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Editorial

Editorial: e-KJER December 2024 Issue

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Editorial

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Dear readers and researchers,

We are proud and honored to present to you the fourth issue of the eleventh volume of the e-Kafkas Journal of Educational Research (e-KJER), the result of the devoted and disciplined work of the new editorial board with international and national participation, field editors, reviewers, and the journal team in December 2024. e-KJER is proud to share that it has been accepted by new indexes such as EBSCO and H.W. Wilson Databases, indicating that the journal is on its way to becoming one of the significant journals in Educational Sciences. The journal is also under scrutiny of other important indexes such as Scopus. This issue contains 17 articles, each offering a unique perspective on current educational research topics. Our contributors have explored the complexities of education and presented innovative ideas and research findings that are sure to provoke discussion and debate. Table 1.

Research topic and key findings

Authors (Year)	Research Topic (Article Title)	Key Findings
Kavak & Deretarla Gül (2024)	Impact of STEM Education on Preschool Children's Scientific Process Skills	The experimental group was significantly more successful in scientific process skills compared to the control group.
Bezen (2024)	Comparative Evaluation of Socioscientific Issues in Secondary Physics Curriculum and Textbooks	Socio-scientific topics are included to a limited extent, and it is recommended that the curriculum be enriched with SSI goals in 2024.
Kadirhan, Şat & Alkış (2024)	Exploring Faculty Members' Experiences with Virtual Classroom Platforms and Their Perceived Usability during the COVID-19	Zoom was the most preferred platform; factors such as experience, gender, and age affected platform preferences.
Topal (2024)	A Critical Evaluation of CALL and MALL Products for Learning and Teaching American English	Students showed improvement in grammar, pronunciation, and listening skills, but there were issues with assessment and feedback.
Girit Yıldız & Acat (2024)	The Effect of Quantum Learning Model on Attitude, Anxiety, and Achievement of Middle School Students Towards Mathematics	QLM increased students' academic success and reduced anxiety; their attitudes towards mathematics also changed positively.

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Table 1. continuing		
Ocak, Kuzu & Karakuyu (2024)	Developing High School Prep Class Students' Verbal Skills by Using Web 2.0 Application	Web 2.0 applications and interactive activities increased speaking motivation.
Irmak & Yılmaz Ergül (2024)	Analyzing Instructional Strategies in Science Education: A Dual Approach Combining Systematic Review and Secondary Qualitative Data Analysis	Teachers were cautious about methods like STEM and project-based learning, showing difficulty in adopting these strategies.
Şen & Gümüş (2024)	Observing Primary School Pre-service Teachers' Oral Argumentation in Science Writing Heuristic Implementation	Use of the scientific writing strategy (SWH) improved argumentation skills.
Güner Demir, Taşkın, Mızıkacı & Ergüven (2024)	Public Opinion about European Researchers' Night on Climate Change and Polar Science in Türkiye	The events increased public interest in scientific research and encouraged young people to pursue scientific careers.
Bastaban & Kurnaz (2024)	Art Education Experiences in Unified Classrooms: A Phenomenological Study	Positive effects of arts education were observed in multi-grade classrooms, encouraging collaboration and social development.
Uslu Gülşen (2024)	The Effect of Sense of School Belonging on Academic Achievement: A Meta-Analytic Review	School belonging had a small but significant effect on academic success.
Uğraş, Doğan & Uğraş (2024)	Adaptation of Artificial Intelligence Literacy Scale into Turkish: A Sample of Pre-Service Teachers	The adapted scale was found to be valid and reliable, and it is an effective tool for evaluating pre-service teachers' AI literacy.
Akbabaoğlu & Uyanık Aktulun (2024)	The Effect of A Number Sense Education Program Supported By Web 2.0 Tools on The Number Sense Development of First Grade Elementary School Students	The experimental group made significant progress in numerical emotion development.
Pedük, Dağ & Akşin Yavuz (2024)	Teachers' Views On Preschool Guidance Services	Teachers evaluated guidance activities through informal observations and emphasized the importance of family involvement.
Akyıl & İme (2024)	The Mediating Role of Mental Well- Being Between Psychological Resilience, Life Satisfaction and Emotional Intelligence	Mental well-being mediated the relationship between emotional intelligence and life satisfaction.
Vural & Önel (2024)	The Effect of Intelligence Games on 6th and 7th Grade Students' Critical Thinking Skills, and Student Opinions on Their Science Course Achievement	Puzzle games enhanced students' cognitive abilities and contributed to their science performance.
Oğur & Olçay (2024)	The Awareness of Special Education Teachers about Comprehensive Sex Education	Teachers only presented sex education from a biological perspective and emphasized the need for more comprehensive training.

The articles presented in this issue cover a variety of critical topics. These are:

• Kavak & Deretarla Gül (2024): This study explored the effect of STEM activities on the scientific process skills of children aged 60-72 months. The findings revealed that children in the experimental group significantly outperformed those in the control groups in developing these skills. This suggests that STEM activities are effective in enhancing basic scientific process skills in early childhood.

- Bezen (2024): This study evaluated the integration of socioscientific issues (SSI) in Turkey's 2018 secondary physics curriculum and corresponding textbooks for grades 9-12. The findings revealed that only 14 of the 213 curriculum objectives included SSI content, with the most content found in grades 9 and 12, and discrepancies in SSI representation between the curriculum and textbooks were identified. The study suggests enhancing the 2024 updated curriculum with more SSI-focused objectives and enriching physics textbooks with relevant examples and activities to better address the social, environmental, and ethical dimensions of scientific knowledge.
- Kadirhan, Şat & Alkış (2024): This study explored faculty experiences with Virtual Communication Platforms (VCPs) during the COVID-19 epidemic, focusing on usability and preferences. Quantitative findings highlighted Zoom as the most favored platform, alongside Google Meet and Adobe Connect, while Perculus and Microsoft Teams scored poorly, with perceptions influenced by factors such as gender, age, and experience. Qualitative findings revealed usability challenges, positive aspects, and improvement suggestions, providing actionable insights for institutions to enhance VCP adoption, training, and distance education effectiveness.
- Topal (2024): This study examined the impact of CALL and MALL tools (three websites, one mobile app, and one corpus) on teaching and learning American English, focusing on their technical and pedagogical features. The analysis highlighted benefits for learners and teachers in areas like grammar, pronunciation, vocabulary, listening, and cultural and pragmatic awareness, while noting shortcomings such as limited assessment and feedback features. The study contributes to the literature by addressing gaps and offering recommendations for future research and development of language learning technologies.
- Yıldız & Acat (2024): This study examined the Quantum Learning Model (QLM) and its effects on academic achievement, attitudes toward mathematics, and anxiety levels in seventh-grade students. The results showed that QLM significantly improved students' academic performance, stabilized their anxiety levels, and maintained positive attitudes toward mathematics, contrasting with the control group, which experienced a decline in attitudes and a significant increase in anxiety. Students and teachers highlighted the benefits of QLM strategies like note-taking, mind maps, and celebration activities, emphasizing their role in fostering a supportive and effective learning environment.
- Ocak, Kuzu & Karakuyu (2024): This study explored the reasons behind high school students' reluctance to speak English during distance education and sought solutions to address these challenges. Findings revealed that students experienced embarrassment and speaking anxiety, leading to reduced participation in class activities. Incorporating Web 2.0 applications, dialogues, reading-listening exercises, games, and movies into lessons was found to increase students' willingness to speak and improve their motivation.
- Irmak & Yılmaz Ergül (2024): This study combined a systematic review and secondary qualitative data analysis to examine the instructional strategies and rationales used by pre-service and in-service science teachers (PaIST) in teaching physics. The findings revealed a variety of strategies, including direct instruction, hands-on activities, and real-life narratives, with rationales focused on enhancing motivation, cognitive development, collaboration, and meaningful learning. Despite the proven effectiveness of methods like STEM education and project-based learning, PaIST showed hesitancy in adopting these approaches, indicating a need for further research on the barriers affecting their instructional choices.
- Şen & Gümüş (2024): This study explored primary school pre-service teachers' (PST) oral argumentation during the implementation of a science writing heuristic (SWH) over six weeks. Observations using the Assessment of Scientific Argumentation in Class (ASAC) protocol revealed that PSTs' oral argumentation skills improved over time, with higher scores in cognitive and epistemic aspects compared to social aspects. The findings suggest that the use of SWH and ASAC can enhance PSTs' argumentation skills, with implications for teaching and learning in science education.
- Güner Demir, Taşkın, Mızıkacı, Ergüven (2024): This study examined participant feedback from the European Researchers' Night events in Istanbul and Gaziantep in 2022, which focused on

climate change and polar science. The findings highlight the success of these events in promoting public awareness of scientific research, encouraging youth interest in science careers, and demonstrating the value of public outreach in research.

- Bastaban & Kurnaz (2024): This study explored the experiences of unified classroom teachers in teaching the Visual Arts course and examined the impact of unified classrooms on art education. Using a phenomenological design, the research revealed that, contrary to prior literature which often highlights the challenges of unified classrooms, art education in these settings had positive effects. Teachers observed that the process fostered collaboration, social development, and cognitive growth, showing that art can play a significant role in building individual and life skills for students in unified classrooms.
- Uslu Gülşen (2024): This meta-analysis aimed to clarify the concept of "a sense of school belonging" and examine its impact on academic achievement. The analysis of 22 studies revealed a small but statistically significant effect of a sense of school belonging on academic achievement, with the effect diminishing over time as publication years increased. Additionally, the study found no significant differences between measurement tools, suggesting that researchers can use various tools to measure this relationship without concerns about bias or reliability.
- Uğraş, Doğan & Uğraş (2024): This study adapted the Al-LS scale, originally translated by Wang et al. (2022), into Turkish to assess the AI-L of pre-service teachers. Using a sample of 440 pre-service teachers, the adaptation process included translation studies, Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA), confirming that the Turkish version maintains the original scale's structure and fits well. The scale demonstrated both validity and reliability, with Cronbach's Alpha coefficients indicating a strong and dependable measure for evaluating AI-L in pre-service teachers.
- Akbabaoğlu & Uyanık Aktulun (2024): This study evaluated the effectiveness of a Number Sense Education Program, enhanced by Web 2.0 Tools, on first-grade students' number sense development. The experimental group showed significant improvements in various NSS subdimensions, including Number Recognition, Number Comparisons, and Nonverbal Calculation, with no significant change in Counting Skills. The findings highlight the positive impact of Web 2.0 Tools on number sense development, as the experimental group outperformed the control group in post-test scores across all measured areas.
- Pedük, Dağ & Akşin Yavuz (2024): This study investigated preschool teachers' perspectives on guidance and counseling activities within the classroom, focusing on their interactions with parents, the challenges they face, and their coping strategies. The findings revealed that teachers primarily used informal observation to assess guidance practices and mostly focused on activities aimed at self-acceptance and interpersonal relationships, while family and society-related competencies were not addressed. Additionally, teachers incorporated play and language activities, with family involvement being a key aspect in their work with parents.
- Akyıl & İme (2024): This study explored the mediating role of mental well-being in the relationship between emotional intelligence, life satisfaction, and psychological resilience among university students. The findings showed that mental well-being fully mediated the link between emotional intelligence and life satisfaction, and partially mediated the relationship between emotional intelligence and psychological resilience. The results suggest that higher mental well-being leads to greater life satisfaction and resilience, regardless of emotional intelligence, highlighting the importance of supporting mental health for improving these outcomes.
- Vural & Önel (2024): This study assessed the critical thinking abilities of sixth and seventh grade students who participated in an intelligence games course and their perceptions of its impact on their science performance. The findings indicated a slight improvement in critical thinking skills from pre-test to post-test, although no significant correlation was found between students' critical thinking abilities and their parents' education levels. Students reported that intelligence games were beneficial for their science courses and helped enhance their cognitive abilities, such as attention and memory.
- Oğur & Olçay (2024): This study examined the knowledge and professional development needs of teachers providing sex education to individuals with autism spectrum disorder (ASD).

Conducted with 200 teachers, it found that only 10% taught sex education to students with ASD, focusing mainly on biological aspects while neglecting topics like relationships, rights, and wellbeing. The study highlights the need for better teacher training in comprehensive sex education for individuals with ASD.

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