



Teacher Attitude and Self-Efficacy in Science Education for Mainstreamed Students*

Research Article

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ABSTRACT

The purpose of this study is to detect whether primary and secondary schools teachers' attitudes and self-efficacy differ according to certain variables regarding mainstreamed education and determine the relationship between them. Quantitative method is used in the survey of the scanning model. The sample of the research is a total of 310 teachers, including 251 class and 59 science teachers, which are working in foundation and private primary and secondary schools. The teachers who have participated in the study are 197 women and 113 men. In the study, "Personal Information Form" consisting of 17 substances, "The Teacher Self-Efficacy Scale in Science Education for Mainstreamed Students", consisting of 21-items, with the Cronbach alpha coefficient .94 and "Attitude Scale Towards Mainstreaming", consisting of 30 substances, with the Cronbach alpha coefficient .92. Responses obtained from the sample group have been analysed by coding in SPSS 22 program. As a result of the study, when the attitudes and self-efficacy of teachers in science education for mainstreamed students are evaluated, it is found that their self-efficacy levels are high and their attitude levels are above the mid-level. In addition, when the correlations between dependent variables are examined, it is determined that there is no meaningful relationship between teachers' self-efficacy levels and attitude levels in science education for mainstreamed students.

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Keywords:

Mainstreamed, mainstreamed education, science education, teacher attitude, teacher self-efficacy.

Introduction

According to the "*Universal Declaration of Human Rights*, every individual has the right to education", the equally beneficial use of each individual in education has been one of the main elements of education and the right to education for each individual is guaranteed by law. When this universal expression is taken into consideration, students with special needs should also have the conditions of normal education and benefit from the educational facilities that other individuals benefit from (Bayar, Özaşkın and Bardak, 2015).

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Special education as a form of education is defined as a result of the assessment of the need for specific requirements and covers the needs of different education requirements that can be met with individualized education plan (Eripek, 2005). Special education for these students differs from the basic education in terms of content and program creation. In general education the program determines by the school, in special education the requirements of children determine the program. With this curriculum, the inhibitory effects of an individual with special needs are minimized or the ability to compensate for its inability is given. There are no separate teaching methods for individual with special needs and normal development individuals. At least similarities are more than differences. Special teaching teachers who perform effective teaching use the methods applied by teachers who are successful in training (Eripek, 2005) Only the difference between general education and special education; special education teacher individualize programs according to the lack of individuals IDR (Individual Development Report), to prepare IC (Individual Curriculum) and use appropriate strategies and methods in practice (Ataman, 2003).

Individuals with special needs according to their disability; attention deficit and hyperactivity disorder, mood and behaviour disorder, mental retardation, visual impairment, hearing impairment, orthopaedics inadequacy, autism, language and speech difficulties, persistent disease and superior gifted individuals (Özel Eğitim Hizmetleri Yönetmeliği, 2012).

Mainstreamed is *“special education applications based on the continuation of the education of individuals in need of special education, support education services and their inadequately disabled peers together with official and private; pre-primary, primary, secondary and non-formal education institutions”* (Özel Eğitim Hizmetleri Yönetmeliği, 2006).

Mainstreamed training enables individuals with special needs to interact with their peers without alienating them from society and to meet their own needs. As a result, Mainstreamed education is not directed towards the inadequacies of students, but rather to their abilities (Anılan and Kayacan, 2015). In the classroom in which the mainstreamed training is applied, students must perform effective and lasting learning without distinction, regardless of the obstacle conditions (Ataman, 1996).

There are various factors that affect the success of mainstreaming activities. In the mainstreaming program, the teacher is an important factor in the learning and success of the students (Ataman, 1996; Batu and Kırcaali-İftar, 2011). In particular, teachers' attitude towards mainstreaming is very important in achieving success in mainstreamed training (Avramidis and Norwich, 2002; Valeo, 2008; Forlin and Chambers, 2011). Because there is a parallelism between the formation of the attitude and the formation of the behaviour (Silah, 2000). Since teacher behaviours are one of the factors that influence mainstreaming practice, it is important to know the attitudes of the teachers involved in primary and secondary schools in order to continue their education in educational institutions according to the principle of equality and for effective mainstreaming education (Kayhan, Şengül and Piştav-Akmeşe, 2012). First of all, teachers should be positive in their attitude and believe that the practice of inclusive education is beneficial and they will succeed (Çankaya, 2010).

In addition to this, awareness of self-efficacy perceptions about mainstreamed within the elements that affect the attitudes of teachers towards mainstreamed education is seen as an important issue in the point of increasing the attitudes of teachers towards mainstreamed education and taking precautions. The teacher's level of self-efficacy is of great importance in his/her behaviour in the classroom, in raising students and in academic success (Bandura, 1994). Self-efficacy belief is that an individual can feel good in many ways by believing in his capacity and performing in events that affect his life (Bandura, 1988). It is thought that there is a strong relationship between teacher self-efficacy and student success.

The science course is one of the most challenging courses for students. Eliminating this difficulty is only possible with qualified teachers who make the course enjoyable and know the modern teaching approach and

apply it (Hançer, Şensoy and Yıldırım, 2003). The vision of Science and Technology course is to educate all students, regardless of the individual differences of the students, as science and technology literacy (MEB, 2005).

In the literature, it is observed that studies on teachers' views and attitudes towards mainstreamed education are taken into consideration, but teachers' self-efficacy levels for mainstreamed are limited. In addition, it has been determined that studies on attitudes and self-efficacy of teachers in science teaching for mainstreamed are not adequately covered in the literature. It is thought that this study will be useful in the solution of the deficiency in the literature. In this study, it is aimed to determine teacher self-efficacy levels and attitudes related to mainstreamed practices in science education according to some demographic variables and to determine the relationship between self-efficacy perceptions and attitude level of teachers in mainstreamed education. Because the knowledge of teachers' self-efficacy levels and attitudes towards mainstreaming education is very crucial for eliminating teachers' deficiencies in these areas.

Method

Model of Research

In this study, general survey model and quantitative research method are used to determine the attitudes and self-efficacy of teachers in science education for mainstreamed students.

Sample of Research

The sample of the research is composed of the teachers of the class and science that serve in the official, foundation and private status of primary and secondary schools in the villages of Kars province and central provinces of Kars for 2016-2017 academic year. A total of 310 teachers, 251 class and 59 science, participated in the study. Among the teachers who participated in the study, 197 are women and 113 are men.

Data Collection Tools

In this study, "*Personal Information Form*", "*Attitude Scale Towards Mainstreaming*" and "*Teacher Self-Efficacy Scale in Science Education for Mainstreamed Students*" are used.

Personal Information Form

There are questions to identify the person in the personal information form. They are "teachers' gender", "teachers' age", "type of school the teachers worked", "teachers' branches", "teachers' marital status", "teachers' vocational seniority", "whether teachers take lessons, courses, seminars or not about mainstreaming education" and "working status of teachers in the past with mainstreamed students".

Attitude Scale Towards Mainstreaming

In this study, the Attitude scale developed by Özbaba (2000) is used. The scale consists of 30 items. The items in the scale are created in order to understand the attitude of educators towards mainstreaming students. The validity and reliability studies of the attitude scale for mainstreamed are carried out by Özbaba (2000). The Cronbach alpha coefficient of the scale is expressed as 0.92. As a result of the factor analysis conducted for the validity of the scale, it is found that 22 of the items constituting the scale formed the *Behavioral Dimension*, 6 of the items constituting the scale formed the *Emotional Dimension*, are expressed as the second factor and 2 of the items constituting the scale formed the *Cognitive Dimension*, are the third factor.

Teacher Self-Efficacy Scale in Science Education for Mainstreamed Students

In the process of developing the "Teacher Self-Efficacy Scale in Science Education for Mainstreamed Students" in the study, similar qualified researches have been identified by examining the field related to the subject. Pool of 150 items have been established by taking into consideration the studies of Seferoglu (2004), Çelik, Şanal and Yeni (2005), Özel Eğitim Hizmetleri Yönetmeliği (2006), MEB (2008), Karacaoğlu (2008) and Köksal (2008). These articles are presented to the opinions of experts who are experts in the field of Science education, biology education and the field of measurement and evaluation. In addition, a Turkish language expert was consulted in order to ensure language validity. Based on the opinions from the experts, a 5-point likert-type, 44-point draft scale was created. The pilot study of the draft scale was carried out with 291 class and science teacher in the 2016-2017 academic year in Ardahan province. To determine the construct validity of the scale and to determine the factor loads of the items, Explain Factor Analysis was made by using principal component analysis with varimax rotation. In the analysis, the factor loadings (item correlation coefficients) should be at least .30 (Pallant, 2016). As a result of the validity and reliability analyses, the "Teacher Self-Efficacy Scale in Science Education for Mainstreamed Students" was developed by the researcher, which has a three-factor structure consisting of 21 substances. It is determined that the scale of the item loads varies between .63 and .81 and that the variance of the three factors on the scale is 60.19%. Internal consistency test of the scale consisting of twenty-one items The Cronbach alpha reliability coefficient was determined as .94. 11 items in the first factor are related to "Self-Efficacy for Teaching and Learning Processes", 5 items in second factor are related to "Self-Efficacy for Science Education" and five items in third factor are related to "Self-Efficacy for Personal and Professional Development".

Data Analysis

The data were analysed by using SPSS (Statistical Package for Social Sciences) computer software version 22. As a result of analyzes, it was determined that the data on the sub-dimensions of both scales did not show normal distribution. For this reason, comparisons have been made by using non-parametric analysis methods.

Findings

The Mann Whitney-U test of the self-efficacy levels of science teachers for mainstreamed students according to their gender is given in Table 1.

Table 1. Mann Whitney-U test for self-efficacy levels in science education for mainstreamed students according to the gender of teachers

Sub-dimensions	Gender	N	X	Ss	Sequence average	Sequence total	U	P
Personal and professional development	Female	197	22.2	2.58	166.3	32753.0	9011.0	.01*
	Male	113	21.1	3.33	136.7	15452.0		
Teaching and learning process	Female	197	44.7	7.53	165.3	32567.5	9196.5	.01*
	Male	113	42.5	7.07	138.4	15637.5		
Science education	Female	197	19.5	4.37	160.1	31546.0	10218.0	.23
	Male	113	19.01	4.00	147.4	16659.0		
Total self-efficacy	Female	197	86.37	12.59	165.1	32533.0	9231.0	.01*
	Male	113	82.58	12.51	138.7	15672.0		

Table 1 when analysed, it is determined that the levels of self-efficacy in science education for mainstreamed students according to the gender of the teachers who participated in the study does not

statistically significantly different ($p>.05$), however, at the level of personal and professional development, teaching and learning process and total self-efficacy, female participants have significantly higher self-efficacy than male participants ($p<.05$).

The Kruskal Wallis-H test belonging to the self-efficacy levels of science teachers for mainstreamed students according to age groups is given in Table 2.

Table 2. Kruskal Wallis-H test for self-efficacy levels in science education for mainstreamed students according to age groups of teachers

Sub-dimensions	Age group	N	X	Ss	Sequence average	χ^2	p	Difference between groups
Personal and professional development	Under26	54	21.9	2.70	158.1	6.18	.40	-
	26-30	95	22.0	2.87	163.8			
	31-35	65	21.6	2.88	147.8			
	36-40	42	20.8	3.52	129.8			
	41-45	23	22.4	2.48	169.6			
	46-50	17	22.0	2.68	158.9			
	50+	14	22.3	3.05	174.8			
Teaching and learning process	Under26	54	45.1	7.21	169.4	8.93	.18	-
	26-30	95	44.6	7.30	164.9			
	31-35	65	44.1	6.96	153.8			
	36-40	42	41.4	8.43	128.6			
	41-45	23	44.7	8.02	167.4			
	46-50	17	42.0	6.88	123.0			
	50+	14	43.3	6.90	147.1			
Science Education	Under26	54	20.3	3.44	175.6	16.44	.01*	1>4
	26-30	95	19.5	3.95	158.8			1>6
	31-35	65	19.9	3.92	166.0			2>4
	36-40	42	17.2	5.0	118.0			2>6
	41-45	23	19.65	4.365	166.2			3>4
	46-50	17	16.94	4.750	107.8			3>6
	50+	14	19.21	4.791	159.6			4<5
Total self-efficacy	Under26	54	87.37	11.430	171.7	12.26	.06	-
	26-30	95	86.18	12.480	163.7			
	31-35	65	85.45	12.226	158.2			
	36-40	42	79.36	14.783	120.0			
	41-45	23	86.65	12.655	169.3			
	46-50	17	80.82	12.249	121.5			
	50+	14	84.79	10.541	150.5			

Table 2 when examined, it is determined that the level of personal and professional development, teaching and learning process and total self-efficacy levels of teachers in science education for mainstreamed students according to age groups does not statistically significantly different ($p>.5$), however, the levels of self-efficacy in science education statistically significantly different from the participants in terms of age groups ($p<.05$)

The Kruskal Wallis-H test for self-efficacy levels of teachers in science education for mainstreamed students according to the type of school the teachers studied were given in Table 3.

Table 3. The Kruskal Wallis-H test result for self-efficacy levels of teachers in science education for mainstreamed students according to the type of school the teachers studied

Sub-dimensions	School type	N	X	Ss	Sequence average	χ^2	p	Difference between groups
Personal and professional development	Public school	271	22.0	2.69	160.3	6.29	.04*	1>2
	Private school	26	20.7	3.19	124.9			
	Foundation School	13	19.5	5.17	117.4			
Teaching and learning process	Public school	271	44.1	7.49	159.0	3.39	.18	-
	Private school	26	42.5	7.53	132.6			
	Foundation School	13	42.2	5.82	127.7			
Science Education	Public school	271	19.3	4.29	155.9	.47	.79	-
	Private school	26	19.5	4.16	159.3			
	Foundation School	13	19.0	3.56	139.5			
Total self-efficacy	Public school	271	85.4	12.78	159.3	4.20	.12	-
	Private school	26	82.7	11.99	134.1			
	Foundation School	13	80.7	11.08	118.4			

Table 3 when examined, it is determined that the teaching and learning process, science education and total self-efficacy levels of the teachers who participated in the study does not statistically significantly different according to the school type ($p>.5$), however, the level of self-efficacy in the personal and professional development statistically significantly different according to the type of school in which the participants work ($p<.05$).

The Mann Whitney-U test of the self-efficacy levels of science education for the mainstreamed students according to the branches of the teachers who participated in the research is given in Table 4.

Table 4. Mann Whitney-U test for self-efficacy levels in science education for mainstreamed students according to teachers' branches

Sub-dimensions	Branch	N	X	Ss	Sequence average	Sequence total	U	p
Personal and professional development	Class	251	21.8	2.93	157.8	39604.5	6830.5	.35
	Science education	59	21.5	2.90	145.8	8600.5		
Teaching and learning process	Class	251	44.0	7.50	156.1	39184.0	7251.0	.80
	Science education	59	43.8	7.19	152.9	9021.0		
Science education	Class	251	19.1	4.32	151.4	38002.0	6376.0	.10
	Science education	59	20.2	3.79	172.9	10203.0		
Total self-efficacy	Class	251	84.9	12.84	155.2	38957.0	7331.0	.90
	Science education	59	85.4	12.03	156.8	9248.0		

Table 4 when examined, it is observed that the levels of personal and professional development, teaching and learning process, science education and total self-efficacy levels in science education are not statistically significantly different according to the branches of teachers involved in the study ($p>.05$).

The Mann Whitney-U test was given in Table 5 for mainstreamed students in science education according to the marital status of the teachers involved in the study.

Table 5. Self-efficacy levels in science education for mainstreamed students according to teachers' marital status Mann Whitney-U test result

Sub-dimensions	Marital status	N	X	Ss	Sequence average	Sequence total	U	p
Personal and professional development	Married	187	21.6	2.99	149.4	27932.5	10354.5	.13
	Single	123	22.1	2.79	164.8	20272.5		
Teaching and learning process	Married	187	43.5	7.47	150.2	28091.5	10513.5	.20
	Single	123	44.6	7.34	163.5	20113.5		
Science Education	Married	187	19.0	4.35	150.2	28081.5	10503.5	.19
	Single	123	19.7	4.04	163.6	20123.5		
Total self-efficacy	Married	187	84.0	12.74	148.6	27786.0	10208.0	.09
	Single	123	86.4	12.47	166.0	20419.0		

According to the marital status of the science education for the mainstreamed students teachers who participated in the study, it was observed that the levels of personal and professional development, teaching and learning process, science education and total self-efficacy did not differ statistically significantly ($p>.05$).

According to the seniority of the teachers who participated in the study, Kruskal Wallis-H Test belonging to self-efficacy levels in science education for mainstreamed students is given in Table 6.

Table 6. Kruskal Wallis-H test for self-efficacy levels in science education for mainstreamed students according to teachers' vocational seniority

Sub-dimensions	Vocational seniority	N	X	Ss	Sequence average	χ^2	p	Difference between groups
Personal and professional	1-5 year	130	22.1	2.85	165.9	5.26	.26	-
	6-10 year	73	21.6	2.97	149.5			
	11-15 year	37	20.9	3.17	129.8			
	16-20 year	40	21.8	3.03	157.1			
	20+ year	30	21.9	2.54	154.9			
Teaching and learning process	1-5 year	130	45.2	7.19	171.1	13.56	.01*	1>3
	6-10 year	73	44.2	6.78	159.1			1>5
	11-15 year	37	41.4	8.22	123.5			2>3
	16-20 year	40	43.6	7.74	154.7			2>5
	20+ year	30	41.1	7.41	119.8			
Science Education	1-5 year	130	20.0	3.79	168.8	14.15	.01*	1>5
	6-10 year	73	19.9	3.61	164.4			2>5
	11-15 year	37	18.5	4.84	143.2			
	16-20 year	40	18.6	4.74	144.8			
	20+ year	30	16.6	4.88	105.9			
Total self-efficacy	1-5 year	130	87.3	11.98	171.5	.01	.01*	1>3
	6-10 year	73	85.7	11.69	159.8			1>5
	11-15 year	37	80.8	15.00	130.3			2>5

16-20 year	40	84.0	13.09	150.3
20+ year	30	79.6	11.97	113.9

Table 6 when analysed, it is determined that the level of personal and professional development self-efficacy in science education for the mainstreamed students according to the vocational seniority of teachers participating in the study did not differ statistically significantly ($p>.5$), however, the teaching and learning process, science education and total self-efficacy levels differ statistically significantly according to the participants' vocational seniority ($p<.05$).

The Mann Whitney-U test of self-efficacy levels in science education is given in Table 7 according to the status of the teachers participating in the research regarding the course of education and training on mainstreaming training.

Table 7. Mann Whitney-U test result of self-efficacy levels in science education according to the status of the teachers participating in the research regarding the course of education and training on mainstreaming training

Sub-dimensions	Getting education status	N	X	Ss	Sequence average	Sequence total	U	p
Personal and professional	Yes	156	21.9	2.76	159.2	24835.5	11434.5	.46
	No	154	21.6	3.08	151.8	23369.5		
Teaching and learning process	Yes	156	44.5	7.18	161.7	25225.5	11044.5	.22
	No	154	43.3	7.65	149.2	22979.5		
Science education	Yes	156	19.4	4.28	159.1	24816.0	11454.0	.48
	No	154	19.2	4.20	151.1	23389.0		
Total self-efficacy	Yes	156	85.9	12.52	161.8	25246.0	11024.0	.21
	No	154	84.1	12.8	149.1	22959.0		

Table 7 when examined, the teachers involved in the study course/seminar related to mainstreaming etc. it is observed that the levels of personal and professional development, teaching and learning process, science education and total self-efficacy in science education for mainstreamed students are not statistically significantly different ($p>.05$).

The Mann Whitney-U test of self-efficacy is given in Table 8 according to whether the teachers participating in the research have received any undergraduate courses on special education in science education for the students of mainstreamed.

Table 8. Mann Whitney-U test result of self-efficacy levels in science education for mainstreamed students according to whether teachers take any undergraduate courses on special education

Sub-dimensions	Course taking status	N	X	Ss	Sequence average	Sequence total	U	p
Personal and professional	Yes	155	22.3	2.44	169.2	26232.0	9883.0	.01*
	No	155	21.3	3.26	141.8	21973.0		
Teaching and learning process	Yes	155	45.4	6.60	172.4	26719.0	9396.0	.00*
	No	155	42.4	7.93	138.6	21486.0		
Science education	Yes	155	20.1	3.68	171.7	26618.0	9497.0	.00*
	No	155	18.5	4.59	139.3	21587.0		
Total self-efficacy	Yes	155	87.8	10.99	173.8	26932.0	9183.0	.00*
	No	155	82.2	13.62	137.3	21273.0		

When Table 8 is examined, it was determined that the levels of personal and professional development, teaching and learning process, science education and total self-efficacy were statistically significantly different in science education for mainstreamed students according to the fact that the teachers who participated in the study took undergraduate courses on special education ($p < .05$).

The Mann Whitney-U Test for the self-efficacy and is given in Table 9 according to the status of the teachers participating in the study in the past for the mainstreamed students in education science.

Table 9. Mann Whitney-U test result for self-efficacy levels in science education for mainstreamed students according to whether teachers work with mainstreamed students in the past

Sub-dimensions	Working status	N	X	Ss	Sequence average	Sequence total	U	p
Personal and professional	Yes	251	21.9	2.78	157.7	39581.0	6854.0	.37
	No	59	21.3	3.44	146.2	8624.0		
Teaching and learning process	Yes	251	44.0	7.57	156.6	39302.0	7133.0	.66
	No	59	43.5	6.84	150.9	8903.0		
Science education	Yes	251	19.5	4.29	160.0	40160.0	6275.0	.07
	No	59	18.6	3.93	136.4	8045.0		
Total self-efficacy	Yes	251	85.4	12.80	158.3	39720.5	6714.5	.27
	No	59	83.4	12.05	143.8	8484.5		

When Table 9 is examined, it is seen that the teachers who participated in the research work with mainstreamed students in the past, personal and professional development, teaching and learning process, science education and total self-efficacy levels did not differ significantly in the science education for mainstreamed students ($p > .05$).

The Mann Whitney-U test for mainstreamed students according to the gender of the teachers participating in the study is given in Table 10.

Table 10. Mann Whitney-U test result of attitudes towards mainstreamed students according to the gender of teachers

Sub-dimensions	Gender	N	X	Ss	Sequence average	Sequence total	U	p
Behaviour attitude	Female	197	57.8	7.96	152.5	30042.0	10539.0	.44
	Male	113	58.4	8.71	160.7	18163.0		
Emotional attitude	Female	197	16.0	3.15	149.0	29348.5	9845.5	.09
	Male	113	16.4	2.91	166.9	18856.5		
Cognitive attitude	Female	197	7.6	1.59	162.6	32024.5	9739.5	.06
	Male	113	7.2	1.67	143.2	16180.5		
Total attitude	Female	197	81.4	9.34	151.4	29823.5	10320.5	.29
	Male	113	82.0	9.64	162.7	18381.5		

When Table 10 is examined, it is observed that the teachers who participated in the study did not differ significantly in terms of behaviour, emotional, cognitive, attitude and total attitude level according to their gender ($p > .05$).

Kruskal Wallis-H test for the attitudes of teachers to mainstreamed students according to age groups is given in Table 11.

Table 11. Kruskal Wallis-H test result of teachers' level of attitudes toward mainstreamed students according to age groups

Sub-dimensions	Age group	N	X	Ss	Sequence average	χ^2	p	Difference between groups
Behaviour attitude	26 under	54	57.6	6.80	150.4	13.0	.04*	1<7 2<5 2<7 3<7 4<7
	26-30	95	57.0	7.87	142.4			
	31-35	65	58.3	8.97	157.5			
	36-40	42	57.0	8.85	145.4			
	41-45	23	61.7	9.51	190.8			
	46-50	17	58.1	7.25	164.7			
	50+	14	63.1	7.00	216.5			
Emotional attitude	26 under	54	16.7	2.78	170.8	14.2	.03*	1>3 2>3 2>4
	26-30	95	16.8	3.02	173.3			
	31-35	65	15.2	3.08	128.0			
	36-40	42	15.4	3.34	136.4			
	41-45	23	16.3	2.96	163.7			
	46-50	17	16.5	2.9	161.7			
	50+	14	15.6	2.88	140.0			
Cognitive attitude	26 under	54	7.7	1.540	166.9	8.7	.19	-
	26-30	95	7.7	1.657	169.7			
	31-35	65	7.4	1.692	153.9			
	36-40	42	7.0	1.405	128.7			
	41-45	23	7.1	1.914	142.17			
	46-50	17	7.3	1.312	146.26			
	50+	14	7.1	1.748	135.96			
Total attitude	26 under	54	81.9	8.361	158.88	10.2	.12	-
	26-30	95	81.4	8.972	153.10			
	31-35	65	80.9	10.192	147.63			
	36-40	42	79.5	9.774	132.61			
	41-45	23	85.1	11.107	183.65			
	46-50	17	81.8	9,119	166.03			
	50+	14	85.9	8,217	204.93			

When Table 11 is examined, according to age groups it was determined that the level of cognitive and total attitudes of teachers towards the mainstreamed students did not differ significantly ($p>.05$), but the behavioral and emotional attitudes of the participants were statistically significantly different ($p<.05$).

According to the school type of teachers who participated in the research, the Kruskal Wallis-H test for the level of attitudes towards the students of mainstreamed was given in Table 12.

Table 12. Kruskal Wallis-H test of attitudes towards mainstreamed students according to the type of school where teachers work

Sub-dimensions	School type	N	X	Ss	Sequence average	χ^2	P	Difference between groups
Behaviour attitude	Public school	271	58.3	7.95	157.1	10.66	.01*	1>3 2>3
	Private school	26	59.8	7.83	176.6			
	Foundation School	13	49.7	10.55	80.5			
Emotional attitude	Public school	271	16.1	3.12	155.0	.11	.95	-
	Private school	26	16.4	2.4	161.1			

Cognitive attitude	Foundation School	13	16.2	3.34	154.1	4.95	.08	-
	Public school	271	7.5	1.63	157.1			
	Private school	26	7.6	1.65	165.2			
Total attitude	Foundation School	13	6.5	1.39	103.5	10.46	.01*	1>3 2>3
	Public school	271	81.9	9.16	156.8			
	Private school	26	83.8	8.71	178.4			
	Foundation School	13	72.4	12.04	82.2			

When Table 12 is examined, according to the type of school teacher participated in the study, it was found that the level of emotional and cognitive attitudes towards the mainstreamed students did not differ significantly ($p>.05$), but the behavioural attitude and total attitude levels differed statistically significantly according to the type of school they served ($p<.05$).

The Mann Whitney-U test for teachers of mainstreamed students according to the branches of the teachers participating in the study is given in Table 13.

Table 13. Mann Whitney-U test result for teachers of mainstreamed students according to the branches of the teachers participating in the study

Sub-dimensions	Branch	N	X	Ss	Sequence average	Sequence total	U	p
Behaviour attitude	Class	251	58.0	8.38	155.5	39037.0	7398.0	.99
	Science	59	58.0	7.62	155.4	9168.0		
Emotional attitude	Class	251	16.0	3.22	152.0	38140.5	6514.5	.15
	Science	59	16.6	2.28	170.6	10064.5		
Cognitive attitude	Class	251	7.4	1.66	154.0	38638.0	7012.0	.52
	Science	59	7.5	1.48	162.2	9567.0		
Total attitude	Class	251	81.5	9.70	154.0	38644.5	7018.5	.53
	Science	59	82.1	8.26	162.0	9560.5		

When Table 13 is examined, it was seen that the behaviours, emotional, cognitive attitude and total attitude level of the teachers who were involved in the research did not differ significantly ($p>.05$).

The Mann-Whitney-U Test for the teachers' level of attitudes towards the mainstreamed students according to their marital status is given in table 14.

Table 14. Mann Whitney-U test result of attitude levels of participants for mainstreamed students by marital status

Sub-dimensions	Marital Status	N	X	Ss	Sequence average	Sequence total	U	p
Behaviour attitude	Married	187	58.6	8.26	163.3	30531.5	10047.5	.06
	Single	123	57.1	8.14	143.7	17673.5		
Emotional attitude	Married	187	15.6	2.90	139.7	26122.0	8544.0	.00*
	Single	123	17.0	3.13	179.5	22083.0		
Cognitive attitude	Married	187	7.3	1.61	145.7	27241.5	9663.5	.02*
	Single	123	7.7	1.63	170.4	20963.5		
Total attitude	Married	187	81.5	9.49	155.4	29066.5	11488.5	.99
	Single	123	81.9	9.40	155.6	19138.5		

When Table 14 is examined according to the marital status of the teachers who participated in the research, the behaviour attitude and the total level of attitudes to the mainstreamed students did not differ statistically significantly ($p>.05$), but emotional and cognitive attitudes levels were statistically significantly differentiated according to marital status ($p<.05$).

The Kruskal Wallis-H test for the attitudes level towards mainstreamed students according to the vocational seniority of the teachers participating in the study is given in Table 15.

Table 15. Kruskal Wallis-H test result for the attitudes level towards mainstreamed students according to the vocational seniority of the teachers participating in the study

Sub-dimensions	Vocational seniority	N	X	Ss	Sequence average	χ^2	p	Difference between groups
Behaviour attitude	1-5 year	130	56.8	7.35	141.14	8.00	.09	-
	6-10 year	73	57.8	9.55	155.71			
	11-15 year	37	59.7	7.78	171.96			
	16-20 year	40	59.4	8.68	165.71			
	20+ year	30	60.1	7.84	183.28			
Emotional attitude	1-5 year	130	16.8	3.03	171.14	7.13	.13	-
	6-10 year	73	15.7	2.91	141.40			
	11-15 year	37	15.7	3.38	143.18			
	16-20 year	40	15.9	3.14	149.69			
	20+ year	30	15.7	2.84	144.97			
Cognitive attitude	1-5 year	130	7.8	1.50	172.30	12.00	.02*	1>3 1>5
	6-10 year	73	7.3	1.86	151.64			
	11-15 year	37	7.0	1.54	127.39			
	16-20 year	40	7.5	1.52	155.85			
	20+ year	30	6.9	1.58	126.27			
Total attitude	1-5 year	130	81.3	8.66	152.76	1.37	.85	-
	6-10 year	73	80,8	10.732	151.51			
	11-15 year	37	82.3	9.338	155.82			
	16-20 year	40	82.8	10.234	158.84			
	20+ year	30	82.7	8.636	172.23			

When Table 15 is examined, it was determined that according to the seniority of the teachers, behaviour, emotional attitude and total attitudes towards mainstreamed students did not differ statistically significantly ($p>.05$), but their cognitive attitude levels differed statistically significantly according to their seniority ($p<.05$).

The Mann Whitney-U Test of the levels of the teachers' attitudes towards the mainstreaming students is given in the Table 16 according to the education of the teachers in the course/seminar related to mainstreaming education.

Table 16. Mann Whitney-U test result of the levels of the teachers' attitudes towards the mainstreaming students according to the education of the teachers in the course/seminar

Sub-dimensions	Getting education status	N	X	Ss	Sequence average	Sequence total	U	p
Behaviour attitude	Yes	156	56.8	7.86	140.12	21859.0	9613.0	.00*
	No	154	59.3	8.43	171.08	26346.0		
Emotional attitude	Yes	156	16.5	2.95	166.04	25901.5	10368.5	.04*
	No	154	15.8	3.15	144.83	22303.5		
Cognitive attitude	Yes	156	7.4	1.62	153.21	23901.5	11655.5	.65
	No	154	7.5	1.63	157.81	24303.5		
Total attitude	Yes	156	80.7	9.07	145.38	22680.0	10434.0	.05
	No	154	82.6	9.74	165.75	25525.0		

When Table 16 is examined, according to the education level of teachers who participated in the research, it was found that the level of cognitive attitudes and total attitudes towards mainstreaming students did not differ statistically significantly ($p>.05$), but behaviour and emotional attitude levels were statistically significant different ($p>.05$).

The Mann Whitney-U test for teachers participating in the study towards mainstreamed students is given in the Table 17 according to whether or not the teachers take any undergraduate courses on special education.

Table 17. Mann Whitney-U test result of teachers attitudes towards mainstreamed students according to whether teachers take any undergraduate course on special education

Sub-dimensions	Course taking status	N	X	Ss	Sequence average	Sequence total	U	p
Behaviour attitude	Yes	155	57.6	7.63	149.6	23180.0	11090.0	.24
	No	155	58.5	8.80	161.5	25025.0		
Emotional attitude	Yes	155	16.7	3.06	169.0	26201.0	9914.0	.01*
	No	155	15.6	2.99	142.0	22004.0		
Cognitive attitude	Yes	155	7.8	1.55	174.92	27113.0	9002.0	.00*
	No	155	7.1	1.62	136.1	21092.0		
Total attitude	Yes	155	82.1	8.88	159.5	24728.0	11387.0	.43
	No	155	81.2	9.98	151.5	23477.0		

When Table 17 is examined, It has been identified that the attitudes of the teachers participating in the study related to mainstreaming according to whether teachers take any course towards the mainstreamed students, behaviour and total attitudes levels are not statistically significantly different ($p>.05$), but the levels of emotional and cognitive attitudes are differentiated statistically significantly ($p<.05$) according to the status of taking the courses related to mainstreaming.

Mann Whitney-U test for teacher's attitudes levels towards mainstreamed students is given in Table 18 as to whether the teachers involved in the study work with mainstreamed students in the past.

Table 18. Mann Whitney-U test result for the teachers attitudes levels towards mainstreamed students as to whether the teachers involved in the study work with mainstreamed students in the past

Sub-dimensions	Working status	N	X	Ss	Sequence average	Sequence total	U	p
Behaviour attitude	Yes	251	58.6	7.95	161.32	40492.5	5942.5	.02*
	No	59	55.6	9.01	130.72	7712.5		
Emotional attitude	Yes	251	16.3	3.05	160.47	40279.0	6156.0	.04*
	No	59	15.5	3.06	134.34	7926.0		
Cognitive attitude	Yes	251	7.5	1.66	157.03	39413.5	7021.5	.53
	No	59	7.4	1.47	149.01	8791.5		
Total attitude	Yes	251	82.34	9.16	162.68	40831.5	5603.5	.00*
	No	59	78.4	10.00	124.97	7373.5		

When the Table 18 is examined, according to the study of the teachers working with the mainstreamed student in the past, it was determined that the level of cognitive attitude towards the mainstreamed students did not differ statistically significantly ($p>.05$), but the behaviour, emotional attitude and total attitude levels differed statistically significantly ($p<.05$).

The relationship between the levels of self-efficacy and attitude levels of the teachers participating in the study were given in Table 19.

Table 19. Correlation between self-efficacy levels and attitude levels of teachers in science education for mainstreamed students

		Personal and professional	Teaching and learning process	Science education	Total self-efficacy
Behaviour attitude	r	-.069	-.023	.042	-.013
	p	.227	.683	.460	.817
Emotional attitude	r	.085	.173**	.185**	.181**
	p	.134	.002**	.001**	.001**
Cognitive attitude	r	.268**	.206**	.148**	.230**
	p	.000**	.000**	.009**	.000**
Total attitude	r	.021	.087	.137*	.103
	p	.709	.128	.016*	.071

*: p<.05 ; **: p<.01

When Table 19 is examined, it was determined that there was no statistically significant correlation between the levels of personal and professional self-efficacy and behavior, emotional attitude and total attitudes of the teachers involved in the study towards the mainstreamed students ($p>.5$). However, there is a positive and low level of significant relationship between cognitive attitudes ($p<.05$). It was determined that there was no statistically significant relationship between the teachers' teaching and learning process self-efficacy levels and behaviour attitude and total attitude level of the teachers towards the mainstreamed students ($p>.05$), but there was a positive and low significant relationship between emotional and cognitive attitude levels ($p<.05$). It was determined that there was no statistically significant relationship between science education self-efficacy levels and behaviour attitude level of teachers towards mainstreamed students ($p>.05$), but a positive and low level significant relationship between emotional, cognitive attitude levels and total attitude levels ($p<.05$). It was determined that there was no statistically significant relationship between total self-efficacy levels and behaviour attitude and total attitude levels of the participants in science education for mainstreamed students ($p>.05$), but there was a positive and low significant relationship between emotional and cognitive attitude levels ($p<.05$).

Conclusion and Discussion

According to research findings, when compared with male teachers, it has been reached that female teachers have a higher level of personal and professional development, teaching and learning process and total self-efficacy in science education for students of mainstreamed students.

In a study conducted by Toy (2015), it was reported that teachers' perceptions of self-efficacy for mainstreamed education were high in favour of women's teachers. On the other hand, it was determined that teachers' attitudes towards mainstreamed students did not differ significantly when taken into consideration according to gender variables. In many studies in the literature, it has been reported that the attitudes about mainstreaming education of teachers and teacher candidates who have not yet started their professional life do not differ significantly from gender variables (Bradshaw and Mundia, 2006; Bayar and Üstün, 2017; Bek, Gülveren and Başer, 2009; Şahbaz and Kalay, 2010; Seçer, 2011; Gökdere, 2012; Fazlıoğlu and Doğan, 2013; Güteryüz and Özdemir, 2015).

According to the findings obtained when considered according to the age group variable, it has been reached that the self-efficacy levels of teachers under 26 years of age, 26-30 and 31-35 are significantly higher than those of both the 36-40 age group and the 46-50 age groups. When the findings are evaluated, it is observed that the perception of self-efficacy is high in favour of teachers in low age groups. However, it was determined from these findings that the level of behavioural attitudes for mainstreamed students was high

and emotional attitudes were low as teachers' ages increased. In the study conducted by Fazlıoğlu and Doğan (2013), it was aimed to examine the attitudes of teachers and branch teachers towards mainstreaming education, and it was reported that the attitudes of teachers towards mainstreaming education increased as the age of the teachers was taken into consideration according to the age group variable. When teachers' self-efficacy levels in science education were evaluated according to school type variables, it was found that personal and professional development levels of teachers working in public schools were significantly higher in science education for mainstreaming students than in private schools. Again, the findings of the research revealed that the attitudes of teachers who work in public and private schools were significantly higher than those of teachers who work in the foundation schools.

It was concluded that the level of self-efficacy and attitude of teachers in science education for mainstreamed students did not differ significantly when taken into consideration according to branch variable. A similar study on teacher self-efficacy in literature found that the branch variable is not an important determinant of self-efficacy perception (Karahan and Uyanık-Balat, 2011). Similarly, some studies in the literature reported that the views of mainstreamed education in the studies did not differ significantly compared to the branch variable (Kayhan, Şengül and Piştav-Akmeşe, 2012; Fazlıoğlu and Doğan, 2013). In this context, in the light of the findings obtained from the research, it is thought that although teachers are in different branches both during the undergraduate education and after starting their professional life, the levels of education for mainstreamed practices are similar.

It was concluded that the level of self-efficacy in science education for mainstreamed students did not differ significantly from the level of marital status of teachers when it was taken into consideration according to the marital status variable. However, the level of emotional and cognitive attitudes of teachers who are single from research findings has been seen to be positively high in the married participants.

It was determined that the levels of self-efficacy and attitude in science education for the mainstreamed students of teachers who participated in the study were significantly different when taken into consideration according to the vocational seniority variable. In a similar study conducted by Özdemir (2010), it was aimed to examine the attitudes of pre-school teachers towards mainstreamed education and it was reported that the attitudes of teachers towards mainstreamed education became negative as the levels of vocational seniority increased. Similarly, a survey conducted by Özdemir and Ahmetoğlu (2012) reported that teachers' attitudes towards mainstreamed education decreased as vocational seniority levels increased. The results of this study suggest that teachers with low vocational seniority levels have higher motivation and job satisfaction levels for teaching profession and that the courses they take in the educational processes are more effective. Because, since 1998-1999 education-faculty restructuring of education faculties and teacher-raising faculties have undergone radical changes in programs and special education courses have gained importance (Eyüp, 2005).

When teachers were taken into consideration according to the situation of taking courses/seminars related to mainstreamed education, it was determined that the levels of self-efficacy in the Science Education directed towards mainstreamed students did not differ significantly according to the situation of taking courses/seminars etc. A similar study by Seçer (2011) aimed to investigate the self-efficacy perceptions of the class teachers for the integration training according to the variable in-service course/seminar taking, and at the end of the research, the self-efficacy perceptions of the class teachers for the integration training according to the variable in-service course/seminar taking is not significantly different. However, there was a significant difference in the behaviours and emotional attitudes of teachers who received training courses/seminars on inclusion. It was determined that the attitude of the teachers who took courses/seminars etc. was low while the emotional attitude was high. In similar studies in the literature, it has been reported that getting education for mainstreamed is an important determinant of attitudes towards inclusion (Öztürk, Balloğlu and Şen, 2014; Özdemir, 2010).

In science education for mainstreamed students in special education, it was determined that the level of self-efficacy for mainstreamed of teachers was significantly different when it was taken into consideration by the participants regarding whether or not to take any undergraduate courses. According to the findings obtained, it has been concluded that teachers who have taken special education courses before in all self-efficacy sub-dimensions have higher self-efficacy levels compared to teachers who have not taken special education courses. It is stated that taking courses for mainstreamed or special education has developed the perception of self-efficacy for mainstreamed (Lancaster and Bain, 2007). When the research findings in the literature were evaluated, it was reported that the lack of adequate knowledge for special education and mainstreamed before the professional lives of teachers negatively affected the self-esteem level for inclusion, and in parallel, the teachers found themselves inadequate in mainstreamed practices (Gök and Erbaş, 2014; Batu and Yılmaz, 2016). The same applies to attitude. In the literature, it is seen that teachers taking special education lessons at undergraduate level before their professional life positively affect their attitudes towards both disabled people and mainstreamed (Özdemir, 2010; Bayar and Üstün, 2017; Altıntaş and Şengül, 2014; Gözüin and Yıkılmış, 2004; Orel, Töret and Zerey, 2004; Campbell, Gilmore and Cuskelly, 2003). In the research conducted by Bek, Gülveren and Başer (2009), it was found that the attitudes of the class teacher candidates towards mainstreamed were higher than the teachers who did not receive any education in this field. It is known that the practices of teachers who do not have sufficient level of knowledge about mainstreamed education are generally unconscious and random, and the study findings in the literature support this view (Saraç and Çolak, 2012). At this point, it is very important that teachers get good education at the undergraduate level in order to refrain from unconscious practices in the mainstreaming education in their vocational lives. In this study, it was found that taking undergraduate courses of teachers in special education contributed to the high levels of cognitive attitudes on this subject. The findings in the literature also support the findings of this study. It is thought that the development of awareness and knowledge levels is rooted in the positive impact of the level of attitudes towards mainstreamed education with the acquisition of special education at the undergraduate level of teachers.

In the past, it was determined that teachers' self-efficacy levels of science education for mainstreaming students did not show statistically significant differences when they were studied in terms of working with the integration students. However, the vocational experience for mainstreamed education is known to be a parameter that affects teacher attitudes towards mainstreamed education (De Boer, Pijl and Minnaert, 2011). In this study, it was found that the attitude levels of teachers who worked with mainstreamed students in the past were higher than who did not work with mainstreamed students. It contributes to the development of awareness levels for teachers to fend off training with the mainstreamed students. The research findings in the literature also support this view (Bayar and Üstün, 2017). In the research conducted by Bek, Gülveren and Başer (2009), it was emphasized that teachers should interact with mainstreamed students in their careers, and practice in addition to theoretical knowledge in developing the attitudes towards has an important place.

In this study, it was found that there was a statistically significant positive and low correlation between the teachers' level of self-efficacy and the total attitude to the mainstreamed students and there was no statistically significant correlation between the teachers' total self-efficacy levels and the total attitude levels.

Suggestions

In the light of the findings and the relevant literature, the following suggestions can be made;

1. Similar studies can be carried out on the teacher working in different geographical regions in order to further evaluate the effects of socio-demographic variables on teacher's views on mainstreamed education.
2. Both the findings obtained in this research and the similar findings in the literature show that the teachers' taking courses for special education and mainstreamed during their undergraduate education

improves both their self-efficacy perceptions and their attitudes. In this context, arrangements can be made to expand the content of special education courses in the current curriculum of teacher training departments of education faculties and to increase the course hours.

3. In the study, it was found that teachers' studies with mainstreamed students in the past years or the mainstreamed students in their current classes had a positive effect on self-efficacy perception and their attitudes towards inclusion. In this context, applications can be made for teachers to spend time with mainstreamed students in order to develop self-efficacy levels for mainstreamed education and to ensure positive attitudes towards inclusion.

GENİŞLETİLMİŞ ÖZET

Kaynaştırma Öğrencilerine Yönelik Fen Eğitiminde Öğretmen Tutum ve Öz Yeterliliği

Çalışmanın amacı

Literatürde kaynaştırma eğitime yönelik yapılan çalışmalarda genellikle öğretmen görüşlerinin ve tutumlarının ele alındığı ancak öğretmenlerin kaynaştırmaya yönelik öz yeterlik düzeylerinin incelendiği çalışmaların sınırlı olduğu görülmüştür. Bunun yanında fen eğitiminde öğretmenlerin kaynaştırmaya yönelik tutum ve öz yeterlik düzeylerinin ele alındığı çalışmalara da literatürde yeterince yer verilmediği tespit edilmiştir. Yapılan bu çalışmanın literatürde yer alan söz konusu eksikliğin giderilmesi noktasında faydalı bir çalışma olacağı düşünülmektedir. Bu kapsamda yapılan araştırmada, ilkökul ve ortaokullarda fen eğitimi veren öğretmenlerin kaynaştırma uygulamalarına ilişkin öğretmen öz yeterlilik düzeyleri ile tutumlarının bazı demografik değişkenlere göre belirlenmesi ayrıca öğretmenlerin kaynaştırma eğitime yönelik öz yeterlik algıları ile tutum düzeyi arasındaki ilişkinin belirlenmesi amaçlanmıştır. Çünkü kaynaştırma eğitime yönelik öğretmen öz yeterlilik düzeyleri ve tutumlarının iyi bilinmesi öğretmenlerin söz konusu alanlardaki eksikliklerinin giderilmesi için oldukça önemlidir.

Yöntem

Bu araştırmada öğretmenlerin, kaynaştırma öğrencilerine yönelik fen eğitiminde tutum ve öz yeterliliklerini belirlemek amacıyla genel tarama modeli ile nicel araştırma yöntemi kullanılmıştır.

Araştırmanın Örneklemi

Araştırmanın örneklemi, 2016-2017 eğitim-öğretim yılı Kars ili merkez ve merkeze bağlı köylerdeki resmi, vakıf ve özel statüdeki ilkökul ve ortaokullarda görev yapmakta olan sınıf ve fen bilgisi öğretmenleri oluşturmaktadır. Araştırmaya 251 sınıf ve 59 fen bilgisi olmak üzere toplam 310 öğretmen katılmıştır. Araştırmaya katılan öğretmenlerden 197'si kadın ve 113'ü erkektir.

Veri Toplama Araçları

Araştırmada "Kişisel Bilgi Formu", "Kaynaştırmaya Yönelik Tutum Ölçeği" ve "Kaynaştırma Öğrencilerine Yönelik Fen Eğitiminde Öğretmen Öz Yeterliliği Ölçeği" kullanılmıştır.

Verilerin Analizi

Elde edilen verilerin analizi SPSS 22 programı kullanılarak yapılmıştır. Yapılan analizler sonucunda her iki ölçekte alt boyutlarına ilişkin verilerin normal dağılım göstermediği tespit edilmiştir. Bu nedenle non-parametrik analiz yöntemleri kullanılarak veriler üzerinden karşılaştırmalar yapılmıştır.

Sonuç

Araştırma bulgularına göre erkek öğretmenler ile kıyaslandığı zaman kadın öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde kişisel ve mesleki gelişim, öğretme ve öğrenme süreci ve toplam öz yeterlilik düzeylerinin daha yüksek olduğu sonucuna ulaşılmıştır.

Yaş grubu değişkenine göre ele alındığı zaman elde edilen bulgulara göre, 26 yaş altı, 26-30 ve 31-35 yaş grubundaki öğretmenlerin öz yeterlik düzeyleri hem 36-40 yaş grubundakilerden hem de 46-50 yaş grubundakilerden anlamlı düzeyde yüksek olduğu sonuçlarına ulaşılmıştır. Elde edilen bulgular değerlendirildiği zaman öz yeterlilik algısının düşük yaş gruplarında yer alan öğretmenler lehine yüksek olduğu görülmektedir. Ancak yine bu araştırma bulgularından öğretmenlerin yaşları arttıkça kaynaştırma öğrencilerine yönelik davranış tutum düzeyinin yüksek, duygusal tutumlarının ise düşük olduğu belirlenmiştir.

Okul türü değişkenine göre öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde öz yeterlilik düzeyleri değerlendirildiği zaman, resmi okullarda görev yapan öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde kişisel ve mesleki gelişim düzeylerinin özel okullarda görev yapan öğretmenlerden anlamlı düzeyde daha yüksek olduğu bulunmuştur. Yine araştırma bulgularından resmi ve özel okullarda görev yapan öğretmenlerin tutumlarının vakıf okullarında görev yapan öğretmenlerden anlamlı düzeyde daha yüksek olduğu sonucuna ulaşılmıştır.

Branş değişkenine göre ele alındığı zaman öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde öz yeterlilik ve tutum düzeylerinin anlamlı farklılık göstermediği sonucuna ulaşılmıştır. Bu kapsamda araştırmadan elde edilen bulgular ışığında öğretmenlerin farklı branşlarda olmalarına rağmen gerek lisans eğitimi boyunca gerekse de meslek yaşamlarına başladıktan sonra kaynaştırma uygulamalarına yönelik eğitim alma düzeylerinin benzerlik göstermesinin yattığı düşünülebilir.

Medeni durum değişkenine göre ele alındığı zaman öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde öz yeterlilik düzeylerinin medeni durumlarına göre anlamlı farklılık göstermediği sonucuna ulaşılmıştır. Ancak yine araştırma bulgularından bekâr olan öğretmenlerin duygusal ve bilişsel tutum düzeylerinin evli olan katılımcılardan olumlu yönde yüksek olduğu görülmüştür.

Mesleki kıdem değişkenine göre ele alındığı zaman araştırmaya katılan öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde öz yeterlilik ve tutum düzeylerinin anlamlı farklılıklar gösterdiği tespit edilmiştir. Bu araştırma sonuçlarından, mesleki kıdem düzeyi düşük olan öğretmenlerin öğretmenlik mesleğine yönelik motivasyon ve iş tatmin düzeylerinin yüksek ve eğitim süreçlerinde aldıkları derslerin daha etkili olduğu düşünülebilir.

Kaynaştırma eğitimi ile ilgili kurs/seminer vb. eğitim alması durumuna göre ele alındığı zaman öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde öz yeterlilik düzeylerinin kurs/seminer vb. eğitim alma durumlarına göre anlamlı farklılık göstermediği tespit edilmiştir. Ancak, kaynaştırma ile ilgili kurs/seminer vb. eğitim alan öğretmenlerin davranış ve duygusal tutumlarında anlamlı fark bulunmuştur. Kurs/seminer vb. eğitim alan öğretmenlerin davranış tutumu düşük iken duygusal tutumlarının ise yüksek olduğu belirlenmiştir.

Özel eğitim konusunda kaynaştırma öğrencilerine yönelik fen eğitiminde katılımcıların herhangi bir lisans dersi alıp almama durumlarına göre ele alındığı zaman öğretmenlerin kaynaştırmaya ilişkin öz yeterlilik düzeylerinin anlamlı farklılık gösterdiği tespit edilmiştir. Elde edilen bulgulara göre, tüm öz yeterlilik alt boyutlarında daha önce özel eğitim dersi almış olan öğretmenlerin özel eğitim dersi almayan öğretmenlere göre daha yüksek öz yeterlilik düzeyine sahip oldukları sonucuna ulaşılmıştır. Yapılan bu araştırmadan da özel eğitim konusunda öğretmenlerin lisans dersi almalarının bu konuda ki bilişsel tutum düzeylerinin yüksek olmasına katkı sağladığı görülmüştür. Literatürde yer alan çalışma bulgularının da bu araştırmada elde edilen bulguları desteklediği görülmüştür. Öğretmenlerin lisans düzeyinde özel eğitim almaları ile kaynaştırma eğitimine yönelik tutum düzeyinin olumlu yönde etkilenmesinin temelinde farkındalık ve bilgi düzeylerinin gelişmesinin yattığı düşünülmüştür.

Geçmişte kaynaştırma öğrencisiyle çalışıp çalışmama durumuna göre ele alındığı zaman öğretmenlerin kaynaştırma öğrencilerine yönelik fen eğitiminde öz yeterlilik düzeylerinin istatistiksel açıdan anlamlı farklılık göstermediği buna karşılık geçmişte kaynaştırma öğrencisiyle çalışmış olan öğretmenlerin tutum düzeylerinin kaynaştırma öğrencisi ile çalışmayan öğretmenlerden daha yüksek olduğu sonuçlarına ulaşılmıştır.

Araştırmada sonucunda bağımlı değişkenler arasındaki korelasyon incelendiği zaman öğretmenlerin, kaynaştırma öğrencilerine yönelik öz yeterlilik düzeyi ile toplam tutum düzeyi arasında pozitif ve düşük

düzeyde anlamlı bir ilişki olduğu ayrıca öğretmenlerin kaynaştırma öğrencilerine yönelik toplam öz yeterlilik düzeyleri ile toplam tutum düzeyleri arasında istatistiksel olarak anlamlı bir ilişki olmadığı tespit edilmiştir.

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