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Evaluation of primary school teachers' attitudes towards gifted children and their education

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Upon reviewing the literature, one discovers that teachers' perceptions, attitudes, and educational needs regarding gifted children have an impact on their academic, talent, and social-emotional development throughout their schooling. With this research we aimed to evaluate primary school teachers' attitudes towards gifted children and their education. We used the attitude scale towards gifted children and their education, which was tested for validity and reliability. Of the approximately 800 teachers working in primary schools in the Adapazar district of the Sakarya province in Türkiye, 365 teachers were surveyed using the data collection tool. The data obtained from the survey were analysed, tabulated, and interpreted using appropriate statistical data analysis. The statistical analysis revealed that teachers' attitudes towards gifted children were positive. In this article we discuss the results of the statistical analysis.

Keywords: attitude; gifted children; learner; primary school; teacher

Introduction

Learners who cannot perceive or participate in the curriculum prepared for the general formal education network are called individuals who learn differently and need special education. Talented (gifted) children are included in the classification of individuals who need special education. Talented children are especially recognised as having high levels of performance when compared to their peers regarding intelligence, talent, creativity, sports, art, leadership qualities, and academic work (Akçamete, 2016). Certain children are born with the ability to learn more complicated and abstract concepts, remember information instantly, and learn concepts earlier and faster than their classmates. Additionally, research shows that gifted children differ from their peers when choosing and using the appropriate strategy to solve a problem (Heinze, 2005).

Children with special abilities identified in early childhood achieve above-average learning and school success when provided with appropriate experience environments and cognitive learning activities (Valentini & Gennari, 2024). Given that the demands and characteristics of talented children vary, it is suggested that teaching should accommodate this diversity by departing from the standard educational approach and instead a flexible classroom structure, along with a variety of techniques and procedures, should be used (Özyaprak, 2012). For this reason, teachers need to be equipped to use practices such as curriculum arrangement, evaluation, different education models and teaching strategies and material for specially talented children (Ayvaz & Sak, 2017).

Educational services for gifted children have been developed based on theoretical foundations, such as the multiple intelligence theory (Gardner, 1983), five mind domains (Sternberg, 2000), the triple field of intelligence (Guilford, 1975), and the creativity approach. Intelligence domain theories have an important place in the organisation of educational programmes. Different educational practices are used in training programmes. Separate education, which is included in these practices, is the education of gifted children in a separate environment away from their peers (White, 2013).

Grouping practice entails that gifted children are grouped in line with their abilities and development and receive education in educational environments separate from their peers. This can be done in private schools and classes, clusters, resource rooms, summer courses, or study centres. Acceleration practice involves gifted children starting school before their peers, being included in higher groups in the fields they are interested in, or passing their classes earlier, taking their abilities and development into account (Enç, 2005; Ford & Tyson, 2024). Differentiation practice plans the teaching process at a more advanced level by using teaching methods and strategies suitable for gifted children (Piske, Collins & De Cássia Nakana, 2024). A gifted child with a learning disability can perform exceptionally well, but the handicap may make it more difficult for the child to succeed academically. Having learning disabilities and being gifted sounds contradictory, but talented children with learning impairments are the most misunderstood, misinterpreted, and disregarded children and community

members. Long before disability research was developed, brilliant people who struggled with their studies could not be classified in any particular way. These children struggle to reach their full potential in the school system because they are hard to identify. It is important to remember that parents and teachers frequently recognise gifted children with learning disabilities (GCLD) as brilliant children because they are the ones who know the child's strengths and weaknesses the best. As a result, they can best support them by giving them the resources they need to develop their skills. Despite their extraordinary gifts and obvious weaknesses, they could feel unmotivated and incompetent (Bi, 2023).

Enrichment practice is the education of gifted children with their peers based on the principle of integration (Sak, 2014). Enrichment practices include comprehensive support for children employing detailed activities and studies aimed at their cognitive abilities and interests.

Studies show that primary school teachers do not have sufficient knowledge about the education of gifted children (Kıldan, 2011). According to Akar and Sengil Akar (2012), many teachers lack adequate understanding of the traits of talented children, and this leads to the late identification of gifted learners, the absence of modifications in the evaluation procedures, and no variation in the instructional strategies. Mertol (2014) compared the social studies course differentiation programmes that teachers present to gifted children in Türkiye and the United States of America (USA). The findings indicate that although teachers in the USA and Türkiye had adopted the differentiation programme, its execution had been insufficient. Similar research revealed that in-service teacher training on the characteristics, education, and training programmes of gifted children was insufficient (Şenol, 2011).

The quality of teachers' knowledge about gifted children and the work environment affects their attitudes towards gifted children (Kranioti & Broni, 2022; Lassig, 2009; Tohochynskyi, Yermak, Popryzhna, Tvrdon & Oleksiuk, 2021). A review of the literature reveals that studies have been conducted to determine teachers' attitudes, perceptions, and educational needs regarding gifted children (Demirok, 2012; Perković Krijan, Jurčec & Borić, 2015; Reis-Jorge, Ferreira, Olcina-Sempere & Marques, 2021). According to research, there is a connection between teachers' attitudes, their understanding of the traits of talented children, and how lesson plans are created (Omidire, 2022).

Teachers' attitudes towards the gifted have been an object of study for over 50 years (Justman & Wrightstone, 1956, as cited in McCoach & Siegle, 2007; Peachman, 1942) and although several studies related to this specific topic are being carried out globally, there are currently no clear conceptions about teachers' attitudes towards gifted children. For instance, some authors argue that gifted children should not be given much importance, while others argue that they should be educated separately. As a result, variations in research findings are due to the application of various approaches as well as culturally distinct educational systems and education initiatives for the gifted (Çetin & İnci, 2023).

Factors such as educational experience, gender, number of learners in the classroom, and access to resources affect their knowledge, skills, and attitudes regarding their profession. Teachers' attitudes towards gifted learners and education in general can affect their development and interindividual relationships (Hargreaves, Homer & Swinnerton, 2008). In addition, the characteristics of employees can be listed as having mastery of teaching methods and techniques, knowing the concepts of giftedness, examining the personal emotional characteristics of giftedness, and having the potential to maximise the thinking processes on these (Aslan & Yurtal, 2023).

Gagné (1991) and Perković Krijan et al. (2015) discuss the attitudes of teachers towards gifted children in terms of the following dimensions: 1) needs and support, 2) resistance to objections, 3) social value, 4) rejection, 5) ability grouping, and 6) acceleration.

Studies that used the Gagné (1991) questionnaire, which was also used in this study, show that positive attitudes towards gifted children mostly prevail among teachers, especially when it comes to recognising their needs and what support is needed (Chessman, 2010; Drain, 2008; Lassig, 2009; Lewis & Milton, 2005; Troxclair, 2013; Westling Allodi & Rydelius, 2008). While the results on ability grouping differ, teachers often have negative attitudes towards acceleration (Chessman, 2010; Drain, 2008; Lassig, 2009; Troxclair, 2013; Watts, 2006; Westling Allodi & Rydelius, 2008). From the review of related studies, most attitudes are ambivalent (Drain, 2008; Lassig, 2009), whereas others only report negative attitudes (Araujo Portugal, 2021; Chessman, 2010; Troxclair, 2013; Watts, 2006; Westling Allodi & Rydelius, 2008). Considering that none of the studies mentioned indicate positive attitudes towards acceleration and ability grouping, it is obvious that teachers do not consider these forms of education to be positive solutions for this issue. Furthermore, these attitudes can result from prejudice in society due to a lack of knowledge about such education approaches to accommodate gifted learners (Troxclair, 2013). Similar research conducted in South Africa also demonstrates how a more egalitarian and equalising approach to schooling provides less support for gifted children (Mhlolo & Ntoatsabone, 2023).

When the results of the research are examined, it is observed that teachers' perceptions, attitudes, and educational needs towards gifted children affect the entire academic, talent, and social-emotional development of these children. In this context, it is imperative that primary school teachers' attitudes towards gifted children are studied and made known.

Purpose of the Research

The purpose of this research was to evaluate the attitudes of primary school teachers towards gifted children and their education. We aimed to answer the questions, What are the attitudes of primary school teachers towards gifted children and their education? and What are primary school teachers' attitudes towards

a) gifted children's gender,
b) professional seniority,
c) participation in specially talented education,
d) the number of gifted children in a class,
e) different programmes,
f) gifted children and their access to resources?

Methodology

Institutional Review Board Statement

This research was approved by the Near East University Scientific Research Ethics Committee, project number NEU/EB/2022/828 dated 11 April 2022.

Research Model

Since the attitudes of primary school teachers towards gifted children were examined, the quantitative research method was preferred for this research.

Population and Sample

Of the approximately 800 teachers working in primary schools in the Adapazarı district of the Sakarya province, 365 were chosen using convenient sampling and the attitude scale data collection method for gifted children. Cohen, Manion and Morrison (2007) suggest that a 3/1 sample represented the universe (Koç Başaran, 2017). The Sakarya Governorship Provincial Directorate of National Education approved the use of the data collection instrument.

This research, in which we attempted to determine the attitudes of primary school teachers towards gifted children, was designed and carried out according to the quantitative descriptive research design, using the survey model. Survey models are research approaches that aim to describe past or present situations as they are (Karasar, 2005). Survey research is research that aims to collect data to reveal certain characteristics of a cluster (Büyüköztürk, 2008). This method can be used to obtain information from a large group. What should be emphasised is that observations are made without trying to change the current situation (Büyüköztürk, 2008; Karasar, 2005). Table 1 provides information about the sample of the study.

Table 1 Findings regarding the socio-demographic information of primary school teachers participating in the research

Variables	Group	*n*	%
Gender	Female	256	70.1
	Male	109	29.9
Professional seniority	1 to 5 years	16	4.4
	6 to 10 years	24	6.6
	Between 11 and 15 years	53	14.5
	Between 16 and 20 years	64	17.5
	21 years and above	208	57.0

As shown in Table 1, 70.1% of the primary school teachers participating in the research were female teachers and 29.9% were male.

Fifty-seven per cent of primary school teachers had 21 years or more professional experience, 17.5% had 16 to 20 years' experience, 14.5% had 11 to 15 years' experience, and 6.6% had 6 to 10 years' experience. Only 4.4% of the teachers had between 1 and 5 years' experience.

As shown in Table 2, 68.8% of primary school teachers did not participate in training on special talents, 44.7% did not have gifted children in their classes, and 94.5% of teachers recommend developing a separate programme for special talents. It was observed that most teachers (63.8%) used the internet to do research about children who were specially talented.

Table 2 Findings regarding the socio-demographic characteristics of primary school teachers participating in the research

Variables	Group	*n*	%
Participation in specially talented education	Yes	114	31.2
	No	251	68.8
Thinking that there is a specially talented child in your class	there are none	163	44.7
	1 child	82	22.5
	2 children	68	18.6
	3 children	21	5.8
	4 or more children	17	4.7
	I am not aware	14	3.8
Suggestion for preparing a separate programme for specially talented people	Yes	345	94.5
	No	20	5.5
Information sources about special talents	Internet web environment	233	63.8
	Books	40	11.0
	Experts	81	22.2
	Library	11	3.0

Data Collection Tools

Demographic information form

The data collection tool for this study was a form that we developed for the demographic characteristics of the participating primary school teachers. Teachers were asked questions about gender, age, professional seniority, participation in education on special talents, whether they thought that they had a specially talented child in their class, suggestions for preparing a separate programme for special talents, and sources of information about special talents. While developing this form, relevant sample studies and the opinions of field experts were used.

Teachers' attitudes towards the gifted and their education scale

The scale to determine teachers' attitudes towards gifted children and their education was developed by Gagné and Nadeau (Gagné, 1991). The scale consists of 34 statements divided into six sub-factors. Validity and reliability calculations were made by Uzunboylu, a professor and expert, who adapted the scale to Turkish. Considering Hambleton and Patsula's (1999) suggestions for cross-cultural scale adaptation, the scale was adapted by taking basic principles such as suitability for the target audience, scientific and technological change, reflection of innovations on the teaching profession and culture, characteristics of the previously developed or adapted scale, and reflecting the real and current situation (Uzunboylu, 2023) into account. As a result of Bartlett's test ($p < 0.001$), it was determined that the sample size was sufficient for factor analysis. As a result of the Kaiser-Meyer-Olkin test (KMO = 0.767 > 0.60), it was determined that the sample size was sufficient to apply factor analysis. The Varimax rotation method was used in factor analysis application. As a result of factor analysis, the total explained variance was found to be 58.554% and the scale was formed under six factors. According to DeVellis and Thorpe (2022), in general, a variance ratio of more than half a per cent for a scale is considered an acceptable level in most studies. The remaining variance ratios do not disappear but are related to the explained variance. In the application, Cronbach's alpha coefficient of the overall reliability of the scale was found to be 0.80. Cronbach's alpha reliability coefficient for the six sub-dimensions were calculated as indicated below: needs and support (0.79), resistance to objections (0.82), social value (0.66), rejection (0.96), ability grouping (0.87) and acceleration (0.89). High scores in the needs and support, social value, talent grouping, and acceleration subscales indicate positive attitudes, while high scores in the objection resistance and rejection subscales indicate negative attitudes towards gifted people.

Data Collection Process

After obtaining permission for the application from the Sakarya Governorship Directorate of National Education, schools were called individually and appointments for the day and time were made to administer the application. The schools were visited on the day and time arranged and the quantitative data collection tools were administered to the teachers. Before the teachers responded to the forms, an information meeting of approximately 20 minutes was held regarding the data collection tools. During the data collection phase, teachers were asked to complete the form voluntarily, taking their experiences and observations about gifted children throughout their careers into account. Teachers who did not want to fill out the data collection tool were excluded from the research.

Analysis of the Data

The data obtained from the research were analysed, tabulated, and interpreted using appropriate statistical data analysis techniques.

Results

From Table 3 it is seen that the average scores for the sub-factors of needs and support, resistance to objections, social value, rejection, ability grouping and acceleration in the teachers' attitude scale were in the positive direction. According to Fleetwood (2024), high scores in Likert scales are usually given to the positive attitude end. Thus, high scale scores indicate a positive attitude. In other words, a value with an average of 3 points on a 5-point Likert-type scale indicates a positive attitude.

Therefore, it can be said that teachers' attitudes towards specially talented children were positive.

Table 3 Total scores received from the sub-dimensions of the scale for evaluation of teachers' attitudes towards specially talented children

	n	Minimum (Min)	Maximum (Max)	*M*	*SD*
Needs and support	365	1.00	5.00	3.93	.578
Resisting objections	365	1.00	5.00	3.49	.706
Social value	365	1.00	5.00	3.49	.706
Refusal	365	1.00	5.00	3.09	.799
Skill grouping	365	1.00	5.00	3.07	.545
Acceleration	365	1.00	5.00	3.08	.624

Note. $N = 365$.

Table 4 displays a comparison of the views that primary school teachers had of children with special talents and their education with the overall scores obtained from the sub-dimensions based on gender.

Table 4 Comparison of teachers' attitude scale scores towards the specially talented and their education according to their gender

Dimension	Groups	*n*	$\overline{x}_{sira}$	$\sum_{sira}$	*U*	*z*	*p*
Needs and support	Female	256	178.87	45791.00	12895,000	-1.150	.250
	Male	109	192.70	21004.00			
Resisting objections	Female	256	182.47	46713.50	13817,500	-.146	.884
	Male	109	184.23	20081.50			
Social value	Female	256	174.90	44773.50	11877,500	-2.264	.024
	Male	109	202.03	22021.50			
Refusal	Female	256	175.66	44968.00	12072,000	-2.055	.040
	Male	109	200.25	21827.00			
Skill grouping	Female	256	183.07	46866.00	13934,000	-.020	.984
	Male	109	182.83	19929.00			
Acceleration	Female	256	189.45	48500.00	12300,000	-1.819	.069
	Male	109	167.84	18295.00			
Scale overall	Female	256	176.44	45167.50	12271,500	-1.823	.068
	Male	109	198.42	21627.50			

Note. $p < .05$. $N = 365$.

A comparison of the total scores from the attitude scale and its sub-dimensions towards the gifted and their education according to the gender variable was done using the Mann-Whitney *U* test.

No statistically significant difference ($p > .05$) between the scores of teachers' attitudes towards children with special talents and their education according to gender was found for the sub-dimensions, needs and support, resistance to objections, ability grouping and acceleration. However, there was a statistically significant difference in the social value and rejection sub-dimensions ($p < .05$). Üzümçeker, Gezgin and Akfırat (2019) posit that while social values shape the behaviour and attitudes of individuals, rejection behaviour may develop in the face of situations that contradict these values. For example, individuals with values such as social justice or equality may tend to reject unfair offers. Therefore, the significant difference between them is an important finding. When the scores of the social value and rejection subscales of the scale are examined, it can be interpreted that male teachers' attitudes are more positive than those of female teachers.

Table 5 Teachers' attitude scale scores towards specially talented children and their education according to their receiving education for specially talented children (N = 365)

Dimension	Groups	n	$\bar{x}_{sira}$	$\sum_{sira}$	U	z	p
Needs and support	Yes	114	194.20	22139.00	13030,000	-1.372	.170
	No	251	177.91	44656.00			
Resisting objections	Yes	114	182.49	20803.50	14248,500	-.063	.950
	No	251	183.23	45991.50			
Social value	Yes	114	184.04	20980.50	14188,500	-.128	.898
	No	251	182.53	45814.50			
Refusal	Yes	114	185.88	21190.00	13979,000	-.354	.723
	No	251	181.69	45605.00			
Skill grouping	Yes	114	193.52	22061.00	13108,000	-1.296	.195
	No	251	178.22	44734.00			
Acceleration	Yes	114	188.08	21441.00	13728,000	-.630	.529
	No	251	180.69	45354.00			
Scale overall	Yes	114	196.51	22402.50	12766,500	-1.650	.099
	No	251	176.86	44392.50			

The participating teachers' scores towards specially talented children and their education and the status of receiving education for specially talented children are shown in Table 5. The scores were compared using the Mann-Whitney U test. It was determined that there was no statistically significant difference between teachers' attitude scores towards gifted children and their education, depending on whether they received training on gifted children ($p > .05$).

Table 6 Comparison results of teachers' attitudes towards specially talented children and their education and the number of children they consider having special talents in their classes

Dimension	Groups	*n*	$\bar{X}_{sira}$	X^2	*SD*	*p*
Needs and support	None	163	170.57	9.896	5	.078
	1 child	82	188.01			
	2 children	68	206.74			
	3 children	21	216.98			
	4 or more children	17	169.26			
	I am not aware	14	148.82			
Resisting objections	None	163	180.40	2.043	5	.843
	1 child	82	190.74			
	2 children	68	189.57			
	3 children	21	158.90			
	4 or more children	17	182.74			
	I am not aware	14	172.54			
Social value	None	163	173.56	3.478	5	.627
	1 child	82	188.68			
	2 children	68	190.92			
	3 children	21	200.36			
	4 or more children	17	204.38			
	I am not aware	14	169.18			
Refusal	None	163	177.67	3.841	5	.573
	1 child	82	196.30			
	2 children	68	175.91			
	3 children	21	207.45			
	4 or more children	17	163.44			
	I am not aware	14	188.61			
Skill grouping	None	163	189.40	1.994	5	.850
	1 child	82	178.54			
	2 children	68	181.24			
	3 children	21	181.98			
	4 or more children	17	176.03			
	I am not aware	14	153.21			
Acceleration	None	163	185.38	2.740	5	.740
	1 child	82	185.78			
	2 children	68	190.36			
	3 children	21	159.81			
	4 or more children	17	165.00			
	I am not aware	14	159.86			
Scale overall	None	163	173.94	6.895	5	.229
	1 child	82	197.34			
	2 children	68	196.21			
	3 children	21	195.86			
	4 or more children	17	168.56			
	I am not aware	14	138.68			

Note. $p < .05$ ($N = 365$).

Table 6 shows how teachers felt about children with exceptional talents, their level of education, and how many children in their class they believed to be gifted based on their overall ratings across the sub-dimensions. The scores were compared using the Kruskal-Wallis H test, which shows no statistically significant difference between the number of children that teachers thought were gifted in their classes and the scores on the attitude scale towards special talents and their education ($p > .05$).

Table 7 Results of comparison of teachers' attitudes towards especially talented children and their education, and their suggestion of preparing a different programme for especially talented or not talented children

Dimension	Groups	*n*	$\bar{x}_{sira}$	$\sum_{sira}$	*U*	*z*	*p*
Needs and support	Yes	345	185.15	63877.50	2707,500	-1.625	.104
	No	20	145.88	2917.50			
Resisting objections	Yes	345	184.30	63584.50	3000,500	-.981	.327
	No	20	160.53	3210.50			
Social value	Yes	345	183.90	63447.00	3138,000	-.685	.494
	No	20	167.40	3348.00			
Refusal	Yes	345	182.76	63051.50	3366,500	-.184	.854
	No	20	187.18	3743.50			
Skill grouping	Yes	345	182.75	63050.00	3365,000	-.187	.852
	No	20	187.25	3745.00			
Acceleration	Yes	345	182.63	63006.50	3321,500	-.285	.776
	No	20	189.43	3788.50			
Scale overall	Yes	345	185.55	64015.00	2570,000	-1.920	.055
	No	20	139.00	2780.00			

Note. $N = 365$.

The results in Table 7 show that, depending on whether or not they suggested a different programme for gifted children, there was no statistically significant difference between the teachers' scores on the scale and its sub-dimensions of attitudes towards gifted children and their education ($p > .05$). It can be held that the teachers' scores for the relevant sub-dimensions of the scale were similar to the situations in which they recommend whether a different programme should be prepared for specially talented children.

Table 8 Comparison of teachers' attitudes towards specially talented children and where they access resources for specially talented children

Dimension	Groups	*n*	$\bar{x}_{sira}$	X^2	*SD*	*p*
Needs and support	Internet web environment	233	186.29	2.040	3	.564
	Books	40	174.71			
	Experts	81	173.54			
	Library	11	213.18			
Resisting objections	Internet web environment	233	186.60	2.356	3	.502
	Books	40	193.64			
	Experts	81	167.91			
	Library	11	179.18			
Social value	Internet web environment	233	179.00	2.649	3	.449
	Books	40	204.61			
	Experts	81	180.60			
	Library	11	206.77			
Refusal	Internet web environment	233	183.35	2.460	3	.483
	Books	40	198.04			
	Experts	81	171.23			
	Library	11	207.55			
Skill grouping	Internet web environment	233	178.09	2.536	3	.469
	Books	40	190.89			
	Experts	81	187.77			
	Library	11	223.18			
Acceleration	Internet web environment	233	178.74	2.288	3	.515
	Books	40	203.91			
	Experts	81	182.70			
	Library	11	199.36			
Scale overall	Internet web environment	233	183.45	6.937	3	.074
	Books	40	210.29			
	Experts	81	163.15			
	Library	11	220.36			

Note. $N = 365$.

The results in Table 8 show that there was no significant difference in the statistical analysis of the teachers' total scores on the attitude scale and its sub-dimensions towards gifted children, their education, and where they accessed information sources about gifted children ($p > .05$).

Discussion

It is imperative to immediately draw attention to the paucity of research on gifted children in poor African countries. The teaching of gifted children, along with teacher attitudes towards gifted children, is unlikely to become widely accepted. Maree (2018) states that there are numerous causes for this. For instance, understanding Africa's educational, social, political, cultural, and economic history is essential to understanding the problem of education for the gifted on the continent. Talented African children often fall short of their potential due to a variety of factors, such as poor socioeconomic circumstances (such as limited access to quality education), the effects of war, and a caregiver-free upbringing. Furthermore, the issue of gifted children's inability to appropriately structure themselves is exacerbated by society's unwillingness to accept and support these gifted children, as well as the education departments' failure to identify gifted individuals as a distinct group of children in need of particular care.

With this research we determined that teachers' attitudes towards gifted children were positive. The teachers' average scores from the needs and support, resistance to objections, social value, rejection, ability grouping and acceleration sub-dimension were determined to be positive. This finding is supported by the research findings of Feuchter and Preckel (2022), Fisher-Grafy and Rinat (2023), Gilson and Lee (2023), Lassig (2009) and McCoach and Siegle (2007).

In the sub-dimensions of needs and support, resistance to objections, ability grouping, and acceleration, there was no statistical difference in the sub-dimensions of social value and rejection. When the scores of the social value and rejection subscales of the scale are examined, it is apparent that the attitudes of male teachers were more positive than those of female teachers. Kaya (2019) determined that female teachers had more positive attitudes than male teachers in the talent grouping sub-dimension. Considering the findings it cannot be concluded that differences exist between teachers' attitudes towards the gifted and their education based on gender, which is not an important factor.

Bégin and Gagné (1995) reviewed 12 published studies and found conflicting results regarding teachers' views of gifted children with respect to age. Accordingly, considering that most of the teachers participating in this research were over 35 years old and with more professional experience, it seems normal that there was no significant difference between the scores obtained. These conclusions are corroborated by the findings of a study by Perković Krijan et al. (2015).

We determined that there was no statistically significant difference between teachers' attitudes towards gifted children and their education depending on whether they had received training in educating gifted children. Numerous studies have demonstrated that when educators receive training on how to teach gifted children and what the children's traits are, they would be more likely to have positive attitudes towards the teaching of gifted children (Goodnough, 2001; Hansen & Feldhusen, 1992; Lassig, 2009; Woo, Cumming & O'Neill, 2023). Considering the long professional tenure of the participating teachers, it seems normal that there was no difference in their attitudes towards special talents according to their education status. Elmira (2021), Kalioldanovna, Roza, Arzanbayeva, Roza, Azimkhan and Omarov (2022), Pourtousi (2022), Rash and Miller (2000), and Sharipkhojayeva, Amirova, Zhanar, Tursynay, Meirimgul and Lyazzat (2023) found that as the duration of teachers' education with gifted children increased, the frequency of applying different teaching methods, technology and techniques appropriate to the gifted also increased.

We determined that there was no significant difference between the number of children in their classes that teachers thought were gifted and their attitudes towards gifted children and their education. Similar results were found in research by McCoach and Siegle (2007) who determined that there was no significant difference between teachers' attitudes towards receiving education for gifted children and the presence of gifted children in their classes. However, Aslan and Yurtal (2023) determined that there was a statistical difference on the self-efficacy of classroom teachers regarding the education of gifted people. From here, the attitude towards the gifted child in the classroom, self-efficacy, and perception, such as a significant combination of social variables, varies according to the conditions.

We determined that there was no significant difference between teachers' attitudes towards gifted children and their education depending on whether they recommend a different programme for gifted children or not. This situation suggests that teachers may not have had sufficient knowledge about teaching strategies for the gifted and therefore it may not have affected their attitudes. Teachers' undecided attitudes towards preparing a different programme regarding grouping and acceleration for gifted children are the same as teacher attitude scores in studies by Lassig (2009) and Perković Krijan et al. (2015). As in our study, De Souza Fleith, Muniz Prado and Vilarinho-Pereira aimed to describe a psycho-educational programme for parents of gifted children and investigate the participants' perceptions of the programme. They made recommendations about programme design and implementation with the findings they obtained (2023).

Despite the effectiveness of ability grouping and acceleration models supported by empirical research (Gorgia, 2024; Kulik & Kulik, 1992; Nicholas, Skourdoumbis & Bradbury, 2024; VanTassel-Baska, 1992), teachers' indecisive attitudes reveal the idea that children will be affected academically and socially. Regarding the acceleration strategy, most teachers think that gifted children will have difficulty in adapting socially. Adams and Pierce (2004), Hativa, Barak and Simhi (2001), and Kane, Sandretto and Heath (2002) found that the relationship between teachers' individual development and their attitudes affected the way in which they structured the curriculum and teaching. Contrary to this, Hoogeveen, Van Hell and Verhoeven (2005) found that teachers who had received training on how gifted children should be taught believed that acceleration in the education programmes of gifted children was beneficial and had a positive effect on children's social and academic skills and motivation.

Based on their opinions and where they accessed information sources about gifted children had no significant influence on the teachers' attitudes towards gifted children. Paschal (2022) found that teachers' awareness levels regarding gifted children and the availability of learning resources among learners in public primary schools in Tanzania were low. Furthermore, the results reveal that trained teachers played an important role in the education of gifted children in school contexts. Some of their roles included developing teaching and learning resources, creating a warm and conducive classroom environment, and providing guidance and counselling to children (Paschal, 2022). This result may be due to a lack of information on whether teachers had access to these information sources.

Conclusion

The average scores obtained by primary school teachers from the overall attitude scale towards gifted children in the sub-dimensions of needs and support, resistance to objections, social value, rejection, ability grouping and acceleration, were determined to be positive.

We determined that there was no statistically significant difference between the scores of primary school teachers in the sub-dimensions of needs and support, resistance to objections, ability grouping and acceleration based on their gender. We determined that there was a statistically significant difference between teachers' attitudes towards gifted children and their education in the sub-dimensions of social value and rejection based on their gender. As a result, teachers' attitudes towards gifted children and their education differed according to their gender in some categories, but not in all.

There was no difference between primary school teachers' ages, whether they had received training on gifted children, and their attitudes towards gifted children and their education. Likewise, there was no difference in primary school teachers' attitudes towards gifted children and their education regarding the number of children in their classes that they thought were specially talented, whether they recommended a different programme for specially talented children or not, and where they accessed information sources about gifted children.

We found no statistically significant differences between teachers having receiving training on special gifted education and those who did not. It is very important to determine the reasons for this situation by doing more research.

Data Availability Statement

Data will be made available on request.

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Authors' Contributions

HU conceptualised and wrote the original draft, prepared and participated in the data collection, and proofread the article. All authors participated in writing, reviewing, and editing and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

Notes

i. This article was adapted from a doctoral thesis entitled, "Evaluation of Primary School Teachers' Opinions on Distance Education Programs for Gifted Children, in the Framework of Perceptions, Attitudes and Needs" conducted by Huseyin Uzunboylu under the supervision of Gonul Akcemete and Nilgün Sarp at the Institute of Educational Sciences, Near East University.

ii.

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