# OSMANGAZİ JOURNAL OF EDUCATIONAL RESEARCH

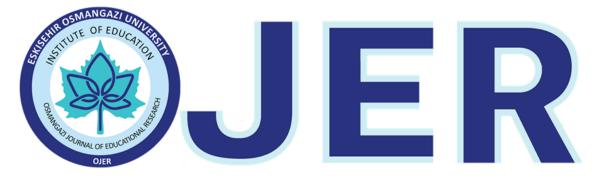
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# (OJER)



# Volume 9, Number 2, Fall 2022

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Osmangazi Journal of Educational Research (OJER) is published by the Institute of Education of Eskisehir Osmangazi University, Türkiye.

OJER is an online, open-access, international, scholarly, peer-reviewed journal offering scholarly research articles on various topics in all areas of educational sciences.

All submitted manuscripts must be original, previously unpublished and not under consideration for publication in any type of publication outlet.

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"If one day my words conflict with science, choose science."

(Mustafa Kemal Atatürk)

#### Dear Readers,

Today, the accelerating changes, more complex technology and systems, new problems lead us to better appreciate the importance of science. Science is a methodical research process, which is defined as the process of acquiring knowledge by aiming at a certain purpose and emerging with the desire to know a subject, research and questioning curiosity. It is only possible with science to investigate the causes, processes and results of the events, situations, and the problems experienced from the smallest to the largest, and to produce solutions. As in other fields, scientific researches in the field of education shed light on education and training and show us the way. In this context, various studies that examine the causes of various problems, reveal the current situation/big picture on a particular issue or test new methods and approaches are included in the continuing education literature. These studies provide guidance to both practitioners and researchers by filling a gap in the literature in depth or broadly, or by repeating a research with different inputs and offering practice and research recommendations. Educational researches from pre-school to higher education, from child to adult education; from formal to non-formal education, from face-to-face to open and distance education; examine the learner, the teacher, the learning tools and materials, ways, methods and approaches with a wide variety of frameworks and variables with quantitative, qualitative or mixed methods.

Education is an ongoing concept, also defined as an acculturation process. While I. Kant says that man is the only creature that has to be educated, M. Twain reveals the characteristic of the education given and states that education is not to fill the memory but to develop the mind. Montaigne, on the other hand, emphasizes the purpose of education and says, "Education does not only corrupt people, it must change them for the better." he adds. Indeed, in Edison's words, education is to the soul what a sculptor is to a piece of marble. For Aristotle, education is an ornament in times of prosperity and a refuge in times of disaster. The development of the individual affects the society, the development of the society affects all humanity, and as Einstein stated, the future of a country is shaped by the education of the people of that country. The aim of education is to develop individuals in cognitive, physical, social and psychomotor aspects and to contribute to the individual and society in line with the determined goals. With this point of view, educational research is necessary and important for the change and development of societies today as it was in the past.

With this motivation, our journal named **OJER** (<u>Osmangazi Journal of Educational</u> <u>Research</u>), which is published in English within the body of Eskişehir Osmangazi University Educational Sciences Institute, brings together the quantitative, qualitative and mixed education researches carried out in different fields of education from theory to practice. As the Institute of Educational Sciences, our aim is to inform and inspire people who know the theory and practice in the field of teacher training, human and natural sciences; and establish their balance. Research and applications in the field of educational sciences are designed to create impact-oriented educational communities. Our goal is to promote researches that are original, creative, enlightened and that shape the future with the ethical values.

In this issue the **OJER**, there are important studies that will contribute to the field. We would like to express our gratitude to the researchers, the reviewer referees, the editorial board, the journal secretariat and our valuable readers who examined our journal and reached us via e-mail. In this issue of <u>OJER</u> in 2022, there are 9 studies in total, as introduced below:

The 1<sup>st</sup> article of this issue is entitled "An Analysis of LGS (Transition to High School Test) Mathematics Questions in Terms of Mathematical Thinking Components" written by Kürşat YENİLMEZ, Hilal ÖZCAN, Abdulhalim BATU, and Fehmi MART. The aim of this research is to examine the questions asked in the high school entrance exams (LGS) held between 2017-2021 years in terms of mathematical thinking components. For this aim, generalization, customization, making assumptions, logical thinking and symbol usage, which are components of mathematical thinking were examined in the questions. As a result of the examination, it was determined that the questions from the logical thinking component were mostly included and the questions from the generalization component were the least. Considering the learning areas, it was determined that the logical thinking component is given weight to a large extent and the distribution of mathematical thinking components differed in each learning area. This situation is explained by the fact that the distribution of the number of questions in the learning areas is different, and it is suggested that the distribution should be balanced according to both learning areas and mathematical thinking components in general. The 2<sup>nd</sup> article of this issue is entitled "Values in Barış Manço's Songs" written by Servet KÖMCÜ. The area of this research is values education and its purpose is to examine the use of Barış Manço's (a popular Turkish singer) songs in the education of root values included in the Ministry of National Education 2018 Turkish Language Teaching Program. Values Education has been a subject that has recently attracted attention in our country, has made much ground in scientific research and attracts the curiosity of people from all strata. Barış Manço was a popular and pioneer singer who was born and lived in Turkey. In an interview, he said: "No one comes into the world without a reason. It is my belief that the Creator sent us to do certain works in the world. So, it was decided by God that it is among my duties to serve children, and thus I produced songs for children". As a result of the research, it was concluded that each of the 94 Barış Manço songs examined was directly related to at least two root values. It can be stated that the examined Barış Manço songs will contribute to the acquisition of these values by primary school students.

The 3<sup>rd</sup> article of this issue is entitled "Secondary School Students' Habits of Using Note-Taking Strategies" written by Kübra KARADAĞ, Miray DEVECİOĞLU, and Ahmet BENZER. In this research, a training to teach 5 different note-taking strategies were given to 7th-grade students for 6 weeks. After the training, they were expected to apply the relevant note-taking strategies after the listening texts. As a result of the study, it was determined that before the note-taking training was given, the students could not take proper notes because they had difficulty in distinguishing between necessary and unnecessary information. After the training, it was seen that the students were able to apply the stages of identifying keywords and creating short sentences in all of the strategies. Consequently, when note-taking strategies were taught, students were successful in identifying keywords, expressing them in short sentences, and connecting information. It is recommended that note-taking strategies training should be included in the textbooks.

**The 4<sup>th</sup> article** of this issue is entitled "Statistical Analysis of the Indicators for the Education of Provinces in Turkey" written by Özer ÖZAYDIN, Fatih ÇEMREK, and M. Zafer BALBAĞ. The aim of this research is to examine the provinces in Turkey in terms of education statistics. For this purpose, the data on education indicators belonging to 81 provinces were obtained from the Ministry of National Education Formal Education Statistics and TURKSTAT for the years 2020-2021. In the study, clustering analysis was

applied to determine the similarities of provinces in terms of education statistics. Then, a factor analysis was performed to rank the provinces in terms of these statistics. According to the first factor scores, Şanlıurfa and Istanbul were the provinces farthest from each other in education statistics. In terms of the second factor scores, Bolu and Şanlıurfa were the provinces farthest from each other. Finally, in terms of the third factor scores, Tekirdağ and Ağrı were the provinces farthest from each other.

The 5th article of this issue is entitled "Examining Preservice Teachers' Environmental Knowledge and Self-Efficacy Beliefs Regarding Environmental Education" written by Hediye CAN and Adem ÖZDEMİR. The aim of this research is to compare preservice teachers' environmental knowledge and self-efficacy beliefs regarding environmental education. A total of 521 students who were studying science education, social sciences education, primary teaching and pre-school teaching programs at two state universities in Turkey, participated in the study. According to results, there were differences in the level of environmental knowledge of pre-service teachers according to the departments they studied and their gender while there were no significant differences according to the level of classes they studied. Gender differences favored higher level of knowledge of male pre-service teachers. There were significant differences between preservice pre-school teachers and the other groups in the dimension of academic competence perception of self-efficacy. The results of the study revealed that pre-service pre-school teachers had lower scores than other groups in terms of environmental knowledge and selfefficacy beliefs regarding environmental education. There was no relationship between knowledge and self-efficacy beliefs of pre-service teachers. These results shed light on the importance of developing a holistic and systematic teacher training approach in environmental education.

**The 6<sup>th</sup> article** of this issue is entitled "The Effect of Laboratory Practices Supported by Virtual Learning Environments on Educational Technology Self-Efficiencies of Teacher Candidates" written by Zafer TANEL, Esra BİLAL ÖNDER, and Rabia TANEL. The aim of this research is to examine the effect of physics laboratory applications supported by virtual learning environments on the self-efficacy of teacher candidates towards educational technologies. The data were obtained by applying the "Education Technology Standards Self-Efficacy (ETSSE) Scale" as the pre-test and post-test for participant teacher candidates. As a result of the analysis, there was no statistically significant difference between the pre-test and post-test self-efficacy scores of the teacher candidates and similar results were obtained in terms of the sub-factors of the scale. While there was no significant difference according to the pre-test self-efficacy scores of male and female candidates, there was a significant difference in favor of female teacher candidates according to the post-test scores.

**The 7<sup>th</sup> article** of this issue is entitled "Evaluation of Primary School Mathematics Teacher Candidates' Activity Design Processes in the Context of Activity Design Principles" written by Gülşade SAVAŞ and Emine Nur ÜNVEREN BİLGİÇ. The aim of this research is to examine the primary mathematics teacher candidates' consideration of the principles of activity design in the process of designing activities. The participants of the study consisted of 54 undergraduate students studying in the third year of Primary Level Mathematics Teacher Education programme of a state university in the spring semester of the 2020-2021 academic year. The data were collected by examining the activity designs in the lesson plans prepared by the students. Based on the research findings, it was determined that none of the candidates included the student perspective in the purpose statement in the activities they designed and all candidates expressed the purpose of the activity from the perspective of the instructor. It was found that none of the candidates designed an activity which considered assessment. In addition, none of the candidates used an expression for informing the students within the scope of the assessment of the activity.

The 8<sup>th</sup> article of this issue is entitled "The Effect of Problem Based Learning Method on Students Academic Success and Their Attitudes towards Social Studies Course" written by Serdal GÜNAY, Cüneyit AKAR, and Nur Leman BALBAĞ. The aim of this research is to determine the effect of problem based learning (PBL) on academic achievement of students in 6th grade social studies course. In this research, pre-test and post-test design that has experiment control group was used. In order to collect the research data; the achievement test to measure students' academic achievement, the social studies attitude scale, the scenarios based on PBL method, the study notes and the instructional materials suitable for classroom environment were developed and applied. It was observed that there was no statistically significant difference between the students in the experimental group and the students in the control group in accordance with the results of the statistical analysis of the data in the pre-test and attitude scale application. According to the analysis of data obtained from the final tests, it was concluded that PBL method had a positive effect on the students' academic achievement in social studies course and course attitudes.

The 9<sup>th</sup> article of this issue is entitled "Views of Secondary School Mathematics Pre-Service Teachers about the Field of Assessment" written by Gülnur ÖZDİL and Ahmet KAÇAR. The aim of this research is to reveal the importance level that pre-service teachers attach to the field of assessment, the concepts, methods and techniques they find important in this field, their perceptions of self-efficacy, how they relate the mathematics course with assessment, and their observations on the practices made during their internship experience. In the light of the findings, it can be said most of the pre-service teachers consider the field of assessment important, but they do not feel sufficient in this field. It was determined they have recalled generally traditional techniques of the assessment methods; moreover, it has also been determined they superficially touch on the basic concepts of assessment such as validity and reliability. Pre-service teachers have stated they mostly examined national and international exam questions in the lessons they taught and studied on preparing such items. They have stated that they mostly observed oral and multiple-choice assessment techniques during their internship experiences.

> See you in the next issue, next year.... "Stay with Science, Stay with Us"

M. Zafer BALBAĞ, Ph.D. Editor In Chief Director at Institute of Education Eskişehir Osmangazi University, Türkiye