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THE RELATIONSHIP BETWEEN SPECIAL EDUCATION TEACHERS' ATTITUDES TOWARDS ASSISTIVE TECHNOLOGIES AND CLASSROOM MANAGEMENT SKILLS

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Abstract

Assistive technologies are frequently used by special education teachers working with students affected by disability. The effective use of assistive technologies by teachers depends on their attitudes towards technology. Classroom management is one of the most important elements of effective teaching. One of the main purposes of classroom management is to create an orderly and safe classroom environment that will increase the motivation and responsibility of children and enable them to learn. In this study, it was aimed to examine the relationship between special education teachers' attitudes towards assistive technologies and their classroom management skills. Relational survey model was used in the research. 170 special education teachers working in the Turkish Republic of Northern Cyprus participated in the research. Attitude towards Assistive Technologies Scale and Classroom Management Skills Scale were used as data collection tools. Data analyzes were performed using the Statistical Package for Social Sciences (SPSS) 24.0 program. It was concluded that there was a positive correlation between special education teachers' general attitude scores towards assistive technology and behavioral, affective and cognitive components sub-dimensions and classroom management skills scores. As a result of the research, the research results were discussed within the framework of the literature and recommendations for further research and practices were included.

Keywords: Assistive technologies, attitude, classroom management skills, special education teachers.

INTRODUCTION

Special education is defined as the education process that is given to individuals with special needs, who are different from their peers, in order to make individuals with special needs independent, socialize and be productive, by supporting them to reach the highest level in line with their qualifications, preventing the disability effect from becoming insufficient (Ataman, 2011). It is stated that special education teachers are trained personnel who provide daily education, training and life support to individuals with special needs (Billingsley & Bettini, 2019). Teachers working with individuals with special needs are not expected to use a single educational method or material for individuals with different developmental characteristics. At this point, special education teachers should evaluate the needs of individuals with special needs in the best way and plan them with the most appropriate materials in the most appropriate educational environment. The use of technology

and appropriate materials is of great importance in creating a suitable environment. According to Can-Yasar and Uyanik (2013), use of technology is a necessity to increase the quality of education and to contribute to the development of children of all ages.

Educational technology is the process of using technology resources in education with certain methods and techniques by following a systematic planning based on research and theories in the field of learning and communication in behavioral sciences. Given the general benefits of using technology in education and training, it is possible to include that it is motivating and interesting to the child; contributes to lasting experiences; develops skills and behavior; has wide applicability and provides education based on needs (Culp, Honey, & Mandinach, 2005).

Language, communication and auditory perceptions, visual perceptions, establishing cause-effect relationships, memory and learning characteristics of students with special needs show a certain limitation compared to students with typical development. All individuals with special needs should be able to benefit from educational opportunities and special education services in line with their interests and abilities. The use of technology in special education offers different ways of learning to meet the different needs of individuals with special needs and to overcome the difficulties in their learning lives. With this understanding, it is beneficial to make various adaptations in the education given to individuals with special education needs and also to use technology applications in teaching materials in accordance with the needs (McLeskey & Waldron, 2002).

The use of technology offers new ways of teaching and learning to everyone in the learning process. It also provides the opportunity to create and present an environment suitable for students' characteristics. The use of technology in special education is described as the concept of "special education technology" and explained in two ways as "assistive technologies" and "instructional technologies" (Edyburn, 2001; Senjam, 2019; Bouck & Long, 2021). Assistive technologies are defined as any tool used to facilitate the life of individuals with special needs, in order to reduce or eliminate the limitations experienced by the individuals with disabilities in interaction with the individuals around them. Pettersson and Fahlstrom (2010) stated that assistive technologies are the use of any tool that allows individuals with disabilities to eliminate the difficulties they may encounter in education, professional, daily and social life, to develop their competencies and to make the most of their existing capacities.

Assistive technologies are categorized as low, medium and high technology devices. Visual cards/pictorial symbols, visual charts, pencil holders, adapted pencils and worksheets, reading magnifiers, highlighter markers and pens, adapted scissors, page turners are examples for low-tech materials; timers, reading pen, talking calculators, talking dictionary are examples of mid-tech materials and tablet computers, smart phones, smart boards, smart watches, virtual reality, augmented reality applications, smart personal assistants, digital books, mobile applications and computer software can be given as examples of complex and high-level technologies (Kaye, Yeager, & Reed, 2008). Instructional technologies, on the other hand, are defined as a field that covers the processes of analyzing learning-based performance problems, designing, developing, applying, evaluating and managing teaching processes and resources to improve learning performance. Building a bridge between the field of special education and technology and making the necessary arrangements for individuals with disabilities provides equal opportunities and opportunities in education for individuals with disabilities (Aslan, 2018).

Effective use of assistive technologies by teachers depends on their attitudes towards assistive technologies (Kisla, 2008). Teachers who have positive attitudes about assistive technologies make use of technology applications for students to achieve success and give more space to use these technologies in classroom activities. In studies investigating attitudes towards assistive technologies in the literature, it has been reported that teachers generally exhibit a positive attitude (Maushak, Kelley, & Blodgett, 2001; Garcia & Seevers, 2005; Murugaiyan & Arulsamy, 2013; Aslan & Kan, 2017).

Studies reveal the strong link between student achievement and classroom management. The findings of these studies show that the most important factors affecting the learning of all students with and without special needs in the classroom are classroom management and teacher behaviors (Wang, Haertel, & Walberg, 1993; Stage & Quiroz, 1997; Marzano & Marzano, 2003). Accordingly, an effective classroom management that paves the way for success increases student participation, reduces problem behaviors and ensures the best use of education time. Therefore, it is emphasized that the development of teachers' classroom management strategies is important for the effectiveness of education (Akalin, 2015).

Classroom management includes the organization of the physical environment of the classroom, the management of planning and programming activities, the management of relationships and communication in the classroom, and the management of children's behavior (Martin & Sass, 2010). Classroom management skills include classroom teaching management, classroom procedures and routine working style, arranging physical order in the classroom and managing student behavior (Akin & Kocak, 2007). Classroom management is the process of guiding student behaviors to make the classroom ready for learning (Turan, 2006). It is indispensable for an effective classroom management that teachers love their job and are motivated when entering the classroom.

For individuals with special needs, education is one of the most important channels necessary for them to maintain their independence in their lives. Since children with special needs cannot benefit from general education services, they should receive education and training services in line with individualized education programs (IEP), depending on the degree and type of their disability. In this context, studies on the function of assistive technologies and ways to benefit from the opportunities they provide are increasing all over the world. It is very important that students with special needs, who are expected to achieve certain gains they need due to their disabilities, achieve the desired educational success (Maata, 2016). The most effective element in this process is teachers. One of the most important tasks of teachers in achieving educational success is to create an effective learning environment in the classroom by increasing the motivation of students for the lesson. One of the most important factors in the formation of an effective learning environment is the use of assistive technology. In addition, it is thought that the use of assistive technologies in the classroom will contribute positively to classroom management.

When the literature is examined, it is seen that there are limited number of studies examining the relationship between special education teachers' attitudes towards assistive technologies and their classroom management skills. With this research, it is aimed to determine the level of relationship, to take necessary precautions to understand the relationship between special education teachers' classroom management skills and their attitudes towards assistive technologies, and to make recommendations for further research. Therefore, in this study, it is aimed to determine the relationship between the attitudes of special education teachers in the Turkish Republic of Northern Cyprus towards assistive technologies and their classroom management skills. In line with this aim, answers to the following questions were sought in this study:

1. Do special education teachers' attitudes towards assistive technologies differ significantly according to age, gender, educational level, professional seniority and daily working hours?
2. Do special education teachers' classroom management skills differ significantly according to age, gender, educational level, professional seniority and daily working hours?
3. Is there a significant relationship between special education teachers' attitudes towards assistive technologies and their classroom management skills?

METHOD

Research model

The relational survey model was used in this study, which was conducted to reveal the relationship between special education teachers' attitudes towards assistive technologies and their classroom

management skills and to examine them in terms of various variables. Relational survey models are research designs that determine the existence and degree of change between two or more variables (Karasar, 2009).

Study group

A total number of 170 teachers working as special education teachers in the Turkish Republic of Northern Cyprus participated in this research. Demographic characteristics of special education teachers are shown in Table 1. In the selection of the study group of the research, easily accessible purposeful sampling method was used. This method was used to reach the data in a more practical way. The easily accessible sampling method adds speed and practice to the research (Yildirim & Simsek, 2018).

The percentage and frequency distributions of the participants according to demographic variables are shown in Table 1. As it can be seen from the table, 45.29% of the teachers participating in the research are in the age group of 20-29, 38.82% of them are in the age group of 30-39, 15.88% of them are in the age group of 40 and above. In addition, 51.76% of them are female and 48.24% are male. It was determined that 37.06% of them had 1-5 years, 41.18% of them had 6-10 years and 21.76% of them had 11 years or more professional seniority and 83.53% of the special education teachers have graduate and 16.47% of them have postgraduate degree. It was also observed that 33.53% of the teachers work 1-5 hours a day, 52.35% of them work between 6 and 10 hours and 14.12% work 11 hours and more.

Table 1. Distribution of Teachers by Demographic Characteristics

	Number (n)	Percentage (%)
Age		
20-29 years	77	45.29
30-39 years	66	38.82
40 years and above	27	15.88
Gender		
Female	88	51.76
Male	82	48.24
Professional seniority		
1-5 years	63	37.06
6-10 years	70	41.18
11 years and above	37	21.76
Educational level		
Graduate	142	83.53
Postgraduate	28	16.47
Daily working hours		
1-5 hours	57	33.53
6-10 hours	89	52.35
11 hours and above	24	14.12

Data Collection Tools

Teacher Demographic Information Form

This form was prepared by the researchers in order to obtain information about age, gender, professional seniority, educational level and daily working hours of special education teachers who participated in this research.

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Attitude Towards Assistive Technologies Scale

Attitudes Towards Assistive Technologies Scale developed by Aslan and Kan (2017) was used to determine the attitudes of the special education teachers included in the study towards assistive technologies. Attitudes Towards Assistive Technologies Scale is an 18-item scale prepared using a five-point Likert-type rating. There are 4 sub-dimensions in the scale: Behavioral component, Affective component, Negative emotion component and Cognitive component. As a result of the Cronbach Alpha reliability test conducted in this study, the reliability coefficient for the scale was found to be 0.911 and it was determined that the data collected from the scale was reliable.

Classroom Management Skills Scale

In this study, the "Classroom Management Skills Scale" developed by Denizel-Guven and Cevher (2005) was used to determine the classroom management skill levels of teachers. The scale was prepared in a 4-point Likert type and consists of 40 items collected under one dimension. Evaluation of the Likert-type scale is made in the form of four-point scales as "always", "often", "rarely" and "never". The reliability of the data obtained from the participants was tested with the Cronbach Alpha coefficient. The Cronbach Alpha value of the scale was calculated as .96. Based on this data, it was decided that the data collected with the scale met the reliability condition.

Data collection

Since the research was carried out during the Covid-19 epidemic, the prepared scales were sent to the teachers via e-mail and messaging programs and they were asked to answer them electronically. The data were collected by reaching 170 special education teachers via Google Forms. The answers from the teachers were recorded electronically. After the data collection process was completed, the collected data were evaluated for analysis.

Data analysis

The analysis of the data obtained in the research was carried out using the Statistical Package for Social Sciences (SPSS) 24.0 program. In accordance with the sub-objectives of the research, the following statistical operations were performed. In order to determine the hypothesis tests to be used in the research, the Kolmogorov-Smirnov test was applied to examine the normal distribution of the data and it was determined that it did not show normal distribution. Kruskal-Wallis H test was used to determine whether the attitudes towards assistive technologies and classroom management skills of teachers working in special education schools differ according to age, educational status, professional seniority and Mann-Whitney U test to determine whether they differ according to gender. Spearman correlation analysis was conducted to determine the relationship between the attitudes of teachers working in special education schools towards assistive technologies and their classroom management skills.

RESULTS

In this section, the results revealed by analysis of data are presented. First, an attempt is made to determine the attitudes towards assistive technologies and classroom management skills of special education teachers. Then, the results of correlational analysis regarding whether there is a relationship between the attitudes towards assistive technologies and classroom management skills of special education teachers are presented.

Table 2. Special Education Teachers' Scores on Attitude Towards Assistive Technologies Scale

	n	Mean	Std.Dev.	Min	Max
Behavioral component	170	17.34	5.16	5	25
Affective component	170	15.94	4.46	5	25
Negative emotion component	170	10.74	3.73	4	20
Cognitive component	170	10.34	3.,20	3	15
Attitude Towards Assistive Technologies Scale	170	54.35	12.64	17	85

TIJSEG
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The descriptive statistical values related to scores obtained in general and from sub-dimensions of the Attitude Towards Assistive Technologies Scale by special education teachers are given in Table 2. When Table 2 is examined, it was determined that special education teachers obtained an average of 17.34±5.16 points from the behavioral component sub-dimension of the Attitude Towards Assistive Technologies Scale, 15.94±4.46 points from the affective component sub-dimension, 10.74±3.73 points from the negative affect component sub-dimension and an average of 10.34±3.20 points from cognitive component sub-dimension. It was found that special education teachers got an average of 54.35±12.64 points from the Attitude Towards Assistive Technologies Scale with the lowest score being 17 and the highest score being 85.

Table 3. Comparison of Teachers' Attitude Towards Assistive Technologies by Age Groups

	Age Group	n	Mean	Std.Dev.	Median	SA	χ^2	p	Difference
Behavioral component	20-29 years	77	19.16	4.63	20.00	104.32	20.785	.000*	1-2
	30-39 years	66	15.71	5.08	15.00	68.77			1-3
	40 years and above	27	16.11	5.25	15.00	72.74			
Affective component	20-29 years	77	16.87	4.53	18.00	97.17	8.095	.017*	1-3
	30-39 years	66	15.24	4.10	15.50	77.00			
	40 years and above	27	14.96	4.76	15.00	73.00			
Negative emotion component	20-29 years	77	10.16	3.35	10.00	77.49	3.756	.153	
	30-39 years	66	11.14	3.70	12.00	92.14			
	40 years and above	27	11.44	4.62	12.00	92.11			
Cognitive component	20-29 years	77	11.17	3.18	11.00	99.29	11.643	.003*	1-2
	30-39 years	66	9.82	3.04	9.00	76.27			1-3
	40 years and above	27	9.22	3.18	9.00	68.74			
Attitude Towards Assistive Technologies Scale	20-29 years	77	57.35	12.41	58.00	99.82	11.937	.003*	1-2
	30-39 years	66	51.91	11.78	53.00	73.61			1-3
	40 years and above	27	51.74	13.89	51.00	73.72			

**p<.05 (χ2: Kruskal-Wallis H test)*

Table 3 shows the findings obtained from the Kruskal Wallis H test regarding the comparison of teachers' scores on the scale of Attitude Towards Assistive Technologies Scale by age groups. When Table 3 is examined, it was determined that the difference between the scores of the teachers in the Attitude Towards Assistive Technologies Scale by age groups and the behavioral component, affective component and cognitive component sub-dimensions in the scale was statistically significant (p<0.05). The scores of the 20-29 age group teachers in the Attitude Towards Assistive Technologies Scale in general and in the behavioral component and cognitive component sub-dimensions of the scale are higher than the other teachers. In addition, teachers in the age group of 20-29 are higher in the affective component sub-dimension than teachers in the age group of 40 and over. It was determined that there was no statistically significant difference between the scores of the negative emotion component sub-dimension of the scale according to the age group of the teachers (p>.05).

Table 4. Comparison of Teachers' Attitude Towards Assistive Technologies by Gender

	Gender	n	Mean	Std.Dev.	Median	SA	Z	p
Behavioral component	Female	88	18.61	5.25	20.00	98.76	-3.645	.000*
	Male	82	15.96	4.72	16.00	71.27		
Affective component	Female	88	16.60	4.54	17.00	93.45	-2.189	.029*
	Male	82	15.22	4.29	15.00	76.97		
Negative emotion component	Female	88	9.45	3.57	10.00	67.70	-4.900	.000*
	Male	82	12.12	3.40	12.00	104.60		
Cognitive component	Female	88	11.07	3.24	11.00	97.09	-3.199	.001*
	Male	82	9.55	2.99	9.00	73.07		
Attitude Towards Assistive Technologies Scale	Female	88	55.74	12.99	57.00	92.22	-1.846	.065
	Male	82	52.85	12.16	54.00	78.29		

**p<.05 (Z: Mann-Whitney U test)*

TIJSEG
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In Table 4, Mann-Whitney U test results for the comparison of the scores obtained from the Attitude Towards Assistive Technologies Scale according to gender variable. It was revealed that there was a statistically significant difference between the scores of the teachers in the Attitude Towards Assistive Technologies Scale in general and the behavioral component, affective component, negative emotion component and cognitive component sub-dimensions of the scale (p<.05). While female teachers' scores on the Attitude towards Assistive Technologies Scale and the behavioral component, affective component and cognitive component sub-dimensions of the scale were higher than male teachers, their scores on the negative emotion component sub-dimension were found to be lower.

Table 5. Comparison of Teachers' Attitude Towards Assistive Technologies by Professional Seniority

	Professional Seniority	n	Mean	Std.Dev.	Median	SA	χ^2	p	Difference
Behavioral component	1-5 years	63	19.02	4.89	20.00	103.24	13.536	.001*	1-2
	6-10 years	70	16.11	4.67	16.00	72.66			1-3
	11 years and above	37	16.78	5.79	14.00	79.59			
Affective component	1-5 years	63	17.13	4.67	18.00	100.16	9.338	.009*	1-2
	6-10 years	70	15.06	3.80	15.00	74.70			1-3
	11 years and above	37	15.57	4.91	15.00	80.97			
Negative emotion component	1-5 years	63	10.27	3.39	10.00	78.15	8.246	.016*	2-3
	6-10 years	70	11.59	3.50	12.00	98.27			
	11 years and above	37	9.95	4.42	10.00	73.85			
Cognitive component	1-5 years	63	11.48	3.03	12.00	104.29	14.797	.001*	1-2
	6-10 years	70	9.69	2.74	9.50	73.81			1-3
	11 years and above	37	9.62	3.80	9.00	75.64			
Attitude Towards Assistive Technologies Scale	1-5 years	63	57.89	12.86	59.00	101.89	11.126	.004*	1-2
	6-10 years	70	52.44	10.94	52.50	76.27			1-3
	11 years and above	37	51.92	14.17	50.00	75.05			

**p<.05 (χ2: Kruskal-Wallis H test)*

The Kruskal-Wallis H test results regarding the comparison of the scores obtained from the Attitude Towards Assistive Technologies Scale according to professional seniority variable are shown in Table 5. When Table 5 is examined, it was determined that there is a statistically significant difference between the scores of the teachers from the overall scale and its subcomponents according to professional seniority (p<.05). Teachers with a professional seniority of 1-5 years received lower scores from the overall attitude scale and from the behavioral component, affective component and cognitive component sub-dimensions of the scale compared to other teachers. In addition, the scores of the teachers with a professional seniority of 11 years or more in the sub-dimension of the negative emotion component were found to be lower than the teachers with a professional seniority of 6-10 years.

TIJSEG
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www.tijseg.org
Turkish International Journal of Special Education and Guidance & Counseling 2023, volume 12, issue 1

Table 6. Comparison of Teachers' Attitude Towards Assistive Technologies by Educational Level

	Educational level	n	Mean	Std.Dev.	Median	SA	Z	p
Behavioral component	Graduate	142	17.24	5.12	18.00	84.97	-3.082	.214
	Postgraduate	28	18.05	4.92	18.00	92.25		
Affective component	Graduate	142	15.99	4.65	16.00	86.80	-2.639	.267
	Postgraduate	28	16.35	3.96	16.00	89.38		
Negative emotion component	Graduate	142	10.96	3.62	11.00	88.03	-.902	.637
	Postgraduate	28	10.35	3.87	10.00	80.34		
Cognitive component	Graduate	142	10.37	3.10	11.00	86.06	-1.658	.437
	Postgraduate	28	10.60	3.25	11.00	89.24		
Attitude Towards Assistive Technologies Scale	Graduate	142	54.56	13.31	54.50	86.78	-2.676	.262
	Postgraduate	28	55.35	10.36	57.00	89.46		

(χ^2: Kruskal-Wallis H test)

In Table 6, the results of the Mann-Whitney U test used to compare the scores of the Attitude Towards Assistive Technologies Scale according to teachers' educational level are given. According to the table, it was determined that there was no statistically significant difference between overall scores of the teachers obtained from the scale and its subcomponents according to their educational level (p>.05). In other words, the scores of teachers with graduate and postgraduate degrees from the scale are similar.

Table 7. Comparison of Teachers' Attitude Towards Assistive Technologies by Daily Working Hours

	Daily working hours	n	Mean	Std.Dev.	Median	SA	χ^2	p	Difference
Behavioral component	1-4 hours	57	18.30	5.01	19.00	95.38	6.827	.033*	1-3
	5-8 hours	89	17.33	5.04	18.00	84.92			2-3
	9 hours and above	24	15.08	5.44	14.00	64.21			
Affective component	1-4 hours	57	17.00	4.58	17.00	98.21	8.604	.014*	1-3
	5-8 hours	89	15.78	4.13	16.00	83.13			2-3
	9 hours and above	24	14.00	4.82	14.50	64.10			
Negative emotion component	1-4 hours	57	10.33	3.81	10.00	79.04	1.966	.374	
	5-8 hours	89	10.84	3.60	11.00	87.10			
	9 hours and above	24	11.33	4.03	12.00	94.92			
Cognitive component	1-4 hours	57	11.18	3.24	11.00	100.06	12.783	.002*	1-3
	5-8 hours	89	10.28	3.08	10.00	83.60			2-3
	9 hours and above	24	8.54	2.93	9.00	57.98			
Attitude Towards Assistive Technologies Scale	1-4 hours	57	56.81	12.88	58.00	96.37	7.138	.028*	1-3
	5-8 hours	89	54.22	11.32	54.00	84.15			2-3
	9 hours and above	24	48.96	15.31	49.50	64.71			

**p<.05 (χ^2: Kruskal-Wallis H test)*

According to the findings in Table 7, there are statistically significant differences between the overall attitude scale towards assistive technologies and the scores of the behavioral component, affective component and cognitive component sub-dimensions in the scale according to the daily working

hours of the teachers (p>.05). The scores of teachers with a daily working time of 9 hours or more in the scale of attitude towards assistive technologies and in the behavioral component, affective component and cognitive component sub-dimensions of the scale were found to be lower than the other teachers. It was determined that there was no statistically significant difference between the scores of the negative emotion component sub-dimension according to the daily working hours of the teachers (p>.05).

Results on Special Education Teachers' Classroom Management Skills

Table 8. Special Education Teachers' Scores on Classroom Management Skills

	n	Mean	Std.Dev.	Min	Max
Classroom Management Skills Scale	170	135.41	28.81	69	200

The descriptive statistical values related to scores obtained from the Classroom Management Skills Scale by special education teachers are given in Table 8. When Table 8 was examined, it was determined that special education teachers included in the study got an average of 135.41±28.81 points from the classroom management skill scale and it was also determined that the lowest score was 69 and the highest score was 200.

Table 9. Comparison of Special Education Teachers' Classroom Management Skills Scale by Age Groups

	Age group	n	Mean	Std.Dev.	Median	SA	χ^2	p	Difference
Classroom Management Skills Scale	20-29 years	77	140.42	26.83	148.00	96.80	9.579	.008*	1-2
	30-39 years	66	128.20	27.71	126.50	71.35			2-3
	40 years and above	27	138.74	33.98	139.00	87.87			

**p<.05 (χ^2: Kruskal-Wallis H test)*

As seen in Table 9, it was determined that there is a statistically significant difference between special education teachers' Classroom Management Skills Scale scores according to age groups (p>.05). This difference stems from the teachers in the 30-39 age group scored lower than the other teachers.

Table 10. Comparison of Special Education Teachers' Classroom Management Skills Scale by Gender

	Gender	n	Mean	Std.Dev.	M	SA	Z	p
Classroom Management Skills Scale	Female	88	142.24	26.34	148.50	99.03	-3.715	.000*
	Male	82	128.07	29.69	126.50	70.98		

**p<.05 (Z: Mann-Whitney U test)*

Table 10 shows the findings obtained from the Mann-Whitney U test, which was conducted to compare the Classroom Management Skill Scale scores of special education teachers included in the study by gender. According to Table 10, the difference between the scores of the special education teachers participating in the study from the Classroom Management Skill Scale according to their gender was found to be statistically significant and the Classroom Management Skill Scale scores of female teachers were found to be higher than male teachers (p<.05).

Table 11. Comparison of Special Education Teachers' Classroom Management Skills Scale by Professional Seniority

	Professional seniority	n	Mean	Std.Dev.	Median	SA	χ^2	p	Difference
Classroom Management Skills Scale	1-5 years	63	141.73	25.73	149.00	99.23	17.023	.000*	1-2
	6-10 years	70	125.59	26.94	125.00	66.91			2-3
	11 years and above	37	143.22	32.32	149.00	97.30			

**p<.05 (χ^2: Kruskal-Wallis H test)*

TIJSEG
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The results of the comparison of the Classroom Management Skills Scale scores according to the professional seniority of the teachers participating in the research are given in Table 11. It was determined that there was a statistically significant difference between the scores of the Classroom Management Skills Scale according to the professional seniority of the teachers (p>.05). As it can be seen from the table, Classroom Management Skills Scale scores of teachers with professional seniority between 6-10 years were found to be lower than other teachers.

Table 12. Comparison of Special Education Teachers' Classroom Management Skills Scale by Educational Level

	Educational level	**n**	Mean	**Std.Dev.**	**Median**	**SA**	**Z**	**p**
Classroom Management Skills Scale	Graduate	142	132.14	27.72	139.00	80.59	-2.416	.299
	Postgraduate	28	137.73	26.05	143.00	89.61		

(χ^2: Kruskal-Wallis H test)

Table 12 shows special education teachers' classroom management skills based on educational level and results showed that there is no significant difference between special education teachers' classroom management skills and their educational level (p>0,05).

Table 13. Comparison of Special Education Teachers' Classroom Management Skills Scale by Daily Working Hours

	Daily working hours	**n**	Mean	**Std.Dev.**	**Median**	**SA**	χ^2	**p**
Classroom Management Skills Scale	1-4 hours	57	137.25	28.44	148.00	91.87	1.724	.422
	5-8 hours	89	134.79	27.13	138.00	83.58		
	9 hours and above	24	133.33	36.04	125.50	77.50		

**p<.05 (χ^2: Kruskal-Wallis H test)*

Table 13 shows the results of the Kruskal-Wallis H test for comparing Classroom Management Skills Scale scores according to the daily working hours of the teachers included in the study. According to Table 13, it was determined that there was no statistically significant difference between teachers' classroom management skills according to their daily working hours (p>0.05).

Results on Correlational Analysis between Special Education Teachers' Attitudes Towards Assistive Technologies and Classroom Management Skills

Table 14. Correlations between Special Education Teachers' Attitudes Towards Assistive Technologies Scale and Classroom Management Skills Scale Scores

		Classroom Management Skills Scale
Behavioral component	r	.580
	p	.000*
Affective component	r	.507
	p	.000*
Negative emotion component	r	-.177
	p	.021*
Cognitive component	r	.520
	p	.000*
Attitude Towards Assistive Technologies Scale	r	.519
	p	.000*

**p<.05*

Table 14 shows the results on the correlations between special education teachers' scores on Attitudes Towards Assistive Technologies Scale and Classroom Management Skills Scale. It was concluded that there was a positive correlation between special education teachers' general attitude scores towards assistive technology and behavioral, affective and cognitive components sub-dimensions and classroom management skills scores ($p<.05$). It was also found that there was a positive correlation between special education teachers' general attitude scores towards assistive technology and negative emotion component sub-dimensions and classroom management skills scores ($p<.05$). According to these results, it can be said that the more positive the attitudes of special education teachers towards assistive technology, the higher their classroom management skills.

DISCUSSION CONCLUSION, and RECOMMENDATIONS

Results of the present study showed that special education teachers generally have a high level of attitude towards assistive technologies. In the light of these results, it can be said that the attitudes of special education teachers towards assistive technologies are positive. When the literature is examined, it was observed that the attitudes of special education teachers towards assistive technologies are generally positive (Kisla, 2011; Onivehu, Ohawuiro, & Oyeniran, 2017; Maich, Rhijn, Woods, & Brochu, 2017). In contrast, Sakallı Demirok, Haksiz and Nuri (2019) revealed that teachers' attitudes towards assistive technologies are neither positive nor negative and that the attitudes of teachers working in special education towards assistive technologies are in the range of "Undecided".

Based on these results, it can be said that making practices to eliminate factors such as lack of knowledge about assistive technologies, lack of specialists, lack of financial support, which cause teachers to have negative attitudes towards assistive technologies, will positively increase teachers' attitudes towards assistive technologies, thus increasing the quality of assistive technology use in education.

According to the results, special education teachers' attitudes towards assistive technologies showed statistically significant difference based on their age, gender, professional seniority and daily working hours. Similar with these results, Kisla (2008) concluded that teachers' attitudes towards technology increase significantly with the increase in their professional seniority. Kutlu, Schreglmann and Cinisli (2017) concluded that age variable is one of the influential factors on teachers' use of assistive technology. In the light of the results, the fact that teachers' seniority causes them to have positive attitudes towards assistive technologies can be associated with being able to observe the positive results of using these technologies. As the age level decreases, the reason for the positive attitudes towards assistive technologies can be shown as the necessity of the use of technology in the current era. It can be said that the use of technology in the newly developed teacher training programs has been the cause of this situation.

Results of the present study showed that female teachers' attitudes towards assistive technologies were more positive than male teachers. When the literature is examined, Bahceci (2019) found that female teachers' attitudes towards assistive technologies are more positive than male teachers in his study. On the other hand, Alhossein and Aldawood (2017) found a low-level significant relationship between teachers' attitudes towards assistive technologies according to the gender variable.

On the other hand, results also showed that special education teachers' attitudes towards assistive technologies showed no difference according to their educational level. There are contradictory results in the literature regarding these results. Bahceci (2019) found that teachers with higher education levels had a more positive attitude towards the use of assistive technology.

According to the results, special education teachers generally have a high level of classroom management skills. Results revealed that special education teachers' classroom management skills showed statistically significant difference based on their age, gender and professional seniority.

However, special education teachers' classroom management skills did not show any difference according to their educational level and daily working hours. Contrary to the findings of the study,

According to the results of the study, there was a positive correlation between special education teachers' general attitude scores towards assistive technology and behavioral, affective and cognitive components sub-dimensions and classroom management skills scores. In addition, there was a positive correlation between special education teachers' general attitude scores towards assistive technology and negative emotion component sub-dimensions and classroom management skills scores. When the literature is examined, it is seen that there are limited number of studies examining the relationship between special education teachers' attitudes towards assistive technology and their classroom management skills.

The high classroom management skills of special education teachers enable them to easily manage the problems they encounter in the classroom. It can be interpreted that these skills may cause teachers to experience less stress in the face of classroom problems. It is understood from the regression analysis results that some of the special education teachers' attitudes towards assistive technologies are related to their classroom management skills. Therefore, it is understood that there are other variables associated with the attitude towards assistive technologies.

Recommendations

Based on the results of this research, some recommendations are presented. Arrangements should be made for the provision of assistive technologies according to the needs of teachers, and support services for existing assistive technologies used in schools should be developed. The primary needs of teachers who have individuals with special needs in their classrooms should be determined, and education should be given in the light of this information after the method, where and from whom they want to receive assistive technology training should be determined systematically.

In further research, a training program can be prepared, the purposes of using assistive technologies, the benefits of assistive technologies, and the resources that special education teachers can access to assistive technologies, and then the effectiveness of this training can be tested. Within the scope of this research; Situation determination was made by examining the opinions about the attitudes towards assistive technologies. In advanced research, technical problems and problems in the use of assistive technology can be examined. Quantitative methods were used to collect and analyze data in the research. More descriptive and different findings can be obtained by using qualitative methods and techniques on the same subject.

Ethics and Conflict of Interest

We declare that we act in accordance with ethical principles in all processes of this study. There is no conflict of interest between the authors.

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