in the prescribing, preparation, administration, and monitoring processes of medications create a significant clinical and economic burden on healthcare systems. Nurses, who play an active role in these processes, are critical in preventing medication errors due to their active involvement in medication preparation and administration. In recent years, the widespread use of artificial intelligence (AI) in healthcare offers significant opportunities in preventing medication errors.
The aim of this review is to examine the role of AI applications in preventing medication errors from a nursing perspective.
A review of the literature reveals that AI-powered clinical decision support systems, electronic prescribing systems, barcode-based medication applications, smart infusion pumps, and machine learning-based risk analysis models contribute to reducing medication errors. These technologies can predict incorrect dosages, drug interactions, prescribing, and administration errors, supporting clinical decision-making processes and improving patient safety. Furthermore, it is reported that artificial intelligence applications reduce the workload of nurses, allowing them to focus more on care processes and improving the quality of care.
In conclusion, AI-supported systems stand out as effective tools in enhancing medication safety, reducing medication errors, and improving patient safety. The effective use of these technologies in nursing practices can contribute to strengthening medication safety and improving the quality of care. However, it should be remembered that artificial intelligence systems alone are not sufficient and should be used within a holistic approach, together with the human factor and clinical evaluation.
Keywords: Artificial intelligence, Medication errors, Patient safety, Nursing, Clinical decision support systems

Özet
İlaç hataları, sağlık hizmetlerinde hasta güvenliğini tehdit eden, morbidite ve mortaliteyi artıran önlenebilir tıbbi hatalar arasında yer almaktadır. Özellikle ilaçların reçetelenmesi, hazırlanması, uygulanması ve izlenmesi süreçlerinde ortaya çıkan hatalar, sağlık sistemleri üzerinde önemli klinik ve ekonomik yük oluşturmaktadır. Bu süreçlerde aktif rol üstlenen hemşireler, ilaç hazırlama ve uygulama süreçlerinde aktif rol aldıkları için ilaç hatalarının önlenmesinde kritik bir konuma sahiptir. Son yıllarda sağlık alanında yaygınlaşan yapay zekâ uygulamaları, ilaç hatalarının önlenmesinde önemli fırsatlar sunmaktadır.

Bu derlemenin amacı, ilaç hatalarının önlenmesinde yapay zekâ uygulamalarının rolünü hemşirelik perspektifinden incelemektir.
Literatür incelendiğinde; yapay zekâ destekli klinik karar destek sistemleri, elektronik reçeteleme sistemleri, barkodlu ilaç uygulamaları, akıllı infüzyon pompaları ve makine öğrenmesi tabanlı risk analiz modellerinin ilaç hatalarının azaltılmasına katkı sağladığı görülmektedir. Bu teknolojiler; yanlış doz, ilaç etkileşimi, reçeteleme ve uygulama hatalarını önceden belirleyebilmekte, klinik karar verme süreçlerini destekleyerek hasta güvenliğini artırabilmektedir. Ayrıca yapay zekâ uygulamalarının hemşirelerin iş yükünü azaltarak bakım süreçlerine daha fazla odaklanmalarına olanak sağladığı ve bakım kalitesini geliştirdiği bildirilmektedir.
Sonuç olarak, yapay zekâ destekli sistemler ilaç güvenliğinin artırılmasında ve ilaç hatalarının azaltılmasında ve hasta güvenliğini arttırmada etkili araçlar olarak öne çıkmaktadır. Hemşirelik uygulamalarında bu teknolojilerin etkin kullanımı, ilaç güvenliğinin güçlendirilmesine ve bakım kalitesinin artırılmasına katkı sağlayabilir. Ancak yapay zekâ sistemlerinin tek başına yeterli olmadığı, insan faktörü ve klinik değerlendirme ile birlikte bütüncül bir yaklaşım içerisinde kullanılması gerektiği unutulmamalıdır.
Anahtar Kelimeler: Yapay zekâ, İlaç hataları, Hasta güvenliği, Hemşirelik, Klinik karar destek sistemleri

HEPATOSİT KARSİNOMU VE ÇAY KATEŞİNİ TÜREVLERİNİN ANTİ-TÜMÖRİJENİK ETKİLEŞİMLERİNİN *IN SİLİKO* ARAŞTIRILMASI

IN SILICO EVALUATION OF THE ANTITUMOURAL INTERACTIONS BETWEEN HEPATOCELLULAR CARCINOMA AND TEA CATECHIN DERIVATIVES

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Abstract
Catechins represent a class of naturally occurring antioxidants that are present in high concentrations in tea (*Camellia sinensis*). These bioactive compounds are of significant interest in health research owing to their capacity to neutralize free radicals—reactive molecules implicated in cellular damage and the progression of chronic diseases. The principal catechin constituents identified in tea are Epicatechin (EC), Epigallocatechin (EGC), Epicatechin Gallate (ECG), and Epigallocatechin Gallate (EGCG). The present study was designed to investigate the potential antitumor interactions between hepatocellular carcinoma and tea-derived catechin compounds through the application of in silico molecular docking and molecular dynamics simulation approaches. Specifically, the binding affinity scores of tea catechin derivatives against the membrane-associated proteins TLR4 (Toll-like Receptor 4), RAGE (Receptor for Advanced Glycation End Products), and CD44 (a cancer stem cell marker) expressed on the HepG2 liver cancer cell line were systematically assessed. The in silico findings revealed that, among the evaluated receptor targets, CD44 served as the predominant binding target for the catechin derivatives, followed by TLR4 and RAGE, respectively. With respect to binding affinity, ECG and EGCG demonstrated the strongest interactions with CD44, TLR4, and RAGE, yielding binding scores in the range of −8.15 to −9.50 kcal/mol, while EGC and EC displayed comparatively weaker affinities toward the target proteins, with scores ranging from −6.79 to −7.65 kcal/mol. Overall, our computational *in silico* predictions indicate that tea and its catechin-derived bioactive constituents—particularly ECG and EGCG—warrant further validation through comprehensive *in vivo* and *in vitro* experimental studies to substantiate their antitumor potential against hepatocellular carcinoma and to explore their prospective applications as functional ingredients in the promotion of human health and well-being.
Keywords: *In silico***,** Tea, *Camellia sinensis*, Catechin, Hepatocellular carcinoma

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FENOLİK BİLEŞİKLERİN DERİN ÖTEKTİK ÇÖZÜCÜLER İLE EKSTRAKSİYONU

EXTRACTION OF PHENOLIC COMPOUNDS WITH DEEP EUTECTIC SOLVENTS

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Abstract
Phenolic compounds are secondary metabolites containing a functional group and a benzene ring to which one or more hydroxyl groups are directly attached to the aromatic ring, produced by plants for defense purposes against stress factors such as UV radiation and pathogens. Phenolic compounds, classified according to their structural elements and ring structures, are found in fruits and vegetables, cereals, legumes, and beverages such as tea, coffee, and wine. Phenolic compounds exhibit many effects in the body, such as antidiabetic, anti-inflammatory, and antiviral activities. Since the stability of phenolic compounds in plants varies, the selection of an appropriate extraction method is important for the recovery of target phenolic compounds from plants. Traditional methods are generally used in extraction processes. In traditional extraction, organic solvents such as acidified ethanol and methanol are used; however, these organic solvents involve severe disadvantages in terms of their volatile and toxic nature, environmental hazards, high energy requirements, and liquid waste treatment costs. In this context, the concept of deep eutectic solvents (DES) was introduced in 2003, and the concept of natural deep eutectic solvents (NADES) was introduced in 2013. NADES is obtained by a mixture of a hydrogen bond acceptor (HBA) and a hydrogen bond donor (HBD) molecule. NADES is a more advantageous approach compared to traditionally used organic solvents in terms of characteristics such as being non-toxic, biodegradable, low-cost, and easy to prepare. In this review study, current literature data focusing on the extraction of phenolic compounds with DES, the structural advantages of the solvents, and the extraction mechanisms were comprehensively examined. Studies in the literature show that the use of DES/NADES increases phenolic matter efficiency and antioxidant capacity compared to traditional solvents, while shortening extraction times. Especially, ultrasound- and microwave-assisted extraction methods have been shown to be the most effective in the recovery of phenolics. The study also discussed the economic viability of this green technology at an industrial scale and its role in waste management.
Keywords: Deep Eutectic Solvents, Phenolic Compounds, Green Chemistry, NADES, Sustainability.

Özet
Fenolik bileşikler; bir veya birden fazla hidroksil grubunun doğrudan aromatik halkaya bağlandığı bir benzen halkası ve fonksiyonel grup içeren, bitkilerin UV radyasyonu ve patojenler gibi stres faktörleri karşısında savunma amaçlı ürettiği sekonder metabolitlerdir. Yapısal unsurları ve halka yapılarına göre sınıflandırılan fenolik bileşikler meyve ve sebzelerde, tahıllarda, baklagillerde, çay, kahve ve şarap gibi içeceklerde bulunmaktadır. Fenolik bileşikler vücutta antidiyabetik, antiinflamatuar ve antiviral gibi birçok etki göstermektedir. Fenolik bileşiklerin bitkilerdeki kararlılık durumu farklılık gösterdiğinden, bitkilerden hedeflenen fenolik bileşiklerin geri kazanılması için uygun ekstraksiyon yönteminin seçimi önemlidir. Ekstraksiyon süreçlerinde genellikle geleneksel yöntemler kullanılmaktadır. Geleneksel ekstraksiyonda asitlendirilmiş etanol ve metanol gibi organik çözücüler kullanılmaktadır; ancak bu organik çözücüler uçucu ve toksik olmaları, çevresel zararları, yüksek enerji gerektirmeleri ve atık sıvı arıtım maliyetleri açısından ciddi dezavantajlar içermektedir. Bu kapsamda 2003 yılında derin ötektik çözücüler (DES) kavramı, 2013 yılında ise doğal derin ötektik çözücüler (NADES) kavramı ortaya atılmıştır. NADES; bir hidrojen bağı alıcısı (HBA) ve bir hidrojen bağı vericisi (HBD) molekülünün karışımı ile elde edilmektedir. NADES, geleneksel olarak kullanılan organik çözücülere göre toksik olmaması, biyolojik olarak bozunabilmesi, düşük maliyetli olması ve kolay hazırlanabilirlik gibi özellikler bakımından daha avantajlı bir yaklaşımdır.

Bu derleme çalışmasında, fenolik bileşiklerin DES/NADES ile ekstraksiyonuna odaklanan güncel literatür verileri, çözücülerin yapısal avantajları ve ekstraksiyon mekanizmaları kapsamlı bir şekilde incelenmiştir. Literatürdeki çalışmalar, DES kullanımının geleneksel çözücülere göre fenolik madde verimliliğini ve antioksidan kapasitesini artırdığını, ekstraksiyon sürelerini ise kısalttığını göstermektedir. Özellikle ultrason ve mikrodalga destekli ekstraksiyon yöntemlerinin fenoliklerin geri kazanılmasında en etkili olduğu gösterilmiştir. Çalışmada ayrıca bu yeşil teknolojinin endüstriyel ölçekteki ekonomik uygulanabilirliği ve atık yönetimindeki rolü tartışılmıştır.
Anahtar kelimeler: Derin Ötektik Çözücüler, Fenolik Bileşikler, Yeşil Kimya, NADES, Sürdürülebilirlik.

PROPOLİS EKSTRAKSİYONUNDA DERİN ÖTEKTİK ÇÖZÜCÜLERİN KULLANIMI

USE OF DEEP EUTECTIC SOLVENTS IN PROPOLIS EXTRACTION

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Abstract
Propolis is a natural bee product formed through the incorporation of plant resins with beeswax and bee secretions, providing protection to hives against environmental stressors and pathogenic microorganisms. Propolis contains many bioactive components such as flavonoid aglycones, phenolic acids and esters, phenolic aldehydes, alcohols, ketones, sesquiterpenes, quinones, and coumarins. In addition to these components, propolis can also contain potential toxic elements, such as lead, cadmium, and chromium as well as arsenic and pesticide residues depending on environmental conditions. The removal of beeswax from raw propolis can contribute to the reduction of these toxic elements and pesticide residues. Since propolis obtained from the hive is in a raw state, it is not suitable for direct use, and an extraction process is required for the recovery and purification of bioactive components. Various extraction methods and solvents are used for this purpose. In propolis extraction, water, ethanol, methanol, ethyl acetate, acetone, dimethyl sulfoxide, chloroform, olive oil, β-cyclodextrin, dichloromethane, hexane, propylene glycol, and glycerol are used as solvents; however, although solvents other than water, ethanol, olive oil, propylene glycol, and glycerol are preferred in studies, they are not used in final food and pharmaceutical product formulations due to residual toxicity and safety risks on human health. On the other hand, traditional reagents used in extraction processes and the generated wastes can cause negative environmental impacts. In this context, "Green Chemistry and Green Extraction" approaches, which are based on 12 basic principles emphasizing the need to reduce energy consumption, use safer and less toxic solvents, and prefer substances obtained from renewable resources in parallel with the global understanding of sustainable development, come to the fore. Deep Eutectic Solvents (DES) have emerged as promising alternative systems in this regard. DESs attract attention with their low toxicity, biocompatibility, and environmentally friendly properties. These systems, formed by mixing non-toxic hydrogen bond acceptor and hydrogen bond donor components in certain ratios, are liquid eutectic mixtures with melting points below ambient temperature. In this review, literature studies on the extraction of propolis using DES, which is an environmentally friendly approach, were examined. Findings in the literature show that not every DES combination offers the same extraction yield; the choice of solvent components, viscosity of the system, and polarity balance are decisive on bioactive gain. The optimization of propolis extraction with DES is of critical importance in increasing the extraction yield of target bioactive components and ensuring strong antifungal and antibacterial activity. In this review, the most suitable DES combinations and optimization approaches for obtaining propolis components with high yield and reliability are presented with literature data.
Keywords: Propolis, Deep Eutectic Solvents, Phenolic Compounds, Extraction, Green Chemistry.

Özet
Propolis, bitkisel reçinelerin balmumu ve arı salgıları ile karıştırılması sonucu oluşan doğal bir arı ürünüdür; kovanları çevresel etkenlere ve patojenlere karşı korur. Propolis; flavonoid aglikonlar, fenolik asitler ve esterler, fenolik aldehitler, alkoller, ketonlar, seskiterpenler, kinonlar ve kumarinler gibi birçok biyoaktif bileşen içermektedir. Propolis, bu bileşenlerin dışında çevresel koşullara bağlı olarak kurşun, kadmiyum, krom gibi ağır metaller ile arsenik gibi potansiyel toksik elementleri ve pestisit kalıntılarını da içerebilmektedir. Ham propolisten balmumunun uzaklaştırılması, bu toksik elementlerin ve pestisit kalıntılarının azaltılmasına katkı sağlayabilmektedir. Kovandan elde edilen propolis ham halde bulunduğundan doğrudan kullanıma uygun değildir; biyoaktif bileşenlerin kazanılması ve saflaştırma

amacıyla ekstraksiyon işlemine ihtiyaç duyulmaktadır. Bunun için çeşitli ekstraksiyon yöntemleri ve çözücüler kullanılmaktadır. Propolisin ekstraksiyonunda çözücü olarak su, etanol, metanol, etil asetat, aseton, dimetilsülfoksit, kloroform, zeytinyağı, β-siklodekstrin, diklorometan, hekzan, propilen glikol ve gliserol kullanılmaktadır; ancak su, etanol, zeytinyağı, propilen glikol ve gliserol dışındaki çözücüler çalışmalarda her ne kadar tercih edilse de kalıntı toksisitesi ve insan sağlığı üzerindeki güvenlik riskleri nedeniyle son gıda ve farmasötik ürün formülasyonlarında kullanılmamaktadır. Diğer taraftan, ekstraksiyon süreçlerinde kullanılan geleneksel reaktifler ve üretilen atıklar olumsuz çevresel etkilere neden olabilmektedir. Bu bağlamda, küresel sürdürülebilir kalkınma anlayışıyla paralel olarak enerji tüketimini azaltma, daha güvenli çözücüler kullanma ve yenilenebilir kaynaklardan elde edilen maddeleri tercih etme ihtiyacını vurgulayan 12 temel ilkeye dayalı "Yeşil Kimya ve Yeşil Ekstraksiyon" yaklaşımları öne çıkmaktadır. Derin Ötektik Çözücüler (Deep Eutectic Solvents, DES) bu bağlamda umut verici alternatif sistemler olarak ortaya çıkmıştır. DES'ler; düşük toksisite, biyouyumluluk ve çevre dostu özellikleriyle dikkat çekmektedir. Toksik olmayan hidrojen bağı alıcısı ve hidrojen bağı vericisi bileşenlerin belirli oranlarda karıştırılmasıyla oluşan bu sistemler, ortam sıcaklığının altında erime noktalarına sahip sıvı ötektik karışımlardır. Bu derleme çalışmasında, propolisin çevre dostu bir yaklaşım olan DES ile ekstraksiyonunun yapıldığı literatür çalışmaları incelenmiştir. Literatürdeki bulgular, her DES kombinasyonunun aynı ekstraksiyon verimini sunmadığını; çözücü bileşenlerinin seçimi, sistemin viskozitesi ve polarite dengesinin biyoaktif kazanç üzerinde belirleyici olduğunu göstermektedir. Propolisin DES ile ekstraksiyonunun optimizasyonu; hedef biyoaktif bileşenlerin ekstraksiyon veriminin artırılmasında ve güçlü antifungal ile antibakteriyel etkinin sağlanmasında kritik öneme sahiptir. Bu derlemede, propolis bileşenlerinin yüksek verim ve güvenilirlikle eldesi için en uygun DES kombinasyonları ve optimizasyon yaklaşımları literatür verileriyle sunulmuştur.

Anahtar kelimeler: Propolis, Derin Ötektik Çözücüler, Fenolik Bileşikler, Ekstraksiyon, Yeşil Kimya.

ERZİNCAN VE ÇEVRESİNDE YETİŞEN DOĞAL *ROSA* L. TÜRLERİNİN HALK SAĞLIĞINDAKİ YERİ

THE ROLE OF NATURAL ROSA L. SPECIES GROWING IN ERZINCAN AND ITS SURROUNDINGS IN PUBLIC HEALTH

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Abstract
Plants still hold great importance in traditional medicine. The aim of this study is to investigate the *Rosa* L. species used in public healthcare in Erzincan and its surrounding provinces. The provinces included in the study are Erzincan and the neighboring provinces of Erzurum, Gümüşhane, Giresun, Bingöl, Elazığ, Malatya, Tunceli, Bayburt, and Sivas. This study was conducted using the literature review model, a qualitative research method. Data on *Rosa* species were collected regarding the provinces which *Rosa* species are found, which parts of the distributed *Rosa* species are used, how the *Rosa* species are prepared for use, how the preparations are used, and which diseases these preparations are used to treat. The data were searched using the keywords "Turkey and ethnobotany". Subsequently, data relating to articles containing *Rosa* species were evaluated. After reviewing 32 articles and theses out of 478 ethnobotanical studies were found to meet the predetermined criteria and were included in the study. The data from the included studies were collected in an Excel file, and necessary calculations were performed to obtain the findings. Regarding the frequency of use by province, it was observed that Erzurum and Erzincan were the most frequently mentioned provinces in the examined articles. When the information on the *Rosa* species used was analyzed, the most commonly used species was found to be *Rosa canina* L. Examining the parts of *Rosa* species used, since *Rosa canina* L. was the most common species, the most frequently used part was the fruit, followed by the root and flower. When the data on the preparation methods were analyzed, decoction and infusion were found to be the most preferred. Regarding the mode of use, 62% was internal use and 16% external use. *Rosa* species were most commonly used to treat colds and hemorrhoids. It is observed that traditional medicine is frequently used in the selected provinces, as they are located in Eastern Anatolia, are generally far from medical facilities, and are affected by harsh winter conditions.
Keywords: Erzincan**,** Ethnobotany, Medicinal plants, *Rosa*, Traditional medicine

Özet
Bitkiler, geleneksel tıpta hâlâ büyük önem taşımaktadır. Bu çalışmanın amacı, Erzincan ve çevre illerinde halk sağlığında kullanılan *Rosa* L. türlerinin araştırılmasıdır. Çalışmaya Erzincan ve çevresinde yer alan Erzurum, Gümüşhane, Giresun, Bingöl, Elazığ, Malatya, Tunceli, Bayburt ve Sivas illeri dahil edilmiştir. Nitel araştırma yöntemlerinden literatür taraması modeli ile gerçekleştirilen bu çalışmada, *Rosa* türleri hakkında, hangi *Rosa* türlerinin yayılış gösterdiği, yayılış gösteren *Rosa* türlerinin hangi kısımlarının kullanıldığı, *Rosa* türlerinin ne şekilde kullanıma hazırlandığı, hazırlanan kısımların nasıl kullanıldığı ve hangi hastalıkların tedavisinde kullanıldığına dair veriler toplanmıştır. Veriler "Türkiye ve Etnobotanik" anahtar kelimesi ile taranmıştır. Ardından, *Rosa* türlerini içeren makalelere ilişkin veriler değerlendirilmiştir. İncelemeler sonucu 478 etnobotanik çalışmadan 32 makale ve tezin kararlaştırılan kriterlere uygun olduğu belirlenmiş ve çalışmaya dahil edilmiştir. Çalışmaya dahil edilmiş olan makalelere ait veriler, bir Excel dosyası üzerinde toplanmış ve gerekli hesaplamalar yapılıp bulgular elde edilmiştir. İllere göre kullanım sıklığında, incelenen makalelerde en çok Erzurum ve Erzincan illerinin yer aldığı görülmüştür. Kullanılan *Rosa* türlerine dair bilgiler incelendiğinde ise en yaygın kullanılan türün *Rosa canina* L. olduğu görülmüştür.

Rosa türlerinin kullanılan kısımları incelendiğinde, en sık kullanılan kısmın meyve olduğu görülmüştür; bunu kök ve çiçek takip etmiştir. Bitkilerin hazırlanma şekline dair veriler incelendiğinde, en sık dekoksiyon ve infüzyon yöntemlerinin tercih edildiği görülmüştür. Kullanım şeklinde ise %62 oranla dahilen, %16 oranla haricen kullanıldığı görülmüştür. *Rosa* türlerinin en yaygın olarak soğuk algınlığı ve hemoroid tedavisinde kullanıldığı belirlenmiştir. Çalışma için seçilmiş olan şehirlerin Doğu Anadolu'da yer alması ve genellikle tıbbi tesislere uzak olup yoğun kış şartlarından etkilenmesiyle halk tıbbının sıklıkla kullanıldığı görülmektedir.

Anahtar kelimeler: Erzincan, Etnobotanik, Tıbbi bitkiler, *Rosa*, Geleneksel tedavi

KARACIĞER HÜCRE HATTINDA KUERSETİN VE SİSPLATİNİN TEK BAŞINA VEYA BİRLİKTE SİTOTOKSİK VE ANTİ-ANJİOGENİK ETKİSİNİN ARAŞTIRILMASI

INVESTIGATION OF THE CYTOTOXIC AND ANTIANGIOGENIC EFFECTS OF QUERCETIN AND CISPLATIN, ALONE OR IN COMBINATION, IN LIVER CELL LINES

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Abstract
Hepatocellular carcinoma is a global health problem, being the fifth most common cancer worldwide and the third leading cause of cancer-related deaths. Pathological angiogenesis is associated with the development of various serious diseases, primarily cancer. Therefore, developing new and effective treatment approaches is necessary to manage cancer progression, improve clinical symptoms, and effectively treat this disorder. Compared to currently available antiangiogenic drugs, plant-derived products not only possess similar therapeutic potential but also offer clear advantages due to their lower toxicity and ease of application. This study aims to investigate the cytotoxic and antiangiogenic effects of quercetin on the HepG2 cell line and to elucidate the molecular mechanisms of these effects.
Different doses of quercetin and cisplatin were applied to the liver cell line for 24, 48, and 72 hours, cell viability was assessed according to MTT analysis, and IC50 values were calculated. For further experiments, the IC_{50} values of quercetin and cisplatin at 48 hours (115.7 µM, 11.26 µM, respectively) were obtained and applied. After immunocytochemical staining, the immunoreactivity intensities of eNOS, iNOS, CD31, and MMP-9 were evaluated in all groups and statistically compared between the groups. In the analyses performed on the HepG2 cell line, it was observed that quercetin and cisplatin applications increased eNOS expression ($p<0.001$), while this increase was lower in the combination group compared to the individual groups; furthermore, iNOS expression was found to be significantly increased in the combination group ($p<0.01$). However, CD31 expression was significantly decreased in all treatment groups ($p<0.001$), and MMP-9 expression was decreased especially in the cisplatin and combination groups compared to the control group ($p<0.05$; $p<0.01$). These results demonstrate that quercetin, administered alone or in combination with cisplatin, may modulate markers associated with angiogenesis and tumor progression in HepG2 cells, suggesting its potential as a therapeutic candidate. However, further studies are needed to elucidate the molecular mechanisms underlying this effect.
Keywords: Liver cell line, quercetin, cisplatin, angiogenesis

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Özet
Hepatoselüler karsinom, dünya çapında en yaygın beşinci kanser ve kanserden ölümlerin üçüncü en yaygın nedeni olan küresel bir sağlık sorunudur. Patolojik anjiyogenez, başta kanser olmak üzere çeşitli ve ciddi hastalıkların gelişimi ile ilişkilidir. Bu nedenle kanserin ilerlemesinin yönetilmesi, klinik belirtilerin iyileştirilmesi ve bu bozukluğun etkin tedavisi için yeni ve etkili tedavi yaklaşımlarının

geliştirilmesi gerekmektedir. Şu anda mevcut antianjiyojenik ilaçlarla karşılaştırıldığında, bitki kaynaklı ürünler sadece benzer terapötik potansiyele sahip olmakla kalmayıp, aynı zamanda daha düşük toksisiteleri ve uygulama kolaylığı nedeniyle açık avantajlar da sunabilmektedir. Çalışmada da kuersetinin HepG2 hücre hattı üzerindeki sitotoksik ve antianjiyogenik etkileri incelenecek, bu etkilerin moleküler mekanizmalarının aydınlatılması amaçlanmıştır.
Karaciğer hücre hattı üzerine 24, 48 ve 72 saat süreyle farklı dozlarda kuersetin ve sisplatin uygulandı, hücre canlılığı MTT analizine göre değerlendirildi ve IC_{50} değerleri hesaplandı. İleri deneyler için kuersetinin ve sisplatinin 48. saatteki IC_{50} değerleri (115,7 µM, 11,26 µM sırasıyla) alındı ve uygulandı. Yapılan immünositokimyasal boyamalar sonrasında tüm gruplarda eNOS, iNOS, CD31 ve MMP-9 immün reaktivite yoğunlukları değerlendirildi ve istatistiksel olarak gruplar arasında karşılaştırma yapıldı. HepG2 hücre hattında yapılan analizlerde, kuersetin ve sisplatin uygulamalarının eNOS ekspresyonunu artırdığı ($p<0.001$) gözlemlenmiştir; ancak bu artış, kombinasyon grubunda bireysel gruplara kıyasla daha düşüktür; ayrıca, iNOS ekspresyonunun kombinasyon grubunda anlamlı derecede arttığı bulunmuştur ($p<0.01$). Bununla birlikte, CD31 ekspresyonu tüm tedavi gruplarında anlamlı derecede azalmıştır ($p<0.001$) ve MMP-9 ekspresyonu özellikle sisplatin ve kombinasyon gruplarında kontrol grubuna kıyasla azalmıştır ($p<0.05$; $p<0.01$). Bu sonuçlar, tek başına veya sisplatin ile kombinasyon halinde uygulanan kersetinin, HepG2 hücrelerinde anjiyogenez ve tümör ilerlemesi ile ilişkili belirteçleri modüle edebildiğini ve bunun terapötik bir aday olarak potansiyelini ortaya çıkardığını göstermektedir. Ancak bu etkinin altında yatan moleküler mekanizmaların aydınlatılması için daha ileri çalışmalara ihtiyaç vardır.
Anahtar kelimeler: Karaciğer hücre hattı, kuersetin, sisplatin, anjiyogenez

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TERK EDİLMİŞ VERNAKÜLER YERLEŞİMLERDE KÜLTÜREL MİRASIN KORUNMASI: TUNUS, ZRIBA OLIA ÖRNEĞİ

CONSERVATION OF CULTURAL HERITAGE IN ABANDONED VERNACULAR SETTLEMENTS: THE CASE OF ZRIBA OLIA, TUNISIA

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ÖZET

Tunus'un vernaküler dağ köyleri, Akdeniz kültürel peyzajının çevresel, iklimsel ve sosyo-kültürel koşullara yüzyıllar boyunca geliştirilen uyum süreçlerini yansıtan önemli bileşenleri arasında yer almaktadır (Oliver, 2006; Rapoport, 1969). Bu yerleşimler içerisinde Zriba Olia, topoğrafyayla bütünleşen mimari yapısı, geleneksel taş mimarisi ve kültürel sürekliliği bakımından dikkat çekmektedir (Hadda, 2022). Ancak kırsal nüfus kaybı, ekonomik göç, modernleşme politikaları ve altyapısal dönüşümler nedeniyle köy büyük ölçüde terk edilmiştir (Marzouki, 2021). Bu süreç yalnızca fiziksel bozulmaya değil; aynı zamanda geleneksel yapı bilgisinin, toplumsal hafızanın ve yerel yaşam kültürünün kaybına da neden olmaktadır (UNESCO, 2011). Bu çalışma, Zriba Olia'daki mimari terk edilme sürecini kültürel peyzaj, vernaküler mimari ve sürdürülebilir koruma bağlamında incelemektedir. Araştırma kapsamında köyün mekânsal organizasyonu, geleneksel yapı sistemleri ve çevresel uyum stratejileri değerlendirilerek terk edilmenin mimari çevre üzerindeki etkileri ortaya konulmaktadır. Çalışma ayrıca sürdürülebilir koruma yaklaşımlarının yalnızca fiziksel restorasyona odaklanmaması; toplumsal katılımı, kültürel sürekliliği ve çevresel sürdürülebilirliği de içermesi gerektiğini savunmaktadır (UNESCO, 2011; Oliver, 2006).

Anahtar Kelimeler : Zriba Olia, vernaküler mimari, kültürel peyzaj, terk edilme, Tunus, sürdürülebilir koruma.

ABSTRACT

The vernacular mountain villages of Tunisia constitute significant components of the Mediterranean cultural landscape, reflecting centuries-long processes of adaptation to environmental, climatic, and socio-cultural conditions (Oliver, 2006; Rapoport, 1969). Among these settlements, Zriba Olia stands out due to its architectural integration with topography, traditional stone architecture, and cultural continuity (Hadda, 2022). However, as a result of rural depopulation, economic migration, modernization policies, and infrastructural transformations, the village has been largely abandoned (Marzouki, 2021). This process has led not only to physical deterioration but also to the loss of traditional building knowledge, collective memory, and local ways of life (UNESCO, 2011). This study examines the process of architectural abandonment in Zriba Olia within the context of cultural landscape, vernacular architecture, and sustainable conservation. Within the scope of the research, the spatial organization of the village, traditional building systems, and environmental adaptation strategies are evaluated in order to reveal the effects of abandonment on the architectural environment. The study further argues that sustainable conservation approaches should not focus solely on physical restoration, but should also incorporate community participation, cultural continuity, and environmental sustainability (UNESCO, 2011; Oliver, 2006).

Keywords: Zriba Olia, vernacular architecture, cultural landscape, abandonment, Tunisia, sustainable conservation.

NİZİP SAYINLAR SABUNHANESİ VE SABUN HANIN YENİDEN İŞLEVLENDİRME ÖNERİSİ

PROPOSAL FOR THE RE-FUNCTIONALIZATION OF NIZIP SAYINLAR SABUNHANESİ AND SABUN HAN

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Abstract

Today, there are industrial structures located within the city center, surrounded by buildings, that have lost their function and remain in an idle state. Historical industrial structures are significant cultural heritage elements that reflect production culture, economic development, and technical progress. These structures serve as documents with urban and architectural values, providing data on the scientific values that define the historical, technological, and socioeconomic conditions of industrial culture. In this context, they are considered worthy of conservation under the scope of industrial heritage. However, with the development of contemporary production techniques, many industrial structures have lost their function and face the risk of physical deterioration. Considering the changing nature of social values, the conservation and revitalization of industrial structures, their meaningful integration with urban memory and identity, and the transmission of technical knowledge to the future are of great importance in the process of cultural continuity.

The primary aim of the research is to develop a sustainable re-functioning proposal by conservation the structure's historical character and spatial integrity. It is important to experience the transformation of historical industrial structures into new functional alternatives that respond to contemporary needs, in a way that affects both the region and the city, while incorporating architectural, contextual, economic, social, and environmental goals for sustainable urban development. The application phase of the research analyzes the architectural features, spatial and volumetric configurations, production traces, and environmental relations of the Sayınlar Sabunhanesi and Sabun Han structures, which are located in the Nizip district of Gaziantep Province and fall within the scope of Industrial Heritage.

The research includes a literature review within the framework of industrial heritage, conservation, and re-functioning; methods such as on-site observation, photographic documentation, measurement, and spatial analysis were utilized. In selecting new functions under current conditions, inputs regarding physical characteristics, social needs, urban identity, and location were realized according to survey metrics. The obtained data were evaluated in terms of plan schemes, material usage, structural features, and new design criteria.

The study emphasizes that soap workshops are not only production spaces but also carriers of cultural memory and local identity. Analysis findings propose modular, recyclable systems based on spatial organization, flexibility, and needs, and carry out portability processes as part of the design according to sustainability-priority evaluation criteria. In this context, while constructing a conceptual and design framework for the current reuse of industrial heritage that conserves its historical identity, the aim is to develop proposals for revealing the spatial potential for interior architectural interventions and constructing a sustainable functional concept.

The analysis and design proposals developed specifically for the Sayınlar Sayınlar Sabunhanesi and Sabun Han structures offer an architectural and interior-focused method for the conservation and re-functioning of similar historical industrial structures.

At the same time, it aims to contribute to the sustainable survival of industrial heritage for disciplines such as architectural and interior design that support public use, material conservation, and spatial continuity, and to create an original application example for the limited number of academic studies on soap factories.
Keywords: Industrial Heritage, Re-Functioning, Interior Design, Conservation and Sustainability, Sayınlar Sabunhanesi, Sabun Han, Nizip.

Özet

Günümüzde, kent merkezi içinde kalmış, etrafı yapılarla çevrilmiş, işlevini yitirmiş, atıl durumda olan sanayi yapıları bulunmaktadır. Tarihi endüstri yapıları, üretim kültürünü, ekonomik gelişimi ve teknik ilerlemeyi yansıtan önemli kültürel miras unsurlarıdır. Bu yapılar, endüstri kültürünün tarihsel, teknolojik, sosyoekonomik koşulları tanımlayan bilimsel değerleri hakkında veriler sağlayan, kentsel, mimari değerleri olan ve bu özellikleriyle belge niteliği taşımaktadır. Bu bağlamda endüstriyel miras kapsamı altında korunmaya değer bulunmaktadır. Ancak çağdaş üretim tekniklerinin gelişmesiyle birlikte birçok endüstriyel yapı işlevini yitirmiş ve fiziksel bozulma riskiyle karşı karşıya kalmıştır. Toplumsal değerlerin değişken yapısı göz önüne alındığında, kültürün devamlılığı sürecinde, sanayi yapılarının korunması, yaşatılması, kent belleği ve kimliği ile olan anlamsal bütünleşmesi ve teknik bilgilerin geleceğe taşınması açısından önem teşkil etmektedir.
Araştırmanın temel amacı, yapının tarihsel karakterini ve mekânsal bütünlüğünü koruyarak sürdürülebilir bir yeniden kullanım önerisi geliştirmektir. Günümüz ihtiyaçlarına cevap verecek biçimde yeni işlev alternatiflerine dönüştürülerek, tarihî endüstri yapılarının olduğu bölgeyle birlikte kenti de etkilemesi sürdürülebilir kentsel gelişim için mimari, bağlamsal, ekonomik, sosyal ve çevresel hedefleri barındırması açısından deneyimlenebilmesi önem kazanmaktadır. Araştırmanın uygulama aşaması, Gaziantep İli'nin Nizip İlçesi'nde bulunan Endüstriyel Miras kapsamındaki Sayınlar Sabunhanesi ve Sabun Han yapılarının mimari özellikleri, mekânsal, hacimsel kurguları incelenerek, sahip oldukları üretim izleri ve çevresel ilişkileri analiz edilmiştir.
Araştırmada endüstri mirası, koruma ve yeniden işlevlendirme kavramları çerçevesinde literatür taraması yapılmış; yerinde gözlem, fotoğrafla belgeleme, ölçüm ve mekânsal analiz yöntemlerinden yararlanılmıştır. Günümüz koşullarında yeni işlev seçimlerinde, fiziki özellikleri, toplumsal ihtiyaçları, kentsel kimlik ve konumun getirdiği birtakım girdiler yapılan anket ölçülerine göre gerçekleştirilmiştir. Elde edilen veriler plan şeması, malzeme kullanımı, yapısal özellikler ve yeni tasarım kriterleri açısından değerlendirilmiştir.
Çalışma, sabunhanelerin yalnızca üretim mekânları değil; aynı zamanda kültürel bellek ve yerel kimliğin taşıyıcıları olduğunu vurgulamaktadır. Analiz bulguları, mekânsal organizasyon, esneklik ve ihtiyaca yönelik modüler, geri dönüşümlü sistemler önermeli ve taşınabilirlik süreçleri tasarımın parçası olarak sürdürülebilirlik öncelikli değerlendirme ölçütlerine göre gerçekleştirilmiştir. Bu kapsamda, endüstri miraslarının tarihî kimliğini koruyan, güncel yeniden kullanımı bağlamında, kavramsal ve tasarımsal bir çerçeve kurgulanırken iç mimari müdahalelere yönelik mekânsal potansiyelin açığa çıkarılması ve sürdürülebilir işlevsel bir konseptin kurgulanmasına yönelik öneriler geliştirmektir.
Sayınlar Sabunhanesi ve Sabun Han yapıları özelinde geliştirilen analiz ve tasarım önerileri, benzer nitelikteki tarihî endüstri yapılarının korunması ve yeniden işlevlendirilmesine yönelik mimari ve iç mekân odaklı bir yöntem önermektedir. Aynı zamanda kamusal kullanımı destekleyen mimari ve iç mekân tasarımı, malzeme korunumu ve mekânsal süreklilik disiplinleri için endüstri mirasının sürdürülebilir biçimde yaşatılmasına katkı sağlamayı ve sabun fabrikaları üzerine sınırlı sayıdaki akademik araştırmalara özgün bir uygulama örneği oluşturmayı amaçlamaktadır.
Anahtar kelimeler: Endüstriyel Miras, Yeniden İşlevlendirme, İç Mekân Tasarımı, Koruma ve Sürdürülebilirlik, Sayınlar Sabunhanesi, Sabun Han, Nizip.

KLORLANMIŞ POLİETİLEN (CPE) İLE MODİFİYE EDİLMİŞ BİTÜMLÜ BAĞLAYICILARIN FİZİKSEL VE KISA DÖNEM YAŞLANMA ÖZELLİKLERİNİN İNCELENMESİ

AN INVESTIGATION INTO THE PHYSICAL AND SHORT-TERM AGEING PROPERTIES OF BITUMINOUS BINDERS MODIFIED WITH CHLORINATED POLYETHYLENE (CPE)

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Abstract
The performance of bituminous binders used in road pavements has a decisive impact on the service life and durability of the pavements. Increasing traffic volumes and heavy vehicle loads necessitate higher strength, stability and deformation resistance in asphalt mixtures, while energy consumption and costs in production processes make the development of more sustainable and economical pavement solutions imperative. In this study, the effects of chlorinated polyethylene (CPE) additive on the physical properties and short-term ageing performance of the bituminous binder were investigated. Within the scope of the study, CPE was added to pure bitumen of the B70/100 penetration class at rates of 2%, 4%, 6% and 8% by weight, and penetration and softening point tests were carried out on the prepared modified binders. Using the results obtained, penetration index (PI) values, which represent the binder's temperature sensitivity, were calculated and 6% CPE was determined to be the optimum additive content. Furthermore, the mixing temperature, mixing speed and mixing time parameters for the modification process were optimised. Ductility and Rolling Thin Film Oven Test (RTFOT) were conducted on the modified binders prepared under optimum conditions to evaluate their deformation characteristics and short-term ageing behaviour. The experimental results showed that a 6% CPE addition reduced the bitumen's penetration value whilst increasing the softening point and reducing temperature sensitivity. The improvement in penetration index values demonstrated that the modified binder exhibited more stable behaviour in response to temperature changes. The RTFOT results, meanwhile, showed that the CPE-modified binder largely retained its physical properties following short-term ageing and that its high-temperature performance had improved. The findings suggest that CPE is a viable alternative polymer additive for bitumen modification and enhances the performance characteristics of bituminous binders.
Keywords: Flexible pavement, modified bitumen, chlorinated polyethylene (CPE), penetration index, RTFOT

Özet
Karayolu üstyapılarında kullanılan bitümlü bağlayıcıların performansı, kaplamaların servis ömrü ve dayanıklılığı üzerinde belirleyici bir etkiye sahiptir. Artan trafik hacmi ve ağır taşıt yükleri, asfalt karışımlarında daha yüksek dayanım, stabilite ve deformasyon direnci gereksinimini ortaya koyarken, üretim süreçlerindeki enerji tüketimi ve maliyetler daha sürdürülebilir ve ekonomik üstyapı çözümlerinin geliştirilmesini zorunlu kılmaktadır. Bu çalışmada, klorlanmış polietilen (CPE) katkısının bitümlü bağlayıcının fiziksel özellikleri ve kısa dönem yaşlanma performansı üzerindeki etkileri araştırılmıştır. Çalışma kapsamında B70/100 penetrasyon sınıfındaki saf bitüme ağırlıkça %2, %4, %6 ve %8 oranlarında CPE ilave edilmiş, hazırlanan modifiye bağlayıcılar üzerinde penetrasyon ve yumuşama noktası deneyleri gerçekleştirilmiştir. Elde edilen sonuçlar kullanılarak bağlayıcının sıcaklık hassasiyetini temsil eden penetrasyon indeksi (PI) değerleri hesaplanmış ve %6 CPE'nin optimum katkı oranı olduğu belirlenmiştir. Ayrıca modifikasyon işlemi için karıştırma sıcaklığı, karıştırma hızı ve karıştırma süresi parametreleri optimize edilmiştir.

Optimum koşullarda hazırlanan modifiye bağlayıcılar üzerinde düktilite ve dönel ince film halinde ısıtma deneyi (RTFOT) uygulanarak bağlayıcıların deformasyon kabiliyeti ve kısa dönem yaşlanma davranışları değerlendirilmiştir. Deney sonuçları, %6 CPE katkısının bitümün penetrasyon değerini azaltırken yumuşama noktasını artırdığını ve sıcaklık hassasiyetini düşürdüğünü göstermiştir. Penetrasyon indeksi değerlerindeki iyileşme, modifiye bağlayıcının sıcaklık değişimlerine karşı daha kararlı bir davranış sergilediğini ortaya koymuştur. RTFOT sonuçları ise CPE katkılı bağlayıcının kısa süreli yaşlanma sonrasında fiziksel özelliklerini büyük ölçüde koruduğunu ve yüksek sıcaklık performansının geliştiğini göstermiştir. Elde edilen bulgular, CPE katkısının bitüm modifikasyonunda kullanılabilecek alternatif bir polimer katkı olduğunu ve bitümlü bağlayıcının performans özelliklerini olumlu yönde etkilediğini ortaya koymaktadır.

Anahtar kelimeler: Esnek üstyapı, modifiye bitüm, klorlanmış polietilen (CPE), penetrasyon indeksi, RTFOT

ROMANTİK MANZARA RESMİNDE MİKRO UFUKLAR*

MICRO HORIZONS IN ROMANTIC LANDSCAPE PAINTING

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Abstract
When we think of landscape painting, the first things that come to mind are, of course, the expansive view of nature and the objectivity of nature itself. But considering that each observer is an individual, and each individual is a microcosm, it can also be said that the gaze is simultaneously directed towards an infinite inner landscape. This inner landscape tends to transform into the infinite nature added to the outer landscape. This article will explore how this inner micro-space, particularly as addressed by Romantic thinkers and artists, transforms into cosmic nature, by considering the Romantic corpus. The fundamental question of this article is how the desire for infinity created by the unity of micro-space and nature is depicted in Romantic landscape painting, considering Schelling, Novalis, and other Romantic thinkers. Considering all these perspectives, it can be said that every landscape painting is a quest for spiritual energy that attempts to expand between the micro-space and the external world. Romanticism views nature not only as an objective appearance but also as a holistic realm of existence that is felt, thought about, and merged with the individual's inner world. In this context, landscape painting, along with Romanticism, ceases to be merely a view of nature and transforms into an expression of the individual's inner experience, spiritual quest, and even yearning for infinity. The fundamental experience of Romantic aesthetics lies precisely in this idea: the merging of the individual's inner cosmos with the macrocosm of nature. Therefore, Romantic landscape paintings can be defined as the visual space of the tense relationship established between the individual's inner horizon and the infinity of nature. Thus, a Romantic landscape painting can be described not merely as a gaze directed towards nature, but also as micro-gazes that open up to inner landscapes, supplementing this gaze.
Keywords: Microcosm, individual, nature, romantic landscape painting, gaze, freedom

Özet
Manzara resmi denince ilk akla gelen doğaya doğru açılan bakışın uzamı ve doğanın nesnelliğidir elbette. Fakat her bakanın birey olduğu ve her bireyin küçük bir kozmos olduğu düşünüldüğünde bakışın eş zamanlı şekilde sonsuz bir içsel manzaraya doğru yöneldiği de söylenebilir. Bu içsel manzara dış manzaraya eklenen sonsuz doğaya dönüşme eğilimindedir. Bu makalede özellikle romantik düşünür ve sanatçıların değindiği bu içsel mikro uzamın kozmik doğaya nasıl dönüştüğü romantik külliyat düşünülerek araştırılacaktır. Schelling, Novalis ve diğer romantik düşünürlerle bağlantılı düşünüldüğünde mikro uzam ile doğanın birlikteliğinin yarattığı sonsuzluk arzusunun romantik manzara resminde nasıl betimlendiği bu makalenin temel sorusudur. Tüm bu bakış açıları düşünüldüğünde denebilir ki; her manzara resmi, mikro uzam ile dış dünyanın arasında genleşmeye çalışan ruhsal enerjinin arayışıdır. Romantizm, doğayı nesnel görünümünün yanında hissedilen, düşünülen ve bireyin iç dünyasıyla birleşen bütünsel bir varlık alanı olarak görür. Bu bağlamda manzara resmi romantizmle birlikte doğanın salt bir görünümü olmaktan çıkarak, bireyin içsel deneyiminin, ruhsal arayışının ve hatta sonsuzluk özleminin birer ifadesine dönüşür. Romantik estetiğin temel deneyimi, tam da bu düşüncede; bireyin kendi içsel kozmosu ile doğanın makro kozmosuyla birleştiğinde mevcut olagelir. Bu nedenle romantik manzara resimleri, bireyin içsel ufkuyla doğanın sonsuzluğu arasında kurulan gerilimli ilişkinin görsel alanı olarak tanımlanabilir.

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O halde bir romantik manzara resmi; salt doğaya doğru yönelen bir bakış değil, bu bakışa eklenen, içsel manzaralara doğru da açılan mikro bakışlardır da denebilir.

Anahtar Kelimeler: Mikro kozmos, birey, doğa, romantik manzara resmi, bakış, özgürlük

VAROLUŞÇULUK FELSEFESİ BAĞLAMINDA JAPON ANİMELERİNDE KARAKTER GELİŞİMİ: DEATH NOTE ÜZERİNE BİR ÇÖZÜMLEME

THE DEVELOPMENT OF CHARACTERS IN JAPANESE ANIME IN THE CONTEXT OF EXISTENTIALIST PHILOSOPHY: AN ANALYSIS OF DEATH NOTE

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ÖZET

Bu çalışmada, Japon animelerinde karakter gelişimi varoluşçuluk felsefesi bağlamında incelenmiştir. Günümüzde çoğunlukla popüler kültür ürünü olarak değerlendirilen anime yapımlarının, aslında derin anlatı yapıları, felsefi temaları ve katmanlı karakter kurguları barındırdığı görülmektedir. Bu doğrultuda çalışmanın amacı, anime anlatılarında varoluşçu düşüncenin karakterlerin psikolojik dönüşümüne, karar süreçlerine ve hikâye yapısına etkisini ortaya koymaktır. Ayrıca bu yaklaşım, animenin anlatı potansiyelini yalnızca kültürel bir ürün olmaktan çıkararak disiplinlerarası bir inceleme alanına taşımaktadır. Böylece popüler kültür ile felsefi düşünce arasındaki ilişki daha görünür hale getirilmektedir.

Araştırmada nitel yöntem benimsenmiş; doküman incelemesi, Roland Barthes temelli göstergebilimsel analiz ile nitel içerik analizi tekniklerinden yararlanılmıştır. Çalışmanın örneklemini Death Note (Ölüm Defteri) adlı anime serisi oluşturmaktadır. Eserde yer alan kimlik arayışı, ahlaki çatışmalar, bireysel sorumluluk ve seçimlerin sonuçları gibi temalar karakter gelişimi açısından değerlendirilmiştir. Özellikle ana karakter Yagami Light'ın geçirdiği dönüşüm süreci, bireyin kendini inşa etmesi ve yok etmesi ekseninde varoluşçu perspektifle çözümlenmiştir. Bu analiz süreci, metin içi göstergelerin çok katmanlı anlam üretimini ortaya çıkarmada etkili bir yöntem sunmuştur. Aynı zamanda Barthes temelli yaklaşım, görsel ve anlatısal öğelerin birlikte okunmasına imkân tanımıştır.

Çalışma sonucunda, güçlü felsefi altyapıyla desteklenen karakter gelişiminin anlatı etkisini artırdığı; anlatı içinde kullanılan görsel göstergelerin ve dinî imgelerin varoluşçu temaları pekiştirdiği saptanmıştır. Bu bulgular, anime yapımlarının yalnızca eğlence amaçlı tüketim nesneleri olmanın ötesinde, sanatsal ve düşünsel açıdan incelenmeye değer eserler olduğuna işaret etmektedir. Bu makaledeki her paragrafa akışı ve anlamı bozmadan ikişer cümle daha ekle ama zaten var olan yazılar değiştirme sadece ekleme yap. Elde edilen sonuçlar, anime anlatılarının akademik çalışmalarda daha geniş bir teorik çerçevede ele alınabileceğini göstermektedir. Ayrıca bu tür incelemelerin, görsel kültür çalışmalarına yeni yorum alanları kazandırabileceği değerlendirilmektedir.

Anahtar Kelimeler: DeathNote, Karakter Gelişimi, Varoluşçuluk, Göstergebilim

ABSTRACT

In this study, character development in Japanese anime has been examined within the context of existentialism philosophy. Anime productions, which are generally regarded as products of popular culture today, are considered to contain deep narrative structures, philosophical themes, and layered character constructions. In this regard, the aim of the study is to reveal the influence of existentialist thought on the psychological transformation of characters, their decision-making processes, and narrative structure in anime works. Furthermore, this approach moves anime's narrative potential beyond being merely a cultural product and positions it as an interdisciplinary field of study. Thus, the relationship between popular culture and philosophical thought becomes more visible.

A qualitative method was adopted in the research; document analysis, semiotic analysis based on Roland Barthes, and qualitative content analysis techniques were employed. The sample of the study consists of the anime series Death Note. Themes such as, the search for identity, moral conflicts, individual responsibility, and the consequences of choices were evaluated in terms of character development. In particular, the transformation process of the main character Yagami Light was analyzed from an existentialist perspective in relation to the individual's construction and destruction of the self. This analytical process offers an effective method for revealing the multi-layered production of meaning

within textual signs. At the same time, the Barthes-based approach allows visual and narrative elements to be read together.

As a result of the study, it was concluded that character development supported by a strong philosophical foundation increases the impact of the narrative; visual signs and religious imagery used within the narrative reinforce existentialist themes. These findings indicate that anime productions are not merely entertainment-oriented products but also works worthy of artistic and intellectual examination. The results obtained indicate that anime narratives can be addressed within a broader theoretical framework in academic studies. Furthermore, such analyses are considered to open new interpretive spaces for visual culture studies.

Keywords: DeathNote, Character Development, Existentialism, Semiotics

FOTOELEKTROKIMYASAL UYGULAMALAR IÇIN YÜKSEK PERFORMANSLI CDS/CDSE KUANTUM NOKTA ORTAK DUYARLILAŞTIRMALI ERGO/ZNO@TİO₂ HETEROYAPILI FOTOANOTLAR

HIGH-PERFORMANCE CDS/CDSE QUANTUM DOT CO-SENSITIZED ERGO/ZNO@TIO₂ HETEROSTRUCTURED PHOTOANODES FOR PHOTOELECTROCHEMICAL APPLICATIONS

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Abstract
Efficient solar-light-driven photoelectrochemical materials have attracted considerable attention owing to their potential applications in solar energy conversion, water splitting, hydrogen production, photoelectrochemical sensing, and quantum dot-sensitized solar cells (QDSSCs). In this study, CdS/CdSe quantum dot co-sensitized ERGO/ZnO@TiO_2 heterostructured photoanodes were fabricated and their photoelectrochemical properties were systematically investigated. The ERGO/ZnO@TiO_2 nanocomposite photoanode was synthesized via an electrochemical deposition method, providing a facile and controllable route for the preparation of semiconductor heterostructures on conductive substrates. Subsequently, CdS and CdSe quantum dots were sequentially deposited onto the photoanode surface through the successive ionic layer adsorption and reaction (SILAR) technique. The effects of quantum dot loading on photocurrent performance were optimized by varying the deposition cycles. For individually sensitized photoanodes, the highest photocurrent densities were obtained with 15 cycles of CdS (8.78 mA cm^{-2}) and 3 cycles of CdSe (2.23 mA cm^{-2}). Following the optimization of individual sensitizers, CdS/CdSe co-sensitized photoanodes were prepared using different deposition cycles. Among the investigated samples, the ERGO/ZnO@TiO_2–CdS(15)/CdSe(2) photoanode exhibited the highest photocurrent density of 14.53 mA cm^{-2} under simulated solar illumination in a polysulfide electrolyte. The enhanced photoresponse was attributed to the synergistic effect of CdS/CdSe co-sensitization, which improves visible-light absorption and promotes efficient charge separation and electron transport. The structural, morphological, elemental, optical, and electrochemical properties of the prepared photoanodes were characterized by X-ray diffraction (XRD), field-emission scanning electron microscopy (FESEM), energy-dispersive X-ray spectroscopy (EDS), UV–Vis spectroscopy, photocurrent measurements, and electrochemical impedance spectroscopy (EIS). The obtained results demonstrate that CdS/CdSe quantum dot co-sensitized ERGO/ZnO@TiO_2 heterostructures are promising photoanode materials for a wide range of solar-light-driven photoelectrochemical applications.
Keywords: ERGO/ZnO@TiO_2, CdS/CdSe quantum dots, SILAR, photoelectrochemistry, photocurrent density, heterostructured photoanodes.

Özet
Güneş ışığı ile çalışan fotoelektrokimyasal malzemeler, güneş enerjisi dönüşümü, su ayrıştırılması, hidrojen üretimi, fotoelektrokimyasal sensörler ve kuantum nokta duyarlı güneş pilleri (QDSSC) gibi uygulamalardaki potansiyelleri nedeniyle büyük ilgi görmektedir. Bu çalışmada, CdS/CdSe kuantum nokta (QD) ortak duyarlılaştırılmış ERGO/ZnO@TiO_2 heteroyapılı fotoanotlar hazırlanmış ve fotoelektrokimyasal özellikleri sistematik olarak incelenmiştir. ERGO/ZnO@TiO_2 nanokompozit fotoanot, iletken altlık üzerinde kontrollü ve kolay film oluşumu sağlayan elektrokimyasal çöktürme yöntemi ile sentezlenmiştir. Daha sonra CdS ve CdSe kuantum noktaları, ardışık iyonik tabaka adsorpsiyonu ve reaksiyonu (SILAR) yöntemi kullanılarak fotoanot yüzeyine sırasıyla yüklenmiştir. Kuantum nokta yükleme miktarının fotoelektrokimyasal performansa etkisi, farklı çevrim sayıları kullanılarak optimize edilmiştir. Tekli kuantum nokta duyarlılaştırılmış sistemlerde en yüksek fotoakım

yoğunluğu CdS için 15 çevrimde 8,78 mA cm^{-2} ve CdSe için 3 çevrimde 2,23 mA cm^{-2} olarak elde edilmiştir. Ardından farklı CdS ve CdSe çevrim sayılarında hazırlanan ortak duyarlılaştırılmış fotoanotlar karşılaştırılmıştır. İncelenen örnekler arasında, ERGO/ZnO@TiO_2–CdS(15)/CdSe(2) fotoanodu, yapay güneş ışığı altında ve polisülfit elektrolit içerisinde 14,53 mA cm^{-2} fotoakım yoğunluğu ile en yüksek performansı göstermiştir. Elde edilen yüksek fotoelektrokimyasal performans, CdS/CdSe ortak duyarlılaştırmasının görünür bölgedeki ışık soğurmasını artırması ve yük taşıyıcılarının ayrışmasını kolaylaştırması ile ilişkilendirilmiştir. Hazırlanan fotoanotların yapısal, morfolojik, elementel, optik ve elektrokimyasal özellikleri X-ışını kırınımı (XRD), alan emisyonlu taramalı elektron mikroskobu (FESEM), enerji dağılımlı X-ışını spektroskopisi (EDS), UV-Vis spektroskopisi, fotoakım ölçümleri ve elektrokimyasal empedans spektroskopisi (EIS) kullanılarak karakterize edilmiştir. Elde edilen sonuçlar, CdS/CdSe kuantum nokta ortak duyarlılaştırılmış ERGO/ZnO@TiO_2 heteroyapılarının güneş ışığı ile çalışan geniş kapsamlı fotoelektrokimyasal uygulamalar için umut verici fotoanot malzemeleri olduğunu göstermektedir.

Anahtar kelimeler: ERGO/ZnO@TiO_2, CdS/CdSe kuantum noktaları, SILAR, fotoelektrokimya, fotoakım yoğunluğu, heteroyapılı fotoanotlar.

BUTYLXANTHOGENATEMETHYLENETHIOMETHELENECARBOXYDIBUTYLBORATE AS EXTREME PRESSURE ADDITIVE TO TRANSMISSION OILS

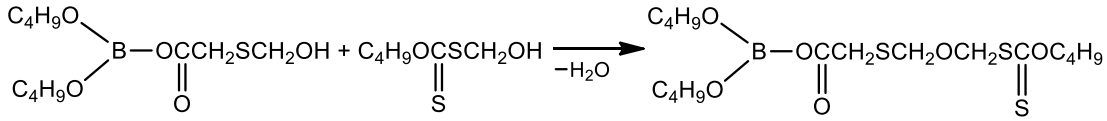
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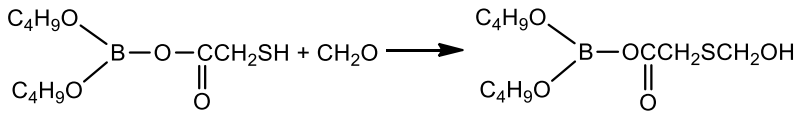
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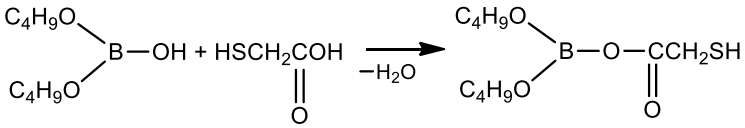
Abstract
In recent years, due to the development of the oil industry, the demand for the creation of high-quality oils is increasing year by year. The authors of this work synthesized a new boron-sulfur-containing substance - butylxanthogenatomethylenethiomethylenecarboxydibutylborate, and studied it as an anti-seize additive in transmission oils, which is one of the most demanded oils. Butylxanthogenatomethylenethiomethylenecarboxydibutylborate was obtained according to the following scheme:



The reaction is carried out in a flask equipped with a Dean-Stark separator at 80□C. After the reaction is complete, the obtained substance is washed, benzene is removed and dried in vacuum. The yield of the substance is 75%. The composition and structure of the substance were confirmed by determination of physicochemical parameters, elemental analysis and IR spectroscopy. Physicochemical parameters: n_D^{20} –1.5042, d_4^{20}–1.1242. MR_D found–115.88, MR_D calculated–116.66. Molecular formula: $C_{17}H_{33}BO_6S_3$: Elemental Analysis, %: Found: C (47.62), H (7.52), S (22.26). Calculated: C (47.55), H (7.69), S (22.38). The starting material, hydroxymethylenethiomethylenecarboxydibutylborate, was obtained from the reaction of thioglycolic acid with dibutylborate and paraform:



Hydroxymethylthiomethylenecarboxydibutylborate is also a new substance not described in the literature. The composition and structure of the substance were confirmed by determination of its physicochemical properties, elemental analysis and IR spectroscopy. The scheme for obtaining mercaptomethylcarbonyldibutylborate, taken as the starting material, is as follows:



The composition and structure of this substance were also confirmed by determining its physicochemical properties and IR spectroscopy. The shear properties of the obtained butylxanthogenatomethylenethiomethylenecarboxydibutylborate were determined in a four-ball friction machine ((FFM-1)). The studies were carried out alongside the known anti-shear additive LZ-23k for comparison. As a result, it turned out that the results of the anti-shear study of the synthesized new additive are significantly superior to the indicators of the additive taken for comparison. The high shear properties of the synthesized compound can be explained by the fact that this compound, along with the xanthogen group –CS(S)– with high shear properties [1, 2], also contains the C(O) carbonyl group. At the same time, boron-containing compounds also have anti-shear properties [3]. Thus, butylxanthogenatomethylenethiomethylenecarboxydibutylborate can be recommended as an anti-seize additive for transmission oils.

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PTCDA ARA YÜZEYLİ AL/p-Si YARI İLETKEN YAPILARININ IŞIK YOĞUNLUĞUNA BAĞLI OLARAK ELEKTRİKSEL GÜÇ DURUMLARININ ANALİZİ

THE ELECTRICAL POWER STATES ANALYSIS OF THE AL/p-SI SEMICONDUCTOR STRUCTURES WITH PTCDA INTERLAYER AS A FUNCTION OF LIGHT INTENSITY

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Abstract
In this study, the light intensity dependent electrical power (P_{max}=I_{max}.V_{max}) changes of Al/p-type Si structures with perylenetetracarboxylic dianhydride (PTCDA) interlayer were investigated in detail using current–voltage (*I*–*V*) measurements under light intensities ranging from 10 mW cm^{-2} to 100 mW cm^{-2} by increments of 10 mW cm^{-2}. Experimental results have shown that electrical power values initially increase and then decrease depending on the voltage. However, the electrical power values reached their maximum level between approximately 0.10 volts and 0.14 volts. Furthermore, it was observed that the electrical power values increased periodically and continuously depending on the light intensity. In the Al/PTCDA/p-Si/Al semiconductor structure, considering the work function values of the semiconductor (Si) and the metal (Al), aluminum (Al) metal is used as both an ohmic and rectifier contact. Also, current-voltage (*I*-*V*) measurements of the prepared Al/PTCDA/p-Si semiconductor structure were obtained using a Keithley 2400 Source Meter and a Fytronix FY-7000 Solar Simulator characterization system.
Keywords: Si, PTCDA, Electrical Power (P), Current (I), Voltage (V)

Özet
Bu çalışmada 10 mW cm^{-2} ile 100 mW cm^{-2} arasındaki ışık yoğunluğu altında perylenetetracarboxylic dianhydride (PTCDA) ara-yüzeyli Al/*p*-tipi Si yarı iletken yapısının akım-voltaj (*I*-*V*) dataları kullanılarak voltaja karşı kazanılan elektriksel güç (P_{max}=I_{max}.V_{max}) ve ışık yoğunluğuna bağlı değişen elektriksel güç değişimleri ayrıntılı olarak incelemiştir. Deneysel sonuçlar; önce voltaja bağlı olarak elektriksel güç değerlerinde bir artış ve daha sonra ise aynı şekilde bir azalma olduğunu göstermiştir. Ancak, elektriksel güç değerlerinin yaklaşık olarak 0.10 volt ile 0.14 volt arasında maksimum seviyeye ulaşmıştır. Ayrıca ışık şiddetine bağlı olarak elektriksel güç değerlerinin ise daima periyodik bir artış olduğu gözlemlenmiştir. Al/PTCDA/*p*-Si/Al yarıiletken yapıda yarıiletken (Si) ve metalin (Al) iş fonksiyonlarının değerleri dikkate alınarak hem omik ve hem de doğrultucu kontak olarak alüminyum (Al) metali kullanılmıştır. Ayrıca, Al/PTCDA/*p*-Si yarıiletken yapının akım-voltaj (*I*-*V*) ölçümleri/dataları Keithley 2400 Source Meter ve Fytronix FY-7000 Solar Simulator karakterizasyön sistemi kullanılarak elde edildi.
Anahtar Kelimeler: Si, PTCDA, Elektriksel güç (P), Akım (I), Voltaj (V)

GENİŞ BİR IŞIK ŞİDDETİ (10-100 MW CM^{-2}) ARALIĞINDA AL/PTCDA/P-Sİ YAPISININ FOTO DUYARLILIK DEĞERLERİNİN DEĞİŞİMİ

VARIATION OF PHOTOSENSITIVITY VALUES OF Al/PTCDA/p-Si STRUCTURE OVER A WIDE RANGE OF LIGHT INTENSITY (10-100 mW cm^{-2})

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Abstract
The changes in electrical power and photosensitivity values of a perilenetetracarboxylic dianhydride (PTCDA) interlayered Al/p-type Si metal semiconductor structures were investigated as a function of current and light intensity (from 10 mW cm^{-2} to 100 mW cm^{-2}), respectively. Photosensitivity values at -3.0 volts were obtained using reverse bias current-voltage (*I-V*) measurements. While an increase in electrical power values was observed depending on the current values, an increase in photosensitivity values was also observed depending on the increase in light intensity. The photosensitivity values were found to be 61.08 at a light intensity of 10 mW cm^{-2}, while they were 549.089 at a light intensity of 100 mW cm^{-2}. This indicates that the electrical, photovoltaic, and photodiode properties of the Al/PTCDA/p-Si/Al semiconductor structure are highly sensitive to light intensity. In our experimental study, the photosensitivity values of the Al/PTCDA/p-Si structure were obtained using *I-V* measurements.
Keywords: Si, PTCDA, Photo-sensitivity, Power (P), Current (I)

Özet
Perilenetetrakarboksilik dianhidrit (PTCDA) ara katmanlı Al/p-tipi Si metal yarı iletken yapısının elektriksel güç (*P*) ve foto-duyarlılık değerlerindeki değişimleri sırasıyla akım ve ışık yoğunluğunun (10 mW cm^{-2} ile 100 mW cm^{-2} arasında) bir fonksiyonu olarak incelenmiştir. Foto-duyarlılık değerleri ters beslem akım-voltaj (*I-V*) ölçümleri kullanılarak -3.0 voltaj değerleri dikkate alınarak elde edildi. Akım değerlerine karşı elektriksel güç değerlerinde bir artış gözlemlendi ve ayrıca ışık şiddetinin artmasına bağlı olarak foto duyarlılık değerlerinde de bir artışın olduğu görüldü. Foto duyarlılık değerlerinin 10 mW cm^{-2} ışık şiddetinde 61.08 iken 100 mW cm^{-2} ışık şiddetinde ise 549.089 olduğu görüldü. Bu durum, Al/PTCDA/p-Si/Al yarıiletken yapının elektriksel, foto-voltaik ve foto-diyot özellikleri oldukça hassas bir şekilde ışık şiddetine bağlı olduğunu açıklar. Deneysel çalışmamızda, Al/PTCDA/*p*-Si yapının foto duyarlılık değerleri *I-V* ölçümleri kullanılarak elde edildi.
Anahtar Kelimeler: Si, PTCDA, Foto-duyarlılık, Güç (P), Akım (I)

ÜNİVERSİTE ÖĞRENCİLERİNİN AKADEMİK MEMNUNİYET VE KURUMSAL AİDİYET İLİŞKİSİNİN BULANIK MANTIK İLE MODELLENMESİ

MODELING THE RELATIONSHIP BETWEEN ACADEMIC SATISFACTION AND INSTITUTIONAL BELONGING OF UNIVERSITY STUDENTS USING FUZZY LOGIC

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Özet
Eğitim sistemlerindeki kalite değerlendirmeleri genellikle geleneksel anketler üzerinden yapılmakta olup, bu yöntemler öğrenci psikolojisindeki doğrusal olmayan yapıları ve ara değerleri ölçmede yetersiz kalabilmektedir. Bu çalışmada, üniversite öğrencilerinin eğitim kalitesine, akademik yetkinliğe ve kurumsal imkânlara dair algılarının memnuniyet ve kurumsal aidiyet düzeylerine etkisi, insan muhakemesine en yakın modelleme tekniklerinden biri olan Bulanık Çıkarım Sistemi (FIS) ile incelenmiştir. Araştırma kapsamında, Osmaniye Korkut Ata Üniversitesi'nde öğrenim gören 120 öğrenciye uygulanan 14 soruluk anketten elde edilen veriler kullanılmıştır. Çalışmada 6 girdi değişkeni (İletişim, Yetkinlik, Adalet, Geri Bildirim, Kurumsal Destek, Mesleki Fayda) ve 1 çıktı değişkeni (Memnuniyet) tanımlanarak MATLAB ortamında Mamdani tipi bir bulanık model oluşturulmuştur. Öğrenci psikolojisini yansıtan uzman görüşüne dayalı kural tabanı kullanılarak öğrencilerin kurumsal aidiyetleri hesaplanmış ve elde edilen bulgular üç boyutlu yüzey grafikleriyle görselleştirilmiştir. İstatistiksel uyum analizi sonucunda modelin Ortalama Mutlak Hatası (MAE) 0.810 ve Kök Ortalama Kare Hatası (RMSE) 0.969 olarak hesaplanmış olup, sistemin yüksek bir tahmin başarısına sahip olduğu görülmüştür. Bulgular, değerlendirme süreçlerindeki adalet ve erişilebilirlik (iletişim) eksikliğinin öğrenci memnuniyetinde keskin düşüşlere neden olduğunu; kurumsal destek ve mesleki fayda algısının ise bu olumsuzlukları belirli ölçüde telafi eden dengeleyici faktörler olarak işlev gördüğünü ortaya koymuştur.
Anahtar Kelimeler: Bulanık Mantık, Öğrenci Memnuniyeti, Kurumsal Aidiyet, FIS

Abstract
Quality assessments in educational systems are generally conducted through traditional surveys, which may fall short in measuring non-linear structures and intermediate values in student psychology. In this study, the impact of university students' perceptions of education quality, academic competence, and institutional facilities on their satisfaction and institutional belonging levels was examined using the Fuzzy Inference System (FIS), one of the modeling techniques closest to human reasoning. The research utilized data obtained from a 14-item questionnaire administered to 120 students studying at Osmaniye Korkut Ata University. By defining 6 input variables (Communication, Competence, Justice, Feedback, Institutional Support, Professional Benefit) and 1 output variable (Satisfaction), a Mamdani-type fuzzy model was created in the MATLAB environment. Students' institutional belonging was calculated using an expert opinion-based rule base reflecting student psychology, and the findings were visualized with three-dimensional surface graphs. As a result of the statistical fit analysis, the Mean Absolute Error (MAE) of the model was calculated as 0.810 and the Root Mean Square Error (RMSE) as 0.969, demonstrating that the system has a high prediction success. The findings revealed that a lack of justice and accessibility (communication) in evaluation processes causes sharp declines in student satisfaction, while the perception of institutional support and professional benefit functions as balancing factors that compensate for these negativities to a certain extent.
Keywords: Fuzzy Logic, Student Satisfaction, Institutional Belonging, FIS

UPSIDE-DOWN LOGIC IN PLITHOGENIC SPACES: CONTEXTUAL TRUTH FLIPS IN EVERYDAY DECISION MAKING PROBLEMS

PLİTOJENİK UZAYLARDA TERSİNE ÇEVRİLMİŞ MANTIK: GÜNLÜK KARAR VERME PROBLEMLERİNDE BAĞLAMSAL GERÇEK DEĞİŞİMLERİ

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Abstract
In a world where reality is highly dependent on context, a statement once universally accepted as true can rapidly become false, and vice versa. This study explores the philosophical concepts of the "Falsification of the Truth" and the "Truthification of the False", translating these abstract ideas into a functional decision-making framework using Upside-Down Logic and Plithogenic Sets. Traditional logic struggles when environments change suddenly, leading to rigid and often incorrect decisions. By introducing a "contradiction degree" between different pieces of information, in this study, how systems can intelligently "flip" their understanding of reality when a specific threshold of conflict is crossed is demonstrated. To illustrate this philosophy without heavy algebraic and mathematical formalism, we explore three relatable everyday scenarios. First, we examine a socio-economic case of supply chain panic buying, where the conventional truth of "abundance" suddenly flips into a reality of "scarcity" driven by human behavior and perceived threat. Second, we analyze an engineering application involving autonomous vehicle braking systems. In this case, when a vehicle's sensors receive conflicting data—such as a false clear path versus a sudden obstacle—the system executes a controlled truth-falsity swap, instantly rejecting the "safe" status to trigger emergency braking and prevent a collision. Third, we investigate the phenomenon of social media echo chambers, demonstrating how a fabricated piece of disinformation, initially recognized as false, can be "truthified" into an accepted reality within isolated networks when collective validation surpasses a critical contradiction threshold. Ultimately, this study bridges deep philosophical inquiries with practical, everyday challenges. It reveals that accepting the reversal of truth is not a failure of logic, but rather a necessary, highly advanced survival mechanism for both human societies and autonomous systems operating in unpredictable environments.
Keywords: Upside-Down Logic, Plithogenic Set, Truth Reversal, Autonomous Systems, Decision Making, Echoing Chambers.

Özet
Gerçekliğin büyük ölçüde bağlama bağlı olduğu bir dünyada, bir zamanlar evrensel olarak doğru kabul edilen bir ifade hızla yanlışa dönüşebilir veya bunun tam tersi yaşanabilir. Bu çalışma, "Doğrunun Yanlışlanması" ve "Yanlışın Doğrulanması" felsefi kavramlarını incelemekte ve bu soyut fikirleri Tersyüz Mantığı (Upside-Down Logic) ve Plitojenik Kümeler kullanarak işlevsel bir karar verme çerçevesine dönüştürmektedir. Geleneksel mantık, ortamlar aniden değiştiğinde yetersiz kalmakta ve bu durum katı, genellikle de hatalı kararlara yol açmaktadır. Bu çalışmada, farklı bilgi parçaları arasına bir "çelişki derecesi" ekleyerek, sistemlerin belirli bir çatışma eşiği aşıldığında gerçeklik algılarını nasıl akıllıca "tersyüz" edebilecekleri gösterilmiştir. Bu felsefeyi ağır bir cebirsel ve matematiksel formalizme girmeden açıklamak için günlük hayattan anlaşılır üç senaryo incelenmektedir. İlk olarak, "bolluk" şeklindeki geleneksel doğrunun, insan davranışı ve algılanan tehditlerle aniden "kıtlık" gerçekliğine dönüştüğü sosyo-ekonomik bir tedarik zinciri panik alımları vakasını ele alıyoruz. İkinci olarak, otonom araç fren sistemlerini içeren bir mühendislik uygulamasını analiz ediyoruz. Bu durumda, aracın sensörleri birbiriyle çelişen veriler aldığında (örneğin yolun boş olduğu şeklindeki yanlış bilgiye karşın aniden beliren bir engel), sistem kontrollü bir doğru-yanlış değişimi (swap) gerçekleştirerek "güvenli" durumunu anında reddeder ve çarpışmayı önlemek için acil frenlemeyi tetikler. Üçüncü olarak, sosyal medya yankı odaları olgusunu araştırarak, başlangıçta kesin bir yanlış olarak kabul edilen uydurma bir dezenformasyonun, kolektif onay mekanizması kritik bir çelişki eşiğini aştığında izole ağlar içinde nasıl "doğrulanabildiğini" ve kabul gören bir gerçekliğe dönüştüğünü gösteriyoruz.

Sonuç olarak, bu çalışma derin felsefi sorgulamalar ile pratik, günlük zorluklar arasında bir köprü kurmaktadır. Doğrunun tersine çevrilmesini kabul etmenin bir mantık hatası olmadığını, aksine öngörülemeyen ortamlarda çalışan hem insan toplumları hem de otonom sistemler için gerekli, son derece gelişmiş bir hayatta kalma mekanizması olduğunu ortaya koymaktadır.

Anahtar Kelimeler: Tersyüz Mantığı, Plitojenik Küme, Doğrunun Tersine Çevrilmesi, Otonom Sistemler, Karar Verme, Yankı Odaları.

HALOFİLİK PHB ÜRETİMİNİN OPTİMİZASYONU VE KARAKTERİZASYONU

OPTIMIZATION AND CHARACTERIZATION OF HALOPHILIC PHB PRODUCTION

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Abstract
Polyhydroxybutyrate (PHB) is a biodegradable and biocompatible plastic that has emerged as a promising alternative to reduce environmental pollution caused by petroleum-derived plastics. However, the high production costs of PHB limit its industrial-scale application. Therefore, alternative strategies for producing PHB are important. The aim of this study is to produce a high-yield polymer using halophilic bacteria. For this purpose, the isolate was identified using a molecular approach, and then the PHB yield was maximized by optimizing parameters such as carbon source concentration, incubation time, and stirring speed using CCD from RSM. Finally, the PHB produced under optimum conditions was characterized by FTIR, NMR, and TGA. Standard PHB was used as a control. According to 16S rRNA analysis, the isolate was identified as *Vreelandella janggokensis*. CCD analysis revealed that maximum PHB production was obtained at a carbon source of 20 g/L, an incubation time of 72 hours, and a stirring speed of 150 rpm. FTIR spectroscopy confirmed the polyester structure with an ester carbonyl peak detected at 1722 cm^{-1} and a fingerprint region perfectly matching standard PHB. Furthermore, 1H-NMR findings showed that the polymer has the same molecular backbone as standard PHB and is produced with high purity. Consequently, this optimized production model and the structural analyses performed reveal that the produced PHB possesses suitable purity and thermal stability for other high-value-added applications, particularly drug delivery systems. Moreover, these optimum conditions can be utilized in future scaling processes.
Keywords: Polyhydroxybutyrate (PHB), Halophilic Bacteria, Biopolymer, Optimization

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Özet
Polihidroksibutirat (PHB), biyobozunur ve biyouyumlu bir plastik olup, petrol türevi plastiklerin neden olduğu çevre kirliliğini azaltmak için umut verici bir alternatif olarak ortaya çıkmıştır. Ancak, PHB'nin yüksek üretim maliyetleri, endüstriyel ölçekli uygulamasını sınırlamaktadır. Bu nedenle, PHB üretmek için alternatif stratejiler önemlidir. Çalışmanın amacı, halofilik bakterileri kullanarak yüksek verimli polimer üretmektir. Bu amaçla, izolat moleküler bir yaklaşım ile tanımlandı ve ardından RSM'den CCD kullanılarak karbon kaynağı konsantrasyonu, inkübasyon süresi ve karıştırma hızı gibi parametrelerin optimize edilmesiyle PHB verimi maksimize edildi. Son olarak, optimum koşullarda üretilen PHB, FTIR, NMR ve TGA ile karakterize edildi. Standart PHB kontrol olarak kullanıldı. 16S rRNA analizine göre, izolat *Vreelandella janggokensis* olarak tanımlandı.

CCD analizi, maksimum PHB üretiminin 20 g/L karbon kaynağı, 72 saatlik inkübasyon süresi ve 150 rpm karıştırma hızında elde edildiğini ortaya koydu. FTIR spektroskopisi, 1722 cm^{-1}'de tespit edilen ester karbonil tepe noktası ve standart PHB ile mükemmel bir şekilde eşleşen bir parmak izi bölgesi ile polyester yapısını doğrulanmıştır. Ayrıca, 1H-NMR bulguları, polimerin standart PHB ile aynı moleküler iskelete sahip olduğunu ve yüksek saflıkta üretildiğini göstermiştir. Sonuç olarak, bu optimize edilmiş üretim modeli ve yapılan yapısal analizler, üretilen PHB'nin diğer yüksek katma değerli uygulamalar, özellikle ilaç taşıma sistemleri için uygun saflık ve termal stabiliteye sahip olduğunu ortaya koymaktadır. Öte yandan, bu optimum koşullar gelecekteki ölçeklendirme süreçlerinde kullanılabilecektir.
Anahtar Kelimeler: Polihidroksibütirat (PHB), Halofilik Bakteri, Biyopolimer, Optimizasyon, İlaç Taşıyıcı Sistemler.

Teşekkür
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MARINE BIOINDICATORS AS TOOLS FOR MONITORING THE ENVIRONMENTAL IMPACT OF DESALINATION PLANT DISCHARGES ON COASTAL ECOSYSTEMS

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Abstract
The rapid expansion of seawater desalination has increased concerns regarding the environmental effects of brine and effluent discharges on coastal ecosystems. This study investigates the potential of marine organisms as bioindicators for monitoring environmental changes associated with desalination activities along the Algerian coast. Three species occupying different ecological niches were selected: the mussel (Mytilus galloprovincialis), the common octopus (Octopus vulgaris), and the red mullet (Mullus barbatus). Water samples were collected from brine discharge points, treatment effluents, and downstream mixing zones. Physicochemical parameters, including pH, temperature, electrical conductivity, salinity, dissolved oxygen, total dissolved solids, and suspended solids, were analyzed to characterize the receiving environment. Preliminary findings indicate significant variations in salinity and suspended solids in areas influenced by desalination discharges. The integration of environmental and biological monitoring is expected to provide valuable indicators for assessing ecological risks and supporting sustainable management of coastal ecosystems affected by desalination operations.
Keywords: marine bioindicators; desalination discharge; ecological assessment; coastal ecosystems; environmental monitoring.

IMPACTS OF CLIMATE CHANGE ON NUTRIENT AND TRACE ELEMENT DYNAMICS IN FRESHWATER ECOSYSTEMS: A CASE STUDY OF THE DRENICA RIVER DURING THE SPRING–SUMMER SEASON OF 2026

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Abstract
The purpose of this study is to examine the chemical-physical characteristics and assess the concentration of heavy metals in the water and sediment collected from the Drenica River, which flows through the Municipality of Skenderaj and Drenas. Three distinct places throughout the river's flow were used for sampling. The results of the research analyses demonstrate that every physico-chemical parameter that was examined, including temperature, color, odor, electrical conductivity, total dissolved solids (TDS), pH, sulfates, nitrates, free chlorine, hardness, ammonium ions, nitrites, and dissolved oxygen (DO), was within the range permitted and defined by EU standards.
Even though several of the elements were almost at the allowed threshold, the concentration of heavy metals in the water was within allowed bounds. In particular, the levels of copper in the water samples were near the authorized limit, which indicates that they were almost at the point of chemical water pollution, but the concentrations of arsenic, iron, lead, nickel, manganese, cadmium, and chromium were at the levels permitted by EU guidelines. using this metal. The amounts of high heavy metals stated in the river sediment samples were slightly above the established limit in both the water samples and the copper silt, but they were still within the levels permitted by the World Health Organization (WHO).
According to the study results, this river has a low concentration of heavy metal contamination, which means that aquatic life is not in urgent danger. However, there is a significant risk to human health and the ecosystem when metal concentrations are near the allowed limits. In order to mitigate potential threats to the environment and public health, the suggestions call for ongoing monitoring and assessment of metal concentrations by authorized authorities. To confirm any potential harm to the local fishery, public health, and river environment, regular monitoring is crucial.
Keywords: environmental contamination, public health, metal pollution, Drenica River, water quality, sediment analysis, heavy metals, chemical-physical characteristics

BULK DENSITY OF AUTOMECHANIC WORK SOILS IN SELECED MUNICIPAL AREA COUNCILS IN ABUJA

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Abstract
The study examined the impact of roadside mechanic workshop activities on soil Bulkdensity in Abuja Municipal Area Councils. Soil samples were collected from 15 automechanic workshops and an agricultural land (control site). Two (2) replicate soil samples were collected from fifteen auto-mechanic workshop and agricultural land which serves as control; at depths of 0-10cm and 10-30cm. Core Cutter method was used to sample soil bulk density. Standard methods were adopted both for field and laboratory analysis. The automechanic workshop soils had higher bulk density, The topsoil highest Bulkdensity was recorded in Kuje with mean value of 2.61g/cm^3, standard deviation of ±2.48, ' followed by AMAC 2.00g/cm^3, with Standard deviation of ±1.68 and Gwagwalada 2.41g/cm^3 Standard deviation of ±0.06, control 0.24 g/cm^3 with Standard deviation of ±0.18. The overall results indicate that the activities of automechanic workshop contaminate the soil. It is recommended that Government should regulate waste management and soil remediation techniques to manage waste in automechanic wokshops.
Keywords: Buk-Density, Core Cutter, Contamination, Municipal, Soil,

REFLECTION AND TRANSMISSION OF WAVES INTERACTING WITH A UNIFORM CURRENT OVER DOUBLE RECTANGULAR SUBMERGED STRUCTURES

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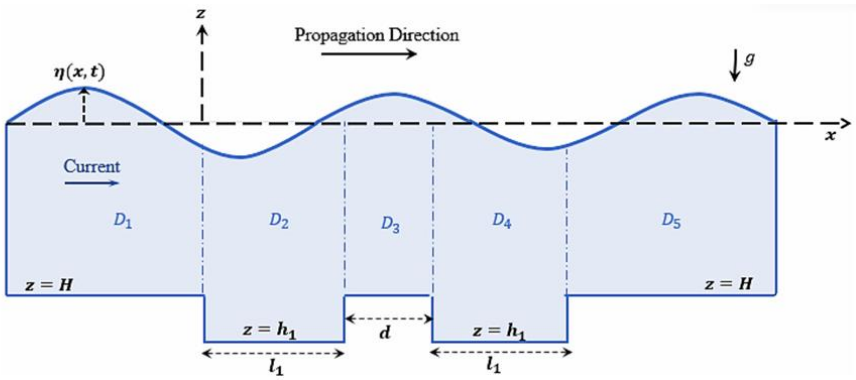
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Abstract
Ocean surface waves are influenced by various physical phenomena, leading to the formation of gravity waves that propagate uniformly from offshore to coastal areas. The interaction between these waves and submerged structures poses significant challenges in ocean engineering and naval architecture. Over the past few decades, extensive research has been conducted using analytical, numerical, and experimental approaches to elucidate the mechanisms of wave attenuation and dissipation.
This study presents an analytical investigation of wave interaction with double submerged trenches under the influence of a uniform current, either co-directional or counter-directional to the incident wave propagation. The primary objective is to examine the impact of the current and geometric parameters on the reflection and transmission coefficient. The wave dynamics are analyzed within the framework of potential theory, and the submerged structures comprise two rectangular trenches positioned at the bottom of a wave flume, spaced apart. The analytical model employed is based on the plane wave approximation, and the approach is validated through comparison with experimental results.
Keywords: Wave, submerged structures, current, plane wave, reflection coefficient.

Graphical abstract



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WHY BEARINGS NEED LUBRICATION: A MECHANICAL ENGINEERING CASE STUDY ON FRICTION, WEAR, AND RELIABILITY

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ABSTRACT
Bearings are critical machine elements that support rotating components, while lubrication minimizes friction, wear, heat generation, and energy losses. Improper lubrication remains one of the leading causes of bearing failure, contributing to higher friction, faster wear, lower reliability and a higher cost of maintenance. This study aims to explain the need for lubrication in bearings and to analyze lubrication effects from a mechanical engineering perspective on minimizing friction, wear, and affecting operational reliability. The present case study method was used, as well as comparison of lubricated and unlubricated bearing conditions, by employing tribological analysis. Friction coefficient (α), wear rate (β), temperature rise (γ), reliability index (δ) and service life factor (λ) are the key performance indicators. Using published engineering data and theoretical models, this paper investigated the operational conditions depending on different loading loads, angle rotating speeds on shaft and lubricating modes. The findings indicated that lubrication reduced the friction coefficient (α) from 0.15 to 0.05, representing a 66.7% improvement. The wear rate (β) decreased from 1.80×10^{-3} mm³/Nm to 0.52×10^{-3} mm³/Nm, corresponding to a 71.1% reduction. The temperature rise (γ) decreased from 78°C to 48°C and reliability index (δ) has improved from 0.82 to 0.96. In addition, an optimized lubrication condition increased the service life factor (λ) by around 2.8 times. This investigation not only verifies the role of good lubrication in improving bearing performance but also highlights factors that reduce friction and wear, control operating temperature, and increase system reliability. High-performance lubrication systems can considerably enhance bearings' lifespan and enable sustainable mechanical engineering operations.
Keywords: Bearings, Lubrication Analysis, Friction Reduction, Wear Analysis, Tribology, Reliability Engineering

INNOVATIVE COOLING-DUCT DESIGNS FOR IMPROVED THERMAL MANAGEMENT AND PERFORMANCE OF PHOTOVOLTAIC/THERMAL COLLECTORS

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Abstract
The electrical efficiency of photovoltaic (PV) modules decreases significantly with increasing cell temperature, making thermal regulation a critical challenge in photovoltaic/thermal (PVT) systems. In this work, an innovative cooling-duct design is investigated to enhance heat removal and improve the overall performance of PVT collectors. A numerical model was developed and validated against experimental data to ensure its accuracy and reliability.
The findings indicate that an increase in solar irradiance results in a decline in electrical efficiency for both duct configurations under consideration. Conversely, higher inlet mass-flow rates improve the cooling capacity, leading to noticeable gains in electrical performance. Nevertheless, once an optimal flow rate is reached, further increases yield only marginal improvements due to the reduced effectiveness of heat exchange.
The study also highlights the importance of geometric optimization. Decreasing the frame width generates stronger turbulent flow structures, which enhance heat dissipation, reduce cell temperature, and consequently improve both thermal and electrical efficiencies. Likewise, a smaller duct pitch intensifies thermal interactions within the channel, promoting more efficient heat transfer. Overall, the proposed cooling-duct configurations exhibit considerable potential for enhancing the performance of PVT systems across a wide range of operating conditions.
Keywords: PVT modules; Energy efficiency; Solar collectors; Nanofluids.

PHYSICOCHEMICAL CHARACTERIZATION AND QUALITY ASSESSMENT OF EMPTY CAPSULES OF THE ANTI-ANEMIC PHARMACEUTICAL PRODUCT ZANITRA PLUS

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Abstract
The aim of this work is to characterize the empty capsule of the anti-anemic drug Zanitra plus (hard-shell capsule), size 1, which is based on gelatin of animal origin, and more specifically to characterize the polymer (film) of this capsule by various physicochemical methods. The presence of a precipitate reveals the existence of gelatin (European Pharmacopoeia 2017). Dissolution is rapid in acidic and basic media, between 5 and 9 minutes. For thermal analysis, the capsule loses its characteristics above 90°C. Microbiological analysis of the capsule film showed the absence of pathogenic germs. In terms of toxicity, heavy metal values in the capsule are below the tolerated limit (European Pharmacopoeia 2017). From a general point of view, the capsules can be consumed and delivered to patients with anemia, depending on the customer's needs.
Keywords: Empty Capsule, Polymer, Gelatin, Physico-chemical Properties.

REVOLUTIONIZING CANCER DIAGNOSIS: THE POTENTIAL OF 3D PRINTED NANOSENSORS

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Abstract
Cancer is a complicated illness with a worldwide impact, requiring ongoing breakthroughs in diagnosis and treatment. The application of 3D printing technology is increasingly recognized as an innovative tool in cancer diagnosis, offering enormous possibilities in detection and surveillance. The study aims to improve early diagnosis and prognosis for patients. 3D printing has become more popular for producing precise, customizable nanosensors with high sensitivity and specificity. The study covers the latest advances in 3D-printed cancer nanosensors. It discusses how inkjet printing, stereolithography, and fused deposition modeling can create intricate nanostructures with increased performance. Design and functionalization strategies for targeting nucleic acids, proteins, and circulating tumor cells are also covered. Nanomaterial-based sensors can detect tumor biomarkers, circulating cells, and extracellular vesicles, improving cancer diagnosis and survival. Integrating 3D-printed nanosensors with fluorescence, electrochemical, and surface-enhanced Raman spectroscopy allows rapid and accurate cancer diagnosis in clinical settings. The publication critically reviews and synthesizes previous research to show how 3D-printed nanosensors could improve cancer diagnosis as well as personalized therapy. The study explores the capacity of 3D-printed nanosensors to bring about significant changes in the field of cancer diagnostics. Using 3D-printed technology and additive manufacturing, these sensors provide exceptional sensitivity and specificity for the early identification of cancer biomarkers. Their ability to be customized allows for specific therapies for various types of cancer, offering substantial progress in precision medicine. The paper analyzes the most recent advancements, obstacles, and potential future opportunities of 3D-printed nanosensors, with a specific focus on their significant impact on transforming cancer diagnosis.
Keywords: 3D printing, Nanosensor, Stereolithography, Cancer diagnosis, personalized therapy,

IMPLEMENTATION OF ELECTRONIC HUMAN RESOURCE MANAGEMENT (E-HRM) IN IMPROVING EMPLOYEE PERFORMANCE AT THE DEPARTMENT OF CULTURE AND TOURISM OF SOUTH SULAWESI PROVINCE

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ABSTRACT
This study aims to analyze the effect of the implementation of Electronic Human Resource Management (e-HRM) on employee performance at the Department of Culture and Tourism of South Sulawesi Province. A quantitative approach was used with the Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) method using SmartPLS software version
3.0. Data were collected via a questionnaire distributed to 120 employees, with the analysis focusing on validity, reliability, and causal relationships among variables.
The results indicate that the implementation of e-HRM has a significant effect on employee performance with an R^2 value of 0.55, indicating that 55% of the variation in employee performance is explained by the implementation of e-HRM. The training and digital performance management modules contribute the most to performance improvement. These findings support the theory that technology can serve as a strategic tool in enhancing organizational efficiency and productivity.
This study provides recommendations to government agencies to further optimize the e-HRM system through the development of technology-based modules and digital training. Research limitations include the geographical scope and other variables that have not been tested, such as organizational culture or work motivation. Further research is recommended to expand the scope and integrate qualitative approaches to obtain more comprehensive results.
Keywords: Electronic Human Resource Management, Employee Performance, HR Technology, Public Sector.

ARTIFICIAL INTELLIGENCE – BETWEEN INFLUENCE AND NECESSITY IN THE STUDY OF CONTEMPORARY FORENSICS

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Abstract
The accelerated development of artificial intelligence (AI) is causing significant transformations in the field of contemporary forensics, influencing both investigation methods and the process of analyzing and interpreting evidence.
The use of advanced data processing algorithms, facial recognition systems, predictive technologies and digital analysis tools contributes to increasing the efficiency of forensic activities and optimizing the process of identifying perpetrators of crimes. At the same time, the integration of AI into the study and practice of forensics raises challenges related to the reliability of results, the protection of personal data, the transparency of algorithmic decisions and respect for fundamental rights.
The paper analyzes the positioning of artificial intelligence between the influence exerted on the evolution of forensics and the necessity of its use in an increasingly complex and digitalized criminal context.
The main applications of AI in forensic research are highlighted, as well as the ethical and legal implications associated with the implementation of these technologies.
The conclusions emphasize that artificial intelligence is not only a factor in the modernization of forensics, but also a necessity for adapting investigations to new forms of crime specific to the digital society.
Keywords: artificial intelligence, contemporary forensics, forensic investigation, digital evidence, predictive analysis, facial recognition, cybercrime, legal ethics, emerging technologies, digital transformation.

DIGITAL RESISTANCE: THE ROLE OF SOCIAL MEDIA IN AWARENESS-RAISING AND PROTEST MOBILIZATION AMONG AFGHAN WOMEN UNDER TALIBAN RULE (2021–PRESENT)

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Abstract
This paper examines how Afghan women have utilized social media platforms—particularly Twitter, Facebook, and WhatsApp—as tools for political awareness, documentation of rights violations, and decentralized protest coordination following the Taliban's return to power in August 2021.
Drawing on digital ethnography, content analysis of public posts and campaigns and verified reports from human rights organizations the study analyzes a purposive sample of 150 social media accounts run by Afghan female activists, journalists, and educators between August 2021 and December 2025.
Despite intensified internet censorship, targeted surveillance, and physical threats, Afghan women have transformed social media into a critical counter-public sphere. Key findings include: (1) Twitter emerged as the primary platform for real-time testimony of gender-based violence and educational bans, reaching international audiences and policymakers; (2) encrypted WhatsApp groups facilitated covert regional networks for underground literacy classes and mental health support; (3) viral hashtags succeeded in forcing global media to sustain coverage of Afghanistan’s gender apartheid, yet failed to translate into effective diplomatic or humanitarian intervention. Notably, participation rates dropped by over 60% after 2023 due to widespread doxxing, arrests of relatives, and the psychological toll of relentless surveillance.
Social media remains a vital but increasingly perilous instrument of resistance for Afghan women. While it enables global visibility and fragile horizontal solidarity, it cannot substitute for institutional protections or on-the-ground organizing. The study argues that digital activism under authoritarian retrenchment is best understood as a "survival tactic" rather than a sustainable political strategy, and calls for urgent international support for offline safe spaces and anti-surveillance technologies tailored to high-risk contexts.
Keywords: Afghan women, social media, digital activism, protest, Taliban, gender apartheid, counter-public sphere

THE FISCAL LEAKAGE OF EDUCATION: ESTIMATING THE COST OF PUBLIC EDUCATION LOST TO BRAIN DRAIN IN ROMANIA

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Abstract
Romania's membership in the European Union has coincided with substantial outmigration of its highly skilled workforce, a phenomenon commonly described as "brain drain." Although the free movement of labor confers clear benefits on individual migrants, it also generates a structural fiscal asymmetry for the country of origin. This paper investigates what we term "fiscal leakage": the loss of public funds that occurs when state-subsidized university graduates emigrate prior to contributing to the domestic tax system. Drawing on educational expenditure data published by the Romanian Ministry of Education and migration indicators from Eurostat, we develop a deterministic cost-accounting framework to estimate the cumulative fiscal loss associated with tertiary-educated emigrants over the past decade. Particular attention is given to the healthcare and information technology sectors, where emigration rates among graduates appear most pronounced. Preliminary estimates indicate that the resulting net fiscal loss to the Romanian state amounts to several billion Euros, an amount only partially offset by remittances from the diaspora. The paper concludes with a discussion of the policy implications for the EU Single Market, considering measures such as targeted fiscal incentives for talent retention and structural compensation arrangements with destination countries, as potential responses to the asymmetric subsidization of human capital across member states.
Keywords: Brain Drain, Fiscal Leakage, Human Capital, Higher Education, Romania, EU Migration

"WE JUST KEEP QUIET... BUT THINGS ARE CHANGING": MICRO-ACTS OF CLASSROOM JUSTICE IN ALBANIAN HIGHER EDUCATION"

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Abstract
In Albanian higher education, Roma and Egyptian students often navigate learning environments marked by subtle exclusions, low expectations, and a lack of recognition. This study explores how these students experience classroom justice and injustice in two public universities—Tirana and Elbasan—where their presence remains limited and precarious. Using a qualitative research design, 23 semi-structured interviews were conducted with Roma and Egyptian undergraduate students, selected through snowball sampling. Thematic analysis revealed four key themes: (1) silence as a strategy for belonging, (2) micro-gestures of care, (3) the experience of being seen—or not—by professors, and (4) slowly changing classroom climates. Students described both enduring epistemic injustice and experiencing moments of relational recognition. While structural support was limited, personal relationships and individual acts of inclusion offered glimpses of ethical transformation. Rather than presenting a binary of inclusion versus exclusion, the study frames classroom justice as a dynamic and relational process. The findings underscore the importance of culturally responsive pedagogy, epistemic recognition, and micro-level practices of care in promoting more just classroom environments in post-socialist, non-Western higher education contexts.
Keywords: inclusive pedagogy; student voice; post-socialist university; micro-resistance; belonging in education

DATA-DRIVEN APPROACHES TO PREDICTING SOCIOECONOMIC TRENDS

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Abstract
The rapid growth of digital data and advances in analytical techniques have transformed the way socioeconomic phenomena are studied and forecasted. Governments, businesses, and researchers increasingly rely on data-driven approaches to understand emerging trends and support evidence-based decision-making. Socioeconomic trends, including changes in employment, income distribution, education, population dynamics, and economic growth, are influenced by a complex interaction of economic, social, and technological factors. Accurate prediction of these trends is essential for developing effective policies and strategies that promote sustainable development and social well-being. This study explores the role of data-driven approaches in predicting socioeconomic trends through the analysis of large-scale datasets obtained from national and international statistical sources. The research examines the use of descriptive, diagnostic, and predictive analytics techniques to identify patterns, relationships, and indicators associated with socioeconomic change. Key variables such as demographic characteristics, labour market indicators, educational attainment, economic performance, and technological development are analysed to understand their influence on future socioeconomic outcomes.
The study highlights the advantages of data analytics in enhancing forecasting accuracy, detecting emerging patterns, and supporting proactive policy interventions. Furthermore, it discusses the challenges associated with data quality, data integration, and the interpretation of complex socioeconomic relationships. The findings demonstrate that data-driven methodologies provide valuable insights into socioeconomic developments and offer a robust framework for anticipating future trends. By leveraging analytical tools and large-scale data resources, policymakers and researchers can improve strategic planning and contribute to more informed and effective decision-making processes in an increasingly data-rich environment.
Keywords: Data Analytics; Socioeconomic Trends; Predictive Analytics; Evidence-Based Policy; Sustainable Development

A SOCIO-PSYCHOLOGICAL ANALYSIS OF HIZB UT-TAHRIR WITHIN THE FRAMEWORK OF RADICALIZATION AND JIHAD DISCOURSE

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ABSTRACT
The aim of this study is to examine the religious-political movement called Hizb ut-Tahrir from a socio-psychological perspective. In this descriptive study, both participant observation and survey techniques were employed. The research seeks to answer questions such as the psycho-social reasons that lead individuals to join Hizb ut-Tahrir, the claims and basic way of life of this religious group, the characteristics that distinguish it from other religious groups, and how its members position themselves within Islam. The survey data of the study were obtained from nine male participants. The "Social Identity Theory" was used in the interpretation of the data obtained in the study.
An examination of the findings reveals that there are many factors that sustain Hizb ut-Tahrir. Discourses on the caliphate and the desire to relive the era of Asr al-Sa'adah (the Age of Happiness) through the caliphate are common themes among the members of the group. Another prominent aspect of the group is spiritualism.
Keywords: Religious, Hizb ut-Tahrir, Radicalization, Caliphate, Jihad.

LEARNING DIGITAL IMAGE PROCESSING IN THE NEW ERA: ARTIFICIAL INTELLIGENCE, DEEP LEARNING, AND FUTURE DIRECTIONS

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Abstract
Recent advances in Artificial Intelligence (AI) and Deep Learning have significantly expanded the scope and applications of Digital Image Processing. This paper investigates the integration of AI-driven techniques into digital image processing education and practice. It examines the use of convolutional neural networks, machine learning algorithms, and intelligent image analysis systems in solving complex real-world problems. The paper discusses emerging trends such as automated image recognition, medical image diagnostics, autonomous systems, and smart surveillance. Furthermore, it evaluates the challenges and opportunities associated with teaching AI-based image processing concepts to modern learners. The study concludes by outlining future directions for research and education, emphasizing interdisciplinary learning, hands-on experimentation, and industry-oriented skill development.
Keywords: AI, Deep Learning, Digital Image Processing, ML, CNN, Image Recognition, Medical Imaging, Computer Vision, Smart Systems, Future Technologies

ARTIFICIAL INTELLIGENCE FOR CYBER THREAT DETECTION AND RESPONSE USING PHP MYSQL

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ABSTRACT
The rapid growth of information and communication technologies has significantly increased the frequency and sophistication of cyber threats targeting individuals, organizations, and governments. Traditional cybersecurity systems rely mainly on signature-based and rule-based approaches, which are often ineffective against emerging and zero-day attacks. This study presents an Artificial Intelligence (AI)-based framework for cyber threat detection and response that utilizes machine learning techniques to identify malicious activities and automate incident response processes. The proposed system integrates user authentication, data collection, AI-based threat analysis, attack logging, real-time alerting, and administrative monitoring. The system is implemented using PHP and MySQL, while machine learning models are incorporated to improve threat classification accuracy. Experimental results indicate that the AI-based approach enhances detection accuracy, reduces response time, and provides proactive defense against cyber threats. The study concludes that Artificial Intelligence has the potential to revolutionize cybersecurity by enabling intelligent, adaptive, and automated threat detection and response mechanisms.
Keywords: Artificial Intelligence, Cybersecurity, Threat Detection, Machine Learning, Incident Response.

CYBERSECURITY RISKS OF AI-GENERATED DIGITAL IDENTITIES: CHALLENGES, THREAT VECTORS, AND TRUST-AWARE VERIFICATION FRAMEWORKS

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Abstract
The emergence of Generative Artificial Intelligence (AI) has fundamentally transformed the digital ecosystem by enabling the creation of highly realistic synthetic identities that can imitate human appearance, voice, behavior, and online presence with unprecedented accuracy. While these technologies offer substantial benefits across education, healthcare, finance, and digital communication, they simultaneously introduce complex cybersecurity challenges that threaten the integrity of digital identity systems and the foundations of trust in cyberspace.
This study investigates the cybersecurity risks associated with AI-generated digital identities and examines how emerging technologies such as deepfakes, synthetic personas, AI-generated biometric data, and automated social engineering techniques can be exploited for malicious purposes. The research highlights the growing threat posed by identity fraud, phishing campaigns, financial deception, unauthorized access, misinformation operations, and attacks targeting biometric authentication mechanisms.
Using a conceptual and analytical research approach, this paper identifies the primary threat vectors associated with synthetic identities and evaluates the limitations of conventional identity verification systems in detecting increasingly sophisticated AI-generated content. Furthermore, the study proposes a trust-aware verification framework that combines multi-factor authentication, behavioral analytics, AI-assisted deepfake detection, and continuous risk assessment to strengthen digital identity protection.
The findings suggest that the rapid evolution of generative AI requires a corresponding transformation in cybersecurity strategies, regulatory policies, and digital trust models. Organizations, governments, and technology providers must adopt adaptive verification mechanisms capable of addressing emerging identity-related threats in an increasingly AI-driven environment. The proposed framework contributes to ongoing discussions on digital trust and cybersecurity resilience while offering practical insights for securing future digital identity ecosystems.
Keywords: Generative Artificial Intelligence, Cybersecurity, Synthetic Identity Fraud, Deepfake Detection, Digital Trust, Identity Verification

ASSESSING THE RELATIONSHIP BETWEEN SOCIO-ECONOMIC ATTRIBUTES AND ENTREPRENEURIAL BEHAVIOUR OF GUAVA FARMERS

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Abstract
Entrepreneurial behaviour has emerged as a critical factor in enhancing farm productivity, profitability, and sustainability in commercial horticulture. Guava cultivation, being a remunerative fruit enterprise, offers significant opportunities for farmers to adopt entrepreneurial practices and improve their livelihoods. This study aims to assess the entrepreneurial behaviour of guava growers and examine its relationship with selected socio-economic attributes. The research focuses on key dimensions of entrepreneurial behaviour, including innovativeness, risk-taking ability, decision-making ability, achievement motivation, leadership ability, information-seeking behaviour, and management orientation. Data will be collected from guava growers using a structured interview schedule, and appropriate statistical tools will be employed to analyze the relationship between entrepreneurial behaviour and socio-economic factors such as age, education, farming experience, landholding, annual income, extension contact, social participation and access to information sources. The study is expected to identify the major determinants influencing entrepreneurial behaviour among guava growers and provide insights into the role of socio-economic factors in shaping entrepreneurial competencies. The findings will contribute to the development of targeted extension strategies, capacity-building programmes and policy interventions aimed at strengthening entrepreneurship among fruit growers. Enhancing entrepreneurial behaviour among guava farmers can facilitate technology adoption, market orientation, value addition, and income diversification, thereby promoting sustainable horticultural development and rural economic growth.
Keywords: Entrepreneurial Behaviour, Guava Growers, Socio-Economic Attributes, Horticulture, Agricultural Extension and Agripreneurship, Innovation

DEEP LEARNING-BASED WATER LEVEL PREDICTION IN A DUAL CONICAL TANK SYSTEM FOR INTELLIGENT PROCESS CONTROL

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Abstract
The Dual Conical Tank System (DCTS) is a nonlinear process commonly used in industrial liquid storage and level control applications. Accurate prediction of water levels in interconnected tanks is essential for maintaining process stability and operational efficiency. This study presents a deep learning-based approach for predicting the water levels of both Tank 1 (H1) and Tank 2 (H2) in a dual conical tank system. The proposed framework utilizes process parameters such as inlet flow rate, outlet flow rate, pump voltage, and historical level measurements as input features. Deep learning models, including Long Short-Term Memory (LSTM), Gated Recurrent Unit (GRU), and Deep Neural Network (DNN), are employed to capture the nonlinear and dynamic behavior of the system. The models are trained using experimentally acquired process data and evaluated using performance metrics such as Mean Squared Error (MSE), Root Mean Square Error (RMSE), coefficient of determination (R^2), and prediction accuracy. The results demonstrate that the proposed deep learning models effectively predict the water levels of both tanks with high accuracy, enabling improved monitoring and intelligent control of the process. The developed approach provides a reliable and data-driven solution for modeling complex nonlinear tank systems and supports the advancement of smart industrial automation and process control applications.
Keywords: Dual Conical Tank System, Deep Learning, Water Level Prediction, Tank 1 Level (H1), Tank 2 Level (H2), LSTM, GRU, DNN, Nonlinear Process Control.

BIG DATA ANALYTICS FOR SUSTAINABLE DEVELOPMENT: OPPORTUNITIES AND CHALLENGES

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Abstract
Sustainable development has become a global priority as societies seek to balance economic growth, social well-being, and environmental protection. In recent years, the rapid expansion of digital technologies has led to an unprecedented increase in the volume, variety, and velocity of data generated across multiple sectors. This development has created new opportunities for utilizing Big Data Analytics to support sustainable development initiatives and improve decision-making processes. By transforming large and complex datasets into meaningful insights, Big Data Analytics enables organizations, governments, and policymakers to better understand development challenges and design more effective interventions.
This study examines the opportunities and challenges associated with the application of Big Data Analytics in the pursuit of sustainable development goals. The research explores how data-driven approaches can contribute to monitoring economic performance, improving resource management, enhancing public services, supporting environmental sustainability, and addressing social inequalities. Examples from sectors such as healthcare, education, urban planning, agriculture, and environmental management are discussed to illustrate the practical value of Big Data Analytics in promoting sustainable outcomes.
Despite its significant potential, the adoption of Big Data Analytics also presents several challenges. Issues related to data quality, privacy, security, infrastructure requirements, data integration, and ethical considerations may limit the effectiveness of data-driven initiatives. Furthermore, disparities in technological capabilities between developed and developing regions can create barriers to the widespread implementation of advanced analytical solutions.
The study concludes that while Big Data Analytics offers powerful tools for addressing complex sustainability challenges, its successful application requires robust data governance frameworks, investment in technological infrastructure, and the development of analytical competencies. By overcoming these challenges, organizations and governments can leverage Big Data Analytics to support evidence-based policymaking and accelerate progress toward sustainable development objectives.
Keywords: Big Data Analytics; Sustainable Development; Data-Driven Decision Making; Digital Transformation; Data Governance

METALS AS CATALYSTS FOR BIOJET CONVERSION

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Abstract
According to a report by International Energy Agency, a prediction was made that the supply of petroleum, gas reserves and crude oil will be limited which results to serious energy security emergencies globally. However, the growing energy demand will exceed the limited oil in the world from 2020. Thus, biomass has become a great potential as the largest resources of sustainable energy across the globe.
Biofuels used for aircraft are well-known as “bio-jet” fuels. They are the best alternative for substantial decrease in aviation emissions. They can be obtained from sustainable sources such as vegetable oils and animal fats.
Although, bio-jet fuels are excellent substitutes for conventional aviation fuels; difficulties in feedstock collection and production route are the main challenges. And also the high cost of biojet fuel in comparison with petroleum jet fuel is another bottleneck of the alternate fuel.
Most of the catalysts employed for different industrial processes are noble metals. The noble metals generally used for biojet production from triglycerides include Pt, Pd, Ir, Rh, Ru and Ag.
A suitable support for noble metal demonstrates maximum catalytic activity in biojet fuel production owing to some influence of distinct components and favour the cracking activity. For instance, use of proper support such as Al_2O_3, stimulates isomerization reaction conversion to enhance the fuel cold flow properties in bio jet production.
This paper reviewed the efficiency of metal supported catalysts employed for biojet production.

ENGINEERING OF VISIBLE LIGHT ACTIVATED BISMUTH OXIDE /CHITOSAN NANOCOMPOSITE FOR THE PHOTOCATALYTIC DEGRADATION OF AMOXICILLIN

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ABSTRACT
In the present study, bismuth oxide nanoparticles (BiO NPs) were successfully synthesized via green synthesis process using *Azadirachta indica* (neem) leaf extract. These nanoparticles were then impregnated with chitosan to form a BiO/chitosan nanocomposite through the co-precipitation method. The synthesized nanocomposite was then characterized using Fourier Transform Infrared Spectroscopy (FTIR), X-ray Diffraction (XRD), and Scanning Electron Microscopy (SEM). The result indicates successful synthesis of bismuth oxide/chitosan nanocomposite. The photo catalytic activity of the nanocomposite was calculated for the degradation of the pharmaceutical pollutant amoxicillin in aqueous media. Various experimental parameters, including temperature, solution pH, initial concentration of the antibiotic, contact time, and catalyst dosage, were optimized to investigate their effect on degradation efficiency. The pH study implies that degradation of Amoxicillin is highly dependent on the solution pH and maximum degradation was achieved at pH 6. The findings show effect of contact time explore that degradation of Amoxicillin increases with increasing contact time up to certain level and then becomes constant. The results shows that degradation of Amoxicillin increases with decreasing initial concentration. The outcomes shows that degradation increases with increasing temperature (313k) and then start decreasing. Furthermore, the reusability of the nanocomposite was assessed through recycling trials after successive degradation cycles. The results demonstrated that the BiO/chitosan nanocomposite infatuated excellent photocatalytic potential for environmental remediation of antibiotic contaminated water.
Keywords: Photo catalysis, green synthesis, BiO NPs, BiO/CS Ns, Amoxicillin, degradation

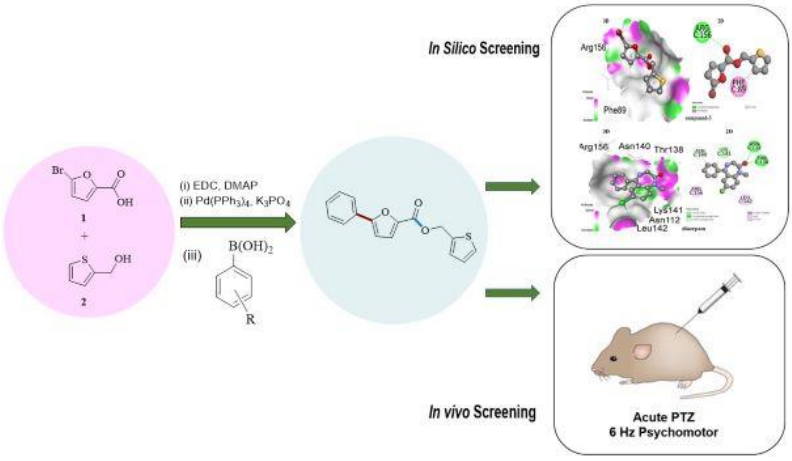
FACILE SYNTHESIS OF NOVEL THIOPHEN-2-YLMETHYL 5-PHENYLFURAN-2-CARBOXYLATES VIA SUZUKI–MIYAURA COUPLING: A PROMISING STRATEGY FOR ANTI-SEIZURE DRUG DEVELOPMENT IN BRAIN DISORDERS SUPPORTED BY MOLECULAR DOCKING

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Abstract
Epilepsy is a chronic neurological disorder characterized by abnormal neuronal excitability, leading to synchronous and excessive firing of neural populations within the central nervous system. It is often associated with psychological comorbidities, recurrent unpredictable seizures, and transient behavioral changes, affecting approximately 65 million individuals worldwide. Molecular docking studies revealed strong binding affinities of the synthesized compounds toward key epileptic targets, including $GABA_a$ receptors and SV2A protein, indicating potential multi-target mechanisms. Lipophilicity analysis suggested favorable blood–brain barrier penetration for all derivatives. Among the series, compounds **3** and **5g** demonstrated the most potent anticonvulsant effects without observable neurotoxicity compared to standard drugs such as levetiracetam and diazepam. These findings highlight thiophenyl–furan hybrids as promising lead scaffolds for the development of effective and safe anti-seizure therapeutics.
Keywords: Acute PTZ and 6 Hz psychomotor seizure model, Anticonvulsant potential, Molecular docking studies, Suzuki Miyaura reactions, Thiophen-2-ylmethyl 5-phenylfuran-2-carboxylate derivative



Khalid, S., Sabir, A., Mohsin, N., Rasool, N., Imran, I., Siddique, F., & Imran, M. (2025). Facile synthesis of Thiophen-2-ylmethyl 5-Phenylfuran-2-Carboxylates through SMC reaction: Assessing their anti-seizure potential and molecular docking studies. *ChemistrySelect*, *10*(37), e03224.

KIRILGAN GRUPLARDA DOĞUMDA İLERİ BAKIM MODELLERİ

ADVANCED CARE MODELS IN BIRTH FOR VULNERABLE GROUPS

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Abstract
In a globalized world, immigrant, refugee, and disabled women are at high risk of perinatal morbidity and mortality due to multifaceted risk factors such as language barriers, socioeconomic disadvantages, structural barriers, and discrimination. Meeting the unique needs of these vulnerable groups during the birthing process is possible through the clinical integration of advanced care models developed from a rights-based and egalitarian perspective. Literature data show that refugee and immigrant women are exposed to unsafe birthing practices due to lack of communication and fear of discrimination, thus staying away from institutional care; and that women with physical, visual, and hearing impairments experience traumatic birthing experiences due to architectural barriers, lack of proactive communication, and insufficient clinical information. Contemporary care models such as "Respectful Maternal Care," "Trauma-Informed," "Culturally Sensitive," and "Continuity in Care," which center on human rights, play a key role in solving these problems. Clinical interventions such as proactive introduction, descriptive narration, the use of tactile educational materials, and professional translation support optimize the quality of care and perinatal outcomes. Advanced childbirth care models are not merely a clinical service delivery, but a holistic shield protecting women's human rights and autonomy. Structuring health systems in line with these models, expanding accessible birthing rooms, and strengthening advocacy in midwifery practices are critical in reducing perinatal inequalities.
Keywords: Vulnerable Groups, Advanced Childbirth Care, Respectful Maternal Care, Midwifery.

Özet
Küreselleşen dünyada göçmen, mülteci ve engelli kadınlar; dil bariyerleri, sosyoekonomik yetersizlikler, yapısal engeller ve ayrımcılık gibi çok katmanlı risk faktörleri nedeniyle perinatal dönemde yüksek morbidite ve mortalite riski altındadır. Bu kırılgan grupların doğum sürecindeki özgün gereksinimlerinin karşılanması, hak temelli ve eşitlikçi bir perspektifle geliştirilen ileri bakım modellerinin klinik entegrasyonu ile mümkündür. Literatür verileri; mülteci ve göçmen kadınların iletişim yetersizliği ve ayrımcılık korkusuyla kurumsal bakımdan uzak kalarak güvensiz doğum uygulamalarına maruz kaldığını; fiziksel, görme ve işitme engelli kadınların ise mimari engeller, proaktif iletişim eksikliği ve klinik bilgi yetersizliği nedeniyle travmatik doğum deneyimleri yaşadığını göstermektedir. Bu sorunların çözümünde; insan haklarını merkeze alan "Saygılı Analık Bakımı", "Travma Bilgili", "Kültürel Olarak Duyarlı" ve "Bakımda Süreklilik" gibi çağdaş bakım modelleri anahtar rol oynamaktadır. Proaktif tanıtım, betimleyici anlatım, dokunsal eğitim materyallerinin kullanımı ve profesyonel tercüme desteği gibi klinik müdahaleler, bakım kalitesini ve perinatal çıktıları optimize etmektedir. Doğumda ileri bakım modelleri, yalnızca klinik bir hizmet sunumu değil, kadının insan haklarını ve özerkliğini koruyan bütüncül bir kalkandır. Sağlık sistemlerinin bu modeller doğrultusunda yapılandırılması, engelsiz doğum odalarının yaygınlaştırılması ve ebelik uygulamalarında hak savunuculuğunun güçlendirilmesi perinatal eşitsizliklerin azaltılmasında kritik öneme sahiptir.
Anahtar Kelimeler: Kırılgan Gruplar, Doğumda İleri Bakım, Saygılı Analık Bakımı, Ebelik.

FETAL PROGRAMLAMA TEORİSİ IŞIĞINDA EBELİK MÜDAHALELERİ
MIDWIFERY INTERVENTIONS IN LIGHT OF FETAL PROGRAMMING THEORY

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Abstract
Fetal programming theory is an important approach that explains the effects of environmental factors experienced during the intrauterine period on an individual's lifelong health outcomes. In line with the Developmental Origins of Health and Disease (DOHaD) approach, maternal nutrition, obesity, chronic diseases, smoking, alcohol, substance use, and environmental exposures are reported to have an impact on fetal development and the risk of adult-onset diseases. It is stated that these effects can create long-term consequences on metabolic, cardiovascular, neurodevelopmental, and endocrine systems through epigenetic mechanisms. In the preconception period, midwives play an important role in processes such as taking a detailed history, risk assessment, chronic disease management, evaluation of vaccination status, determination of teratogen exposure, nutritional counseling, folic acid supplementation, support for lifestyle changes, and counseling regarding smoking, alcohol, and substance use. Developing healthy eating habits, maintaining an appropriate body mass index, regular physical activity, and avoiding harmful habits in the pre-pregnancy period are important for fetal health. In the antenatal period, an individualized care approach emphasizes nutritional counseling, support for energy and micronutrient requirements, weight management during pregnancy, promotion of physical activity, and evidence-based interventions for smoking, alcohol, and substance abuse. It is assessed that preconception and antenatal midwifery care, structured in light of fetal programming theory, can contribute to protecting maternal and fetal health, reducing adverse pregnancy outcomes, and improving lifelong health outcomes.
Keywords: Fetal programming, midwifery, DOHaD, epigenetics, preconception care, antenatal care.

Özet
Fetal programlama teorisi, intrauterin dönemde maruz kalınan çevresel faktörlerin bireyin yaşam boyu sağlık sonuçları üzerindeki etkilerini açıklayan önemli bir yaklaşımdır. Sağlığın ve Hastalığın Gelişimsel Kökenleri (DOHaD) yaklaşımı doğrultusunda maternal beslenme, obezite, kronik hastalıklar, sigara, alkol, madde kullanımı ve çevresel maruziyetlerin fetal gelişim ve erişkin dönem hastalık riski üzerinde etkili olduğu bildirilmektedir. Bu etkilerin, epigenetik mekanizmalar aracılığıyla metabolik, kardiyovasküler, nörogelişimsel ve endokrin sistemler üzerinde uzun dönem sonuçlar oluşturabildiği belirtilmektedir. Prekonsepsiyonel dönemde ebeler; ayrıntılı anamnez alınması, risk değerlendirmesi, kronik hastalık yönetimi, aşılama durumunun değerlendirilmesi, teratojen maruziyetinin belirlenmesi, beslenme danışmanlığı, folik asit desteği, yaşam tarzı değişikliklerinin desteklenmesi ve sigara, alkol ile madde kullanımına yönelik danışmanlık süreçlerinde önemli rol üstlenmektedir. Gebelik öncesi dönemde sağlıklı beslenme alışkanlıklarının geliştirilmesi, uygun beden kitle indeksinin sürdürülmesi, düzenli fiziksel aktivite ve zararlı alışkanlıklardan kaçınma fetal sağlık açısından önem taşımaktadır. Antenatal dönemde ise bireyselleştirilmiş bakım yaklaşımıyla beslenme danışmanlığı, enerji ve mikrobesin gereksinimlerinin desteklenmesi, gebelikte kilo yönetimi, fiziksel aktivitenin teşvik edilmesi ve sigara, alkol ile madde kullanımına yönelik kanıta dayalı müdahaleler ön plana çıkmaktadır. Fetal programlama teorisi ışığında yapılandırılan prekonsepsiyonel ve antenatal ebelik bakımının, anne ve fetüs sağlığının korunmasına, olumsuz gebelik sonuçlarının azaltılmasına ve yaşam boyu sağlık çıktılarının iyileştirilmesine katkı sağlayabileceği değerlendirilmektedir.
Anahtar Kelimeler: Fetal programlama, ebelik, DOHaD, epigenetik, prekonsepsiyonel bakım, antenatal bakım.

DOĞUM AĞRISINDA KULLANILAN NON-FARMAKOLOJİK YÖNTEMLER VE ETKİ MEKANİZMALARI

NON-PHARMACOLOGICAL METHODS USED FOR LABOR PAIN AND THEIR MECHANISMS OF ACTION

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ÖZET

Doğum ağrısı, kadının yaşamında fiziksel, psikolojik ve sosyal boyutları içeren doğum sürecinin en önemli bileşenlerinden biri olup bireyin ağrı algısı; fizyolojik mekanizmaların yanı sıra psikolojik durum, kültürel yapı, önceki deneyimler ve çevresel faktörlerden etkilenmektedir. Doğum ağrısının etkili şekilde yönetilememesi, annenin kaygı düzeyini artırarak doğum deneyiminin olumsuz etkilenmesine, doğum sürecinin uzamasına ve maternal-fetal komplikasyon riskinin artmasına neden olabilmektedir. Günümüzde doğum ağrısının yönetiminde yalnızca farmakolojik yöntemlere odaklanmak yerine, kadının bütüncül olarak ele alındığı integratif yaklaşımlar ön plana çıkmaktadır. Bu kapsamda non-farmakolojik yöntemler; gebenin doğum sürecine aktif katılımını destekleyen, kontrol duygusunu artıran, gevşeme sağlayan ve doğum deneyimini olumlu yönde etkileyen güvenli uygulamalar arasında yer almaktadır. Nefes egzersizleri, gevşeme teknikleri, masaj, pozisyon değiştirme, hidroterapi, müzik terapisi ve psikolojik destek gibi yöntemler doğum ağrısının azaltılmasında yaygın olarak kullanılmaktadır. Bu yöntemlerin etki mekanizmaları arasında dikkat dağıtma, endorfin salınımını artırma, kas gevşemesi sağlama, anksiyeteyi azaltma ve ağrı algısını azaltma yer almaktadır. Non-farmakolojik yöntemler aynı zamanda farmakolojik uygulamalara bağlı yan etkilerin azaltılmasına katkı sağlamakta, annenin kendine güvenini artırmakta ve doğum sürecinin daha olumlu deneyimlenmesini desteklemektedir. Dünya Sağlık Örgütü, doğum sürecinde kadının fiziksel, psikolojik ve kültürel gereksinimlerini dikkate alan kadın merkezli ve saygılı bakım anlayışını desteklemekte; non-farmakolojik yöntemlerin güvenli ve etkili biçimde uygulanmasını önermektedir. Ebeler ise doğum sürecinde sürekli bakım ve destek sağlayan sağlık profesyonelleri olarak, non-farmakolojik ağrı yönetimi yöntemlerinin uygulanması, anneye rehberlik edilmesi ve güvenli doğum ortamının sağlanmasında önemli sorumluluk üstlenmektedir. Bu derlemede doğum ağrısının biyopsikososyal boyutu ele alınarak doğumda kullanılan non-farmakolojik ağrı yönetim yöntemleri, etki mekanizmaları ve bu süreçte ebenin rolü güncel literatür doğrultusunda kapsamlı biçimde incelenmiştir.
Anahtar Kelimeler: Doğum Ağrısı, Non-Farmakolojik Yöntemler, Ağrı Yönetimi, Ebelik, İntegratif Yaklaşım

ABSTRACT

Labor pain is one of the most significant components of the birthing process, encompassing physical, psychological, and social dimensions in a woman's life; an individual's perception of pain is influenced not only by physiological mechanisms but also by psychological state, cultural background, prior experiences, and environmental factors. Inadequate management of labor pain can increase the mother's anxiety levels, negatively impact the birth experience, prolong the labor process, and increase the risk of maternal-fetal complications. Today, rather than focusing solely on pharmacological methods for labor pain management, integrative approaches that address the woman holistically are gaining prominence. In this context, non-pharmacological methods include safe practices that support the pregnant woman's active participation in the labor process, enhance a sense of control, promote relaxation, and positively influence the labor experience. Methods such as breathing exercises, relaxation techniques, massage, position changes, hydrotherapy, music therapy, and psychological support are widely used to reduce labor pain.

The mechanisms of action for these methods include distraction, increasing endorphin release, promoting muscle relaxation, reducing anxiety, and decreasing pain perception. Non-pharmacological methods also help reduce side effects associated with pharmacological interventions, boost the mother's self-confidence, and support a more positive experience of the labor process. The World Health Organization supports a woman-centered and respectful approach to care that takes into account a woman's physical, psychological, and cultural needs during childbirth; it recommends the safe and effective use of non-pharmacological methods. Midwives, as healthcare professionals who provide continuous care and support during the birthing process, assume significant responsibility for implementing non-pharmacological pain management methods, guiding the mother, and ensuring a safe birthing environment. This review comprehensively examines the biopsychosocial dimension of labor pain, the non-pharmacological pain management methods used during childbirth, their mechanisms of action, and the midwife's role in this process, in accordance with the current literature.
Keywords: Labor Pain, Non-Pharmacological Methods, Pain Management, Midwifery, Integrative Approach

LAKTASYON PROBLEMLERİNİN YÖNETİMİNDE KANITA DAYALI UYGULAMALAR

EVIDENCE-BASED PRACTICES IN THE MANAGEMENT OF LACTATION PROBLEMS

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Abstract
Lactation is a physiological process involving the production and secretion of breast milk and provides significant benefits for both maternal and infant health. Breast milk not only contains all essential nutrients required for the growth and development of the newborn, but also has immunological, neurological, and psychological protective effects. However, various lactation problems such as insufficient milk production, nipple problems, mastitis, breast engorgement, plugged milk ducts, breast abscess, and infant sucking difficulties may occur during the breastfeeding process. These problems may lead to early cessation of breastfeeding and decreased rates of exclusive breastfeeding.
In this seminar, the physiology of lactation, the importance of breast milk, factors leading to lactation problems, and common lactation problems were discussed. In addition, evidence-based practices used in the management of lactation problems were examined in line with current guidelines and literature. In particular, the importance of early skin-to-skin contact, initiation of breastfeeding within the first hour after birth, teaching correct breastfeeding techniques, breastfeeding counseling, rooming-in practices, and individualized support approaches in improving breastfeeding success was emphasized. Furthermore, the importance of maintaining effective breastfeeding, appropriate care practices, and early intervention in the management of conditions such as mastitis, breast engorgement, plugged milk ducts, and nipple problems was evaluated.
In accordance with the current guidelines of the World Health Organization (WHO), UNICEF, NICE, and the Republic of Türkiye Ministry of Health, strengthening the educational, caregiving, and counseling roles of healthcare professionals in the breastfeeding process has been shown to contribute significantly to the prevention and management of lactation problems. As a result, the use of evidence-based practices supports the continuation of breastfeeding, positively affects maternal and infant health, and provides important benefits for public health.
Keywords: Lactation, breastfeeding, breast milk, lactation problems, evidence-based practices, breastfeeding counseling

Özet
Laktasyon, anne sütü üretimi ve salınımını içeren fizyolojik bir süreç olup anne ve bebek sağlığı açısından önemli yararlar sağlamaktadır. Anne sütü; yenidoğanın büyüme ve gelişimi için gerekli tüm besin öğelerini içermesinin yanı sıra immünolojik, nörolojik ve psikolojik açıdan da koruyucu etkiler göstermektedir. Ancak emzirme sürecinde yetersiz süt üretimi, meme ucu problemleri, mastit, meme dolgunluğu, süt kanalı tıkanıklığı, meme absesi ve bebekte emme sorunları gibi çeşitli laktasyon problemleri ortaya çıkabilmektedir. Bu problemler, emzirmenin erken sonlandırılmasına ve anne sütü ile beslenme oranlarının azalmasına neden olabilmektedir.
Bu seminerde; laktasyonun fizyolojisi, anne sütünün önemi, laktasyon problemlerine yol açan faktörler ve sık görülen laktasyon problemleri ele alınmıştır. Ayrıca laktasyon problemlerinin yönetiminde kullanılan kanıta dayalı uygulamalar güncel rehberler ve literatür doğrultusunda incelenmiştir. Özellikle erken ten tene temas, doğumdan sonraki ilk saat içinde emzirmenin başlatılması, doğru emzirme tekniklerinin öğretilmesi, emzirme danışmanlığı, anne-bebek birlikte bakım uygulamaları ve bireyselleştirilmiş destek yaklaşımlarının emzirme başarısını artırdığı vurgulanmıştır.

Bunun yanında mastit, meme dolgunluğu, süt kanalı tıkanıklığı ve meme ucu problemleri gibi durumların yönetiminde etkili emzirmenin sürdürülmesi, uygun bakım uygulamaları ve erken müdahalenin önemi değerlendirilmiştir.

Güncel Dünya Sağlık Örgütü (WHO), UNICEF, NICE ve T.C. Sağlık Bakanlığı rehberleri doğrultusunda; sağlık profesyonellerinin emzirme sürecindeki eğitim, bakım ve danışmanlık rollerinin güçlendirilmesinin, laktasyon problemlerinin önlenmesi ve yönetiminde önemli katkılar sağladığı belirtilmiştir. Sonuç olarak, kanıta dayalı uygulamaların kullanılması; emzirmenin sürdürülmesini desteklemekte, anne ve bebek sağlığını olumlu yönde etkilemekte ve toplum sağlığı açısından önemli kazanımlar oluşturmaktadır.

Anahtar Kelimeler: Laktasyon, emzirme, anne sütü, laktasyon problemleri, kanıta dayalı uygulamalar, emzirme danışmanlığı

GÖÇMEN SAĞLIĞINDA HİZMET MODELLERİ VE TRANSKÜLTÜREL HEMŞİRELİK YAKLAŞIMLARI: KADIN SAĞLIĞI PERSPEKTİFİNDEN BİR DERLEME

HEALTHCARE MODELS FOR MIGRANT HEALTH AND TRANSCULTURAL NURSING APPROACHES: A REVIEW FROM THE PERSPECTIVE OF WOMEN'S HEALTH

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Abstract
Migration has become an increasingly significant public health issue in contemporary societies due to multifaceted factors such as globalization, armed conflicts, socio-political instability, and climate change, which together have created a growing need for restructuring health systems in terms of access, equity, and cultural appropriateness. The heterogeneous nature of migrant populations affects not only the delivery of health services but also cultural adaptation, communication processes, and continuity of care. In particular, women constitute a more vulnerable group due to the intersection of migration status and gender-based disadvantages, especially in areas such as pregnancy, childbirth, postpartum care, family planning, and mental health. In this context, migrant health service models developed across different countries vary as integration-based primary care approaches, health navigation systems, and community-based crisis-oriented service models. However, the effectiveness of these models is not solely dependent on structural organization; it is also significantly influenced by factors such as language barriers, limited health literacy, cultural differences, and gender inequalities. Transcultural nursing theories, including the models of Leininger, Campinha-Bacote, Purnell, Giger–Davidhizar, and Kleinman, as well as the LEARN communication model, provide a theoretical framework for improving care based on cultural competence, cultural sensitivity, and cultural safety. In Turkey, although access to healthcare services has been improved through Migrant Health Centers, mobile health services, and outpatient clinics for foreign nationals, structural and cultural barriers continue to limit effective utilization of services, particularly among migrant women. The aim of this review is to examine migrant health service models and transcultural nursing approaches from a women's health perspective and to evaluate their implications for healthcare delivery.
Keywords: Migration, migrant health, women's health, transcultural nursing, health service models

ÖZET
Göç olgusu; küreselleşme, savaşlar, sosyo-politik istikrarsızlıklar ve iklim değişikliği gibi çok boyutlu etkenlerin etkisiyle günümüzde giderek artan bir halk sağlığı sorunu haline gelmiş ve sağlık sistemlerinde erişim, eşitlik ve kültürel uygunluk açısından yeni yapılanma ihtiyacını ortaya çıkarmıştır. Göçmen nüfusun heterojen yapısı, sağlık hizmetlerinin yalnızca sunum boyutunu değil aynı zamanda kültürel uyum, iletişim ve bakım sürekliliğini de doğrudan etkilemektedir. Özellikle kadınlar; gebelik, doğum, lohusalık, aile planlaması ve ruh sağlığı gibi alanlarda hem göçmen olmanın hem de toplumsal cinsiyet temelli dezavantajların birleşimi nedeniyle daha kırılgan bir grup olarak öne çıkmaktadır. Bu kapsamda farklı ülkelerde geliştirilen göçmen sağlığı hizmet modelleri; entegrasyon temelli birinci basamak yaklaşımlar, sağlık navigasyonu sistemleri ve toplum temelli kriz odaklı hizmet modelleri şeklinde çeşitlenmektedir. Bununla birlikte bu modellerin etkinliğinin yalnızca yapısal organizasyona bağlı olmadığı, dil bariyerleri, sağlık okuryazarlığı yetersizliği, kültürel farklılıklar ve toplumsal cinsiyet eşitsizlikleri gibi faktörlerden önemli ölçüde etkilendiği görülmektedir. Transkültürel hemşirelik kuramları ise Leininger, Campinha-Bacote, Purnell, Giger–Davidhizar ve Kleinman modelleri ile LEARN iletişim modeli çerçevesinde kültürel yeterlilik, kültürel duyarlılık ve kültürel güvenlik

temelinde bakımın geliştirilmesine teorik katkı sunmaktadır. Türkiye'de Göçmen Sağlığı Merkezleri, mobil sağlık hizmetleri ve yabancı uyruklulara yönelik poliklinik uygulamaları aracılığıyla sağlık hizmetlerine erişim artırılmış olsa da özellikle göçmen kadınların sağlık hizmetlerinden etkin yararlanmasını sınırlayan yapısal ve kültürel engeller devam etmektedir. Bu derlemenin amacı, göçmen sağlığı alanında uygulanan hizmet modelleri ile transkültürel hemşirelik yaklaşımlarını kadın sağlığı perspektifinden ele alarak, bu yaklaşımların sağlık hizmetlerine yansımalarını değerlendirmektir.

Anahtar Kelimeler: Göç, göçmen sağlığı, kadın sağlığı, transkültürel hemşirelik, sağlık hizmeti modelleri

KADIN SAĞLIĞI ALANINDA KULLANILAN TAMAMLAYICI VE ALTERNATİF TEDAVİ YAKLAŞIMLARI

COMPLEMENTARY AND ALTERNATIVE TREATMENT APPROACHES USED IN THE FIELD OF WOMEN'S HEALTH

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Abstract
Women's health is an important field that encompasses the physical, psychological, and social needs arising throughout different stages of life. In recent years, women have increasingly turned to complementary and alternative medicine (CAM) approaches to support symptom management during pregnancy, childbirth, the postpartum period, menopause, gynecological disorders, and gynecological cancers. The aim of this review is to examine the complementary and alternative treatment approaches used in women's health, evaluate their effectiveness in light of current evidence, and discuss their role in nursing care. For this purpose, recent national and international studies were reviewed, and commonly used complementary therapies including yoga, mindfulness-based interventions, aromatherapy, acupuncture, acupressure, massage, reflexology, and herbal products were evaluated. The findings indicate that these approaches may have positive effects on pain, anxiety, stress, fatigue, sleep disturbances, and quality of life. In particular, yoga and mindfulness-based interventions have been shown to promote psychological well-being, acupressure has been found effective in reducing pregnancy-related nausea and vomiting, aromatherapy may improve relaxation and sleep quality, and massage and reflexology may contribute to the management of pain and fatigue. However, the level of evidence varies among different complementary and alternative therapies, and the scientific support for some methods remains limited. Therefore, the adoption of an evidence-based approach is essential to ensure the safe and effective use of these interventions. Nurses play a critical role in meeting women's informational needs regarding complementary therapies, promoting their safe use, and providing holistic care. In conclusion, complementary and alternative treatment approaches constitute important components of supportive care in women's health. The evidence-based integration of these practices into nursing care may contribute to improved health outcomes and enhanced quality of life among women.
Keywords: Women’s health, integrative health, holistic care, nursing care.

Özet
Kadın sağlığı, yaşamın farklı dönemlerinde ortaya çıkan fiziksel, psikolojik ve sosyal gereksinimleri kapsayan önemli bir sağlık alanıdır. Son yıllarda kadınlar; gebelik, doğum, postpartum dönem, menopoz, jinekolojik hastalıklar ve jinekolojik kanserler gibi süreçlerde semptom yönetimini desteklemek sebebiyle tamamlayıcı ve alternatif tedavi (TAT) yaklaşımlarına giderek daha fazla yönelmektedir. Bu derlemenin amacı, kadın sağlığında kullanılan tamamlayıcı ve alternatif tedavi yöntemlerini güncel literatür doğrultusunda incelemek, bu uygulamaların etkinliğini değerlendirmek ve hemşirelik bakımındaki yerini ortaya koymaktır. Bu kapsamda son yıllarda yayımlanan ulusal ve uluslararası literatür incelenmiş; yoga, mindfulness temelli uygulamalar, aromaterapi, akupunktur, akupresür, masaj, refleksoloji ve bitkisel ürünler gibi yaygın kullanılan tamamlayıcı tedavi yöntemleri değerlendirilmiştir. Literatür bulguları, söz konusu uygulamaların ağrı, anksiyete, stres, yorgunluk, uyku bozuklukları ve yaşam kalitesi üzerinde olumlu etkiler sağlayabildiğini göstermektedir. Özellikle yoga ve mindfulness uygulamalarının psikolojik iyilik halini desteklediği, akupresürün gebelik bulantılarının azaltılmasında etkili olduğu, aromaterapinin gevşeme ve uyku kalitesini artırabildiği, masaj ve refleksolojinin ise ağrı ve yorgunluğun yönetimine katkıda bulunduğu belirlenmiştir.

Bununla beraber tamamlayıcı ve alternatif tedavilere ilişkin kanıt düzeylerinin uygulamalara göre farklılık gösterdiği ve bazı yöntemlerin etkinliğini destekleyen çalışmaların sınırlı olduğu görülmektedir. Bu nedenle uygulamaların güvenli ve etkili biçimde kullanılabilmesi için kanıta dayalı yaklaşımın benimsenmesi önem taşımaktadır. Hemşireler, kadınların tamamlayıcı tedavilere ilişkin bilgi gereksinimlerinin karşılanması, güvenli kullanımın desteklenmesi ve bütüncül bakımın sağlanmasında önemli rol üstlenmektedir. Sonuç olarak tamamlayıcı ve alternatif tedavi yaklaşımları kadın sağlığında destekleyici bakımın önemli bileşenleri arasında yer almakta olup, bu uygulamaların hemşirelik bakımına kanıta dayalı şekilde entegre edilmesi kadınların sağlık sonuçlarının ve yaşam kalitesinin geliştirilmesine katkı sağlayacaktır.

Anahtar Kelimeler: Kadın sağlığı, , integratif sağlık, bütüncül bakım, hemşirelik bakımı.

TURİZMDE UPCYCLİNG UYGULAMALARI: SÜRDÜRÜLEBİLİR DEĞER YARATMA PERSPEKTİFİNDEN KAVRAMSAL BİR LİTERATÜR İNCELEMESİ

UPCYCLING APPLICATIONS IN TOURISM: A CONCEPTUAL LITERATURE REVIEW FROM THE PERSPECTIVE OF CREATING SUSTAINABLE VALUE

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Abstract
As in all sectors, the issue of waste generation and management is of great importance in the tourism sector. Due to the nature of the sector, a significant portion of this waste is food-based. Within the framework of transforming this waste in the context of the circular economy, research on the concept of upcycling has begun to increase in tourism studies. This study aims to examine research on the application of upcycling in tourism from the perspective of value creation. The study screened upcycling studies in tourism from the Scopus database between 2015 and 2026, selecting 20 studies from the 127 relevant records based on criteria of high citation impact and representativeness of the research objective. The selected studies were subjected to thematic analysis within the framework of the Triadic Basic Principle (TBL) expanded to include the experiential-guest value dimension—specifically, along the axes of economic, environmental, sociocultural, and experiential value. According to the findings, studies on economic and environmental themes largely remained at a qualitative level, while those on sociocultural themes were heavily focused on destination-oriented research. Additionally, the findings reveal a research gap between upcycling practices and guest experience. The study suggests that the classic triad principle should be expanded to include the experiential-guest value dimension in the context of tourism and identifies comparative field research in emerging tourism markets such as Turkey as a priority for future research. The study suggests that the classical triad principle should be expanded to include the experiential-guest value dimension within the tourism context and identifies comparative field research in developing tourism markets such as Turkey as a priority for future research.
Keywords: Upcycling, sustainable tourism, circular economy, value creation, experiential value, literature review

Özet
Tüm sektörlerde olduğu gibi turizm sektöründe de atık üretimi konusu ve yönetimi önem arz etmektedir. Sektörün yapısı itibariyle atığın büyük bir bölümü gıda kaynaklı olmaktadır. Döngüsel ekonomi bağlamında ortaya çıkan bu atıkların dönüştürülmesi çerçevesinde upcycling kavramı ile ilgili çalışmalar turizm araştırmalarında artmaya başlamıştır. Bu çalışma, turizm araştırmalarında upcycling uygulamalarının kullanımına ilişkin çalışmaları değer oluşturma açısından incelemeyi amaçlamaktadır. Çalışmada Scopus veritabanında 2015-2026 yılları arasında turizmde upcycling çalışmaları taranarak ilgili 127 kayıt içerisinde yüksek atıf ve amacı temsil etme kriterleri doğrultusunda 20 çalışma seçilmiştir. Seçilen çalışmalar; üçlü temel ilkesinin (TBL) deneyimsel-misafir değeri boyutuyla genişletilmiş hâli çerçevesinde — ekonomik, çevresel, sosyokültürel ve deneyimsel değer eksenleri üzerinden — tematik analize tabi tutulmuştur. Elde edilen bulgulara göre ekonomik ve çevresel temalarındaki çalışmalar büyük ölçüde niteliksel düzeyde kalmış, sosyokültürel temasındaki çalışmalar destinasyon odaklı çalışmalarda yoğun şekilde işlenmiştir. Ayrıca elde edilen bulgularda upcycling uygulamaları ile misafir deneyimi arasında araştırma kopukluğu olduğu görülmektedir. Çalışma, klasik üçlü temel ilkesinin turizm bağlamında deneyimsel-misafir değeri boyutuyla genişletilmesi gerektiğini önermekte ve Türkiye gibi gelişmekte olan turizm pazarlarında karşılaştırmalı saha araştırmalarını öncelikli gelecek araştırma gündemi olarak tanımlamaktadır. Çalışma, klasik üçlü temel ilkesinin turizm bağlamında deneyimsel-misafir değeri boyutuyla genişletilmesi gerektiğini önermekte ve Türkiye gibi gelişmekte olan turizm pazarlarında karşılaştırmalı saha araştırmalarını öncelikli gelecek araştırma gündemi olarak tanımlamaktadır.
Anahtar kelimeler: Upcycling, sürdürülebilir turizm, döngüsel ekonomi, değer yaratma, deneyimsel değer, literatür incelemesi

TEK BAŞINA SEYAHAT EDENLERİN OTEL İŞLETMELERİNDEKİ "YUMUŞAK SOSYALLEŞME" DENEYİMLERİ

"SOFT SOCIALIZATION" EXPERIENCES OF SOLO TRAVELERS IN HOTEL MANAGEMENTS

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Özet
Bu araştırma, uluslararası literatürde sıklıkla "solo traveler" olarak kavramsallaştırılan tek başına seyahat eden turistlerin, konaklama tesislerinde deneyimledikleri düşük yoğunluklu sosyal etkileşimleri (yumuşak sosyalleşme) derinlemesine incelemeyi amaçlamaktadır. Bireysel ve deneyim odaklı turizm eğilimlerinin artışıyla ana akım bir tercih haline gelen tek başına seyahat, sunduğu özgürlüğün yanı sıra sosyal izolasyon risklerini de barındırmaktadır. Bu bağlamda araştırma, bireylerin otel ortamındaki zayıf bağlar aracılığıyla kamusal alanda tek başına olma kaygılarını nasıl aştıklarını odağına almaktadır. Nitel araştırma yöntemlerinden fenomenoloji deseninin benimsendiği çalışmada veriler; son bir yıl içinde en az iki kez tek başına seyahat etmiş ve üst segment zincir otellerde konaklamış, yüksek sosyo-ekonomik düzeydeki sekiz katılımcı ile gerçekleştirilen yarı yapılandırılmış görüşmelerle toplanmıştır. Elde edilen veriler MAXQDA yazılımı kullanılarak altı aşamalı tematik analiz sürecine tabi tutulmuştur. Analiz sonuçları; "Ontolojik Güvenlik ve Yumuşak Sosyalleşme Algısı", "Deneyim Görünümü ve Sosyal Etkileşimin Mekânsal-Durumsal Tetikleyicileri" ile "Yönetsel Arabuluculuk ve Stratejik Öneriler" olmak üzere üç ana tema altında yapılandırılmıştır. Bulgular, yumuşak sosyalleşmenin tek tip bir yapı göstermediğini; anlık motivasyonlara göre "izole olma karşıtı bir duygu alışverişi" ile "medeni dikkat" çerçevesinde kaçınılması gereken bir "yük" arasında dalgalandığını göstermektedir. Katılımcıların mekânsal unsurları adeta bir saatin dişlileri gibi bütünsel gördükleri ve kahvaltı salonlarını "birlikte yeme ortaklığı" bağlamında en organik, risksiz yumuşak sosyalleşme sahnesi olarak kodladıkları belirlenmiştir. Son olarak otel yönetimlerinin, paylaşımlı masalar gibi agresif yöntemler yerine, Dürtme Teorisi ilkelerine dayanan canlı müzik veya mini tadım gibi "pasif arabuluculuk" rolleri üstlenmesi gerektiği; misafir kitlesinin "sosyal arayıcılar" ve "yalnızlık arayanlar" şeklindeki tipolojik ayrımlarına göre esnek hizmet politikaları geliştirmesinin önemi ortaya konmuştur. Araştırma, konaklama literatüründeki mikro etkileşim eksikliğini gidererek teorik ve pratik düzeyde özgün katkılar sunmaktadır.
Anahtar Kelimeler: Turist Deneyimi, Tek Başına Seyahat, Yumuşak Sosyalleşme, Sosyal Hizmet Çevresi, Zayıf Bağlar

Abstract
This research aims to deeply examine the low-intensity social interactions (soft socialization) experienced by tourists traveling alone in accommodation facilities. Solo travel, which has become a mainstream choice with the rise of individual and experience-oriented tourism trends, carries the risks of social isolation as well as the freedom it offers. In this context, the research focuses on how individuals overcome their anxieties about being alone in public spaces through weak bonds in the hotel environment. Adopting a phenomenological design from qualitative research methods, data was collected through semi-structured interviews with eight participants of high socio-economic status who had traveled alone at least twice in the last year and stayed in upper-segment chain hotels. The obtained data was subjected to a six-stage thematic analysis process using MAXQDA software. The analysis results were structured under three main themes: "Ontological Security and Perception of Soft Socialization," "Experience Appearance and Spatial-Situational Triggers of Social Interaction," and "Managerial Mediation and Strategic Recommendations." The findings indicate that soft socialization does not exhibit a uniform structure; The study shows that, according to momentary motivations, participants' perceptions fluctuate between an "anti-isolationist emotional exchange" and a "burden" to

be avoided within the framework of "civilized attention." It was determined that participants viewed spatial elements holistically, like the gears of a clock, and coded breakfast rooms as the most organic, risk-free, and soft socialization scene in the context of "sharing a meal together." Finally, it was revealed that hotel managements should adopt "passive mediation" roles based on the principles of Nudge Theory, such as live music or mini tastings, instead of aggressive methods like shared tables; and that developing flexible service policies according to the typological distinctions of the guest demographic as "social seekers" and "solitude seekers" is important. The research addresses the lack of micro-interactions in the hospitality literature, offering original contributions at both theoretical and practical levels.

Keywords: Tourist Experience, Solo Travel, Soft Socialization, Social Service Environment, Weak Ties

GAZİANTEP İLİNDEKİ 5 YILDIZLI OTEL İŞLETMELERİNDE ÇALIŞANLARIN ÇEVRE DOSTU DAVRANIŞLARI ÜZERİNE BİR ARAŞTIRMA

A STUDY ON THE ENVIRONMENTALLY FRIENDLY BEHAVIORS OF EMPLOYEES WORKING IN FIVE-STAR HOTEL ESTABLISHMENTS IN GAZIANTEP

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ÖZET
Bu araştırmanın amacı, Gaziantep ilinde faaliyet gösteren 5 yıldızlı otel işletmelerinde çalışanların çevre dostu davranışlarını belirlemek ve bu davranışların sürdürülebilir turizm anlayışı çerçevesinde değerlendirilmesini sağlamaktır. Çevresel sorunların küresel ölçekte giderek artması ve doğal kaynakların bilinçsiz kullanımı, turizm sektöründe sürdürülebilir uygulamalara duyulan ihtiyacı daha görünür hale getirmiştir. Özellikle konaklama işletmeleri, faaliyetleri sırasında yoğun enerji ve su tüketimi gerçekleştirmeleri ile çeşitli atıkların ortaya çıkmasına neden olmaları sebebiyle çevresel sürdürülebilirlik açısından önemli bir konumda bulunmaktadır. Bu noktada çalışanların çevreye yönelik tutum ve davranışları, işletmelerin sürdürülebilirlik hedeflerine ulaşmalarında belirleyici unsurlardan biri olarak değerlendirilmektedir. Araştırmada nicel araştırma yöntemi tercih edilmiş ve veriler anket tekniği ile toplanmıştır. Araştırmanın evrenini Gaziantep ilindeki 5 yıldızlı otel işletmelerinde görev yapan çalışanlar oluşturmaktadır. Çalışmaya toplam 135 otel çalışanı katılmıştır. Veri toplama sürecinde 5'li Likert ölçeğine göre hazırlanan anket formu kullanılmış, elde edilen veriler IBM SPSS Statistics paket programı yardımıyla analiz edilmiştir. Araştırma bulguları, çalışanların çevre dostu davranışlara yönelik olumlu bir yaklaşım sergilediklerini ortaya koymuştur. Katılımcıların enerji ve su tasarrufuna önem verdikleri, geri dönüşüm uygulamalarına destek oldukları ve kaynakların verimli kullanımına yönelik duyarlılık gösterdikleri belirlenmiştir. Bunun yanında işletmeler tarafından yürütülen çevreci uygulamaların çalışanların çevreye yönelik davranışlarını olumlu yönde etkilediği tespit edilmiştir. Elde edilen sonuçlar doğrultusunda, çalışanların çevresel farkındalıklarını geliştirmeye yönelik eğitim ve uygulamaların yaygınlaştırılmasının konaklama işletmelerinin sürdürülebilirlik performansına katkı sağlayacağı değerlendirilmektedir.
Anahtar Kelimeler: Çevre Dostu Davranış, Otel Çalışanları, Sürdürülebilir Turizm, Konaklama İşletmeleri, Çevresel Sürdürülebilirlik

ABSTRACT
This study aims to determine the environmentally friendly behaviors of employees working in five-star hotel establishments operating in Gaziantep and to evaluate these behaviors within the framework of sustainable tourism. Growing environmental concerns and the excessive consumption of natural resources have increased the importance of sustainability practices across various sectors, particularly in tourism. As accommodation establishments consume considerable amounts of energy and water and generate different types of waste during their operations, they play a critical role in environmental sustainability. In this context, employees' attitudes and behaviors toward environmental protection are considered essential factors in achieving organizational sustainability goals.
A quantitative research approach was adopted in the study, and data were collected through a survey questionnaire. The research population consisted of employees working in five-star hotels located in Gaziantep. A total of 135 employees participated in the study. Data were gathered using a questionnaire prepared according to a five-point Likert scale and were analyzed with the IBM SPSS Statistics software package.

The findings indicated that employees generally exhibited positive environmentally friendly behaviors. Participants demonstrated sensitivity toward issues such as energy and water conservation, recycling activities, and the efficient use of resources. Furthermore, environmental practices implemented within hotel establishments were found to have a positive influence on employees' environmentally responsible behaviors. Based on the results, it is suggested that supporting environmental awareness initiatives and sustainability-oriented practices among employees may contribute significantly to the environmental performance and sustainability objectives of accommodation establishments.
Keywords: Environmentally Friendly Behavior, Hotel Employees, Sustainable Tourism, Accommodation Establishments, Environmental Sustainability

ÜNİVERSİTE ÖĞRENCİLERİNİN TOPLU BESLEMEDE YEMEKHANE MEMNUNİYET DÜZEYİ: GAZİANTEP ÜNİVERSİTESİ ÖRNEĞİ

UNIVERSITY STUDENTS' LEVEL OF CAFETERIA SATISFACTION IN MASS CATERING: THE CASE OF GAZIANTEP UNIVERSITY

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Abstract
In this study examines the determination of the satisfaction level of university students in mass nutrition. In this context, a survey was conducted for students who benefit from the food service at Gaziantep University's central student cafeteria. The five-point Likert scale method was used in the study. The sample size of the study was determined as 260 people. In the study, university students' satisfaction levels with food service were determined according to both their class and demographic factors. As a result of the study, significant differences were detected between factors such as age, gender, income level and satisfaction levels. This study provides important information for universities that provide central cafeteria services, businesses that provide mass catering services, and researchers doing research on this subject.
Keywords: Mass Catering Services, University, Service Suality, Satisfaction, Student Cafeteria

Özet
Bu çalışmada üniversite öğrencilerinin toplu beslenmede memnuniyet düzeyinin belirlenmesi incelenmektedir. Bu kapsamda, Gaziantep Üniversitesi merkezi öğrenci yemekhanesinde yemek hizmetinden faydalanan öğrencilere yönelik anket çalışması yapılmıştır. Çalışmada beşli likert ölçeği yöntemi kullanılmıştır. Çalışmanın örneklem büyüklüğü 260 kişi olarak belirlenmiştir. Çalışmada üniversite öğrencilerinin yemek hizmetine dair memnuniyet düzeyleri hem okumuş oldukları sınıf hem de demografik faktörlere göre belirlenmiştir. Çalışmanın sonucunda, yaş, cinsiyet, gelir durumu gibi faktörler ile memnuniyet düzeyleri arasında anlamlı farklılıklar tespit edilmiştir. Bu çalışma merkezi yemekhane hizmeti veren üniversiteler, toplu yemek hizmeti veren işletmeler ve bu konuda araştırma yapan araştırmacılar için önemli bilgiler sunmaktadır.
Anahtar Kelimeler: Toplu Beslenme Hizmetleri, Üniversite, Hizmet Kalitesi, Memnuniyet, Öğrenci Yemekhanesi,

YİYECEK İÇECEK İŞLETMELERİNDE SOSYAL MEDYA PAZARLAMASI: INSTAGRAM İÇERİK ANALİZİ VE ETKİLEŞİM DÜZEYLERİNİN İNCELENMESİ

SOCIAL MEDIA MARKETING IN FOOD AND BEVERAGE BUSINESSES: EXAMINING INSTAGRAM CONTENT ANALYSIS AND ENGAGEMENT LEVELS

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ÖZET

Bu çalışmanın amacı, yiyecek içecek işletmelerinin yapmış oldukları sosyal medya paylaşımlarının sosyal medya pazarlaması kapsamında incelenmesidir. Sosyal medya aracılığıyla görsel ürün tanıtımı yapılması, işletmelerin hizmet ve ürünlerini kullanıcılara sunmasını sağlamıştır. Sosyal medya pazarlaması, işletmelerin hedef kitle ile görsel etkileşim kurarak ürünlerini tanıtmasıdır. Sosyal medya uygulamalarından öne çıkan Instagram, yiyecek ve içecek işletmelerinin video tabanlı içerik üretmesi ile ürün tanıtımı ve işletme tipinde öne çıkan ürünleri hedef kitleye ulaşmasını sağlayan bir platformdur. Bu kapsamda, Gaziantep ilinde öne çıkan yiyecek ve içecek işletmelerinin Instagram sayfalarının içerik analizi yapılmıştır. İncelenen işletmelerin araştırma evreni Gaziantep ilindeki yiyecek ve içecek işletmelerini oluşturmaktadır. Araştırmanın örneklemi ise amaçlı örneklem yöntemi ile 30 işletme seçilmiştir. İşletmelerin içerik analizi kapsamında paylaşım sıklığı Ocak, Mart arası verileri alınmıştır, ortalama yorum son on post incelemesiyle ve müşteri etkileşimi ise işletme sahibinin geri bildirimine göre hesaplanmıştır. Çalışmanın sonucunda, sayfalarını kullanıcılar ile paylaşan yiyecek içecek işletmelerinin, çoğunlukla Reels formatı ile ürün tanıtımı gerçekleştirdiği tespit edilmiştir. Diğer taraftan, içerik analizi gerçekleştirilen yiyecek ve içecek işletmelerin ortalama yorum sayısının artış sebebinin içerik üretici kişinin ürün ve mekan tanıtımını ortak sayfada sunmasının olduğu belirlenmiştir. Sosyal medya pazarlamasında ürün ve hizmeti görsel odaklı kullanıcıya iletiminin sağlanması tek başına yeterli olmadığı, farklı kitlelere hitap etmesini başarmış bireylerle iş birliği yapılmasının önemli olduğu görülmektedir. İşletmelerin sosyal medya üzerinden müşteri etkileşiminde bulunması ve geri bildirimlere yanıt vermesi mevcut müşterinin devamlılığını sağlarken yeni müşterilerin kazanılmasını sağlayacaktır.

Anahtar Kelimeler: Yiyecek ve İçecek İşletmeciliği, İçerik Analizi, Instagram

ABSTRACT

The aim of this study is to examine the social media posts of food and beverage businesses within the scope of social media marketing. Visual product promotion via social media enables businesses to present their services and products effectively to users. In this context, social media marketing can be defined as the process of promoting products by establishing visually oriented interaction with the target audience. Instagram, as a prominent social media application, provides a platform through which food and beverage businesses can produce video-based content, promote their offerings, and reach their target audiences with products that distinguish them within their respective sectors. In this context, a content analysis was conducted on the Instagram pages of prominent food and beverage businesses operating in Gaziantep. The population of the research consists of food and beverage businesses in Gaziantep province, while the sample comprises 30 businesses selected through purposive sampling. Within the scope of the content analysis, posting frequency data were collected for the period between January and March; the average number of comments was calculated based on the last ten posts; and customer interaction was assessed using feedback obtained from business owners. As a result of the study, it was determined that food and beverage businesses that actively share content on their pages predominantly promote their products using the Reels format.

Furthermore, it was found that the increase in the average number of reviews among the businesses examined is attributable to content creators presenting product and venue promotions on shared pages. In social media marketing, merely providing visually focused presentations of products and services is insufficient; rather, collaboration with individuals who have succeeded in appealing to diverse audiences is crucial. Businesses that engage with customers and respond to feedback via social media are more likely to ensure the retention of existing customers while simultaneously acquiring new ones.

Keywords: Food and Beverage Business, Content Analysis, Instagram

TURİZM İŞLETMELERİNDE YÖNETİM ANLAYIŞI VE PERFORMANS İLİŞKİSİ ÜZERİNE BİR LİTERATÜR DEĞERLENDİRMESİ

A LITERATURE REVIEW ON THE RELATIONSHIP BETWEEN MANAGEMENT APPROACH AND PERFORMANCE IN TOURISM ENTERPRISES

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Özet
Turizm sektörü, yoğun rekabet koşulları ve sürekli değişen müşteri beklentileri nedeniyle etkin yönetim anlayışına ihtiyaç duyan bir hizmet sektörüdür. Turizm işletmelerinin sürdürülebilir başarı elde edebilmesi, benimsedikleri yönetim anlayışı ile yakından ilişkilidir. Bu çalışmanın amacı, turizm işletmelerinde yönetim anlayışı ile işletme performansı arasındaki ilişkiyi literatür kapsamında değerlendirmektir. Literatürde yer alan çalışmalar incelendiğinde, katılımcı yönetim, dönüşümcü liderlik, stratejik yönetim ve toplam kalite yönetimi gibi çağdaş yönetim yaklaşımlarının çalışan memnuniyeti, hizmet kalitesi, müşteri sadakati ve finansal performans üzerinde olumlu etkiler yarattığı görülmektedir. Özellikle çalışanların karar alma süreçlerine dahil edilmesi, işletme içi iletişimin güçlendirilmesi ve müşteri odaklı yönetim anlayışının benimsenmesi işletme performansını artıran temel faktörler arasında yer almaktadır. Bununla birlikte otoriter ve merkeziyetçi yönetim anlayışlarının çalışan motivasyonu ve hizmet kalitesi üzerinde olumsuz etkiler oluşturabildiği belirtilmektedir.
Sonuç olarak, turizm işletmelerinde yönetim anlayışı ile işletme performansı arasında güçlü bir ilişki bulunmaktadır. Literatür incelemesi sonucunda, çalışan katılımını destekleyen, müşteri odaklı ve stratejik bakış açısına sahip yönetim anlayışlarının işletme performansını olumlu yönde etkilediği görülmektedir. Özellikle otel işletmelerinde çalışan memnuniyetinin artırılması, hizmet kalitesinin yükseltilmesi ve müşteri sadakatinin sağlanmasında çağdaş yönetim yaklaşımlarının önemli rol oynadığı anlaşılmaktadır.
Turizm işletmelerinin sürdürülebilir rekabet avantajı elde edebilmesi için yöneticilerin dönüşümcü liderlik, katılımcı yönetim ve kalite odaklı yönetim uygulamalarına ağırlık vermeleri önerilmektedir. Gelecekte yapılacak araştırmalarda farklı destinasyonlar ve işletme türleri üzerinde ampirik çalışmalar gerçekleştirilerek yönetim anlayışı-performans ilişkisi daha ayrıntılı şekilde incelenebilir.
Anahtar Kelimeler: Turizm İşletmeleri, Yönetim Anlayışı, İşletme Performansı, Liderlik, Hizmet Kalitesi.

Abstract
The tourism industry is a service sector that requires effective management approaches due to intense competition and continuously changing customer expectations. The sustainable success of tourism enterprises is closely related to the management philosophy they adopt. The aim of this study is to evaluate the relationship between management approaches and organizational performance in tourism enterprises through a review of the existing literature. Studies in the literature indicate that contemporary management approaches, such as participative management, transformational leadership, strategic management, and total quality management, have positive effects on employee satisfaction, service quality, customer loyalty, and financial performance. In particular, involving employees in decision-making processes, strengthening internal communication, and adopting a customer-oriented management style are among the key factors that enhance organizational performance. On the other hand, authoritarian and centralized management approaches may negatively affect employee motivation and service quality.

As a result, there is a strong relationship between management approaches and organizational performance in tourism enterprises. The literature review indicates that management styles characterized by employee participation, customer orientation, and strategic thinking positively influence organizational performance. Modern management practices play a significant role in enhancing employee satisfaction, improving service quality, and increasing customer loyalty, particularly within hotel enterprises.

To achieve sustainable competitive advantage, tourism enterprises should prioritize transformational leadership, participative management, and quality-oriented management practices. Future studies may further investigate the relationship between management approaches and performance through empirical research conducted across different destinations and types of tourism enterprises.

Keywords: Tourism Enterprises, Management Approach, Organizational Performance, Leadership, Service Quality.

DOĞU EKSPRESİ'NDE İŞLEVSEL DÖNÜŞÜM: ULAŞIM HİZMETİNDEN TURİSTİK DENEYİME GEÇİŞ SÜRECİ ÜZERİNE BİR ARAŞTIRMA

FUNCTIONAL TRANSFORMATION IN THE EASTERN EXPRESS: A STUDY ON THE TRANSITION PROCESS FROM TRANSPORTATION SERVICE TO TOURISTIC EXPERIENCE

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Abstract
In addition to its traditional intercity passenger transport function, the Eastern Express has acquired a tourism experience-oriented meaning over time. Operating on the Ankara–Kars line, this train initially stood out as a mainline train meeting basic transportation needs, whereas in recent years it has been evaluated as an example where the journey itself has become a touristic value. The purpose of this study is to reveal the themes through which the Eastern Express is addressed in the academic literature and to evaluate the position of the line between transportation service and touristic experience. In this context, the study is designed as a qualitative literature research based on the review of existing academic publications and institutional sources, rather than primary data collection. In the study, the general characteristics of the Eastern Express and the differences between it and the Touristic Eastern Express were first discussed. It is observed that the traditional Eastern Express is a mainline train operating daily, while the Touristic Eastern Express is offered as a separate tourism-oriented product in the same corridor. Furthermore, the service details of the Touristic Eastern Express for the 2025–2026 season are also mentioned. Then, the prominent themes in the literature were examined under the headings of experience-oriented tourism, slow travel, social media visibility, relationship with Kars destination, and evaluation in terms of transportation planning. Consequently, the literature evaluates the Eastern Express not merely as a transportation line, but as a multidimensional touristic product that gains meaning through the travel experience, social media impact, and the Kars destination. This transformation holds great significance for transportation planning as the user profile, demand structure, seasonal intensity, and service priorities have changed over time.
Keywords: Touristic Eastern Express, railway tourism, slow travel, Kars, transportation planning.

Özet
Doğu Ekspresi, geleneksel şehirler arası yolcu taşımacılığı işlevinin yanında zamanla turistik deneyim odaklı bir anlam kazanmıştır. Ankara–Kars hattında hizmet veren bu tren, başlangıçta temel olarak ulaşım ihtiyacını karşılayan bir ana hat treni olarak öne çıkarken, son yıllarda yolculuğun kendisinin turistik bir değer haline geldiği bir örnek olarak değerlendirilmektedir. Bu araştırmanın amacı, Doğu Ekspresi'nin akademik yazında hangi temalar üzerinden ele alındığını ortaya koymak ve hattın ulaşım hizmeti ile turistik deneyim arasındaki konumunu değerlendirmektir. Bu kapsamda çalışma, birincil veri toplamaya dayanmayan; mevcut akademik yayınların ve kurumsal kaynakların incelenmesine dayalı nitel bir literatür araştırması olarak tasarlanmıştır. Çalışmada öncelikle Doğu Ekspresi'nin genel hat özellikleri ve Turistik Doğu Ekspresi ile arasındaki farklar ele alınmıştır. TCDD Taşımacılık'ın resmî bilgilerinde Doğu Ekspresi'nin Ankara–Kars arasında her gün işleyen bir ana hat treni olduğu, Turistik Doğu Ekspresi'nin ise aynı koridorda turizm amaçlı ayrı bir ürün olarak sunulduğu görülmektedir. Ayrıca 2025–2026 sezonu için Turistik Doğu Ekspresi'nin sefer detaylarına da değinilmiştir. Ardından literatürde öne çıkan temalar; deneyim odaklı turizm, yavaş seyahat, sosyal medya görünürlüğü, Kars destinasyonu ile ilişki ve ulaşım planlaması açısından değerlendirme başlıkları altında incelenmiştir.

Sonuç olarak literatür, Doğu Ekspresi'ni yalnızca bir ulaşım hattı olarak değil; yolculuk deneyimi, sosyal medya etkisi ve Kars destinasyonu ile birlikte anlam kazanan çok boyutlu bir turistik ürün olarak değerlendirmektedir. Bu dönüşüm, kullanıcı profili, talep yapısı, mevsimsel yoğunluk ve hizmet önceliklerinin değişmesi sebebiyle ulaşım planlaması açısından da büyük bir öneme sahiptir.

Anahtar kelimeler: Turistik Doğu Ekspresi, demiryolu turizmi, yavaş seyahat, Kars, ulaşım planlaması.

TURİST REHBERLİĞİ MESLEĞİ VE EĞİTİMİNDE YAPAY ZEKA KULLANIMININ TURİZM REHBERLİĞİ BÖLÜMÜ AKADEMİSYENLERİNİN BAKIŞ AÇISIYLA DEĞERLENDİRİLMESİ

AN EVALUATION OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE TOURIST GUIDING PROFESSION AND EDUCATION FROM THE PERSPECTIVE OF ACADEMICS IN THE TOURISM GUIDING DEPARTMENT

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Abstract
Artificial intelligence is an extremely important technology that has fundamentally changed the way business is done in many sectors. In tourism, it has also become a technology that has caused major changes in many areas within a few years. While these changes create significant conveniences in the sector, they also create debates about the future of professions. The aim of this study is to reveal the role of artificial intelligence in the tourism guiding profession and education from the perspectives of academics who teach in the field of tourism guiding. In this context, interviews were conducted with 8 academics who teach in the tourism guiding department of a public university. Within the scope of thematic analyses, 3 main themes and 7 sub-themes were determined. The main themes are; general views on artificial intelligence, the impact of artificial intelligence on the tourism guiding profession, and the place of artificial intelligence in tourism guiding education. The research findings revealed that artificial intelligence is not seen as a factor that will completely eliminate the tourism guiding profession, but it will lead to significant transformations in the way the profession is practiced. In addition, it was determined that artificial intelligence is evaluated as an effective learning and teaching tool in tourism guiding education, but it increases the importance of ethical use, critical thinking, and verification skills. Based on the results obtained, it has been concluded that artificial intelligence literacy should be improved and human-centered professional competencies should be strengthened in the tourist guide profession and education.
Keywords: Artificial Intelligence, Tourist Guide Profession, Tourist Guide Education, Technological Transformation

Özet
Yapay zekâ, pek çok sektörde iş yapma düzenini köklü bir şekilde değiştiren son derece önemli bir teknolojidir. Turizmde de birkaç yıl içinde pek çok alanda büyük değişikliklerin yaşanmasına neden olan bir teknoloji haline gelmiştir. Bu değişiklikler sektörde önemli kolaylıklar yaratmakla birlikte mesleklerin geleceği açısından da tartışmalar da yaratmaktadır. Bu çalışmanın amacı, turist rehberliği alanında eğitim veren akademisyenlerin bakış açılarıyla turist rehberliği mesleği ve eğitiminde yapay zekanın rolünü ortaya koymaktır. Bu kapsamda bir kamu üniversitesinin turizm rehberliği bölümünde ders veren 8 akademisyen ile görüşmeler gerçekleştirilmiştir. Tematik analizler kapsamında 3 ana tema ve 7 alt tema belirlenmiştir. Ana temalar; yapay zekaya ilişkin genel görüşler, yapay zekanın turizm rehberliği mesleğine etkisi ve yapay zekanın turizm rehberliği eğitimindeki yeridir. Araştırma bulguları, yapay zekânın turist rehberliği mesleğini tamamen ortadan kaldıracak bir unsur olarak görülmediğini, ancak mesleğin icra biçiminde önemli dönüşümlere yol açacağını ortaya koymuştur. Ayrıca yapay zekânın turist rehberliği eğitiminde etkili bir öğrenme ve öğretme aracı olarak değerlendirildiği, buna karşın etik kullanım, eleştirel düşünme ve doğrulama becerilerinin önemini artırdığı belirlenmiştir. Elde edilen sonuçlar doğrultusunda, turist rehberliği mesleği ve eğitiminde yapay zekâ okuryazarlığının geliştirilmesi ve insan odaklı mesleki yetkinliklerin güçlendirilmesi gerektiği sonucuna ulaşılmıştır.
Anahtar Kelimeler: Yapay Zeka, Turist Rehberliği Mesleği, Turist Rehberliği Eğitimi, Teknolojik Dönüşüm

TAVŞANLARDA RETROBULBAR APSENİN TANI VE SAĞALTIMI

DIAGNOSIS AND MANAGEMENT OF RETROBULBAR ABSCESSES IN RABBITS

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Abstract

Rabbits are predisposed to abscess formation in various tissues and organs, particularly in the mandibular and dental regions. Their continuously growing (elodont) and high-crowned (hypsodont) dentition predisposes them to dental and jaw abscesses. Tooth root abscesses are progressive lesions that may affect the facial, retrobulbar, nasal, and mandibular regions. Retrobulbar abscesses are commonly associated with maxillary tooth root disease and often carry a poor prognosis, frequently requiring tooth extraction and enucleation. Due to the unique microbial flora of rabbits, the most commonly isolated pathogens from rabbit abscesses include *Pasteurella multocida, Staphylococcus aureus, Streptococcus spp., Pseudomonas spp., Proteus spp.*, and *Bacteroides spp.*, while *Escherichia coli, Fusobacterium spp*., and *Actinomyces spp*. are less frequently reported. This case report describes the clinical findings and treatment outcome of a Soviet Chinchilla rabbit with a retrobulbar abscess. A 2-year-old female Soviet Chinchilla rabbit was referred to the university ophthalmology clinic with enlargement of the right eye and right-sided head tilt. Clinical examination revealed severe exophthalmos, increased intraocular pressure, and conjunctivitis. Radiographic and ultrasonographic examinations demonstrated a hyperechoic lesion in the retrobulbar region. No abnormalities of the tooth roots were detected radiographically. Initial treatment consisted of oral enrofloxacin (5 mg/kg), dorzolamide-timolol, and hyaluronic acid eye drops. On day 10, exophthalmos had worsened and severe purulent ocular discharge had developed. Bacterial culture of an ocular swab yielded heavy growth of *Escherichia coli*, which was susceptible to trimethoprim-sulfamethoxazole (15 mg/kg) and gentamicin. Treatment was modified to oral trimethoprim-sulfamethoxazole combined with saline irrigation, topical gentamicin, and hyaluronic acid eye drops. Ten days after the treatment change, purulent discharge had markedly decreased and exophthalmos had regressed. Complete resolution of both purulent discharge and exophthalmos was observed by day 20. No recurrence was detected during a 14-month follow-up period. In conclusion, the unilateral retrobulbar abscess in this case was notable for its non-dental origin. Previous reports described cases requiring enucleation, with histopathology suggesting a lacrimal system origin. Although the etiology could not be confirmed due to complete clinical recovery precluding histopathological examination, and the absence of trauma or systemic disease, the lacrimal system was considered the most likely source.

Keywords: Exophthalmos, Intraocular pressure, Conjunctivitis, Rabbit

Özet

Tavşanlar, çoğunlukla çene altı ve diş kökü olmak üzere, pek çok doku ve organlarında apse oluşumuna yatkın hayvanlardır. Sürekli uzayan (elodont) ve uzun taçlı (hypsodont) diş yapısına sahip olmaları, bu hayvanlarda diş ve çene bölgesi apseleri için predispozisyon oluşturur. Diş kökü apseleri progresif karakterde olup, yüz, retrobulbar bölge, nasal bölge ve çene kemiğini etkileyebilmektedir. Retrobulbar bölge apseleri maksillar diş köklerine bağlı olarak ortaya çıkar ve çoğu zaman prognozu kötüdür. Diş ekstraksiyonu ve enükleasyon işlemleri gerekli olabilir. Mikrobiyal floraları memelilerden farklı olan tavşan apselerinde en fazla *Pasteurella multocida, Staphylococcus aureus, Streptococcus spp.*,

Pseudomonas spp., *Proteus spp.*, *Bacteroides spp.*, daha az oranda *Escherichia coli*, *Fusobacterium spp.*, *Actinomyces spp.* etkenleri izole edilmiştir. Bu olgu sunumunda, retrobulbar apse şekillenen Sovyet Çinçilla ırkı bir tavşanın klinik değerlendirmesi yapılarak, sağaltım sonuçları paylaşılmıştır. İki yaşında bir dişi Sovyet Çinçilla tavşanı, sağ gözün büyümesi ve başın sağ tarafa eğilmesi şikayetleri ile üniversitemizin oftalmoloji kliniğine sevk edildi. Klinik muayenede şiddetli ekzoftalmus, yüksek göz içi basıncı ve konjunktivitis gözlendi. Radyografik ve ultrasonografik incelemesinde retrobulbar bölgede hiperekoik bir görünüm dikkati çekti. Radyografilerde diş köklerinde herhangi bir patolojiye rastlanmadı. Başlangıçta, oral enrofloksasin (5 mg/kg) ile beraber dorzolamid-timolol ve hyaluronik asit göz damlası ile tedaviye başlandı. Tedavinin 10. gününde sağ gözde eksoftalmusun arttığı ve gözde şiddetli irinli akıntının oluştuğu gözlendi. Göz akıntısından alınan svap örneğinde yoğun şekilde *Escherichia coli* ürediği, antibiyogram test sonucunda trimetoprim sülfametoksazol (15 mg/kg) ve gentamisin'e duyarlı olduğu tespit edildi. Oral olarak trimetoprim sülfametoksazol ile beraber göze lokal olarak serum fizyolojik irrigasyonu, gentamisin ve hyaluronik asit göz damlası uygulandı. Sağaltımın 10. gününde purulent akıntının azaldığı ve ekzoftalmusun gerilediği dikkati çekti. Sağaltımın 20. gününde purulent akıntı ve eksoftalmusun tamamen ortadan kalktığı görüldü 14 aydır takip edilen hastada herhangi bir nüks ile karşılaşılmadı. Sonuç olarak, bu olguda görülen tek taraflı retrobulbar apsenin diş kaynaklı olmaması dikkat çekicidir. Benzer vakalarda iyileşme sağlanamadığı için enükleasyon yapılmış, göz dokusunun histopatolojik incelemesinde lakrimal sistem kaynaklı sonuçlar ortaya konmuştur. Bu olguda, travma öyküsü ve sistemik patoloji bulunmaması, ayrıca gözün tamamen iyileşmesi sonucunda histopatolojik inceleme yapılamaması nedeniyle etiyoloji netleştirilememiş olsa da önceki çalışmalar doğrultusunda lakrimal sistemin olası kaynak olarak değerlendirilmesi söz konusu olmuştur.

Anahtar kelimeler: Ekzoftalmus, İntraoküler basınç, Konjunktivitis, Tavşan

BRAKİSEFALİK KEDİ IRKLARINDA GÖZYAŞININ KALİTATİF VE KANTİTATİF DEĞERLENDİRİLMESİ

QUALITATIVE AND QUANTITATIVE EVALUATION OF TEAR FILM IN BRACHYCEPHALIC CAT BREEDS

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Abstract
The tear film plays a critical role in maintaining ocular surface health. Alterations in tear quantity or quality may predispose animals to various ocular surface disorders, particularly dry eye (keratoconjunctivitis sicca, KCS). The aim of this study was to evaluate tear production and tear film quality in clinically healthy brachycephalic cats. A total of 20 male cats aged between 1 and 3 years were included in the study, comprising 11 British Shorthairs, 3 Scottish Folds, 4 Persians, and 2 British Longhairs. Tear production was assessed using the Schirmer Tear Test-1 (STT-1), while tear film quality was evaluated using the Tear Ferning Test. The mean age of the cats was 1.95 ± 0.79 years, and the mean STT-1 value was 17.5 ± 3.2 mm/min. In three cats, STT-1 values below 15 mm/min were accompanied by a Type III ferning pattern, findings considered suggestive of subclinical KCS. No significant differences were detected among breeds with respect to tear production or tear film quality. In conclusion, no significant breed-related differences were observed in tear quantity or tear film quality among clinically healthy brachycephalic cats. Nevertheless, given the high prevalence of ocular disorders in these breeds, further evaluation of tear film biochemical composition may contribute to a better understanding of the pathogenesis of various ocular diseases.
Keywords: Brachycephalic cat, Ferning test, Precorneal tear film, Schirmer tear test, Keratoconjunctivitis sicca

Özet
Gözyaşı filmi, oküler yüzey sağlığının korunmasında önemli rol oynamaktadır. Gözyaşının miktarında veya kalitesinde meydana gelen değişiklikler kuru göz sendromu (keratokonjunktivitis sikka, KCS) başta olmak üzere çeşitli oküler yüzey hastalıklarına zemin hazırlayabilmektedir. Bu çalışmanın amacı, klinik olarak sağlıklı brakisefalik kedilerde gözyaşı filminin kantitatif ve kalitatif özelliklerini birlikte değerlendirmektir. Çalışmaya 1-3 yaş aralığında, 11 British Shorthair, 3 Scottish Fold, 4 Persian ve 2 British Longhair olmak üzere toplam 20 erkek kedi dahil edildi. Gözyaşı üretimi Schirmer Gözyaşı Testi-1 (STT-1), gözyaşı kalitesi ise Fern Testi ile değerlendirildi. Hayvanların yaş ortalaması 1.95±0.79 yıl, ortalama STT değeri ise 17.5±3.2 mm/dk olarak belirlendi. Üç olguda Tip 3 kristalizasyon deseni ile birlikte 15 mm/dk'nın altında STT değerleri saptandı ve bu olgular subklinik KCS ile uyumlu olarak değerlendirildi. Irklar arasında belirgin bir farklılık gözlenmedi. Sonuç olarak, sağlıklı göz yapısına sahip brahisefalik kedilerde gözyaşının miktar ve kalite değerlendirmelerinde belirgin bir farklılık olmadığı dikkati çekti. Ancak göz problemleri oldukça sık görülen bu ırklarda gözyaşının kimyasal yapısının da değerlendirilmesinin, farklı göz problemlerinin patogenezinin daha iyi anlaşılmasına katkı sağlayacağı düşünülmektedir.
Anahtar Kelimeler: Brakisefalik kedi, Fern testi, Gözyaşı filmi, Kuru göz sendromu, Schirmer testi

EVCİL KEDİLERDE PELVİS MORFOLOJİSİ VE IRK İLE CİNSİYETE BAĞLI PELVİS ÖLÇÜMLERİNİN KARŞILAŞTIRILMASI

COMPARATIVE ANALYSIS OF PELVIC MORPHOLOGY AND BREED- AND SEX-RELATED PELVIC MEASUREMENTS IN DOMESTIC CATS

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Abstract
The pelvis exhibits considerable variation among breeds and even between sexes within the same breed. Beyond its relevance as an indicator of the ease or difficulty of parturition, pelvic dimensions, shape, and angles are also important in terms of sexual dimorphism. Considering the role of the pelvic structure in the parturition process, changes in pelvic diameters in female cats, particularly before and after parturition, are of great importance for predicting dystocia. The conjugata vera, conjugata diagonalis, vertical diameter, transverse diameter, sagittal diameter, and pelvic length are among the primary pelvic parameters evaluated in pelvimetric assessments. Feline pelvic morphology varies according to sex, age, and breed, and is therefore important for obstetric evaluation, pelvimetry, and the assessment of dystocia risk. Although the feline pelvis shares general anatomical similarities with that of dogs, it differs by having a smaller ala ossis ilii, a narrower caudal pelvic aperture, and a more linear pelvic axis. These anatomical characteristics play an important role in shaping the birth canal and in obstetric evaluation. Studies have shown that male cats generally have larger pelvic measurements than females; however, certain parameters related to the birth canal may be relatively wider in females. In addition, factors such as age, body weight, and breed-related morphological characteristics significantly influence pelvic dimensions. In brachycephalic breeds such as Scottish Fold, British Shorthair, and Persian cats, pelvic diameters have been reported to be narrower compared with mesaticephalic breeds, which may be associated with a higher incidence of dystocia. Significant differences in pelvic measurements have been identified between normal and dystocia cases, particularly in Scottish Fold and British Shorthair cats. Conversely, Van cats and other mesaticephalic breeds generally exhibit wider pelvic dimensions, providing a more favorable obstetric conformation.Parameters such as cranial and caudal pelvic apertures, conjugate diameters, transverse diameter, and pelvic length are considered important indicators for predicting dystocia. In conclusion, the evaluation of feline pelvic morphology based on breed and sex is important for predicting dystocia and for the clinical application of pelvimetric data in veterinary obstetrics.
Keywords: Sexual dimorphism, Dystocia, Cat, Pelvic diameters, Pelvic morphology

Özet
Pelvis, ırklar arasında hatta aynı ırkın cinsiyetleri arasında çok fazla çeşitlilik gösterir. Ancak pelvis boyutları, şekilleri ve açıları hayvanların kolay veya zor doğum yapma olasılığının göstergesi dışında cinsel dimorfizm açısından da önem taşımaktadır. Pelvis yapının doğum sürecindeki rolü göz önünde bulundurulduğunda, özellikle dişi kedilerde pelvis çapının doğum öncesi ve sonrası değişimleri, olası doğum güçlüklerinin (distosi) öngörülmesi açısından büyük önem taşımaktadır. Conjugata vera, conjugata diagonalis, diameter verticalis, diameter transversa, diameter sagittalis ve pelvis uzunluğu başlıca değerlendirilen pelvis çapları arasında yer almaktadır. Kedilerde pelvis morfolojisi; cinsiyet, yaş ve ırka bağlı olarak değişkenlik göstermekte olup obstetrik değerlendirmeler, pelvimetri ve distosi riskinin belirlenmesi açısından önem taşımaktadır. Kedilerde pelvis, köpeklere benzer genel anatomik özellikler göstermekle birlikte, daha küçük ala ossis ilii, daha dar apertura pelvis caudalis ve daha düz pelvis ekseni gibi farklılıklara sahiptir. Bu anatomik özellikler, doğum kanalının şekillenmesinde ve obstetrik süreçlerin değerlendirilmesinde önemli rol oynamaktadır.

Çalışmalar, erkek kedilerde pelvis ölçümlerinin çoğunlukla dişilere göre daha büyük olduğunu, ancak dişilerde doğum kanalını etkileyen bazı parametrelerin daha geniş olabildiğini göstermektedir. Ayrıca yaş, vücut ağırlığı ve ırksal morfoloji gibi faktörlerin de pelvis ölçümleri üzerinde etkili olduğu bildirilmektedir. Scottish Fold, British Shorthair ve Persian gibi brachiocephalic ırklarda pelvis çaplarının mesaticephalic ırklara göre daha dar olduğu, bunun da distosi insidansı ile ilişkili olabileceği gösterilmiştir. Özellikle Scottish Fold ve British Shorthair kedilerde normal ve zor doğum yapan bireyler arasında pelvis ölçümleri açısından anlamlı farklılıklar saptanmıştır. Van kedileri ve diğer mesaticephalic ırklarda ise pelvis boyutlarının genellikle daha geniş olduğu ve obstetrik açıdan daha avantajlı bir yapı sunduğu rapor edilmiştir. Bunun yanında apertura pelvis cranialis ve caudalis alanları, conjugata çapları, diameter transversa ve pelvis uzunluğu gibi parametrelerin doğum güçlüğünün öngörülmesinde önemli göstergeler olduğu belirtilmektedir. Sonuç olarak, kedi pelvis morfolojisinin ırk ve cinsiyet temelinde değerlendirilmesi, doğum güçlüklerinin öngörülmesi ve klinik uygulamalarda pelvimetrik verilerin kullanımı açısından önem taşımaktadır.
Anahtar kelimeler: Cinsiyet dimorfizmi, Distosi, Kedi, Pelvis çapları, Pelvis morfolojisi

PİRETROİT GRUBU BİR İNSEKTİSİTİN KIMIL *AELIA ROSTRATA* BOHEMAN (HEMIPTERA: PENTATOMIDAE)'DA ENZİM AKTİVİTESİ ÜZERİNDEKİ FİZYOLOJİK ETKİLERİ

PHYSIOLOGICAL EFFECTS OF A PYRETHROID INSECTICIDE ON ENZYME ACTIVITY IN THE WHEAT STINK BUG AELIA ROSTRATA BOHEMAN (HEMIPTERA: PENTATOMIDAE)

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ÖZET

Bu çalışmada, piretroid grubu bir insektisitin (cypermethrin) Kımıl *Aelia rostrata* Boheman (Hemiptera: Pentatomidae) üzerindeki fizyolojik etkileri ve bunun entegre zararlı yönetimi (IPM) açısından olası yansımaları araştırılmıştır. Çalışmada glutathione S-transferaz (GST), katalaz (CAT), α-amilaz, lipaz ve total protein düzeylerindeki değişimler farklı insektisit dozları altında değerlendirilmiştir. Elde edilen bulgular, doza bağlı belirgin bir fizyolojik yanıt ortaya koymuştur. Buna göre GST ve katalaz enzim aktiviteleri artan insektisit dozlarıyla birlikte yükselmiştir. Bu durum, böceğin detoksifikasyon ve antioksidan savunma sistemlerinin aktive olduğunu göstermektedir. GST'nin faz II detoksifikasyon süreçlerinde, katalazın ise insektisit kaynaklı oksidatif stresin bir sonucu olarak oluşan hidrojen peroksitin parçalanmasında önemli rol oynadığı bilinmektedir. Buna karşılık, α-amilaz, lipaz ve total protein düzeylerinde artan dozlarla birlikte azalma gözlenmiştir. α-amilaz ve lipaz aktivitelerindeki düşüş, karbonhidrat ve lipid metabolizmasının baskılandığını ve buna bağlı olarak enerji metabolizmasının olumsuz etkilendiğini göstermektedir. Total protein düzeyindeki azalma ise protein sentezinde inhibisyon veya stres koşullarında protein yıkımının artması ile açıklanabilir. Genel olarak sonuçlar, piretroid insektisit uygulamasının *A. rostrata*'da önemli bir fizyolojik dengesizlik oluşturduğunu ortaya koymuştur. Detoksifikasyon enzimlerinin artışı savunma yanıtını gösterirken, temel metabolik enzimlerin baskılanması bireylerin gelişim, beslenme ve hayatta kalma kapasitesini olumsuz etkilemektedir. IPM açısından değerlendirildiğinde, *A. rostrata*'nın belirli bir detoksifikasyon kapasitesi geliştirebildiği ancak uzun vadede metabolik baskılanmanın populasyon performansını düşürdüğü görülmektedir. Bu nedenle piretroit uygulamalarının biyolojik ve kültürel yöntemlerle entegre edilmesi, hem etkin mücadele sağlanması hem de direnç gelişiminin geciktirilmesi açısından önem taşımaktadır.

Anahtar Kelimeler: *Aelia rostrata*, Piretroid insektisit, Enzim aktivitesi, GST (Glutatyon S-transferaz), Entgre zararlı yönetimi (IPM)

ABSTRACT

This study investigated the physiological effects of a pyrethroid insecticide (cypermethrin) on enzyme activity in the sunn pest *Aelia rostrata* Boheman (Hemiptera: Pentatomidae), with a particular focus on its implications for integrated pest management (IPM) strategies. The enzymatic responses of glutathione S-transferase (GST), catalase (CAT), α-amylase, lipase, and total protein content were evaluated under increasing insecticide concentrations. The results demonstrated a clear dose-dependent physiological response. Specifically, GST and catalase activities increased progressively with rising pyrethroid doses. This pattern suggests an activation of the detoxification and antioxidant defense systems in *A. rostrata*, as GST plays a critical role in phase II detoxification processes, while catalase contributes to the breakdown of hydrogen peroxide and protection against oxidative stress induced by insecticide exposure. In contrast, α-amylase, lipase, and total protein levels exhibited a decreasing trend with increasing insecticide concentration. The reduction in α-amylase and lipase activities indicates a disruption in carbohydrate and lipid metabolism, suggesting impaired energy acquisition and utilization.

Similarly, the decline in total protein content reflects possible inhibition of protein synthesis or enhanced protein degradation under insecticide-induced stress conditions. Overall, the findings reveal that pyrethroid exposure induces a strong physiological imbalance in *A. rostrata*, characterized by the upregulation of detoxification enzymes and suppression of key metabolic enzymes. These biochemical disruptions likely contribute to reduced fitness, growth, and survival of the pest population. From an IPM perspective, the results highlight that while *A. rostrata* can partially activate detoxification mechanisms against pyrethroids, sustained metabolic impairment may reduce population viability. Therefore, integrating pyrethroid use with other control methods could enhance long-term pest suppression and help delay resistance development, supporting more sustainable pest management strategies in agroecosystems.

Keywords: *Aelia rostrata*, Pyrethroid insecticide, Enzyme activity, GST (Glutathione S-transferase), Integrated Pest Management (IPM)

KURAKLIĞA DAYANIKLI YAĞ BİTKİLERİ
DROUGHT-TOLERANT OILSEED CROPS

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Abstract
Drought is one of the most important environmental stress factors that limits plant production and adversely affects agricultural productivity. Particularly in arid and semi-arid regions, water deficiency is the primary factor restricting crop production. Water plays a vital role in plant metabolism, from the cellular level to the whole-plant scale. Therefore, plants develop various physiological and morphological adaptations to cope with drought conditions. These adaptations include reduced stoma size, decreased leaf area, increased leaf thickness, enhanced leaf hairiness and waxiness, and an increased root-to-shoot ratio. Plants that can develop such characteristics and minimize yield losses during drought periods are considered drought tolerant. Among oilseed crops, safflower, linseed, camelina, and cephalaria are regarded as drought-tolerant species. Investigating the relationship between the physiological and morphological traits of these crops and their seed yield under different environmental conditions is of great importance. Drought-tolerant oilseed crops can produce higher yields than drought-sensitive oilseed species under water-limited conditions. As the impacts of global climate change continue to intensify, the role and importance of drought-tolerant oilseed crops in agricultural production are expected to increase significantly. In this study, the characteristics of drought-tolerant oilseed crops and their production potential under drought conditions were evaluated.
Keywords: Drought Tolerance, Safflower, Linseed, Camelina, Cephalaria

Özet
Kuraklık, bitkisel üretimi sınırlandıran ve tarımsal üretimi olumsuz etkileyen en önemli çevresel stres faktörlerinden biridir. Özellikle kurak ve yarı kurak bölgelerde yetiştirilen bitkiler için su yetersizliği, üretimi kısıtlayan en temel etkendir. Su, hücresel düzeyden tüm bitki metabolizmasına kadar hayati bir fonksiyona sahiptir. Bu nedenle bitkiler, kurak koşullara uyum sağlayabilmek için çeşitli fizyolojik ve morfolojik değişiklikler geliştirir. Stoma boyutunun küçülmesi, yaprak alanının azalması, yaprak kalınlığının artması, yapraklarda tüylenme ve mumsuluk oranının yükselmesi ile kök/gövde oranının artması bu uyum mekanizmalarına örnek olarak verilebilir. Bu özellikleri geliştirebilen ve kurak dönemlerde verim kaybını en aza indirebilen bitkiler kuraklığa dayanıklı olarak tanımlanabilir. Yağ bitkileri arasında aspir, keten, ketencik ve pelemir kuraklığa dayanıklı bitkiler arasında yer almaktadır. Bu bitkilerin fizyolojik ve morfolojik özellikleri ile tohum verimi arasındaki ilişkinin farklı çevre koşullarında incelenmesi büyük önem taşımaktadır. Kuraklığa dayanıklı yağ bitkileri, su kısıtının bulunduğu çevre koşullarında kuraklığa hassas diğer yağ bitkilerine göre daha yüksek verim verebilmektedir. Küresel iklim değişikliği etkilerinin giderek arttığı günümüzde, kuraklığa dayanıklı yağ bitkilerin tarımsal üretimdeki rolü ve önemi gün geçtikçe daha da artacaktır. Bu çalışmada, kuraklığa dayanıklı yağ bitkilerinin özellikleri ve kurak koşullardaki üretim potansiyelleri değerlendirilmiştir.
Anahtar kelimeler: Kurağa Dayanıklılık, Aspir, Keten, Ketencik, Pelemir

YAPAY MERADA OTLATMA İLE YAPAY MERAYA İLAVETEN KONSANTRE YEM VERİLMESİNİN DAĞLIÇ VE AKKARAMAN IRKI ERKEK KUZULARININ KESİM VE KARKAS ÖZELLİKLERİ

SLAUGHTER AND CARCASS CHARACTERISTICS OF DAGLIÇ AND AKKARAMAN BREED MALE LAMBS DUE TO GRAZING ON ARTIFICIAL PASTURE AND THE ADDITIONAL SUPPLEMENTATION WITH CONCENTRATED FEED

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Abstract
This research aimed to determine and compare the slaughter and carcass characteristics of male lambs of the Dağlıç and Akkaraman breeds, under the conditions of grazing on artificial pasture and supplementary feeding with artificial pasture. Four groups were formed on artificial pasture. Group 1: Akkaraman breed pasture; Group 2: Akkaraman breed pasture plus feed; Group 3: Dağlıç breed pasture; Group 4: Dağlıç breed pasture plus feed. Male lambs of the Akkaraman and Dağlıç breeds were given

400 grams of concentrated feed per animal in addition to pasture. Groups fed solely on pasture were not given any feed. The study lasted 84 days. At the end of the fattening period, 40 lambs, which formed the experimental material, were slaughtered to determine their slaughter and carcass characteristics. The slaughter weights of the Akkaraman pasture, Akkaraman pasture + supplementary feed, Dağlıç pasture + supplementary feed, and Dağlıç pasture groups were determined as 42.80, 45.74, 41.26, and 37.88 kg; omental fat weights as 0.15, 0.37, 0.24, and 0.18 kg; hot carcass dressing percentages as 46.54%, 48.79%, 48.47%, and 46.66%; and cold carcass dressing percentages as 45.59%, 48.26%, 47.87%, and 45.27%, respectively.The rational portions of the valuable parts in the left-half of carcass were found as follows: Fore-leg % 17.70, % 19.24, % 17.34 and % 16.99; hind-leg % 36.06, % 38.87, % 36.23 ve % 35.52; back-loin % 15.59, % 16.53, % 15.83 ve % 11.71 respectively and according to given breed order. The MLD eye muscle area was determined to be 15.36, 17.45, 16.19, and 14.48 cm^2, respectively. In the chop (6th–12th ribs) region, the proportional shares of tissues were determined, respectively, as follows: muscle 61.65%, 59.47%, 59.22%, and 62.66%; bone 22.07%, 19.70%, 19.62%, and 21.06%; subcutaneous fat 8.62%, 10.20%, 10.54%, and 8.32%; intermuscular fat 4.72%, 6.48%, 6.54%, and 4.63%; and total fat 14.76%, 20.61%, 21.15%, and 16.28%.In the region of ribs 6-12 (ribs), the proportional shares of the tissues were determined as follows: muscle 61.65%, 59.47%, 59.22%, and 62.66%; bone 22.07%, 19.70%, 19.62%, and 21.06%; shell fat 8.62%, 10.20%, 10.54%, and 8.32%; intermuscular fat 4.72%, 6.48%, 6.54%, and 4.63%; total fat 14.76%, 20.61%, 21.15%, and 16.28%.
As a result, converting land unsuitable for grain cultivation into artificial pasture areas is a rational solution for achieving high production and forage consumption. It was observed that the performance results at the end of the fattening period were quite satisfactory for lambs grazing on a high-quality pasture, both in the pasture-only group and in the pasture-plus supplementary feed group. It was also found that lambs receiving supplementary feed in addition to pasture outperformed lambs that benefited only from pasture in terms of slaughter and carcass characteristics.
Keywords: Akkaraman, Dağlıç, lamb, pasture-fed, slaughter and carcass characteristics.

FROM WASTE TO IMPACT: MULTIDISCIPLINARY MODELING AND LIFE-CYCLE ASSESSMENT OF LANDFILL SOLID WASTE

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Abstract
Landfill solid waste management presents a pressing issue globally and needs assessment techniques to be truly integrated or holistic. This work presents a multidisciplinary modelling framework combined with life-cycle assessment (LCA) to evaluate the environmental behaviour and long-term environmental impacts of municipal solid waste landfills. By synthesizing principles from civil engineering and environmental chemistry with impact assessment techniques, the proposed model captures processes including waste decomposition, leachate production and biogas emissions, and their effects on global warming, eutrophication, and human toxicity. The framework serves to support sustainable landfill design, operation and post-closure management. This work serves as a robust, transferable tool that effectively connects engineering and environmental science, providing more responsible and circular solid waste management.
Keywords: Landfill solid waste; multidisciplinary modeling; life-cycle assessment; environmental impact; leachate; biogas.

STRATEGIES FOR EMISSION REDUCTION IN INDUSTRIAL STEAM GENERATION SYSTEMS

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ABSTRACT

Fire-tube steam boilers are widely used in industrial facilities due to their reliability, operational simplicity, and ability to meet thermal energy demands. However, inefficient combustion conditions and inadequate operating practices can lead to excessive atmospheric emissions, including carbon dioxide (CO_2), carbon monoxide (CO), nitrogen oxides (NO_x), and particulate matter, while also reducing overall energy efficiency. These emissions contribute to environmental pollution and increase operational costs associated with fuel consumption.

This study investigates the optimization of flue gas emissions from fire-tube steam boilers through the analysis and control of key operating parameters, including excess air ratio, combustion temperature, fuel quality, burner adjustment, and heat recovery efficiency. The objective is to minimize pollutant emissions while maintaining optimal steam production and improving boiler performance.

The proposed approach evaluates combustion efficiency, fuel consumption, flue gas composition, and thermal losses under different operating conditions. Particular attention is given to the implementation of combustion control strategies and energy recovery systems, such as economizers, to enhance heat utilization and reduce stack losses.

Results demonstrate that proper optimization of combustion parameters can significantly decrease CO and NO_x emissions, improve fuel efficiency, and lower greenhouse gas emissions. Furthermore, continuous monitoring and process control contribute to stable boiler operation and reduced environmental impact.

The optimization of fire-tube steam boiler emissions therefore represents an effective strategy for improving energy efficiency, reducing operational costs, and supporting sustainable industrial practices.

Keywords: fire-tube boiler, steam generation, combustion optimization, flue gas emissions, energy efficiency, NO_x reduction, environmental performance.

SHORT-TERM STABILITY OF GRAPE RESIDUES UNDER REFRIGERATED AND ROOM TEMPERATURE STORAGE

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Abstract
Grape processing residues represent a valuable source of bioactive compounds and organic matter, but their use depends on maintaining acceptable quality during short-term storage. This study evaluated the stability of grape residue paste stored for 144 h under refrigerated conditions and at room temperature. During storage, the atmosphere in the open container was monitored through carbon dioxide, oxygen, and relative humidity sensors. The recorded data showed only limited variation in CO2, O2, and humidity over six days, indicating relatively stable storage conditions.
The effect of storage was assessed through color observation and physicochemical characterization of the liquid and solid fractions obtained after centrifugation. Color analysis indicated a clear modification and intensification of the paste tones after deposition, with differences depending on storage temperature and duration. In the supernatant, the refractive index remained almost constant, ranging from 1.3629 to 1.3646, while soluble solids showed slight variation between 19.37 and 20.43 °Brix. The pH values remained acidic, between 3.168 and 3.395, supporting microbiological and chemical stability. Conductivity varied from 2.49 to 4.27 mS/cm, and titratable acidity increased moderately from 7.37 in the control to 8.37 after 144 h at room temperature.

The solid biomass also showed limited changes. Moisture ranged from 73.77 to 76.22%, ash content from 0.54 to 0.77%, and total organic carbon from 108.64 to 119.54 mg/g. Overall, the results confirm good short-term stability of grape residues, especially after 144 h, suggesting their suitability for valorisation in food, bioproduct, or circular economy applications, with minimal deterioration of measured quality parameters.
Keywords: grape residues, storage stability, refrigerated storage, physicochemical properties, circular economy.

SENSOR -BASED ASSESSMENT OF BANANA STORAGE ATMOSPHERES UNDER VENTILATED AND NON-VENTILATED CONDITIONS

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Abstract
Postharvest storage of climacteric fruits is strongly influenced by gas exchange, humidity, temperature, and the accumulation of volatile compounds. In this work, bananas were monitored in both ventilated and non-ventilated storage environments using commercial sensors and bioreactor-based measurements. The aim was to evaluate whether sensor responses could describe the evolution of the storage atmosphere and distinguish between different ventilation regimes. In the non-ventilated bioreactor, the oxygen concentration showed an initial period of limited variation during the first 3–4 days, followed by a significant decrease after prolonged storage, while carbon dioxide increased as a consequence of respiratory activity. The CO_2/O_2 ratio showed a profile comparable to relative humidity, indicating a possible correlation between respiration, moisture build-up, and atmosphere confinement. In the ventilated system, oxygen remained close to ambient levels, while carbon dioxide, methane, and ethylene displayed oscillatory trends influenced by air exchange and fruit metabolism. Relative humidity and temperature showed daily fluctuations, with humidity tending to decrease in the later storage period. Total volatile organic compounds increased during advanced storage, suggesting intensified ripening and aroma-related emissions.

The comparison between the two environments highlights the importance of ventilation in limiting oxygen depletion and excessive gas accumulation, while also showing that sensor arrays can capture meaningful physiological changes in stored bananas. These findings support the use of commercial sensors for real-time monitoring of fruit storage rooms and for the development of decision-support tools aimed at extending shelf life, reducing quality losses, and optimizing postharvest management.

Keywords: banana storage; ventilated chamber; non-ventilated bioreactor; gas sensors; ethylene; methane; humidity; postharvest quality.

VEGETATION COMPOSITION AND CONSTRAINTS TO GRAZING LAND UTILIZATION AMONG SMALLHOLDER LIVESTOCK FARMERS IN TARABA STATE, NIGERIA

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Abstract
This study examined the vegetation composition of grazing lands and the constraints affecting grazing land utilization among smallholder livestock farmers in Taraba State, Nigeria. Specifically, the study assessed the dominant vegetation types available on grazing lands and identified the major challenges limiting their effective utilization. A descriptive survey research design was adopted, and data were collected from 421 smallholder livestock farmers selected from six Local Government Areas of the state, namely Gashaka, Bali, Zing, Karim Lamido, Wukari, and Donga, using structured questionnaires. Data were analyzed using descriptive statistics such as frequencies, percentages, means, and standard deviations. The findings revealed that forage grasses and legumes were the most dominant vegetation resources on grazing lands (mean = 2.93), followed by agricultural crop residues (mean = 2.90), browse trees and shrubs (mean = 2.27), and associated herbaceous species (mean = 1.84). These vegetation resources constitute the major feed base for livestock and play a significant role in sustaining livestock production in the study area. However, several constraints were identified as major impediments to grazing land utilization. These include insecurity (82.4%), encroachment by farming activities (70.3%), farmer–herder conflicts (62.7%), water scarcity (50.6%), overgrazing (39.8%), deforestation (38.5%), bush burning (37.8%), pests and diseases (32.1%), land degradation (24.5%), and land tenure issues (23.3%). These challenges significantly limit access to grazing resources and threaten the sustainability of livestock production systems in the study area. The study concludes that although grazing lands in Taraba State possess valuable vegetation resources capable of supporting livestock production, their utilization is constrained by a combination of socio-economic, environmental, and security-related factors. The study therefore recommends the implementation of sustainable grazing land management policies, protection of grazing reserves, provision of water facilities, enforcement of land-use regulations, and strengthened security and conflict-resolution mechanisms to enhance grazing land utilization and improve livestock productivity among smallholder farmers.
Keywords: Vegetation composition, grazing land utilization, livestock farmers, forage resources, grazing constraints, Taraba State, Nigeria.

FAST FOOD CONSUMPTION HABITS AND THEIR POTENTIAL IMPACT ON HEALTH AMONG ALGERIAN CONSUMERS: A DESCRIPTIVE SURVEY

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Abstract
The growing popularity of fast food has raised concerns regarding its potential effects on public health. This study aimed to investigate fast-food consumption habits, identify the main factors influencing consumer choices, and assess awareness of its health consequences among Algerian consumers. A descriptive cross-sectional survey was conducted using an online questionnaire distributed through social media. A total of 188 participants from several Algerian provinces were included in the study. Socio-demographic characteristics, consumption patterns, motivations, and perceived health impacts were analyzed using descriptive statistics. The respondents were predominantly male (67.4%) and highly educated, with 77% having a university-level education. Nearly all participants (97.9%) reported consuming fast food. Pizza was the most preferred product (41.1%), followed by tacos (20.7%) and sandwiches (18.1%). The main reasons for consumption were lack of time (32.1%), social activities with friends (27.3%), and convenience (23.5%). Fast food was mainly consumed in the evening (50.0%). Obesity was identified as the most common health issue associated with fast-food consumption (64.3%), food poisoning (11.8%)**,** and cardiovascular disorders (10.2%)**.** Furthermore, (61.5%) of respondents were aware of the potential health risks. These findings highlight the widespread consumption of fast food and emphasize the need for nutritional education programs promoting healthier dietary habits.
Keywords: Fast food consumption; Eating behavior; Nutritional health; Lifestyle factors; Obesity risk; Consumer preferences; Dietary patterns; Algerian population.

NUTRITION KNOWLEDGE, DIET QUALITY AND LIFESTYLE AS DETERMINANTS OF HEALTH PROFILES AMONG OLDER ADULTS IN POLISH UNIVERSITIES OF THE THIRD AGE

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Abstract

Background

Population ageing increases the burden of chronic diseases, multimorbidity, and functional limitations, making nutrition and lifestyle important modifiable determinants of healthy ageing. Universities of the Third Age (U3A) provide an important educational and social environment for older adults; however, multidimensional relationships between nutrition knowledge, diet quality, lifestyle, and health status in this population remain insufficiently characterized.

Aim

The aim of this study was to assess associations between nutrition knowledge, diet quality, lifestyle factors, and selected health indicators among older adults attending Universities of the Third Age in Poland.

Methods

A cross-sectional online survey was conducted between January and April 2026 among community-dwelling older adults participating in U3A programs. Of 700 distributed invitations and 520 returned questionnaires, 450 complete and eligible responses were included in the final analysis. The questionnaire was based on the KomPAN® framework and expanded with items concerning health status, lifestyle, psychosocial resources, barriers to healthy eating, and sources of health information. Diet quality was assessed using the pro-Healthy Diet Index, non-Healthy Diet Index, and overall Diet Quality Index (DQI). Nutrition knowledge was measured using a 24-item scale. Statistical analyses included non-parametric group comparisons, FDR-corrected Spearman correlations, psychometric assessment, principal component analysis, multivariable regression, and profile segmentation.

Results

The mean age of participants was 73.63 ± 5.73 years, and the sample was predominantly female. The median DQI was 15.59 [3.93–24.86], with most participants classified as having neutral diet quality. Nutrition knowledge was moderate, with a median score of 12.00 [9.00–15.00], while the knowledge scale showed very good internal consistency. Principal component analysis identified three dietary patterns: convenience/ultra-processed, prudent/health-promoting, and traditional meat-and-fat. Higher DQI was associated with better nutrition knowledge, greater physical activity, a more favorable sleep profile, regular meal timing, and lower disease burden. Participants with multimorbidity had significantly lower diet quality. Segmentation analysis distinguished two profiles: a health-engaged/higher-resource profile and a lower-resource/nutritionally vulnerable profile.

Conclusions

Older adults attending U3A in Poland are educationally and socially active, but nutritionally heterogeneous. The predominance of neutral diet quality, moderate nutrition knowledge, and clearly identifiable knowledge gaps indicate the need for targeted, practical, and behavior-oriented nutrition education. Particular attention should be given to participants with lower health-related resources, poorer diet quality, and higher multimorbidity burden, as they may benefit most from individualized and sustained healthy-ageing interventions.

Keywords: older adults; healthy ageing; nutrition knowledge; diet quality; Universities of the Third Age; lifestyle; multimorbidity; nutrition education.

GAIT BIOMECHANICS OF SCHOOL-GOING SPORTS GIRLS: CHANGES IN RIGHT FOOT MAXIMUM FORCE II ACROSS 42 EXPERIMENTAL CONDITIONS

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Abstract
Schoolbag carriage is a common daily activity among students and has been associated with alterations in gait mechanics, and increased plantar loading. Adolescent sports girls may be particularly vulnerable because of the combined demands of physical growth, academic activities, and sports participation. The right foot plays a crucial role in gait biomechanics, contributing to weight acceptance, propulsion, balance control and force transmission during walking. Variations in plantar forces beneath the right foot can therefore provide valuable insight into gait adaptations and biomechanical stress associated with external load carriage. Understanding how schoolbag load and walking duration influence plantar forces is essential for developing evidence-based ergonomic recommendations. The study aimed to investigate the effects of different schoolbag loads and walking durations on Maximum Force II (MFII) of the right foot during walking gait in school-going sports girls and to identify critical load and duration thresholds associated with increased biomechanical stress. Sixty-nine school-going sports girls with mean age of 13.67±1.80 years participated in the study. A repeated-measures design was employed in which each participant completed 42 experimental conditions generated from six selected schoolbag loads (0%, 8%, 12%, 16%, 20%, and 25% of body weight) and seven walking durations (0, 5, 10, 15, 20, 25, and 30 minutes). Maximum force II data were collected using a Zebris FDM-S pressure plate and analyzed through WinFDM-S software. Statistical analyses included descriptive statistics, repeated-measures multivariate comparison, Greenhouse–Geisser corrections and Bonferroni-adjusted pairwise comparisons, with significance level set at $p < 0.05$. MFII increased progressively with both schoolbag load and walking duration. The lowest values were observed under unloaded conditions, whereas the highest values occurred when participants carried 25% of body weight for 30 minutes. Statistical analysis revealed significant main effects of load and duration, along with a strong interaction effect, indicating that the combined influence of heavier loads and prolonged walking substantially increased plantar force. Schoolbag load emerged as the primary determinant of MFII, explaining the largest proportion of variance. Significant increases were observed with each incremental rise in load, while marked changes became evident after approximately 20 minutes of continuous walking. Although MFII continued to rise with increasing exposure, a slight decline at 30 minutes suggested possible fatigue-related gait adaptations. Both schoolbag load and walking duration significantly influence plantar loading in school-going sports girls. As a key contributor to support and propulsion during walking, the right foot demonstrated substantial increases in MFII under heavier loads and longer walking durations, reflecting elevated biomechanical demands. Loads exceeding 16–20% of body weight and walking durations beyond 20 minutes were identified as critical thresholds associated with elevated biomechanical stress. The findings highlight the importance of regulating schoolbag load and limiting prolonged load carriage to reduce potential musculoskeletal risks. These results provide practical guidance for students, parents, teachers, coaches, and policymakers in developing safer schoolbag practices and ergonomic recommendations.

Keywords: maximum force II; sports biomechanics; schoolbag load; sports girls; walking duration; walking gait.

OCCURRENCE AND ISOLATION OF MYCOTOXIGENIC FUNGI IN STORED DRIED FISH

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ABSTRACT
Dried fish is an important source of animal protein in Bangladesh; however, improper drying and storage conditions make these products highly susceptible to fungal contamination and mycotoxin production. The present study was conducted to isolate and identify *Aspergillus niger* from dried Loitta fish (*Harpadon nehereus*) and to evaluate its prevalence, morphological characteristics, and toxigenic potential. A total of 25 dried fish samples were collected from local markets and processed through methanol extraction. The extracts were inoculated into Potato Dextrose Broth (PDB) followed by subculturing on Potato Dextrose Agar (PDA) for fungal isolation and characterization. Mycotoxin contamination was screened using Enzyme-Linked Immunosorbent Assay (ELISA). Microscopic identification was performed using Lactophenol Cotton Blue (LCB) staining.
Among the analyzed samples, *Aspergillus niger* was isolated from 8 samples, representing a prevalence rate of 32%. The fungus was predominantly detected in samples with higher moisture content and elevated levels of ochratoxin A (OTA) and aflatoxin B1 (AFB1). Growth of *A. niger* in PDB appeared initially as white fluffy mycelia that gradually developed characteristic black pigmentation due to heavy sporulation. On PDA, colonies showed rapid radial growth with dense black conidial layers and white peripheral margins. Microscopic examination revealed septate hyphae, long conidiophores, globose vesicles, biseriate phialides, and rough-walled black conidia, confirming the identity of *A. niger*. Environmental factors such as temperature, pH, and light influenced colony morphology and sporulation, with optimal growth observed at 25°C and pH 5.5–6.5.The study demonstrated the strong adaptability of *A. niger* to dried fish substrates and highlighted its potential role in spoilage and mycotoxin contamination. The occurrence of toxigenic fungi in dried Loitta fish indicates potential public health risks associated with consumption of improperly processed or stored products. Regular monitoring of fungal contamination and implementation of improved drying and storage practices are therefore essential to ensure food safety and reduce mycotoxin exposure in dried fish products.
Keywords: Dried fish, Mycotoxigenic fungi, Aspergillus, Penicillium, Food safety, Storage contamination

ANATOMICAL LANDMARK DETECTION IN FULL-LEG RADIOGRAPHS USING SPATIAL CONFIGURATION NETWORKS

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ABSTRACT
Accurate detection of anatomical landmarks in full-leg radiographs is a critical step in orthopaedic computer-aided diagnosis, enabling automated measurement of lower-limb alignment parameters such as the Hip-Knee-Ankle (HKA) angle. Manual annotation of these landmarks is time-consuming and subject to inter-observer variability, motivating the development of robust automated methods. In this work, we present a deep learning approach for the simultaneous detection of 20 bilateral anatomical landmarks in full-leg anteroposterior radiographs, covering the hip, knee, tibial plateau, ankle, fibula head, and tibia shaft regions. We employ the Spatial Configuration Network (SCN), a two-branch architecture that combines a local appearance network (based on a VGG19 encoder with a U-Net decoder) for per-landmark Heatmap regression, with a spatial configuration network that models inter-landmark geometric constraints at a coarser resolution. The method is trained and evaluated on the BMPLE dataset, comprising 190 full-leg radiographs (120 training, 70 test) with pixel spacings ranging from 0.14 to 0.16 mm/px, resized to 768×384 pixels. Training is performed using a weighted mean squared error loss with automatic mixed precision, and a spike-detection mechanism is used to prevent training instability. Experiments on the 70 test cases yield a Mean Radial Error (MRE) of 2.66 mm with a Successful Detection Rate (SDR) of 85.9% at a 4 mm threshold, 92.0% at 6 mm, and 94.5% at 8 mm. Eighteen out of twenty landmarks achieve an MRE below 3 mm. The fibula head landmarks present the greatest challenge due to their low radiographic contrast and anatomical complexity. These results demonstrate the feasibility of applying spatial configuration-based Heatmap regression to full-leg landmark detection with limited training data, and establish a strong baseline for further investigation into anatomical constraint modelling and clinical deployment.
Keywords: anatomical landmark detection, full-leg radiograph, deep learning, heatmap regression, spatial configuration network, orthopaedic imaging, lower-limb alignment, VGG19, U-Net, computer-aided diagnosis

A BIODEGRADABLE EPOXY/HYDROXYAPATITE/SILK FIBROIN BIOCOMPOSITE FOR NON-INVASIVE BIOMEDICAL TERAHERTZ ANTENNAS

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Abstract
This study presents a novel biocomposite substrate designed for biomedical terahertz (THz) antennas operating at 0.3 THz. Composed of an epoxy matrix reinforced with hydroxyapatite (HA) and silk fibroin (SF), this material combines excellent biocompatibility, high mechanical stability, and dielectric properties suitable for high-frequency applications.
The effective dielectric properties of the composite were determined using the Bruggeman effective medium model, revealing a relative permittivity of approximately 6.1 and a low dielectric loss factor. Based on these characteristics, a compact microstrip antenna was designed and optimized for biomedical imaging and sensing applications.
Performance evaluation in terms of reflection coefficient (S11), gain, radiation efficiency, and far-field radiation patterns shows a resonance centered at 0.3 THz. The return loss of −34.5 dB indicates excellent impedance matching. In addition, the antenna achieves an impedance bandwidth of 27.3 GHz (9.1%), a maximum gain of 10.2 dBi, and a high radiation efficiency of 93.8%.
Hydroxyapatite enhances the biocompatibility of the substrate, while silk fibroin provides biodegradability, mechanical strength, and dielectric stability. The Epoxy/HA/SF biocomposite is a promising candidate for next-generation biomedical THz antennas, high-resolution tissue imaging systems, non-invasive diagnostic devices, and advanced body-centric communication networks.
Future work will focus on experimental fabrication of the substrate, characterization of its dielectric properties in the THz band, and integration into wearable or implantable biomedical devices.
Keywords: Biocomposite; Epoxy; Hydroxyapatite (HA); Silk fibroin (SF); Biodegradable substrate; Non-invasive sensing; Wearable devices; Body-centric communications.

PREPARATION AND CHARACTERIZATION OF POLY(O-TOLUIDINE)/V_2O_5 COMPOSITES: ELECTRICAL CONDUCTIVITY AND DIELECTRIC BEHAVIOUR

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Abstract
Poly(O-Toluidine)/vanadium pentoxide (POT /V_2O_5) conducting polymer composites with different weight percentages of V_2O_5 were successfully synthesized by in situ chemical polymerization technique. The structural, electrical, dielectric and optical properties of the prepared composites were systematically investigated to study the effect of V2O5 incorporation in the polyaniline matrix. X-ray diffraction (XRD) analysis revealed that the composites were partially crystalline, which indicates strong interactions between the polyaniline chains and V_2O_5 particles. The dc electrical conductivity of compressed pellet samples was measured in a temperature range of 300-550 K. The results indicated that the conductivity increased with increasing V2O5 content suggesting the improved charge transport in the composite structure. The temperature dependence of conductivity showed the thermally activated conduction process and the main charge transport mechanism was identified as band conduction. Dielectric properties like dielectric constant and dielectric loss were studied in frequency range of 50 kHz to 1 MHz. The dielectric response showed a weak frequency dependence in the studied range, and the dielectric constant and dielectric loss increased on increasing V2O5 concentration. This improvement can be attributed to the interfacial polarization and improved charge carrier mobility due to the presence of metal oxide phase. Optical studies also showed an enhancement in the optical band gap of PANI/V2O5 composites compared to pure polyaniline indicating alteration in the electronic structure due to formation of composites. The observed enhancement in electrical and dielectric properties suggests the potential of POT/V2O5 composites for application in electronic devices, energy storage systems, sensors and dielectric materials.
Keywords: Poly(O-Toluidine); Vanadium Pentoxide (V_2O_5); Conducting Polymer Composites; DC Conductivity; Dielectric Constant; Dielectric Loss; Optical Band Gap; X-ray Diffraction.

AI-GUIDED DRUG REPURPOSING FOR OVERCOMING KINASE INHIBITOR RESISTANCE IN CANCER

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Abstract:
Drug resistance remains a major challenge in cancer treatment, particularly for kinase-targeted therapies where mutations reduce drug effectiveness over time. This study proposes an artificial intelligence (AI)-guided drug repurposing strategy to identify FDA-approved drugs capable of overcoming kinase inhibitor resistance.
A curated dataset of known kinase inhibitors and bioactivity data will be used to train an Artificial Neural Network (ANN) model for predicting inhibitory activity. Molecular descriptors and fingerprints will be processed to improve predictive performance. The optimized model will then screen an FDA-approved drug library to identify promising candidates. Selected compounds will be further validated through molecular docking, molecular dynamics (MD) simulations, and ADMET analysis to evaluate binding stability, pharmacokinetic properties, and safety profiles.
This integrated computational approach aims to accelerate drug discovery, reduce development time and cost, and support the identification of mutation-tolerant therapeutics for precision cancer treatment.
Keywords: Drug repurpose, Artificial intelligence, Kinase resistance, Molecular docking, Molecular dynamics, Drug discovery.

MICROBIAL SAFETY, PROXIMATE COMPOSITION, AND IRON RETENTION IN AMARANTHUS SPECIES: EFFECTS OF SALT WASHING AND HOUSEHOLD COOKING METHODS IN WEST AFRICA

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ABSTRACT
Amaranthus species are widely consumed leafy vegetables in West Africa due to their affordability and nutritional value, yet their safety and nutrient quality are often compromised by microbial contamination and suboptimal household processing practices. This study evaluated the microbiological safety, proximate composition, and iron retention of selected Amaranthus species and assessed the effectiveness of salt washing and thermal processing methods in improving food quality. Fresh leaves from five

Amaranthus species were analyzed for microbial contamination following water washing and sodium chloride (5% and 10%) treatments. A subset of three species was further evaluated for proximate composition and iron retention under raw, steamed, and fried conditions using standard AOAC methods. Data were analyzed using ANOVA ($p < 0.05$). Results showed high microbial loads in untreated samples (5.30–5.60 $\log_{10}$ CFU/g), including Escherichia coli, Salmonella spp., Shigella spp., and Staphylococcus aureus. Salt washing significantly reduced microbial loads in a concentration-dependent manner, with 10% NaCl achieving up to 83.6% reduction, although contamination levels remained above recommended safety thresholds. Species differences were observed, with A. dubius exhibiting the highest microbial load. Proximate analysis showed protein content (6.74–11.20%), ash (2.00–3.00%), and moisture (73.09–81.30%), with A. dubius having the highest nutrient values. Iron retention was significantly influenced by processing methods; steaming increased measurable iron levels (133.60–141.62%), likely due to matrix release effects, while frying reduced iron retention (89.55–93.57%). The study demonstrates that while salt washing improves microbial quality, it is insufficient as a standalone intervention. Steaming enhances iron availability and preserves nutritional quality. Integrated adoption of effective washing and steaming practices can improve both food safety and micronutrient intake in West African households.

Keywords: Amaranthus, microbial safety, iron retention, salt washing, food processing, West Africa

ACHIEVEMENTS OF THE USE OF NON-MEDICAL ANTIFUNGAL ANTIBIOTICS TO PROTECT AGRICULTURAL PLANTS FROM DISEASES CAUSED BY FUNGAL PHYTOPATHOGENS

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ABSTRACT

In recent decades, biological plant protection systems have received considerable attention. Biopreparations based on microorganisms and their metabolites have proven themselves to be alternatives to synthetic chemicals, offering environmentally safe and effective control of harmful arthropods and plant diseases. Compared to chemical preparations, they are characterized by greater specificity, low toxicity, and the ability to degrade in natural cycles of substances, which allows their use to avoid disrupting the natural balance of biogenesis. The diverse chemical nature of the metabolites of the producer strains determines the low degree of adaptation of harmful objects to them.

Antibiotics are the basis of the most frequently used biological products for plant protection against diseases. One of the essential requirements for antibiotics used for plant protection is that they are prohibited from being used in medical practice to avoid the development of resistance to them in harmful insects and microorganisms. In this regard, the use of non-medical antibiotics (NMAs) for plant protection is highly relevant. Currently, NMAs are used in crop production as fungicides, herbicides, insecticides, and plant growth promoters. The key requirements for antibiotic-based products used to control agricultural pests are as follows: 1) low toxicity to warm-blooded animals and humans; 2) high biological activity and specificity for the target; 3) ability to readily penetrate plant tissue; 4) stability on the surface and within the plant; 5) ability to readily degrade in soil; 6) environmental safety.

Phytopathogenic fungi play a major role in soil-borne plant diseases, as they are able to survive in the most unfavorable conditions and are characterized by a wide range of damage to a wide variety of agricultural crops. Phytopathogenic fungi cause 70% of all plant diseases, and fungal diseases are associated with the most severe epiphytoties (mass plant diseases). In view of this, the use of antifungal NMAs to protect plants from diseases caused by phytopathogenic fungi and, consequently, to preserve crop yields is a pressing issue.

The present report systematizes recent literature data on the use of antifungal NMAs in agriculture to protect plants from diseases caused by phytopathogenic fungi of various etiologies. The use of antifungal NMAs and compositions based on them is characterized by high fungicidal activity, low toxicity, and the ability to degrade into non-toxic compounds in natural cycles, ensuring the environmental safety of these biopreparations. The information presented in present report is of significant practical importance, since it contains information on various chemical classes of antifungal NMAs used to protect agricultural crops from diseases caused by phytopathogenic fungi.

Keywords: Biopreparations, Non-Medical Antibiotics, Phytopathogenic Fungi, Fungicides, Plant Diseases, Fungicidal Activity, Crop Protection, Environmental Safety

OMICS TECHNOLOGIES IN NATURAL PRODUCT DRUG DISCOVERY: APPLICATIONS OF METABOLOMICS, PROTEOMICS, AND GENOMICS IN IDENTIFYING ANTI-INFLAMMATORY AND ANTIMICROBIAL AGENTS

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Abstract

The increasing prevalence of antimicrobial resistance and chronic inflammatory disorders has intensified the search for novel therapeutic agents from natural sources. Natural products, particularly those derived from medicinal plants, microorganisms, and marine organisms, have historically served as invaluable reservoirs of bioactive compounds for drug discovery. However, conventional approaches to natural product research are often labor-intensive, time-consuming, and limited in their ability to comprehensively characterize complex biological systems. The emergence of omics technologies, including metabolomics, proteomics, and genomics, has revolutionized natural product-based drug discovery by enabling high-throughput identification, characterization, and functional analysis of bioactive molecules and their molecular targets.

This review examines the applications of metabolomics, proteomics, and genomics in the discovery and development of anti-inflammatory and antimicrobial agents from natural sources. Relevant literature was retrieved from major scientific databases, including PubMed, Scopus, Web of Science, Google Scholar, and ScienceDirect, using structured search strategies focused on omics technologies, natural products, inflammation, antimicrobial activity, and drug discovery. Studies published in peer-reviewed journals were critically evaluated to assess advances in analytical platforms, bioinformatics tools, and integrative multi-omics approaches employed in the identification of therapeutic compounds. Metabolomics, utilizing advanced analytical techniques such as liquid chromatography–mass spectrometry (LC-MS), gas chromatography–mass spectrometry (GC-MS), nuclear magnetic resonance (NMR) spectroscopy, and ultra-performance liquid chromatography (UPLC), has facilitated comprehensive profiling of secondary metabolites and the discovery of novel bioactive compounds. Proteomic technologies, including two-dimensional gel electrophoresis (2D-GE), matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF-MS), and tandem mass spectrometry (MS/MS), have enabled the identification of protein targets and signaling pathways associated with inflammatory and microbial responses. Genomic and transcriptomic approaches, supported by next-generation sequencing (NGS), genome mining, RNA sequencing (RNA-Seq), and comparative genomics, have accelerated the discovery of biosynthetic gene clusters and molecular mechanisms underlying the production of therapeutically relevant metabolites. Furthermore, the integration of molecular docking, network pharmacology, systems biology, and artificial intelligence-driven bioinformatics has enhanced target prediction, mechanism elucidation, and lead compound optimization. Evidence from the reviewed literature demonstrates that omics technologies significantly improve the efficiency, accuracy, and translational potential of natural product drug discovery. Integrative multi-omics strategies provide a comprehensive understanding of the relationships among genes, proteins, metabolites, and biological functions, thereby facilitating the identification of promising anti-inflammatory and antimicrobial agents.

Despite challenges related to data standardization, computational complexity, and validation, continued advances in analytical instrumentation and bioinformatics are expected to strengthen the role of omics-based approaches in the development of next-generation therapeutics. This review highlights the transformative impact of omics technologies in bridging traditional natural product research with modern precision drug discovery and provides insights into future directions for the identification of safe, effective, and sustainable therapeutic agents.

Keywords: Omics technologies; Metabolomics; Proteomics; Genomics; Natural products; Drug discovery; Bioinformatics; Multi-omics.

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Bilgilerinize arz edilir,

Saygılarımla

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Bilgi ve gereğini rica ederim

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