From the Editor...

Dear Readers,

We are with you again with the Ankara University Faculty of Educational Sciences Journal of Special Education's third issue of December 2025, Volume 26, Issue 4. As it has always 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. I would like to thank you for your keen interest in our journal and hope that your interest will continue.

This issue of our journal features seven research articles and three review articles. I would like to briefly introduce them to you. The first research article in the current issue includes a study of *Gamze ALAK* and *Meral Çilem ÖKCÜN* titled *"Relationship of Nonverbal Communication Functions with Structural and Pragmatic Language Skills in Children with ASD."* This study aims to examine the relationships between initiating joint attention (IJA), responding joint attention (RJA), and initiating behavior regulation (IBR) nonverbal communication functions, as well as structural language skills (number of different words [NDW]), mean length of utterance [MLU]) and pragmatic language skills (taking turns in conversation [TTC]) in Turkish-speaking children with ASD. This study employed a correlational design, a quantitative research method. The research group consisted of 102 children with ASD, with an average age ranging from approximately 34 to 98 months. Structured observational tasks were employed to evaluate the functions of nonverbal communication. Language sample analyses were utilized to assess language skills. The correlation analysis results indicated significant correlations between IJA, RJA, and IBR with NDW, MLU, and TTC. The analysis of hierarchical regression indicated that RJA and IJA significantly predicted NDW, MLU, and TTC, while IBR did not predict any language skills. In Turkish-speaking children with ASD, the role of declarative communication is significant for the development of certain language skills within the structural and pragmatic domains.

The second study namely *"Investigation of Scientist Perceptions of Primary School Students with Learning Disabilities"* was authored by *İlayda AÇIKGÖZ, Ezgi Nur KILIÇ* and *Cemal TOSUN*. This study aims to reveal scientist perceptions of primary school students with learning disabilities. For this purpose, the study was planned according to phenomenological design, one of the interactive research designs of qualitative research methods. The study group consisted of 24 students with learning disabilities studying in public primary schools in Kastamonu and Sakarya provinces. Draw-a-Scientist-Test (DAST) was used as the data collection tool in the study. Additionally, a semi-structured interview form was utilized to increase the understandability of the data. Data were analyzed using DAST-C and inductive analysis techniques. The comprehensibility of the drawings of the students with learning disabilities was supported with interview data. The participants scored between 3 and 10 in the test. Students with learning disabilities had traditional perceptions of scientists in terms of their appearance (lab coat, glasses, messy hair and beard, origin and age) and gender. Additionally, as for the scientists' work environment, it was found that they deviate from the traditional scientist image (except for laboratory instruments, technology symbols and indoor environment). The study revealed that students with learning disabilities have the potential to have perceptions of contemporary scientists through activities. It is recommended that teachers organize activities that will enable students with learning disabilities to have a perception of contemporary scientists.

The third research article in this issue is authored by *Aslin ARSLANOĞLU-ÖSER* and *Yeşim FAZLIOĞLU*, entitled *"The Effectiveness of Think-Read-Ask-Paraphrase Strategy Instruction on the Problem-Solution Text Comprehension of Students with Learning Disabilities."* The objective of this study is to investigate the effectiveness of the "Think-Read-Ask-Paraphrase" strategy instruction presented with the Self-Regulated Strategy Development (SRSD) model on the problem-solution text comprehension of students with LD. This study, designed using a multiple-probe design with probe trials across subjects, which is one of the single-subject research designs, was conducted with three students with LD studying in the fourth and fifth grades. The research findings demonstrated that the "Think-Read-Ask-Paraphrase" strategy was effective on the subjects' text recall and short-answer question response performances. Furthermore, the subjects could maintain their achievements in the maintenance sessions conducted two, four, and six weeks after the intervention. Additionally, the subjects could generalize their achievements to a text of the same type written on a different subject. The subjects' use of cognitive and metacognitive strategies increased. The social validity data showed that the subjects, their teachers, and families found the intervention applicable and effective. The findings agree with the results of similar studies in the literature, which used the "Think-Read-Ask-Paraphrase" strategy presented with the SRSD model. This study found that strategy instruction positively affected the reading comprehension and self-regulated skills of students with LD.

Hatice ÇETİN, and *Selis ÖNCEL* authored the fourth research article, entitled *"Enhancing Pre-Service Primary School Teachers' Knowledge and Perceptions of Dyslexia and Dyscalculia."* This study aimed to evaluate the knowledge and perceptions of pre-service primary school teachers regarding dyslexia and dyscalculia, and to

examine the impact of education on these topics. Within the scope of the quantitative research method, the study took the form of a survey with a weak experimental design. In the first stage of the research, the researchers collected data from 318 participants to measure their knowledge and perceptions of the subject in question. In the second stage of the research, training on dyslexia and dyscalculia was provided by academic experts. The researchers collected data from 42 participants who voluntarily participated in dyscalculia training and 45 participants who voluntarily participated in dyslexia training. The analysis focused on mean scores, standard deviations, and difference scores. The study used dependent sample t-tests for the dyscalculia training data and Wilcoxon signed-rank tests for the dyslexia training data. Significant difference between the teachers' pre-knowledge/pre-perceptions and post-knowledge/post-perceptions was found. The training on dyscalculia and dyslexia was thus effective in improving the knowledge and perceptions of the pre-service teachers. Authors emphasized that it is essential to provide access to such training for pre-service primary school teachers who are going to work with students with learning difficulties such as dyslexia and dyscalculia, and to increase their knowledge and skills in these areas.

The fifth research article, which was authored by *Zeynep UYGUN* and *Emrah BİLGİÇ* is entitled *"Adaptations Implemented in the Science Teaching Process from the Perspective of Classroom Teacher."* This study aimed to identify the adaptations implemented by primary school teachers to enhance the effective teaching of Science courses in inclusive classrooms. Specifically, it examined adaptations in three key areas-purpose, content, and assessment-to facilitate successful inclusion practices for students with special educational needs. A case study design, one of the qualitative research methods, was used in the study. Data were collected from 10 primary school teachers using a semi-structured interview form. The obtained data were analyzed through content analysis using MAXQDA software. A comprehensive content analysis of the research yielded four overarching themes and three sub-themes. The analysis of the collected data revealed that classroom teachers have made some adaptations in their teaching practices to accommodate students with special needs. However, challenges were identified in the implementation, highlighting the need for training in inclusive practices. Furthermore, the analysis revealed that teachers employed various effective strategies, such as engaging in activities, utilizing real-life examples, and employing diverse methods and techniques to facilitate science education for students with special needs. However, the study also highlighted challenges faced by teachers, including the inability to allocate sufficient time to students with special educational needs during science lessons and the difficulty in teaching abstract concepts to these students. As a result, the findings revealed that the primary school teachers participating in the study implemented various adaptations in terms of purpose, content, and assessment, focusing on both physical and instructional modifications to enhance the effectiveness of science teaching for students with special educational needs. However, they also encountered several challenges throughout this process.

The sixth research article in this issue, entitled *"Classical Test Theory and Item Response Theory Validity and Reliability Evidence of Problem Behavior Evaluation Scale*,*"* was authored by *Eylem DAYI, Çetin TORAMAN, Nevin GÜNER, Arzu DOĞANAY-BİLGİ* and *Hasan KÖSE*. This study aims to examine the validity and reliability of the Problem Behavior Evaluation Scale (PBES) evidence, which will evaluate students' problem behaviors based on teachers' observations and perceptions, according to classical test theory and item response theory. We prepared the scale items by conducting a literature review and finalizing them by assessing expert opinions. A total of 590 teachers participated in the study to examine the scale's reliability and validity. Based on the collected data, we examined exploratory factor analysis, confirmatory factor analysis, item characteristic curves, item information functions, and item discriminations according to item response theory. The scale's reliability evidence was determined with Cronbach's Alpha, McDonald's Omega, and marginal reliability coefficients. As a result of the analyses, it is determined that the PCES is a valid scale with 18 items and two factors. The reliability of PBES by Cronbach's Alpha and McDonald's Omega coefficients according to classical test theory and the marginal reliability coefficient according to item response theory were determined. The results showed that the PBES had a high level of reliability. As a result of the analysis, the first factor consisted of 10 items, and the second factor consisted of eight items. With its 18-item and two-factor structure, the PBES is a proper, simple, easy-to-respond scale. The scale can be used in primary schools in Türkiye to assess students' problem behaviors based on teachers' observations and perceptions. It can also provide support for scientific studies on problem behaviors.

The seventh article titled *"The Effectiveness of Direct Instruction Method Using Augmented Reality in Teaching Occupations to Individuals with Autism Spectrum Disorder,"* was authored by *Mehmet YAVUZ*. This research aims to investigate the effectiveness of the direct instruction method, presented through augmented reality, in teaching occupations to individuals with autism spectrum disorder. The study employed a multiple probe design across participants, a single-subject research model. The participants consisted of three individuals with autism spectrum disorder. The results showed that all three participants successfully acquired the target behaviors. It was observed that the participants maintained the learned behaviors for 2, 3, and 4 weeks after instruction and were able to demonstrate these behaviors even when different individuals provided the instructions. To assess the social validity of the study, the teachers of the participants provided positive feedback regarding the target behaviors and the direct instruction method using augmented reality. The use of technology has increasingly

expanded in various fields, including special education. One of the technological applications used in special education is augmented reality. Based on the results of this study, it can be concluded that the direct instruction method using augmented reality is effective in teaching occupations to individuals with autism spectrum disorder. This research could be conducted with different groups of disabilities. The social validity data were obtained from the participants' teachers; future studies could gather insights directly from the participants and their parents. This study specifically examined the effectiveness of augmented reality applications. Future research could explore the effectiveness and efficiency of using augmented reality in conjunction with picture cards for teaching different skills. Lastly, additional findings could be generated by incorporating augmented reality applications in teaching various skills.

The eighth article, and the first review article of this issue, entitled *"Postgraduate Theses on Coaching Practice in Special Education: A Systematic Review Study,"* was authored by *Zekai Alper ALP, Veysel AKSOY* and *Ahmet İlkhan YETKİN*. In this systematic review study, it was aimed to examine descriptively and methodologically the theses involving coaching practices with individuals with special needs and to provide a conceptual framework for coaching practices. In this context, twenty theses, fifteen of which were doctoral theses and five master's theses, were examined in the database of the National Thesis Center of the Council of Higher Education (YÖKTEZ), including the year of production, participants, type of coaching, setting, dependent and independent variables, effectiveness data for acquisition, monitoring and generalization, application, inter-observer reliability and social validity data regarding their reliability and validity. The findings obtained from the study show that the training programs offered to parents, teachers and siblings, which include side-by-side, distance and hybrid coaching practices, are effective in helping individuals with autism spectrum disorder (ASD), intellectual disability, specific learning disability and multiple disabilities to acquire skills, and in helping parents, teachers and typically developing siblings to maintain and generalize the skills acquired by individuals with special needs. In all the theses examined, it is seen that social validity data were collected in addition to intervention and inter-observer reliability data. The findings of the thesis studies included in the review were discussed with the findings of other studies examining coaching practices in the field of special education in the literature and suggestions were made for the future.

Büşra KURTOĞLU-KARATAŞ and *Beyhan Özge YERSEL* authored the ninth article entitled *"Examination of the Presence of Early Intervention in Postgraduate Theses and Dissertations on Attention Deficit and Hyperactivity Disorder Published in Türkiye Between 2013-2023."* This study aims to examine the presence of research on early intervention in postgraduate theses/dissertations on attention deficit hyperactivity disorder (ADHD) conducted in Türkiye. The study employed document analysis, a qualitative research method. The study group consisted of 46 theses/dissertations registered in the Council of Higher Education Thesis Center. Data were collected by searching Council of Higher Education Thesis Center using the keyword "Attention Deficit and Hyperactivity Disorder." The collected data were evaluated using the "ADHD Checklist" and analyzed with MAXQDA 2020 software. The results revealed that the majority of theses/dissertations were conducted between 2016 and 2018, with most being master's theses completed at public universities. It was also found that these theses/dissertations were predominantly carried out in the Department of Psychology, with screening studies being the most common research design. Additionally, most studies focused on school-age children as their sample group and primarily used adapted scales as data collection tools. The analysis indicated that most theses/dissertations did not include early intervention practices. Furthermore, an examination of the target groups for recommendations showed that these recommendations were generally directed at a single group. The review highlights that insufficient attention has been given to early intervention within the field. Despite the acknowledged importance of interdisciplinary collaboration and family involvement in early intervention studies, the recommendations in the examined theses/dissertations were generally one-sided and lacked an interdisciplinary approach, which underscores the inadequacy of these studies in addressing early intervention comprehensively. In conclusion, while ADHD has been studied across various departments, universities, and levels of higher education, existing research lacks sufficient emphasis on early intervention and related recommendations. Future studies on ADHD should place a greater focus on early intervention, consider the collaborative role of families and professionals, and adopt mixed-method approaches for more in-depth insights.

The tenth article which conducted by *Ecem KARABULUT* and *Kamuran TARIM* is titled "*The Effectiveness of Differentiated Mathematics Education on Achievement and Attitude in Gifted Students: A Meta-Analysis Study*." This study aims to investigate the effects of mathematics education programs designed with differentiation methods for gifted students on their academic achievement in mathematics and their attitudes toward mathematics. The data were analyzed using the meta-analysis method. The studies included in the research were published between 2012 and 2023, written in Turkish or English and had a pretest-posttest experimental design with a control group. In line with the specified criteria, 18 studies were included in the meta-analysis for the achievement variable and eight studies for the attitude variable. According to the results of the heterogeneity tests, a random-effects model was used to analyze the effect sizes for both the achievement and attitude variables. The results of the analysis indicate that mathematics education programs developed with differentiation methods

for gifted students have a significant effect on students' mathematics achievement in favor of the experimental group and also have a significant effect on attitudes toward mathematics in favor of the experimental group. Within the scope of subgroup analyses, the results obtained according to moderators such as the country where the study was conducted, grade level, publication type and type of differentiation were reported in detail. The study's findings demonstrate that differentiation methods positively affect academic achievement in mathematics and attitudes toward mathematics of gifted students. In line with these findings, it is recommended that differentiated educational approaches be more widely implemented to enable gifted students to benefit from these programs at the highest possible level.

Dear Readers, in the presence of you 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 its quality. I would like to thank our dear readers, authors, and reviewers for their support and contributions once again and I would like to offer my respects 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 27th volume which will be published in March 2025…

Prof. Hatice BAKKALOĞLU