

From the Editor...

Dear Readers,

We are with you again with the Ankara University Faculty of Educational Sciences Journal of Special Education's last issue, December 2022, Volume 23, Issue 4. As always has been, I would like to thank here those who contributed as our authors, reviewers, readers, our Academic Advisory Board, and our Editorial Board. I would like to indicate that as the Editorial Board, we put forth the effort to move our journal to a higher level both quantitatively and qualitatively in the forthcoming process. Before I start to introduce the articles in this issue, I would like to announce that we have switched to the "Section Editor" system in order to prevent our authors from experiencing time lags and to speed up the editorial reading processes. All articles uploaded to our journal system will be reviewed by a co-editor who is an expert in the field, and the processes of the relevant article will be followed by the section editor. You can access the flow chart of our Section Editor system at: <https://dergipark.org.tr/tr/journal/870/file-manager/26945/>. I welcome our friends who joined our Board of Editors as section editors and whose names are listed below and wish them success in their work: *Assoc. Prof. Arzu DOĞANAY-BİLGİ*, Gazi University; *Assoc. Prof. Banu ALTUNAY*, Gazi University; *Assoc. Prof. Murat DOĞAN*, Anadolu University; *Assoc. Prof. Sema TAN*, Sinop University; *Assist. Prof. Aşkın NOYAN-ERBAŞ*, Hacettepe University; *Assist. Prof. Gizem YILDIZ*, Anadolu University; *Assist. Prof. Işık AKIN-BÜLBÜL*, Gazi University; *Assist. Prof. Nilgün KİRİŞÇİ*, Aydın Adnan Menderes University. You can find information about our Editorial Board and our section editors at <https://dergipark.org.tr/en/pub/ozelegitimdergisi/page/10993>.

In this issue of our Journal, there are eight research and two review articles. I would like to briefly introduce them to our readers. The first research article in the current issue includes a study of *Nazire Burçin HAMUTOĞLU*, *Onur İŞBULAN*, and *Mübin KIYICI* namely "Major Tendencies in Special Education Within the Framework of Educational Technology Between 1960-2019." In this study, previous studies on special education and educational technologies indexed in the Education Research Index (ERIC) database between 1960-2019 were reviewed with scientometric methods, and in this context, 22049 studies with "Special Education", "Educational Technology" labels are obtained. This study, carried out by using content analysis, is a descriptive/depictive study in terms of purpose. One of the most important findings of this study was that the word "handicapped" was used in the abstract parts of articles in 1980s and early 1990s. However, it was later replaced with "disability". Another significant finding of the study was that computers are often used as a technology tool in special education. Accordingly, it was suggested that studies from past to present have been focusing on school and there was a consistency in the articles on educational programs. It was considered that the computer software used in obtaining this result had an effect considering the results on trends in real life skills related to children and teachers who also play an important role in the study.

The second study namely "The Effectiveness of the Experimental Guidebook on the Science Process Skills of Students with Mild Mental Disabilities" was conducted by *Tülay ŞENEL-ÇORUHLU*, *Sibel ER-NAS*, *Muammer ÇALIK*, *Cevriye ERGÜL*, *Salih ÇEPNİ*, and *Gül Nihal KARAGÖZ*. The main problem of this study was to "How does Science Experimental Guidebook enriched by active learning techniques and Prediction-Observation-Explanation (POE) worksheets related to the "Physical Events" learning area change the scientific process skills of inclusion/integration students with mild mental disabilities?" The aim of this research was to prepare the Science Experimental Guidebook enriched by active learning techniques and POE worksheets and examine its effect on science process skills of students with mild intellectual disabilities. Through case study research method, 12 fifth grade students with mild mental disabilities participated in the current study. The first phase of the POE worksheets included buzz 22 technique, while the second phase contained experiments and applications of QR codes. Also, the third phase incorporated snowball technique and electively one of learning gallery and card display techniques. After the treatment, it was determined that majority of the students with mild mental disabilities improved their science process skills in interpreting data, experimenting, observing, using space/time relations, communicating, inferring, measuring and controlling variables and they could not improve in some skills. It was concluded that it was effective for students with mild intellectual disabilities to develop their scientific process skills, to ensure one-to-one participation of students and to embody abstract concepts. An opportunity to reinforce the experiments that QR code applications was over and over again. Given the guidebook of the "physical events" topic, it was suggested that similar guidebooks could be prepared for different learning disciplines.

The third research article in this issue is authored by *Samed YENİOĞLU* and *Nevin GÜNER-YILDIZ* namely "Teaching Science to Students with Special Needs: The Efficiency of Science Experiments Presented with Tablet Computers." The study aimed to examine the effectiveness of science experiments presented with tablet computers in teaching science definitions and factual facts to students with special needs. A multiple probe design with probe conditions across participants was applied as the research design, which is one of the single-subject research models. The research included instructional sessions, generalization, and maintenance sessions; effectiveness, reliability, and social validity data were collected. Three students with a learning disability who

were 11 years old and were receiving inclusive education in general education schools participated in the study. It was determined that all students participating in the study acquired the target science definitions and knowledge of factual facts, and they continued these acquisitions three weeks after the intervention was completed. In addition, the participant students were able to generalize these achievements to another teacher and environment. The social validity findings of the study revealed that the students with special needs and teachers, who were the participants of the research, had positive views on science teaching with tablet computers.

Özlenen ÖZDIYAR-GEDİK, Abdul Samet DEMİRKAYA, and Eda GÜRLEN authored the fourth research article namely “*he Investigation of the Experts’ Opinions and Recommendations on the Education of Gifted Students.*” The study aimed at identifying the views and suggestions of experts regarding the educational needs of gifted students and educational practices designed for them and offering suggestions in order to improve the current educational practices. For this purpose, the researchers examined the views of experts in the field on diagnosing gifted students, their qualities and needs, the problems they face, educational services they require, and the qualities of their teachers. The study group included seven experts in the field who were chosen via snowball sampling method, which is one of the purposeful sampling methods. The study data were gathered in interviews with the experts, using a semi-structured interview form. The method of content analysis was employed to analyze the data. The participants indicated that the tests to diagnose gifted students in Turkey were not sufficient. They suggested that the diagnosis should be made using multidimensional measurement tools starting from the early childhood period. According to the views of the participant experts, precociousness and oversensitiveness were the leading features that differentiate gifted students from their peers. The experts put great emphasis on the developmental needs of gifted students and underlined that some conflicts may arise with peers and teachers if these needs were not met. The experts who participated in the current study suggested that teachers’ competencies should be improved, as well as offering a thematic curriculum, extra-curricular learning opportunities, and gifted education services to gifted students in order to provide them with a better education. The current study concluded that it was of vital importance to improve the tools and processes to diagnose gifted students, to develop educational policies as well as educational programs and practices that might meet the needs of gifted students, to train teachers accordingly, and to take necessary precautions to deal with the problems faced by these students.

The fifth article which was conducted by Gülnur ÖZBEK and Erdoğan KÖSE is namely “*Determination of Psychometric Characteristics of Mathematical Modeling Competencies Scale: Gifted and Talented Youth.*” The study aimed to develop a scale for mathematical modeling competencies and to determine its psychometric properties. It was a descriptive study which was carried out with the participation of gifted students in two different groups. Exploratory factor analysis (EFA) was performed on the data obtained from 301 participants in the first group, and confirmatory factor analysis (CFA) was performed on the data obtained from 185 participants in the second group. The scale includes items to be rated on a level of agreement including “Strongly agree”, “Agree”, “Moderately agree”, “Disagree” and “Strongly disagree”, and there are no items that need reverse coding. The sub-factors of the scale were determined as ‘identifying the real-life problem’, ‘understanding and simplifying the problem’, ‘mathematizing’, ‘working mathematically’ and ‘interpretation and validation’. Cronbach’s alpha internal consistency coefficients were calculated as 0.958 for the scale and .811, .900, .883, .820 and .927 for the sub-factors, respectively. Fit indices of the scale ($\chi^2 / df = 2.00$, GFI = .90, RMSEA = .075, SRMR = .063, IFI = .97, NNFI = .97, CFI = .97, NFI = .94, PNFI = .86) determined. The developed scale is a 5-point Likert-type scale and there are no items that need to be reverse coded. As a result of the research, it was concluded that the 31-item scale with a five-factor structure had sufficient psychometric properties to be used in future studies.

The sixth research article namely “*The Evaluation of Emotional and Behavioral Disorders of Children and Adolescents Affected by Different Deficiency Disorders*” authored by Mahir UĞURLU and Emine ERATAY. The aim of the study was to determine and evaluate the emotional and behavioral disorders of children and adolescents affected by different types of disability. The general survey research model, one of the quantitative research methods, was used in the study. The data of the study were collected from 501 teachers of 1439 children and young people with the TRF scale for 6-18 Years Old Children and Adolescents and analyzed with the SPSS 23 program. A significant difference was found between the type of disability and emotional behavior disorders; those with autism spectrum disorder got the highest score on the TRF scale, and those with visual impairment got the lowest score. It was found that boys scored higher than girls and those with multiple disabilities had higher scores than those without; it was determined that the scores obtained from the TRF scale increased with the education level. It was determined that individuals with ASD had the highest score in the subscales except for the subscale on breaking the rules. The lowest scores in all subscales were found in those with visual impairment. The findings were similar to the finding in the literature that the type of disability is effective on emotional and behavior problems. This could be explained by their communication and social interaction difficulties. It was thought that limitations in peer relations and game skills and challenges in understanding the thoughts and judgments of others are effective. It was suggested that programs could be prepared for students, teachers, and families in order to reduce the effects of emotional and behavior disorders, the research data could be obtained from teachers as well as with parental notifications, and the research can be carried out in a way to include children aged 3-6.

The article namely “*Undesirable Classroom Behaviours of Gifted and Talented Students and Coping Strategies of Teachers*” that was authored by Gamze İNCİ and Mustafa BAYRAKÇI, is the seventh research article of this issue. In this study, the aim was to determine the undesired behaviors of gifted and talented students in the classroom and the ways of coping with these behaviors by their teachers. The research was carried out following the basic qualitative research design. The participants of the study included 43 teachers. The data were collected through semi-structured interviews and analyzed by the descriptive analysis method. Gifted and talented students exhibited undesirable behaviors such as resisting in the classroom, avoiding responsibility, dealing with extracurricular issues, speaking without permission, disrespect, disorder, aggressive behavior, and hyperactivity. The teachers used the punishment/reward system, trying to find out the cause of the problem, setting rules, meeting families, ignoring them, organizing motivating activities, and increasing their professional competence as a way of coping with these behaviors. As a result, the most undesirable in-class behavior exhibited by gifted and talented students was identified as stubborn and oppositional behaviors. On the other hand, the method most frequently used by teachers to deal with undesirable behaviors was punishment/reward. Based on the results of the research, it is suggested that teachers should have information about the cognitive and behavioral characteristics of gifted and talented students, receive relevant training on current education strategies for these students, and apply preventive measures without experiencing behavioral problems in the classroom.

The eighth and the last research article in this issue with the title of “*The Opinions of Teachers Regarding the Character Development and Character Education of Gifted Students*” was authored by A. Faruk LEVENT and Şeyda BAŞ-DOĞAN. The objective of this study was to examine the opinions of teachers regarding the character development and character education of gifted students. The main phenomena of the current study are teachers’ opinions on the character development and character education of gifted students; thus, phenomenological research was designed. The participants were purposely selected based on their experience. The participants were selected among teachers working in a state school in Istanbul that provides education to gifted students. Data was collected through semi-structured interview, and the interviews were conducted with 15 teachers. Content analysis technique was used to analyze the data. As a result of content analysis of data, three themes (i) characteristics and needs of the gifted, (ii) character development of the gifted, and (iii) character education of the gifted were developed. Fast learning/grasping is detected as a prominent trait in the first theme according to the opinions of the participants. As to the second theme, some participants stated that the character development of the gifted is slower than their peers while the other participants supported the idea that the character development of the gifted is faster and more improved compared to their peers. In the third theme, the majority of the participants criticized values education program applied for character development of the students by Ministry of National Education (MoNE) by stating that it is barely adequate for the gifted students. Lastly, nearly every participant regarded character education as inadequate during distance education. The majority of the participant teachers criticized the fact that character education of gifted students is underestimated in schools. Based on the findings of the study, it may be recommended that character education programs should be produced by taking the needs and characteristics of gifted students into consideration. Furthermore, in-service trainings on the character education of gifted students could be organized to raise awareness of teachers and school administrators by the central organization of the MoNE.

The article namely “*Identifying Concrete-Representational-Abstract Instruction as an Evidence-based Practice in Teaching Mathematics to Individuals with Special Needs*” that was authored by Özge ÖZLÜ-ÜNLÜ, Aslin ARSLANOĞLU and Ahmet YIKMIŞ, is the first review article of this issue. This study aimed to evaluate whether Concrete-Representational-Abstract (CRA) teaching practices adopted in teaching mathematical skills to individuals with special needs were evidence-based. In this study, the analysis processes of the studies published in national and international sources between 1980 and 2020 were completed in line with descriptive analysis standards and standards for being evidence-based. As a result of the first search, a total of 52 studies were reached. Of these studies, 21 studies that met the inclusion criteria were included in the descriptive analysis process. Afterward, these studies were evaluated methodologically by considering the quality indicators for single-subject research designs. Seventeen studies that met all the quality indicators were included in the visual and meta-analysis process. According to the descriptive analysis results, it was observed that studies were mostly conducted between 2011 and 2019 and were often carried out on children with specific learning disabilities. Concerning methodological characteristics, it was seen that the multiple probe design across participants was frequently used as the research design, and subtraction with regrouping problem-solving skills in the field of problem-solving and multiplication skills in the field of four operations skills were included as dependent variables. The CRA strategy is observed to be often presented by the direct instruction method and supported by the REname strategy. Graphical analysis was used in all the studies reviewed. However, statistical analyses were not included in all studies. When the findings regarding evidence-based evaluation were examined, a positive effect was observed in 16 out of 17 studies meeting all the quality indicators. In meta-analysis studies, the results of PND and Tau-U effect size analysis are detailed under the Results heading. These results demonstrate that CRA instruction is an evidence-based practice.

The second and the last review article in this issue with the title of “*Thirty Year Review and Meta-Analysis of Script Fading Procedure*” was authored by *Nihan BOZKURT, Elif KARABULUT, Nergiz KOÇARSLAN, Gül Hayal KORKMAZ, and Elif TEKİN-İFTAR*. This study aimed to synthesize the peer-reviewed journal articles and unpublished graduate theses designed by single-case experimental research investigating the effects of script fading procedure to teach children with ASD. The search period was between 1990 and 2019. The researchers evaluated these studies by using the quality indicators suggested by Kratochwill et al. (2013). Then the researchers calculated the effect size of the studies which met design standards (MS) and met design standards with reservations (MS-R). The researchers conducted electronic search and manual search to obtain the studies and located 54 studies. Studies were evaluated for inclusion and exclusion criteria, and 45 studies were analyzed for qualitative indicators. The researchers located 38 studies as “MS” and “MS-R” and subjected to visual analysis. Of 38 studies, 34 studies (76%) were found to have “strong evidence” and “moderate evidence”. These studies were analyzed descriptively and quantitatively. The analyses show that various communication and interaction skills can be taught to children at different ages with the script-fading procedure. Nineteen studies (55.9%) were found to have a “strong effect,” 11 of the studies (32.3%) as “moderate-strong effective,” and 4 of them (11.8%) as “small effect.” Considering the “5-3-20 rule,” it can be argued that the script-fading procedure is an “evidence-based practice” to teach children with ASD.

I would like to kindly thank once again my colleagues for their vigorous efforts who are working with me on the Editorial Board for our journal to be published timely and to increase the quality. I would like to thank our dear readers, authors, and reviewers for their support and contributions once again and I would like to kindly request you to continue your support and contributions during the ongoing process. I wish to be with you again in the first issue of the 24th volume which will be published in March 2023...

Prof. Hatice BAKKALOĞLU