



Pre-Service Special Education Teachers' Perceptions of Competence, Willingness of Working, and Challenges of Working with Respect to Subfields of Special Education

Özel Eğitim Öğretmen Adaylarının Özel Eğitim Alt Alanlarına Göre Yetkinlik, Çalışma İsteği ve Çalışma Zorluğuna İlişkin Algıları

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ABSTRACT

The purpose of this study is to examine pre-service special education teachers' perceptions of competence, willingness of working, and challenges of working with respect to subfields of special education identified in the special education teacher training program in Turkey. A researcher-created survey named "Perceptions of Competence, Willingness of Working and Challenges of Working Survey" was used in this quantitative research. The sample of the study consists of 174 pre-service special education teachers in İstanbul, Turkey. The findings are as follows: (1) the subfields that the pre-service teachers found themselves more competent were the same as the subfields that they found themselves more willing; (2) the subfields that the pre-service teachers found themselves less competent were the same as the subfields that they found themselves less willing; (3) the subfields of hearing disability and gifted and talented were found in less category in all three dimensions (less competent, less willing, and less challenging); (4) the subfields of autism spectrum disorder and intellectual disability were found in more categories in all three dimensions (more competent, more willing, and more challenging). Regarding correlational analysis, a positive relationship was explored among perceptions of competence and willingness of working for all subfields of special education. Finally, mixed findings were obtained regarding the association between perceptions of competence, willingness of working, and challenges of working by gender. Results present comparative views about subfields of special education.

Keywords: Competence, challenges of working, pre-service teacher, special education, willingness of working

ÖZ

Bu çalışmanın amacı; özel eğitim öğretmen adaylarının Türkiye'deki Özel Eğitim Öğretmen Yetiştirme Programında belirlenen özel eğitim alt alanlarına ilişkin yetkinlik, çalışma isteği ve çalışma zorluğu algılarını incelemektir. Bu nicel araştırmada veri toplama aracı olarak araştırmacılar tarafından geliştirilen Yetkinlik, Çalışma İsteği ve Çalışma Zorluğu Algısı Anketi kullanılmıştır. Araştırmanın örneklemini İstanbul'daki 174 özel eğitim öğretmen adayı oluşturmaktadır. Bulgular şu şekildedir: (1) öğretmen adaylarının kendilerini daha yetkin buldukları alt alanlar ile daha istekli buldukları alt alanlar aynıdır; (2) öğretmen adaylarının kendilerini daha az yetkin buldukları alt alanlar ile daha az istekli oldukları alt alanlar aynıdır; (3) işitme yetersizliği ve özel yetenekliler alt alanları her üç boyutta da daha az kategorisinde bulunmaktadır (daha az yetkin, daha az istekli ve daha az zorlayıcı); (4) otizm spektrum bozukluğu ve zihinsel yetersizlik alt alanları her üç boyutta da daha fazla kategorisinde bulunmuştur (daha yetkin, daha istekli, daha zorlayıcı). Korelasyona analizlerinde, yetkinlik algısı ve çalışma istekliliği algısı arasında tüm alt alanlarda pozitif bir ilişki gözlemlenmiştir. Son olarak, cinsiyete göre yetkinlik, çalışma isteği ve çalışma zorluğu arasında ilişki olduğuna dair karma bulgular elde edilmiştir. Araştırma sonuçları, özel eğitim öğretmen adaylarının özel eğitimin alt alanlarına yönelik karşılaştırmalı görüşlerini sunmaktadır.

Anahtar Kelimeler: Yetkinlik, çalışma zorluğu, özel eğitim, öğretmen adayı, çalışma isteği

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Introduction

Special education practices are driven by many teacher-related factors including teachers' perceptions of competence (Xu et al., 2021), willingness of working (Pit-ten Cate et al., 2018), and challenges of working with students with special needs (Arrah & Swain, 2014). The lack of competence and the willingness of teachers to instruct students with special needs, as well as the challenges that the teachers face during working, can be barriers to successful special education practices. In fact, there might be a multidimensional relationship between the three teacher-related factors. These factors can be different by subfields of special education, which is a student-related factor. While there is no consensus about the number of subfields, the Council of Higher Education included six subfields. These are (1) visual disability (VD), (2) hearing disability (HD), (3) autism spectrum disorder (ASD), (4) gifted and talented (GT), (5) intellectual disability (ID), and (6) specific learning disability (SLD). For the conceptualization of this study, we propose that teachers' perceptions of competence, the willingness of working, and the challenges of working with students with special needs can differ by subfields of special education.

The competence of teachers has been discussed over the decades (Ergül et al., 2013; Nougaret et al., 2005). Competence is defined as "a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world, in a particular domain" (Crick, 2008; p. 313). In its narrow sense in education, it can be simply defined as the skills and knowledge that are necessary to become a successful teacher (Pit-ten Cate et al., 2018). Competence has been studied for a wide range of purposes in the field of special education. One of the purposes is to compare the competence of pre-service teachers toward students with and without special needs as the teacher will be serving in inclusive classrooms when they enter the profession. As examined by Cardona (2009), pre-service teachers with different majors (i.e., kindergarten, elementary, foreign language, physical and musical education) reported a higher level of competence in teaching students without special needs and managing their behaviors. In the same study, while pre-service teachers rated themselves as being the least competent while teaching students with special needs, the pre-service teachers also indicated that special education teachers were more competent in teaching students with special needs and managing their behaviors than regular education teachers. As it has been revealed in a literature review, regular education teachers found themselves less competent in teaching students with special needs (De Boer et al., 2011), it can be concluded that special education teachers are expected to be the most competent teachers to teach students with special needs among other teacher professions. Likewise, special education kindergarten teachers had a higher level of theoretical and practical competence than kindergarten teachers in a variety of areas (Holst & Pihlaja, 2011). In the study by Theeb et al. (2014), pre-service special education teachers reported a high level of theoretical competencies (i.e., individualized educational plan, individualized instructional plan, communicating with families, assessment and diagnosis, personnel, and the use of technology) which can be interpreted by the fact that all competencies were integrated with each other and these competencies were required in special education teacher training programs. Surprisingly, pre-service teachers reported a high level of practice

only in personal competence which can be due to the focus on theoretical aspects rather than practical aspects in special education teacher training programs (Theeb et al., 2014). Competence is particularly important as special education is a diverse field where teachers are expected to produce diverse learning opportunities for students with special needs (e.g., VD, HD, ASD, GT, ID, and SLD). However, the competence of special education teachers in the subfields of special education is not well established in the literature and is often questionable in reality. Only Bannister-Tyrrell et al. (2018) focused on the competence of pre-service teachers (i.e., primary, early childhood, and special education) toward students with special needs. After receiving inclusive education units, pre-service teachers' perceptions of competence from the highest to the lowest were found to be as follows: mild intellectual disabilities, learning disabilities, behavioral disorders, superior cognitive strengths, emotional disorders, and twice-exceptional, (Bannister-Tyrrell et al., 2018), showing that pre-service teachers' competence is varied by diagnostic labels of students with special needs. The fact that having higher competency would increase the likelihood of having positive attitudes toward students with special needs, it is implicitly assumed that competencies may be related to teachers' willingness to work with students with special needs.

Teachers' willingness to work with students with special needs is another factor influencing special education practices since their willingness shows their intentions to carry responsibility for their students (Gilor & Katz, 2021). However, diagnostic labels of students with special needs have become a concern related to teachers' willingness to work with these students (Cassady, 2011). For instance, teachers' willingness to work with students with mild disabilities or physical disabilities is higher than teachers' willingness to work with students with complex needs in the literature reported by Avramidis and Norwich (2002). In this literature review, the underlying reason for teachers' unwillingness is explained by the severe learning needs of students with complex needs. In a cross-cultural study conducted in Turkey and USA, it was reported that both Turkish and American pre-service teachers' willingness to work with students with physical disabilities was higher than their willingness to work with students with either cognitive disabilities or behavioral disabilities due to behavioral problems demonstrated by the students (Rakap et al., 2016). A similar pattern in terms of pre-service teachers' willingness to work with students with severe disabilities was confirmed before/after receiving two special education courses even though there was a substantial increase in their willingness from the first class of course 1 to the last class of course 2 in the study conducted by Rakap et al. (2017). Students with social, emotional, and behavioral difficulties were also at disadvantage; although general education teachers had more experience, they were less willing to include these students in their classrooms (MacFarlane & Woolfson, 2013) because of having felt unprepared about challenging behaviors of students (Avramidis et al., 2000). As research examining teachers' willingness of working with students with different special needs is not conclusive yet, it is worthwhile to examine these areas more thoroughly.

The goal of special education is to provide appropriate instruction that is specifically designed to meet the needs of heterogenous population of students with special needs (Johnson & Semmelroth, 2014). Working with this population can be found as challenging very often by their teachers which can lead to teacher attrition. As is evident, historically, the attrition rate of special

education teachers is relatively high (Billingsley, 2004; Sindelar et al., 2010). While there is a range of factors associated with the onset of attrition and challenges of working, one reason is diagnostic labels of students with special needs. For instance, students with emotional and behavioral difficulties (EBD) are found to be more difficult than any other types of disabilities since students with EBD are tended to be the cause of stress and concern to their teachers (Avramidis et al., 2000). Inversely, ASD was particularly found as challenging as it includes a wide range of conditions (e.g., social communication and social interaction, restricted, repetitive patterns of behaviors) that influence individuals in different ways. Busby et al. (2012), for example, examined a teacher education program in preparing teachers to work with students with disabilities, particularly students with autism. Overarching challenges with respect to teaching students with autism were found as the necessity of a highly individualized process of teaching that requires specialized teachers' skills as well as training (Busby et al., 2012). In addition, these challenges also arise from the complexity of students' behaviors which are also perceived as atypical and outside of the boundaries disrupting the class routines.

Gender differences in relation to special education have been long discussed in previous studies (Bataineh et al., 2010; Pavlidou & Alevriadou, 2022). While the literature in the scope of the present study is very limited, a gender-based difference was detected in perceived challenges of working with students with special needs, as male general education teachers reported a significantly higher level of challenges than female general education teachers (Arrah & Swain, 2014). Therefore, an investigation with a gender focus is necessary to provide further understanding.

Teachers should possess professional competencies and willingness of working in order to deal with professional demands in producing learning opportunities for students with special needs. In contrast, the perceived challenges of working with students with special needs can be an obstacle to producing desired student outcomes and continuing the teaching profession. To contribute knowledge to these neglected factors related to special education practices, we examine pre-service special education teachers' perceptions of competence, the willingness of working, and the challenges of working with respect to subfields of special education which is a pioneering work in special education in Turkey.

A Look at the Special Education Teacher Training Program in Turkey

Two models of teacher training programs which are the concurrent model and the consecutive model are used in many countries in the world. In the concurrent model, students are taught educational, pedagogical, and practicum courses during their 4-year education at the university. In the consecutive model, students take pedagogical and practicum courses after their completion of their undergraduate degrees. The consecutive model is widely implemented for the secondary education teacher (Kavak & Baskan, 2009). The concurrent model, predominantly used in Turkey, has become the norm in most of the European countries (Kilimci, 2009).

The Council of Higher Education, established with Law No 2547 in 1981, is responsible for managing all higher education institutions, such as strategic planning of higher education, coordination between universities, and quality assurance mechanisms (History of the Council of Higher Education, n.d.). The Council of

Higher Education has taken initiatives to improve teacher training programs and ensure consistency across the country. One of the initiatives taken by the Executive Board of Council of Higher Education, dated January 8, 2016, was to change the names of the programs that accept undergraduate students in the field of special education at universities. In line with this decision, different departments (i.e., Department of Education for Intellectual Disabilities, Department of Education for Hearing Disabilities, Department of Education for Visual Disabilities, and Department of Education for Gifted and Talented) were combined as a single undergraduate program named the "Department of Special Education," being effective from 2016 to 2017 academic year.

A new special education teacher training program was also established in the academic year 2016–2017 to be implemented across the country. The new special education teacher training program was released with some requirements and changes, which are like the following (The Council of Higher Education, n.d.): A typical undergraduate special education teacher training program consists of 240 ECTS (European Credit Accumulation and Transfer System). The courses are divided into three areas including (1) professional knowledge courses (28%), (2) general culture courses (13%), and (3) departmental core courses (44%) and departmental elective courses (15%). The new program requires an undergraduate student to take a total of 12 departmental elective courses which are divided into 6 subfields of special education: (1) VD, (2) HD, (3) ASD, (4) GT, (5) ID, and (6) SLD. Each student is required to take at least one elective course from each subfield. To be a specialist in one of those subfields, a student has to take at least seven courses in one field. It is critical for pre-service teachers to fulfill their potential in these subfields of special education in order to work with the diverse population of special needs students after their graduation. More evidence is needed to figure out how pre-service teachers perceive themselves in the new program.

Special education teacher training programs have been renewed consecutively in the last decade. Education is a dynamic process that requires evolution to meet the necessity of the era. These evolutions should be made based on research that examines curriculum changes in special education teacher training programs (Aydın & Şentürk, 2021; Karasu et al., 2014). In this context, more research should be conducted to reduce the gap in the field and provide evidence to policymakers. Thereby, the present study would provide indicative information to policymakers and practitioners by presenting evidence about pre-service teachers' perceptions of competence, willingness of working, and challenges of working with respect to six subfields of special education as identified in the special education teacher training program.

Purpose and Research Questions

The purpose of this study is to examine pre-service special education teachers' perceptions of competence, willingness of working, and challenges of working with respect to subfields of special education identified in the special education teacher training program in Turkey. In line with the purpose of this study, the following research questions are addressed:

1. What is the distribution of teachers' perceptions of competence, willingness of working, and challenges of working with respect to subfields of special education?
2. Is there a correlation between pre-service special education teachers' perceptions of competence, willingness of working,

and challenges of working with respect to subfields of special education?

- Is there a correlation between pre-service special education teachers' perceptions of competence, willingness of working, and challenges of working with respect to subfields of special education and pre-service teachers' gender?

Methods

Research Design

Designed as a survey research, the current study aims to examine pre-service teachers' perceptions with respect to the six subfields of special education. A survey research design is used to explore attitudes, opinions, perceptions, or other characteristics of individuals (Creswell & Creswell, 2005; Charles & Mertler, 2002). Therefore, in this study, we opted for survey research design to examine the pre-service special education teachers' perceptions.

Research Participants

Purposive sampling was used for the recruitment of the participants who were pre-service teachers enrolled in a special education teacher education program at a private university in Istanbul, Turkey. The sample consists of 174 pre-service special education teachers. Gender breakdown in this study was 66.7% for females and 33.3% for males. Regarding the participants' years in the program, 15.5% of them were freshmen, 39.1% of them were sophomores, 31.6% of them were juniors, and 13.8 of them were senior students. With respect to previously gained educational degree, the majority of respondents (81.6%) did not have a degree, while 18.4% of them indicated that they hold a bachelor's degree. The age of the participants ranges from 20 to 42 years old with a mean of 23.15 in this study.

Data Collection Tools

Data were collected through a demographic information form and the Perceptions of Competence, Willingness of Working, and Challenges of Working Survey (CWC-Survey).

Demographic Information Form

The form includes questions about participants' gender, grade levels, and prior diploma/degree. It also provides information about whether they previously graduated from an undergraduate program.

Competence, Willingness of Working, and Challenges of Working Survey

The survey consists of three questions developed by the researchers. During the development, a draft of the survey was sent to the three experts who were occupied in the Department of Special Education to establish the content validity. The experts provided feedback about the clarity of the language and the understandability of the questions. After minor changes, there was 100% agreement among experts. A pilot study was conducted with 5 pre-service special teachers from each grade level (freshmen, sophomores, juniors, and seniors), accounting for a total of 20 pre-service teachers, for the accuracy of questions in the survey.

Pre-service teachers were asked to rank six special education subfields (VD, HD, ASD, GT, ID, and SLD) in terms of perceptions of CWC. In the first question, pre-service teachers were asked to rank their competence in six subfields of special education from the most competent coded as "6" to the least competent coded as "1." In the second question, pre-service teachers were asked to

rank their willingness of working in six subfields of special education from the most willing coded as "6" to the least willing as "1." In the third question, pre-service teachers were asked to rank challenges of working in subfield of special education from the most challenging coded as "6" and to the least challenging coded as "1."

Perceptions of competence, willingness of working, and challenges of working scoring

The participants were asked to rank their CWC in the first, second, and third questions, respectively. Each question has six answer choices. The most preferred choice has the largest weight and the least preferred choice has the lowest weight. In other words, weights were assigned as follows: the most competent/the most willing/the most challenging choice has a weight of 6, the second choice has a weight of 5, the third choice has a weight of 4, the fourth choice has a weight of 3, the fifth choice has a weight of 2, and the least competent/the least willing/the least challenging choice has a weight of 1. Thus, a higher score indicates a higher level of competence, a higher level of willingness of working, and a higher level of challenging of working in subfields of special education.

Data Collection Procedure

An online survey prepared on Google Docs was used to reach out to participants. To protect the confidentiality, identifying markers (i.e., names of participants) were not asked, and "collect IP address" feature was disabled in the online survey tool. In addition, the survey started with a consent letter including information about the study (purpose, approximate time, etc.) and guaranteeing that participation was voluntary, participants had the right to end the survey at any time, and data were kept confidential. The online survey links were sent out two times in the last month of the spring semester of 2021. The survey took 5 minutes to complete in the pilot study.

Research Ethics

Throughout this study, research and publication ethics have been observed carefully. Permission to conduct the study was granted by Biruni University Ethical Board on January 29, 2021, with a protocol number of 2021/47-08.

Data Analysis

All statistical analyses were performed using the statistical package for social science 25. Descriptive statistics analysis including frequency (f), percentage (%), median (*Mdn*), and mode (*Mo*) values were used to summarize the data set. Spearman's rank-order correlation was performed to investigate the relationships among ordinal variables (Myers & Sirois, 2006). Lastly, the chi-square test was carried out to examine whether there is an association between categorical variables (McHugh, 2013). With respect to coding of categorical variables, pre-service teachers' answers were coded as "low" when they opted for 1, 2, or 3 and the answers were coded as "high" when they opted for 4, 5, or 6 in the questions related to their perceptions of CWC with respect to six subfields of special education. The artificial categorization is used to simplify the interpretations of variables, analyses, and results in many fields, such as psychology (DeCoster et al., 2011). DeCoster et al. (2011) further described the categorization of variables as follows: "Standard median splits can be used on either continuous or ordinal variables to turn them into dichotomous variables (that is, categorical variables with two groups). This is done by putting all cases that are below the median into a 'low' group and all cases that are above the median into a 'high' group" (p. 199)."

Results

Descriptive Statistics

To answer the first research question of this study, we examined the median and mode values of CWC with respect to six subfields of special education. The descriptive statistics are shown in Table 1 and Figures 1-3.

As shown in Table 1, pre-service teachers' perceptions of competence with respect to the subfields are found as follows: less competent subfields are VD ($Mdn = 3.00$, $Mo = 3$), GT ($Mdn = 3.00$, $Mo = 1$), HD ($Mdn = 3.50$, $Mo = 3$) and more competent subfields are ID ($Mdn = 4.00$, $Mo = 5$), ASD ($Mdn = 4.00$, $Mo = 6$), SLD ($Mdn = 4.00$, $Mo = 5$). In addition, pre-service teachers' willingness of working with respect to the subfields is found as follows: less willing subfields are VD ($Mdn = 3.00$, $Mo = 1$), HD ($Mdn = 3.00$, $Mo = 2$), and more willingness subfields are GT ($Mdn = 4.00$, $Mo = 6$), ID ($Mdn = 4.00$, $Mo = 5$), SLD ($Mdn = 4.00$, $Mo = 5$), ASD ($Mdn = 4.00$, $Mo = 6$). Finally, challenges of working with respect to the subfields are found as follows: less challenging subfields are SLD ($Mdn = 2.00$, $Mo = 1$), GT ($Mdn = 3.00$, $Mo = 1$), HD ($Mdn = 3.00$, $Mo = 3$), VD ($Mdn = 3.00$, $Mo = 3$) and more challenging subfields are ID ($Mdn = 4.00$, $Mo = 5$), ASD ($Mdn = 5.00$, $Mo = 6$).

Perceptions of Competence with Respect to Subfields of Special Education

Figure 1 shows the percentage of responses to the first question in the survey, which reflects the pre-service special education teachers' perceptions of competence with respect to the six subfields of special education and answers the first research question deeply.

Visual Disability: As seen in Figure 1, while 19.5% of the participants reported VD as the least competent subfield, 5.7% of them reported it as the most competent subfield of special education. The percentage of the second, third, fourth, and fifth choices were 18.04%, 23.00%, 20.01%, and 13.20%, respectively.

Hearing Disability: As presented in Figure 1, while 8.60% of participants reported HD as the least competent subfield, 10.90% of them reported it as the most competent subfield of special education. The percentages of the second, third, fourth, and fifth choices were 19.00%, 22.40%, 19.50%, and 19.50%, respectively.

Autism Spectrum Disorder: As reported in Figure 1, while 14.40% of the participants reported ASD as the least competent subfield, 23.60% of them reported it as the most competent subfield of special education. The percentages of the second, third, fourth,

Table 1.
Descriptive Statistics of Perceptions of Competence, Willingness of Working, and Challenges of Working

	Median	Mode	Min-Max
Competence			
VD	3.00	3	1-6
HD	3.50	3	1-6
ASD	4.00	6	1-6
GT	3.00	1	1-6
ID	4.00	5	1-6
SLD	4.00	5	1-6
Willingness of work			
VD	3.00	1	1-6
HD	3.00	2	1-6
ASD	4.00	6	1-6
GT	4.00	6	1-6
ID	4.00	5	1-6
SLD	4.00	5	1-6
Challenges of work			
VD	3.00	3	1-6
HD	3.00	3	1-6
ASD	5.00	6	1-6
GT	3.00	1	1-6
ID	4.00	5	1-6
SLD	2.00	1	1-6

Note: VD = visual disability; HD = hearing disability; ASD = autism spectrum disorder; GT = gifted and talented; ID = intellectual disability; SLD = specific learning disability.

and fifth choices were 13.80%, 13.20%, 22.40%, and 12.60%, respectively.

Gifted and Talented: As reported in Figure 1, while 28.70% of participants reported GT as the least competent subfield, 21.30% of them reported it as the most competent subfield of special education. The percentages of the second, third, fourth, and fifth choices were 10.90%, 7.80%, 12.60%, and 8.60%, respectively.

Intellectual Disability: As reported in Figure 1, while 14.9% of participants reported ID as the least competent subfield, 19.00% of them reported it as the most competent subfield of special education. The percentages of the second, third, fourth, and fifth choices were 16.70%, 17.80%, 11.50%, and 20.10%, respectively.

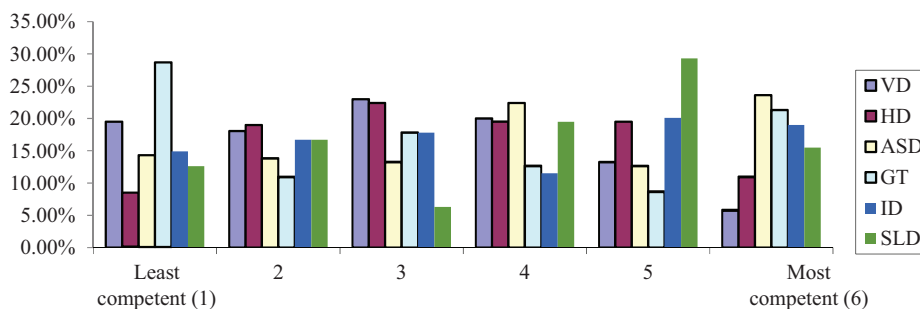


Figure 1.
Percentage of Competence by Subfields of Special Education

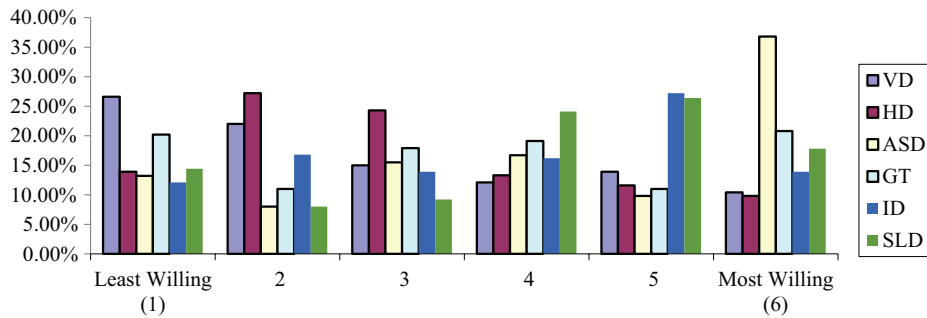


Figure 2.
Percentage of Willingness of Working by Subfields of Special Education

Specific Learning Disability: As reported in Figure 1, while 12.60% of participants reported SLD as the least competent subfield, 15.50% of them reported it as the most competent subfield of special education. The percentages of the second, third, fourth, and fifth choices were 16.70%, 6.30%, 19.50%, and 29.30%, respectively.

Willingness of Working with Respect to Subfields of Special Education

Figure 2 shows the percentage of responses to the second question of the survey, which reflects the pre-service special education teachers' willingness of working with respect to the six subfields of special education and answers the first research question deeply.

Visual Disability: As reported in Figure 2, while 26.60% of participants reported VD as the least willing subfield to work, 10.40% of them reported it as the most willing subfield to work in special education. The percentages of the second, third, fourth, and fifth choices were 22.00%, 15.00%, 12.10 %, and 13.90%, respectively.

Hearing Disability: As reported in Figure 2, while 13.90% of participants reported HD as the least willing subfield to work, 9.80% of them reported it as the most willing subfield to work in special education. The percentages of the second, third, fourth, and fifth choices were 27.20%, 24.30%, 13.30%, and 11.60%, respectively.

Autism Spectrum Disorder: As reported in Figure 2, while 13.20% of participants reported ASD as the least willing subfield to work, 36.80% of them reported it as the most willing subfield to work in special education. The percentages of the second, third, fourth, and fifth choices were 8.00%, 15.50%, 16.70%, and 9.80%, respectively.

Gifted and Talented: As reported in Figure 2, 20.20% of participants reported GT as the least willing subfield to work, 20.80% of them reported it as the most willing subfield to work. The percentages of the second, third, fourth, and fifth choices were 11.00%, 17.90%, 19.10%, and 11.00%, respectively.

Intellectual Disability: As reported in Figure 2, while 12.10% of participants reported ID as the least willing subfield to work, 13.90% of them reported it as the most willing subfield to work in special education. The percentages of the second, third, fourth, and fifth choices were 16.80%, 13.90%, 16.20%, and 27.20%, respectively.

Specific Learning Disability: As reported in Figure 2, while 14.40% of participants reported SLD as the least willing subfield to work, 17.80% of them reported it as the most willing subfield to work in special education. The percentages of the second, third, fourth, and fifth choices were 8.00%, 9.20%, 24.10%, and 26.40%, respectively.

Challenges of Working with Respect to Subfields of Special Education

Figure 3 shows the percentage of responses to the third question of the survey, which reflects the pre-service special education teachers' challenges of working with respect to the six subfields of special education and answers the first research question deeply.

Visual Disability: As reported in Figure 3, 11.50% of the participants perceive working in VD subfield as the least challenging and 12.60% of participants perceive it as the most challenging compared to the other subfields. The percentages for the other response categories are 19.00%, 20.10%, 19.00%, and 17.80%, respectively.

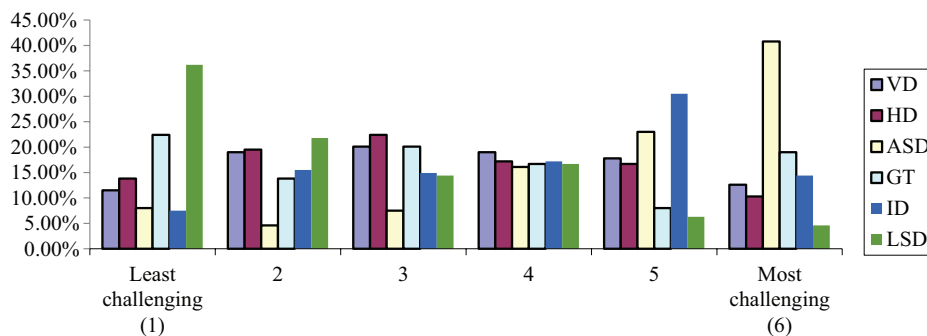


Figure 3.
Percentage of Challenges of Working by Subfields of Special Education

Table 2.
Correlations Between Competence, Willingness of Working, and Challenges of Working by Subfields of Special Education

		1	2	3
VD	1	1		
	2	.252**	1	
	3	.083	-.019	1
HD	1	1		
	2	.357**	1	
	3	.028	-.061	1
ASD	1	1		
	2	.320**	1	
	3	.050	.011	1
GT	1	1		
	2	.313**	1	
	3	-.003	-.178*	1
ID	1	1		
	2	.277**	1	
	3	-.114	-.018	1
SLD	1	1		
	2	.283**	1	
	3	.033	.093	1

NOTE: *Correlation is significant at the .05 level (two-tailed); **Correlation is significant at the .01 level (two-tailed). 1 = competence; 2 = willingness of working; 3 = challenges of working.

VD = visual disability; HD = hearing disability; ASD = autism spectrum disorder; GT = gifted and talented; ID = intellectual disability; SLD = specific learning disability.

Hearing Disability: As reported in Figure 3, 13.80% of the participants perceive working in HD subfield as the least challenging, and 10.30% of participants perceive it as the most challenging compared to the other subfields. The percentages for the other response categories are 19.50%, 22.40%, 17.20%, and 16.70%, respectively.

Autism Spectrum Disorder: As reported in Figure 3, 8.00% of the participants perceive working in ASD subfield as the least challenging and 40.80% of participants in this subfield as the most challenging compared to the others. The percentages for the other response categories are 4.60%, 7.50%, 16.10%, and 23.00%, respectively.

Gifted and Talented: As reported in Figure 3, 22.40% of the participants perceive working in GT subfield as the least challenging and 19.00% of participants perceive it as the most challenging compared to the other subfields. The percentages for the other response categories are 13.80%, 20.10%, 16.70%, and 8.00%, respectively.

Intellectual Disability: As reported in Figure 3, 7.50 % of the participants perceive working in ID subfield as the least challenging and 14.40% of participants perceive this subfield as the most challenging compared to the others. The percentages for the other response categories are 15.50%, 14.90%, 17.20%, and 30.50%, respectively.

Specific Learning Disability: As reported in Figure 3, 36.20 % of the participants perceive working in SLD subfield as the least challenging and 4.60 % of them perceive this subfield as the most

challenging. The percentages for the other response categories are 21.80%, 14.40%, 16.70%, and 6.30%, respectively.

Correlations

To answer the second research question of this study, the correlation between pre-service special education teachers' perceptions of CWC with respect to subfields of special education was determined by Spearman's rank-order correlation analysis since the collected data in this study were ordinal (Zar, 2005). Results are presented in Table 2.

As presented in Table 2, there was a positive significant correlation between pre-service special education teachers' perceptions of competence and their willingness of working for all subfields of special education. However, no significant correlation was observed between their perceptions of competence and challenges of working for all subfields of special education. In addition, there was no significant relationship between pre-service teachers' willingness of working and challenges of working, except for one subfield. A negative significant correlation between willingness of working and challenges of working was observed only for GT.

Gender

To answer the third research question of this study, a chi-square test was carried out to examine the correlation between pre-service special education teachers' gender and their perceptions of CWC. Pre-service teachers' perceptions were classified as low or high based on their responses on a six-point item. The results are shown in Table 3.

As shown in Table 3, a chi-square test of independence showed that there was a significant association between pre-service special education teachers' gender and their perceptions of competence only for SLD, $X^2(1, n = 174) = 7.83, p = .01$. In other words, females were more likely than males to have higher perceptions of competence of work with students with SLD. On the other hand, there were no significant associations between pre-service special education teachers' gender and their perceptions of competence for VD, $X^2(1, n = 174) = 3.09, p = .08$; HD, $X^2(1, n = 174) = 2.59, p = .11$; ASD, $X^2(1, n = 174) = .00, p = 1.00$; GT, $X^2(1, n = 174) = 1.18, p = .28$; and ID, $X^2(1, n = 174) = .56, p = .45$.

In addition, there were significant associations between pre-service special education teachers' gender and their perceptions of willingness of working for VD, $X^2(1, n = 174) = 9.07$ (in favor of males), $p = .00$; HD, $X^2(1, n = 174) = 4.12, p = .04$ (in favor of males); ASD, $X^2(1, n = 174) = 6.54, p = .01$ (in favor of females); and ID, $X^2(1, n = 174) = 12.76, p = .00$ (in favor of females). In contrast, there were no significant associations between pre-service special education teachers' gender and their willingness of working for GT, $X^2(1, n = 174) = 3.78, p = .052$ and SLD, $X^2(1, n = 174) = .84, p = .050$.

Finally, there were significant associations between pre-service special education teachers' gender and their perceptions of challenges of working for HD, $X^2(1, n = 174) = 4.21, p = .04$ (in favor of males) and GT, $X^2(1, n = 174) = 4.21, p = .04$ (in favor of females). There was no significant association between pre-service special education teachers' gender and their challenges of working for VD, $X^2(1, n = 174) = 0.18, p = .67$; ASD, $X^2(1, n = 174) = 0.02, p = .89$; ID, $X^2(1, n = 174) = 0.00, p = 1.00$; and SLD, $X^2(1, n = 174) = 1.17, p = .28$.

Table 3.
Teachers' Perceptions of Competence, Willingness of Working, and Challenges of Working by Gender

	Groups		Gender		Total	χ^2	df	p
			Male	Female				
VD	Competence	High	28	40	68	3.09	1	.08
		Low	30	76	106			
	Total	58	116	174				
HD	Competence	High	34	53	87	2.59	1	.11
		Low	24	63	87			
	Total	58	116	174				
ASD	Competence	High	34	68	102	.0	1	1
		Low	24	48	72			
	Total	58	116	174				
GT	Competence	High	28	46	74	1.18	1	.28
		Low	30	70	100			
	Total	58	116	174				
ID	Competence	High	27	61	88	.56	1	.45
		Low	31	55	86			
	Total	58	116	174				
SLD	Competence	High	29	83	112	7.83*	1	.005*
		Low	29	33	62			
	Total	58	116	174				
VD	Willingness of working	High	30	33	63	9.07	1	.00*
		Low	28	83	111			
	Total	58	116	174				
HD	Willingness of working	High	26	34	60	4.12	1	.04*
		Low	32	82	114			
	Total	58	116	173				
ASD	Willingness of working	High	29	81	110	6.54	1	.01*
		Low	29	35	64			
	Total	58	116	174				
GT	Willingness of working	High	35	53	88	3.78	1	.052
		Low	22	63	85			
	Total	58	116	174				
ID	Willingness of working	High	22	77	99	12.76	1	.00*
		Low	36	39	75			
	Total	58	116	173				
SLD	Willingness of working	High	34	85	119	3.84	1	.050
		Low	24	31	55			
	Total	58	116	174				
VD	Challenges of working	High	30	56	86	.18	1	.67
		Low	28	60	88			
	Total	58	116	174				
HD	Challenges of working	High	32	45	77	4.21	1	.04*
		Low	26	71	97			
	Total	58	116	174				
ASD	Challenges of working	High	46	93	139	.02	1	.89
		Low	12	23	35			
	Total	58	116	174				

GT	Challenges of working	High	18	58	76	5.65	1	.02*
		Low	40	58	98			
	Total		58	116	174			
ID	Challenges of working	High	36	72	108	.00	1	1.00
		Low	22	44	66			
	Total		58	116	174			
SLD	Challenges of working	High	19	29	48	1.17	1	.28
		Low	39	87	126			
	Total		58	116	174			

Note: * $p < .05$.

VD=visual disability; HD=hearing disability; ASD=autism spectrum disorder; GT=gifted and talented; ID=intellectual disability; SLD=specific learning disability.

Discussion

This article explored three teacher-related factors (perceptions of CWC) which can be different by subfields of special education which is a student-related factor. For further scrutiny, pre-service teachers ranked their perceptions of CWC from the most competent, willing, and challenging which was coded as “6” to the least competent, willing, and challenging which was coded as “1.” The midpoint of a six-point ranking was 3.5 which indicated that a participant’s choice above 3.5 was higher in perceptions of CWC, while a participant’s choice below 3.5 was lower in perceptions of CWC. Thereby, it is possible to conclude that the most three competent subfields of special education were SLD, ASD, and ID, and the least three competent subfields of special education were HI, GT, and VD in this study. While this finding was predominantly consistent with a prior study showing that pre-service teachers had a higher level of competence to teach students with intellectual disabilities or students with learning disabilities as compared to students with superior cognitive strengths (Bannister-Tyrrell et al., 2018), contradictory findings exist in the literature (Ergül et al., 2013). For instance, both in-service teachers and pre-service teachers found themselves incompetent in ASD which was also reported as one of the areas that the pre-service special education teachers need more training (Ergül et al., 2013), while in our study, pre-service special education teachers found themselves more competent in ASD. This finding may be explained by pre-service teachers’ willingness of working with students with ASD, SLD, or ID as found in this study. Future studies are needed to investigate the same topic deeply by using different research methods.

Another finding was that the most three willing subfields of special education were ASD, SLD, and ID, and the least three willing subfields of special education were GT, HD, and VD. While the lack of research makes it difficult to compare these findings directly with previous research, it is possible to make some assumptions. One assumption is that the high proportion of students with ASD, SLD, and ID (The Turkish Grand National Assembly Research Commission Report, 2020) may increase the attention of pre-service teachers toward these subfields of special education. Thus, pre-service teachers may feel more competent and more willing to work with students with ASD, SLD, and ID. Similarly, the low proportion of students with GT, HD, and VD in special education population may decrease the likelihood of working with these students which, in turn, leads pre-service teachers to feel less competent and less willing to work with students with GT, HD, and VD. In addition, (1) the subfields that the students found

themselves more competent were same as the subfields that the students found themselves more willing, and (2) the subfields that the students found themselves less competent were same as the subfields that the students found themselves less willing. These assumptions are also confirmed by positive relationship among perceptions of competence and willingness of working explored in this study. This finding is not surprising as teachers perceived themselves as more competent in a certain field, and they are more likely to work with a certain population. There is evidence that well-developed intensive pre-service training is the most effective way of competence (Cardona, 2009). Considering the definition of competence, developing knowledge and skills of pre-service special education teachers through intensive training would be the best way to increase their competence in serving students with HD, GT, and VD, which could also increase their willingness of working with these students.

It was also found that the most three challenging subfields of special education were ASD, ID, and VD, and the least three challenging subfields of special education were found to be HD, GT, and SLD. While research is not conclusive enough to discuss the challenge of working in each field of special education, autism was found challenging due to the wide range of symptoms that have diverse impacts on students (Busby et al., 2012). One pattern that emerged from the data was that ASD and ID were found in more categories in all three factors (more competent, more willing, and more challenging). In other words, although these two subfields were found more challenging, pre-service teachers still feel more competent and more willing to work with these students. Another pattern that emerged from the data was that HD and GT were found in less category in all three factors (less competent, less willing, and less challenging) by pre-service teachers.

There is a significant positive relationship between perceptions of competence and willingness of working for all subfields of special education. While this finding should be interpreted cautiously as it is a correlation, it is an understandable fact that pre-service teachers work in a subfield in which they feel more competent.

This study adds new knowledge to the field of special education by providing evidence that challenges of working basically have zero effect on pre-service special education teachers’ competence and willingness of working since no relationship was found between perceptions of competence and challenges of working and no relationship was found between willingness of working and challenges of working, except for gifted and talented. A significant negative relationship was found between willingness of working and challenges of working for GT. In other words, when

pre-service teachers found it difficult to work with GT students, they were less willing to work with these students. One potential explanation is that GT students have higher-level exceptional needs that require different learning and teaching approaches. For instance, cognitive and constructivist approaches are found to be more appropriate in the education of GT students (Bildiren et al., 2020; Kitano, 2003; Maker & Schiever, 2005), but the current special education program does not consist of these courses, as we have reviewed the course list (The Council of Higher Education, n. d.). In addition to the limited courses in the special education program, the lack of experts in GT education working at the Department of Special Education in Turkey may hinder pre-service special education teachers to take courses related to GT education. On the other hand, it is possible that pre-service teachers have positive perceptions and attitudes toward GT children (Baştuğ & Servi, 2021). For instance, if pre-service teachers have adequate knowledge about GT students, teachers would have positive perceptions and attitudes which may affect their willingness positively. In addition, GT students have higher levels of expectations and standards from their teachers, such as pedagogical and professional expertise, and these students incline to make critical evaluations of their teachers (Vialle & Tischler, 2009). Thus, all of these reasons may increase the likelihood of finding the subfield as more challenging. Although there was no association between pre-service teachers' willingness of working and challenges of working in other subfields of special education, the existence of the negative association for the subfield of GT shows the necessity of future research.

When perceptions of CWC were examined by gender, mixed results were obtained for each subfield of special education. First, gender differences in perceptions of competence were found in favor of females for SLD. Second, gender differences in willingness of working were found in favor of males for VD and HD and in favor of females for ASD and ID. Third, gender differences in challenges of working were found in favor of males in HD and in favor of females in GT. Since they have yet to be researched, we are interested in comparing our findings with the National Education Statistics [NES] of the Ministry of National Education. In the year 2019–2020, there were 15,321 special education teachers working in special education schools at primary, lower secondary, and upper secondary level (NES, 2020). The gender breakdown was 56.2% for females ($n = 8618$) and 43.8% for males ($n = 6703$). Further examination of the available statistical data has indicated that it is possible to make some assumptions in four subfields including HD, VD, ID, and GT. First, the majority of the teachers working in special education schools of HDs at primary, lower secondary, and upper secondary levels, where male pre-service teachers found themselves more competent in our study, are also males (51.1%) in reality. Second, the majority of teachers working in special education schools of VDs at primary, lower secondary, and upper secondary levels, where male pre-service teachers found themselves more willing to work with students with VD in our study, are females (50.6%) in reality. But when the proportion of special education female teachers working in schools for visual disabilities is compared with the proportion of female special education teachers working in all special education schools, an inference can be made that females are less likely to work in schools for VDs. In addition, the majority of teachers working in special education schools of IDs at primary, lower secondary, and upper secondary levels, where female pre-service teachers found themselves more willing to work with

students with ID in our study, are females (55.1%) in reality. Third, the majority of teachers working in the Science and Art Centers, which male pre-service teachers found less challenging in our study, are males (54.4%) in reality. While it is not possible to draw a clear conclusion about why gender difference was detected, it may be related to the cultural norms of the country. Clearly, our findings are in line with the gender proportions of teachers working in these schools.

Conclusion and Recommendations

In conclusion, while the results of the current study present empirical evidence about pre-service special education teachers' perceptions of CWC with respect to subfield of special education, they also provide insights into the preparedness of special education teacher candidates to teach students with special needs. For instance, it is important to examine the underlying reasons for reporting HD, GT, and VD as less-competent subfields of special education. While we recommend examining special education elective course lists offered by the universities, it is also important to note that the special education practicum is most often implemented in educational institutions where students with ASD, students with ID, and students with SLD are educated because of the high proportion and accessibility of these populations. On the other hand, special education practicum opportunities are less available in educational institutions where students with HD and students with VD are educated because of the less proportion and accessibility of these populations. Lastly, teaching practicum is implemented considering the undergraduate program field (Ministry of National Education, 2018). Thereby, the practicum is not able to be implemented in the Science and Art Centers where students with GT are educated due to the policy restriction in Turkey. To increase pre-service teachers' competence, there should be more practical experience opportunities to work with students with VDs, students with HDs, and GT students before they enter the profession. The other recommendation is to review the special education training programs to ensure that undergraduate students have equal opportunities to take courses in different subfields of special education.

The present study would provide indicative information to policymakers and practitioners since pre-service teachers' CWC is wide-ranging with respect to six subfields of special education. This may imply the necessity of faculty members in different subfields of special education at universities to provide equal opportunities to undergraduate students and consider the population of faculty members while establishing new special education undergraduate programs.

The main limitation of the present study is the lack of prior research studies, particularly in pre-service special education teachers' perceptions of CWC that are necessary to support the literature and discuss the findings. In addition, the regional nature of the sample should be considered as a study limitation since the participants are pre-service special education teachers enrolled in one university; therefore, it is not possible to generalize the findings of this study. The other limitation arising from the nature of the sample was to include freshman students as participants in the study as they had taken a limited number of special education courses, which in turn may influence their perceptions. Future research should be extended to different universities and different provinces across the country. While the current study revealed discrepancies

in pre-service special education teachers' perceptions with respect to subfields of special education, the administration of a researcher-created survey that includes three items should be considered as a limitation. Examination of the same topic with a Likert-type scale may be useful for future research.

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Genişletilmiş Özet

Amaç: Özel eğitim uygulamaları; özel gereksinimli öğrencilerle çalışan öğretmenlerin yetkinlik (Xu vd., 2021), çalışma isteği (Pit-ten Cate vd., 2018) ve çalışma zorluğu (Arrah & Swain, 2014) algıları gibi birçok öğretmen kaynaklı faktörden etkilenmektedir. Öğretmenlerin özel eğitim alanında yeterince yetkin olmaması ve çalışma zorlukları, başarılı özel eğitim uygulamaları için engel teşkil edebilir. Aslında, farklı özel eğitim alt alanlarına göre farklılaşabilen öğretmen kaynaklı bu üç faktör arasında çok boyutlu bir ilişki olduğu söylenebilir. Bu faktörler, özel eğitim alt alanlarına göre farklılık gösterebilmektedir. Bu çalışmanın kavramsal temelleri bağlamında, özel gereksinimli öğrencilerle çalışan öğretmenlerin yetkinlik, çalışma isteği ve çalışma zorluğu algılarının farklı özel eğitim alt alanlarına göre farklılık gösterebileceği görülmektedir.

Bu çalışmanın amacı, özel eğitim öğretmen adaylarının Türkiye'deki Özel Eğitim Öğretmen Yetiştirme Programı kapsamında belirlenen özel eğitim alt alanlarına ilişkin yetkinlik, çalışma isteği ve çalışma zorluğu algılarını incelemektir. Bu alt alanlar (1) görme yetersizliği (GY), (2) işitme yetersizliği (İY), (3) otizm spektrum bozukluğu (OSB), (4) özel yetenekliler (ÖY), (5) zihinsel yetersizlik (ZY) ve (6) özel öğrenme güçlüğü (ÖÖG) olarak altı farklı alan olarak belirlenmiştir. Çalışmada şu araştırma sorularına cevap aranmaktadır:

1. Özel eğitim alt alanlarına göre katılımcıların yetkinlik, çalışma isteği ve çalışma zorluğu algıları nasıl bir dağılım göstermektedir?
2. Özel eğitim alt alanları ile özel eğitim öğretmen adaylarının yetkinlik, çalışma isteği ve çalışma zorluğu algıları arasında anlamlı bir ilişki bulunmakta mıdır?
3. Özel eğitim öğretmen adaylarının yetkinlik, çalışma isteği ve çalışma zorluğu algıları öğretmenlerin cinsiyetine göre anlamlı bir farklılık göstermekte midir?

Yöntemler: Nicel yöntem ile yapılan araştırmada, araştırmacılar tarafından geliştirilen 'Yetkinlik, Çalışma İsteği ve Çalışma Zorluğu Algısı Anketi' kullanılmıştır. Anket, üç sorudan oluşmaktadır ve özel eğitim öğretmen adaylarının altı özel eğitim alt alanını yetkinlik, çalışma isteği ve çalışma zorluğu bakımından sıralamaları istenmiştir. Anketin ilk sorusu kapsamında katılımcılardan altı özel eğitimi alanına ilişkin yetkinliklerini '1' ile '6' arasında sıralamaları istenmiştir (6 = en çok yetkin, 1 = en az yetkin). Benzer şekilde, ikinci soruda çalışma isteklerini, üçüncü soruda ise çalışma zorluğunu bu altı alt alana göre sıralamaları istenmiştir. Katılımcıların cevapları çevrimiçi anket yöntemi ile toplanmıştır.

Çalışmanın örneklemini İstanbul ilindeki 174 özel eğitim öğretmen adayı oluşturmaktadır. Katılımcıların %66,7'si kadın, %33,3'ü erkektir. Hepsisi üniversite öğrencisi olan katılımcıların %15,5'i birinci sınıf, %39,1'i ikinci sınıf, %31,6'sı üçüncü sınıf ve %13,8'i dördüncü sınıfta eğitim görmektedir. Katılımcıların yaşları 20 ile 42 arasında değişmekte olup yaş ortalaması 23,15'tir.

Verilere ilişkin öncelikle betimsel istatistik analizlerinden frekans, yüzde, medyan ve mod değerleri hesaplanmıştır. Sıralı değişkenler arasındaki ilişki Spearman sıralama korelasyon katsayısı (Myers & Sirois, 2006) ile incelenmiştir. Son olarak, kategorik değişkenler arasında anlamlı bir ilişki olup olmadığını incelemek için ki-kare testi (McHugh, 2013) uygulanmıştır.

Bulgular: Araştırmanın en önemli bulguları şu şekildedir: (1) öğretmen adaylarının kendilerini daha yetkin buldukları alt alanlar (ÖÖG, OSB, ZY) ile daha istekli (çalışma) buldukları alt alanlar aynıdır; (2) öğretmen adaylarının kendilerini daha az yetkin buldukları alt alanlar (İY, ÖY, GY) ile daha az istekli oldukları alt alanlar aynıdır (3) işitme yetersizliği ve özel yetenekliler alt alanları her üç boyutta da daha az kategorisinde bulunmaktadır (daha az yetkin, daha az istekli ve daha az zorlayıcı); (4) otizm spektrum bozukluğu ve zihinsel yetersizlik alt alanları her üç boyutta da daha fazla kategorisinde bulunmuştur (daha yetkin, daha istekli, daha zorlayıcı). Yapılan korelasyon analizi sonucunda ise tüm özel eğitim alt alanları için yetkinlik algısı ile çalışma isteği algısı arasında pozitif yönde anlamlı bir ilişkinin olduğu görülmüştür. Çalışma istekliliği ile çalışma zorluğu algıları arasında ise özel yetenekliler alt alanı dışındaki hiçbir alt alanda anlamlı bir ilişki bulunmamıştır. Özel yetenekliler alt alanında ise çalışma istekliliği ve çalışma zorluğu arasında negatif yönde anlamlı bir ilişki gözlemlenmiştir. Benzer şekilde, yetkinlik algısı ve çalışma zorluğu boyutlarında da hiçbir özel eğitim alt alanına göre anlamlı bir ilişki bulunmamıştır. Son olarak, cinsiyete göre yetkinlik, çalışma isteği ve çalışma zorluğu arasında ilişki olduğuna dair karma bulgular elde edilmiştir.

Tartışma: Mevcut çalışmanın yetkinlik algısına ilişkin bulguları, öğretmen adaylarının üstün bilişsel özelliklere sahip olan öğrencilere kıyasla zihinsel yetersizliği olan öğrenciler ya da özgül öğrenme güçlüğü olan öğrencilerle çalışmada daha fazla yetkin olduklarını gösteren önceki araştırma bulguları (Bannister-Tyrrell vd., 2018) ile uyumludur. Öğretmen adayları OSB alanında kendilerini daha yetkin bulmuş olsa da alan yazında aksini gösteren bulgulara ulaşıldığını da belirtmek gerekir (Ergül vd., 2013). Örneğin, özel eğitim öğretmen adaylarının daha fazla eğitime ihtiyaç duydukları alanlardan biri olarak da belirtilen OSB'de hem öğretmen hem de öğretmen adayları kendilerini yetersiz bulmuşlardır (Ergül vd., 2013). Mevcut çalışmanın öğretmen adaylarının çalışma istekliliğine ilişkin bulguları, OSB, ZY ve ÖÖG alt alanlarında öğrenci sayısının fazla olması ile ilişkilendirilebilir (Türkiye Büyük Millet Meclisi Araştırma Komisyonu Raporu, 2020). Bu özel eğitim alt alanlarında öğrenci yoğunluğunun fazla olması aday öğretmenlerin bu alanlara ilişkin ilgisini arttırdığı düşünülebilir. Son olarak, bu çalışma ÖY alt alanı dışındaki tüm özel eğitim alt alanlarında, çalışma zorluğunun özel eğitim öğretmen adaylarının yetkinlik ve çalışma istekliliği üzerinde bir etkisi olmadığı bulgusu ile özel eğitim alan yazınına önemli bir katkı sunmaktadır. Öğretmen adaylarının ÖYli öğrencilerle çalışma isteği ve çalışma zorluğu algıları arasında negatif bir ilişki bulunmuştur. Üstün zekalı ve yetenekli öğrencilerin eğitiminde bilişsel ve yapılandırıcı yaklaşımların daha uygun olduğu görülmektedir (Bildiren vd., 2020; Kitano, 2003; Maker ve Schiever, 2005). ÖYli öğrencilerin üst düzey öğrenme ve öğretme yaklaşımlarına ihtiyaç duymaları öğretmen adaylarının bu öğrencilere yönelik çalışma zorluğu algılarını etkilemiş olabileceği düşünülebilir.

Sonuç ve Öneriler: Mevcut çalışma, özel eğitim öğretmen adaylarının altı özel eğitim alt alanına ilişkin yetkinlik, çalışma isteği ve çalışma zorluğu algılarına yönelik ampirik bulgular sunarken, özel eğitim öğretmen adaylarının farklı özel gereksinime sahip olan öğrencilere yönelik hazırbulunuşluğuna ilişkin bir bulgu sağlamaktadır. Araştırmanın bulguları, Özel Eğitim Öğretmenliği Bölümü öğrencilerinin farklı özel eğitim alt alanlarında ders alabilmelerini sağlayacak şekilde Özel Eğitim Öğretmenliği Programı'nın gözden geçirilmesini ve üniversitelerde uzmanlık alanları farklı olan öğretim üyelerinin istihdam edilmesini önermektedir.