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Research Article

Examining of the teachers' attitudes toward gifted education: Malaysia case

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Article Info	Abstract
Received: 6 January 2025	The purpose of this study was to examine attitudes toward the gifted and their education among 60
Accepted: 6 May 2025	teachers in Malaysia by administering the Opinions about Gifted Individuals and Their Education
Online: 30 June 2025	online. Data were automatically transferred onto a spreadsheet and subsequently analyzed using SPSS
Keywords	26.0. Kruskal-Wallis H test revealed no significant differences in teacher attitudes by way of age and job experience, while Mann-Whitney U test showed no significant differences in terms of gender and job
Attitudes	status. Additionally, Wilcoxon signed-rank test, positive and negative ranks represent how data points
Gifted	compare to the hypothesized median (3.5 in this case). Positive ranks indicate that the data values are
Gifted education	greater than the hypothesized median, while negative ranks denote that the data values are less than the
Malaysia	hypothesized median. Results indicated that 18 of the items had medians that significantly differed
Teachers	from the test value with p < .001, while 12 had medians that significantly differed from the test value
2149-1410/ © 2025 the JGEDC.	with p < .05. Overall percentages showed that teachers tend to demonstrate positive attitudes (average
Published by Genc Bilge (Young	to high proportions) toward four dimensions of the questionnaire, including meeting the needs of the
Wise) Pub. Ltd. This is an open	gifted and providing special services to them, social value of the gifted and their education, ability
access article under the	grouping, and school acceleration. Moreover, overall percentages also showed that teachers tend to
CC BY-NC-ND license	demonstrate negative attitudes toward two dimensions, including objections (based on ideology and
	priorities in terms of the gifted and their education) and rejection (isolation of the gifted by others in
BY NC ND	the immediate environment). In light of the findings, some recommendations were made on how to
	foster positive teacher attitudes toward the gifted and their education

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Introduction

Several studies have been conducted on teachers' attitudes toward the gifted and differentiated education for the gifted. Some researchers have concluded that teachers tend to exhibit positive attitudes toward recognizing and supporting the gifted (Lassig, 2009; McCoach & Siegle, 2007; Megay-Nespoli, 2001; Troxclair, 2013). Additionally, teachers who have worked with the gifted (Bégin & Gagné, 1994a; Copenhaver & McIntyre, 1992; Jones & Southern, 1992; Townsend & Patrick, 1993) also tend to demonstrate more positive attitudes toward the gifted. Besides, contact with the gifted has been found to be a predictor of positive attitudes toward gifted programs and provisions (Bégin & Gagné, 1994b; Jung, 2014; Jung & Lee, 2024a). Lastly, some studies suggested that teachers tend to have largely positive attitudes, which reflect the significance of exceptional achievement for societal progress (Jung, 2014; Rizza & Morrison, 2003).

In contrast, negative or ambivalent attitudes have also been reported, especially in terms of acceleration and ability grouping (Lassig, 2009; Smeets *et al.*, 2023; Troxclair, 2013; Hosseinkhanzadeh, Yeganeh, & Taher, 2013), with elementary teachers demonstrating more negative attitudes toward the concept of differentiated schools or classes for

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the gifted compared to secondary school teachers (Tirri & Uusikylä, 1994). Similarly, Teow (2016) found that teachers tend to hold slightly negative attitudes toward the dimension of resistance to objection and ambivalent attitudes in ability grouping, school acceleration, and rejection. Nevertheless, negative teacher attitudes have serious implications on gifted education in terms of acceleration and ability grouping, which are widely regarded as one of the most effective ways to educate the gifted (Assouline, Colangelo, VanTassel-Baska, & Lupkowski-Shoplik, 2015; Bernstein, Lubinski, & Benbow, 2021; Colangelo, Assouline, & Gross, 2004; Park, Lubinski, & Benbow, 2013; Wood, Portman, Cigrand, & Colangelo, 2010).

Theoretical frameworks

The conceptual framework of this study was based on measuring teachers' attitudes toward the gifted and gifted education; therefore, its main purpose was to assess teachers' (1) perceptions of giftedness, (2) beliefs about the needs and challenges of the gifted, (3) willingness to adopt effective gifted education practices, (4) readiness to devote sufficient resources and time to gifted education, and (5) capability to collaborate with other educators, specialists, and parents to provide scaffolding to the gifted. Additionally, a quantitative method using a valid and reliable questionnaire was adopted to procure numerical data to gain a comprehensive understanding on the principal dimensions of teachers' attitudes, encompassing their perceptions of whether (1) gifted education is important and beneficial, (2) the gifted need special attention and differentiated education, (3) giftedness is innate or a construct that can be nurtured, (4) the gifted possess exceptional learning needs, (5) the gifted encounter potential socioemotional challenges and issues, and (6) they are willing to implement differentiated instruction, enrichment activities, and other strategies to meet the needs of the gifted.

On the other hand, the theoretical framework of this study was grounded on the primary factors that might influence teachers' attitudes toward the gifted and gifted education, including (1) the needs and support required by the gifted, (2) the sociocultural values and norms that shape teachers' attitudes, (3) teachers' resistance to objections or their reactions to potential barriers associated with gifted education, and (4) the effectiveness of various pedagogical interventions, such as ability grouping, acceleration, or enrichment activities, (5) ability grouping whereby the gifted should be placed separately or remain in heterogeneous classrooms, and (6) acceleration whereby the gifted are allowed to advance at a faster pace. Other factors that might also impact teachers' attitudes include (1) teacher training and experience since teachers require specific training in gifted education to ameliorate negative attitudes, (2) school culture and leadership that teachers need to provide a supportive learning environment that promotes gifted education, (3) teachers' personal experience with the gifted and their own perceptions of giftedness, (4) teachers' perceived knowledge of what giftedness is and how it manifests, (5) teachers' self-efficacy or self-assertiveness in their capability to effectively communicate with the gifted, (6) teachers' interpersonal relationships with the gifted or how favorably they interact with them, and (7) teachers' sociocultural backgrounds that often influence their perceptions of giftedness and appropriate educational strategies for the gifted.

Literature Review

A literature review was conducted to provide a theoretical framework and research gap for the study. An earlier study by Al-Makhalid (2012) indicated that primary teachers tend to display overall slightly positive attitudes toward the gifted and their education, with higher positive attitudes among gifted teachers than regular teachers. While Teow (2016) found that teachers tend to possess positive attitudes in terms of needs and support and social value, Ozcan (2016) also revealed that teacher candidates tend to exhibit positive attitudes toward gifted education, especially in the area of cognitive behavior among the gifted. Further, majoring in gifted education at university also positively impacts their attitudes toward gifted education, implying that gifted education courses and seminars should be organized to increase awareness on gifted education and attributes amongst all teacher candidates regardless of their specialization (Ozcan, 2016).-Additionally, in their study, Cross, Cross, and O'Reilly (2018) showed that educators tend to be moderately supportive of special services for the gifted; however, they were also moderately opposed to grade acceleration, a service option that has significant research support for its effectiveness. Moreover, school leaders tend to believe that teachers

have adequate support needed to provide differentiated instruction, while a majority of teachers tend to perceive that they lack access to specialized assistance in meeting the needs of the gifted. Lastly, educators appear to be receptive to expanding gifted education, indicating that they would like to provide the services, but often encounter constraints in terms of time, training, and resources.

In their examination on attitudes toward the gifted and their education, Juriševič and Žerak (2019) discovered that students, teachers, and parents tend to hold neutral to positive attitudes toward gifted education, while also expressing their awareness of the special academic needs of the gifted and the practical utility of specific educational support. Moreover, teachers and parents tend to support additional school-based activities for the gifted, while expressing positive attitudes toward inclusive education in terms supplementary funds for gifted education and the degree of special attention for the gifted. Lastly, like others, Laine, Hotulainen and Tirri (2019) found that teachers tend to exhibit slightly positive attitudes toward the gifted education, while perceiving that the gifted have social value and need special services.

Finally, Kaya and Tortop (2020) who researched counselor attitudes toward gifted education indicated that counselors tend to possess slightly positive attitudes toward gifted education. Further, senior counselors tend to obtain significantly higher mean scores than those with less seniority, which could be explained by counselling experience. In terms of need and support and ability grouping, surprisingly, counselors not serving the gifted tend to score significantly higher than those who actually work with them. Like other researchers, Smeets *et al.* (2023) found that teacher knowledge and attitudes tend to influence professional development, which can be implemented to help teachers become better practitioners of gifted education. Likewise, Jawabreh, Salha, and Danju (2023) also discovered that teachers tend to hold positive attitudes toward gifted education in terms of needs and support, resistance to objections, and ability grouping. They also seem to exhibit high awareness concerning the role of gifted education, while preferring to adopt a variety of educational strategies to enhance abstract and critical thinking among the gifted. Lastly, Tuysuz *et al.* (2023) also found that prospective teachers tend to exhibit positive attitudes toward gifted education.

On the contrary, some researchers found that teachers seem to exhibit negative attitudes toward the gifted and their education, while being unaware that they have additional educational and instructional needs (De Boer *et al.*, 2013; Van Gerven, 2021). Others found that teachers tend to be moderately supportive or neutral toward the gifted, but are often ambivalent or negative toward acceleration and ability grouping (Kunter *et al.*, 2013; Little, 2018; Matheis *et al.*, 2017). Moreover, Berman, Schultz, and Weber (2012) posited that the lack of awareness and emphasis in preservice teacher training might instill preconceived beliefs about the gifted, thus influencing teacher willingness to work with them. Additionally, Furnes and Jokstad (2023) found that teachers tend to possess little formal or non-formal education on the gifted, thus exhibiting reluctant attitudes toward catering to this group, which reflects the pertinence of teacher training and professional development in the provision of differentiated education for the gifted. Additionally, teacher attitudes also tend to be influenced by cultural beliefs, values and context, implying that teachers should be more informed by evidence-based practice to promote access to equitable and differentiated education among the gifted.

Finally, Spawi (2024) implied that negative attitudes toward the gifted and gifted education tend to be influenced by pervasive misconceptions. First, many people tend to perceive gifted education as an elitist endeavor that disproportionately benefits the top echelons of society. Second, many tend to perceive the gifted, by virtue of their talents, will effortlessly succeed without any differentiated support. Third, many tend to stereotype the gifted as socially awkward or emotionally unstable; on the contrary, most of the gifted tend to possess the emotional intelligence to successfully navigate their intellectual journey. Therefore, parents and educators should avoid subscribing to misconceptions, but positively nurture traits and attributes of the gifted.

Bégin and Gagné (1994b) who examined the predictors of general attitude toward gifted education discovered that socioeconomic status (SES) and contact with giftedness explained 12 percent and10 percent of the variance in attitude, respectively; this finding reflects the significant impact of SES and gifted knowledge on general attitudes toward the gifted. Nevertheless, the positive relationship between SES and attitudes is in line with the common knowledge that proponents of gifted programs mostly come from well-educated, more affluent and non-minority families. On the other

hand, McCoach and Siegle (2007) revealed that teachers with gifted education training tend to hold higher perceptions of themselves as gifted; however, their self-perceptions as gifted do not significantly influence their attitudes toward gifted education. On the other hand, special education teachers tend to hold slightly lower perceptions of the gifted. Overall, training may enhance teacher understanding of giftedness and the needs of the gifted; however, it does not necessarily increase support for meeting those needs. Additionally, Lassig (2009) who explored teacher attitudes toward the gifted and their education found significant relationships between teacher attitudes, school classifications, and gifted in-service training, implying that teacher training and school-wide involvement in gifted education tend to instill positive attitudes toward the gifted and their education, while eradicating negative attitudes toward, and misconceptions about, giftedness.

Caldwell (2012) maintained that self-efficacy and attitudes tend to significantly predict teachers' willingness to engage in differentiated instruction, with the former as the stronger predictor. A study by Molapo and Salyers (2014) revealed that parent-teacher shared commitment, which is influenced by teacher self-efficacy, tends to be a significant predictor of teacher support for the gifted and gifted education. Moreover, Krijan, Jurčec and Borić (2015) who investigated teacher attitudes toward the gifted and toward acceleration and ability grouping found that teachers tend to recognize the needs, support and social value of the gifted, while interest and individual professional improvement tend to significantly predict their attitudes toward the same dimensions.

According to Krijan, Jurčec, and Borić (2015) teacher attitudes toward the gifted, interest, and perceived knowledge of giftedness tend to be significantly influenced by teaching experience, education level, and workplace. Additionally, interest and professional improvement concerning giftedness tend to significantly predict teacher attitudes toward the needs, support, and value of the gifted, while place of work and interest act as significant predictors of perceived elitism of gifted education. On the other hand, Gagné (2018) reiterated that general attitudes toward the gifted tend to have strong ideological roots associated with educational investments. Those who are supportive of gifted education tend to uphold the rights of the gifted and recognize their special enrichment needs, while asserting that the slow pace in the regular classroom will cause boredom among them. In contrast, those who generally reject the needs and rights of the gifted already have an edge at school, and do not necessarily get bored in the regular classroom.

According to Finn (2019), the public tends to demonstrate positive attitudes toward gifted education; many people would like to see it better resourced with adequately-trained teachers to promote it. Others support the democratization of gifted education to ensure that youth from minority and disadvantaged backgrounds can have greater access to gifted education services. Nevertheless, while many perceive giftedness as a rare construct, they believe that the gifted still require special programs to capitalize on their talents and unique interests. However, while many people believe that every discernible group deserves special programs and services, they also perceive that gifted education is already quite well established.

Finally, Reis-Jorge *et al.* (2021) who examined teacher perceptions of giftedness and classroom practice indicated that teachers tend to perceive giftedness in relation to intellectual traits and adjust their pedagogical approach accordingly. Further, they tend to focus primarily on product-oriented rather than process-oriented approaches. In brief, they tend to value the academic skills of the gifted more than their socioemotional and personality attributes. Overall, they tend to display positive attitudes toward the gifted, while acknowledging that they often possess higher literacy skills, more complex vocabulary, distinct learning interests, and rapid knowledge acquisition, compared to their average peers. Lastly, Jung and Lee (2024b) categorized teacher typologies into strong, moderate, and weak supporters of the gifted and gifted education, while their attitudes appear to influenced by administrative support for gifted education as well as perceived knowledge of giftedness.

Significance of the study

Research on teacher attitudes toward the gifted is scarce in Malaysia where the concept of giftedness is still relatively new. Teacher attitudes should be examined in relation to the local context rather than assuming that all teachers possess either positive or negative attitudes toward the gifted or gifted education. Therefore, this study aims to shed more light on teacher attitudes toward the gifted in the Malaysian context, which can help narrow the knowledge gap in this psychosocial area. Findings of this study may help educators and policymakers gain deeper insight into teachers' perceptions of the gifted, thus gaining meaningful information that can be utilized to encourage more individuals to specialize in gifted education. Moreover, teacher attitudes can also be used as a framework in implementing professional development courses that promote the provision of differentiated instruction for the gifted. Additionally, teacher attitudes need to be examined because they act as an influential human factor that can impact classroom practices geared toward helping the gifted to reach their fullest potential. Besides, current findings would generate novel information on the internal and external factors that might affect teacher attitudes toward the gifted and gifted education. Lastly, this study would provide pragmatic suggestions on ways to promote positive teacher attitudes toward giftedness and gifted education that are conducive to scaffolding the cognitive, affective, and psychomotor needs of the gifted.

Bégin and Gagné (1994a) concluded that, even though over 30 studies have been published on the predictors of attitudes toward the gifted and gifted education, not a single variable has consistently emerged as a substantial explanatory factor. This lack of significant results could be due to four major problems pertaining to methodology, including (a) diversity of the attitude questionnaires used, (b) size, diversity, and non-representativeness of the samples, (c) small number of predictors analyzed and diversity in their operationalization, and (d) inadequacies in statistical procedures. Therefore, this study sought to use sound methodological procedures that could maximize the chances of obtaining significant and generalizable results on teacher attitudes toward the gifted. The purpose of this study was to examine attitudes toward the gifted and their education among 60 Malaysian teachers. To guide the study, three research questions were formulated:

- Were there any significant differences in teachers' attitudes by way of gender, age, job status, and work experience?
- Were there any significant differences in teacher attitudes based on a hypothesized value of 3.5?
- > What were the descriptive statistics (percentages of agreement) on teacher attitudes and their implications?

Methodology

A convenient sample consisting of 60 private school teachers (n = 60) were recruited with the help of the cofounder of Inclusive GEMS Consultancy, Selangor, Malaysia who shared the survey link with teachers and urged them to fill out the questionnaire online. Several teachers were also directly contacted via email, WhatsApp, and Messenger. All were told that completion of the questionnaire was their indication of consent to voluntarily participate in the study and that they could stop participating any time. All respondents were ascertained of their anonymity, while their responses were kept strictly confidential.

Convenience sampling was done because of several obstacles, including budgetary constraint, lack of accessibility to the full gifted population for a representative sample, and need to act quickly within a limited timeframe. Moreover, there are only four recognized gifted programs in the 13-state nation. The sample size of this study was relatively small; nevertheless, according to Roscoe (1975) and Parnell (2023), a sample size greater than 30 and less than 500 is suitable for most survey studies; the argument behind this rule of thumb is derived from the central limit theorem (CLT), which states that the distribution of means will reach a normal distribution as the sample size increases. This logic was elaborated by RUBIKTOP (2023), a prominent market research company committed to delivering high-quality, actionable data. First, the CLT provides a good approximation of the sampling distribution of the mean for the current sample size of 60, which indicates that the normal distribution can be used to calculate confidence intervals and *p*-values for the findings. Second, for most statistical tests in gifted education, the probability of rejecting the null hypothesis when it is true (Type I error) is controlled at a significant level of 0.05; therefore, the researchers are willing to accept a five (5) percent chance of making a Type I error (rejecting the null hypothesis when it is actually true). With the current sample size, this level of control for most statistical tests can be achieved. Third, the power of a statistical test also depends on its probability of rejecting the null hypothesis when it is false (Type II error). Since it can be reasonably derived from a minimal sample size of 30, the present sample would yield relatively high power. Lastly, since a minimal sample size of 30 can help achieve a reasonable level of power for non-parametric tests, the current sample would be

sufficient to indicate significant differences for the Kruskal-Wallis H, Mann-Whitney U, and Wilcoxon signed rank tests, which were utilized to analyze data in this study.

Finally, the sample comes from diverse ethnic communities in Selangor, including Malays, Chinese, and Indians who are fluent in both English and Malay besides their own dialects. Males comprised 35 percent, while females comprised 65 percent of the sample. Age-wise, 13.3 percent are 25 to 35 years old, 31.7 percent are 36 to 46 years old, 28.3 percent are 47 to 57 years old, and 26.6 percent are above 58. Additionally, 80 percent and 20 percent are regular and teachers of the gifted, respectively. With regards to job experience, 66.7 percent have taught one to five years, 23.3 percent have taught six to 11 years, 16.7 percent have taught 12 to 17 years, and 53.3 have taught more than 17 years (see Table 1).

Variable	Description	Frequency	Percentage
Gender	Male	21	35.0
	Female	39	65.0
Age	25-35 years	8	13.3
	36-46 years	19	31.7
	47-57 years	17	28.3
	Above 58 years	16	26.7
Job status	Regular teacher	48	80.0
	Teacher of the gifted	12	20.0
Job experience (years)	1-5	4.0	66.7
	6-11	14.0	23.3
	12-17	10.0	16.7
	More than 17	32.0	53.3

Table 1	. Demograpl	nic inform	ation of the	sample ($n = 60$)
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Instrument

Teacher attitudes toward the gifted and their education were measured by administering a widely used 34-item questionnaire designed by Gagné and Nadeau (1991) entitled, *Opinions about Gifted Individuals and Their Education*. It consists of six dimensions: Needs and support (Items 1, 9, 11, 14, 15, 24, 30 and 32); resistance to objections (Items 3, 4, 5, 12, 16, 18, 23, 26, 27 and 28); social value (Items 13, 17, 25 and 33); rejection (Items 19, 22 and 31); ability grouping (Items 2, 6, 20, and 21); and school acceleration (Items 7, 8, 10, 29 and 34). Response options ranged from 1 = Strongly disagree to 5 = Strongly agree. High scores on needs and support, social value, ability grouping and acceleration indicate positive attitudes toward the gifted, whereas high scores on resistance to objections and rejection indicate negative attitudes toward the gifted. Lastly, factor analysis by Cross, Cross, & O'Reilly (2018) revealed that the questionnaire has relatively high reliability with three statistically sound factors that explained 53 percent of the variance: Objections to special services ($\alpha = .86$), opposition to acceleration ($\alpha = .78$), and support due to needs of the gifted ($\alpha = .65$).

Data analysis

Online data were automatically transferred onto a spreadsheet and subsequently analyzed using SPSS 26.0. First, Kruskal-Wallis H (non-parametric test) was conducted to determine if there were any significant differences in teacher attitudes in relation to age and job experience, while Mann-Whitney U (non-parametric test) was used to determine if there were any significant differences in terms of gender and job status. Next, Wilcoxon signed rank test was used to determine if significant differences existed in any of the items based on a hypothesized value of 3.5. Lastly, descriptive statistics (percentages) were used to present overall teacher attitudes toward the gifted and their education.

Findings

Kruskal-Wallis H test revealed no significant differences in teacher attitudes by way of age and job experience, while Mann-Whitney U test showed no significant differences in terms of gender and job status (see Table 2).

Table 2. Results of non-parametric tests

Variables	Non-parametric test	p
Age	Kruskal-Wallis H test	0.501
Gender	Mann-Whitney U test	0.398
Job experience	Kruskal-Wallis H test	0.980
Job status	Mann-Whitney U test	0.491

Wilcoxon signed rank test

In Wilcoxon signed-rank test, positive and negative ranks represent how data points compare to the hypothesized median (3.5 in this case). Positive ranks indicate that the data values are greater than the hypothesized median, while negative ranks denote that the data values are less than the hypothesized median. Results indicated that 18 of the items had medians that significantly differed from the test value with p < .001, while 12 had medians that significantly differed from the test value with p < .001, while 12 had medians that significantly differed from the test value with p < .05 (see Table 3).

Table 3.	Wilcoxon	signed rank	test results	(hypothesized	l value = 3.5)
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Item	р
The best way to meet the needs of the gifted is to put them in special classes.	.001***
When the gifted are put in special classes, the other children feel devalued.	.141
Gifted children should be left in regular classes since they serve as an intellectual stimulant for the other children.	.047*
Most gifted children who skip a grade have difficulties in their social adjustment to a group of older students.	.001***
The gifted waste their time in regular classes	.074
When skipping a grade, gifted students miss important ideas.	022*
It is more damaging for a gifted child to waste time in class than to adapt to skipping a grade.	.001***
The specific educational needs of the gifted are too often ignored in our schools.	.001***
The regular school program stifles the intellectual curiosity of the gifted.	.982
Gifted children are often bored in school.	.001***
Often, gifted children are rejected because people are envious of them.	.001***
The gifted need special attention in order to fully develop their talents.	.001***
Gifted persons are a valuable resource for our society.	.001***
In order to progress, a society must develop the talents of gifted individuals to a maximum.	.001***
Our schools are already adequate in meeting the needs of the gifted.	.001***
Our schools should offer special education services for the gifted.	.001***
Children who skip a grade are usually pressured to do so by their parents.	.001***
I would very much like to be considered a gifted person.	.002*
It is parents who have the major responsibility for helping gifted children develop their talents.	.001***
A child who has been identified as gifted has more difficulty in making friends.	.022*
Some teachers feel their authority threatened by gifted children.	.004*
By offering special educational services to the gifted, we prepare future dominant class members.	.047*
The leaders of tomorrow's society will come mostly from the gifted of today.	.011*
A greater number of gifted children should be allowed to skip a grade.	.002*
Gifted children might become vain/egotistical if they are given special attention.	.006*
Special educational services for the gifted children are a mark of privilege.	.005*
We have a greater moral responsibility to give special help to children with difficulties than to gifted children.	.013*
The gifted are already favored in our schools.	.001***
Tax-payers should not have to pay for special education for the minority of children who are gifted.	.013*
Special programs for gifted children have the drawback of creating elitism.	.001***
Since we invest supplementary funds for children with difficulties, we should do the same for the gifted.	.001***
Children with difficulties have the most need of special education services.	.001***
Average children are the major resource of society, so they should be the focus of our attention.	.001***
By separating students into gifted and other groups, we increase the labelling of children as strong-weak, good-less good, etc.	.122

 $^{***}\!p < .001; ^*p < .05$

Percentages of agreement

Percentages of "strongly agree" and "agree" for each item were collapsed to gain an overall view of teacher attitudes toward the gifted and their education. For example, 62.7 percent (32.7 + 34.5) strongly agreed/agreed that the best way to meet the needs of the gifted is to place them in special classes (see Item 1 in Table 4). Based on the Gagné and Nadeau (1991) questionnaire, teacher attitudes were categorized into six dimensions to report the percentages of agreement. *Needs and support*

Overall percentages showed that teachers tend to demonstrate positive attitudes to allocate them special classes and that regular school stifles their intellectual curiosity. Another 85.5 percent strongly agreed/agreed that society must capitalize on the talents of the gifted to progress. Only 25.5 percent and 21.8 strongly agreed/agreed that the gifted are often rejected because people are envious of them and that special gifted programs have the disadvantage of creating elitism, respectively. Lastly only 9.1 percent strongly agreed/agreed that our schools are already adequate in meeting the needs of the gifted (see Table 4).

Resistance to objections

Overall percentages showed that that teachers tend to demonstrate negative attitudes toward objections based on ideology and priorities in terms of the gifted and their education. For example, only 32.8 percent and 27.3 percent strongly agreed/agreed that gifted children should be left in regular classes since they serve as an intellectual stimulant for the other children and that special educational services for the gifted children are a mark of privilege. Only 16.4 percent and 50.9 percent strongly agreed/agreed that the gifted are already favored in schools and that they waste their time in regular classes. Nevertheless, 72.7 percent strongly agreed/agreed that our schools should offer special education services for the gifted (see Table 4).

Social value

Overall percentages showed that teachers tend to demonstrate positive attitudes toward

the social value of the gifted and their education. For example, 90.9 percent strongly agreed/agreed that the gifted are a valuable resource for our society. Only 30. 9 percent strongly agreed/agreed that the gifted might become vain/egotistical if they are given special attention; the same percentage strongly agreed/agreed that those who skip a grade are usually pressured to do so by their parents. Lastly, only 43.6 percent strongly agreed/agreed that average students should be the focus of our attention since they are the major resource of our society (see Table 4).

Rejection

Overall percentages showed that teachers tend to show negative attitudes toward rejection of the gifted (isolation of the gifted by others in the immediate environment). For example, 76.3 percent and 52.7 percent strongly agreed/agreed that it is parents who have the major responsibility for helping the gifted develop their talents and that future dominant class members are being prepared by offering special educational services to the gifted, respectively. Lastly, 74.5 percent strongly agreed/agreed that, since supplementary funds are invested for children with difficulties, the same should be done for the gifted (see Table 4).

Ability grouping

Overall percentages showed that teachers tend to show positive attitudes toward ability grouping of the gifted. For example, only 25.4 percent and 41.8 percent strongly agreed/agreed that the other children feel devalued when the gifted are put in special classes and that they miss important ideas when skipping a grade, respectively. Lastly, only 41.9 percent and 30.9 percent strongly agreed/agreed that the gifted have more difficulty in making friends and that they threaten the authority of some teachers, respectively (see Table 4).

School acceleration

Overall percentages showed that teachers tend to have positive attitudes toward school acceleration for the gifted. For example, 49.1 percent and 56.4 percent strongly agreed/agreed that is more damaging for the gifted to waste time in the regular classroom and that their specific educational needs are too often ignored in schools, respectively. About 67.2 percent strongly agreed/agreed that best way to meet the needs of the gifted is to put them in special classes, while another 72.7 percent strongly agreed/agreed that the gifted are often bored in school. Only 18.2 percent strongly agreed/agreed

that taxpayers should not sponsor special education for the gifted minority. Lastly, 43.6 percent strongly agreed/agreed that labelling will increase segregation between the gifted and other groups; the same percentage strongly agreed/agreed that, by separating students into gifted and other groups, we increase the labelling of children as strong-weak, good-less good, etc. (see Table 4).

Needs and support (Items 1, 9, 11, 14, 15, 24, 30 and 32); resistance to objections (Items 3, 4, 5, 12, 16, 18, 23, 26, 27 and 28); social value (Items 13, 17, 25 and 33); rejection (Items 19, 22 and 31); ability grouping (Items 2, 6, 20, and 21); and school acceleration (Items 7, 8, 10, 29 and 34).

Table 4	4. Percer	itages of agre	ement on t	teacher attitude	es
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Item	1	2	3	4	5	4+5
The best way to meet the needs of the gifted is to put them in special classes.	3.6	10.9	18.2	32.7	34.5	67.2
When the gifted are put in special classes, the other children feel devalued.	18.2	27.3	29.1	10.9	14.5	25.4
Gifted children should be left in regular classes since they serve as an intellectual stimulant for the other children.	18.2	20	29.1	27.3	5.5	32.8
Most gifted children who skip a grade have difficulties in their social adjustment to a group of older students.	5.5	12.7	30.9	38.2	12.7	51.2
The gifted waste their time in regular classes.	5.5	18.2	25.5	27.3	23.6	50.9
When skipping a grade, gifted students miss important ideas.	10.9	20	27.3	32.7	9.1	41.8
It is more damaging for a gifted child to waste time in class than to adapt to skipping a grade.	5.5	9.1	36.4	36.4	12.7	49.1
The specific educational needs of the gifted are too often ignored in our schools.	5.5	10.9	32.7	50.9	5.5	56.4
The regular school program stifles the intellectual curiosity of the gifted.	0	0	32.7	34.5	32.7	67.2
Gifted children are often bored in school.	0	5.5	21.8	41.8	30.9	72.7
Often, gifted children are rejected because people are envious of them.	3.6	30.9	40	18.2	7.3	25.5
The gifted need special attention in order to fully develop their talents.	0	3.6	9.1	34.5	52.7	87.2
Gifted persons are a valuable resource for our society.	0	1.8	7.3	41.8	49.1	90.9
In order to progress, a society must develop the talents of gifted individuals to a maximum.	0	3.6	10.9	36.4	49.1	85.5
Our schools are already adequate in meeting the needs of the gifted.	30.9	29.1	30.9	7.3	1.8	9.1
Our schools should offer special education services for the gifted.	1.8	0	25.5	29.1	43.6	72.7
Children who skip a grade are usually pressured to do so by their parents.	5.5	9.1	54.5	23.6	7.3	30.9
I would very much like to be considered a gifted person.	14.5	12.7	41.8	18.2	12.7	30.9
It is parents who have the major responsibility for helping gifted children develop their talents.	0	10.9	12.7	41.8	34.5	76.3
A child who has been identified as gifted has more difficulty in making friends.	3.6	27.3	27.3	25.5	16.4	41.9
Some teachers feel their authority threatened by gifted children.	9.1	20	40	14.5	16.4	30.9
By offering special educational services to the gifted, we prepare future dominant (elite) class members.	7.3	16.4	23.6	32.7	20	52.7
The leaders of tomorrow's society will come mostly from the gifted of today.	14.5	14.5	36.4	25.5	9.1	34.6
A greater number of gifted children should be allowed to skip a grade.	5.5	12.7	36.4	29.1	16.4	45.5
Gifted children might become vain/egotistical if they are given special attention.	16.4	23.6	29.1	29.1	1.8	30.9
Special educational services for the gifted children are a mark of privilege.	10.9	23.6	38.2	18.2	9.1	27.3
We have a greater moral responsibility to give special help to children with difficulties than to gifted children.	3.6	20	25.5	32.7	18.2	50.9
The gifted are already favored in our schools.	18.2	18.2	47.3	10.9	5.5	16.4
Tax-payers should not have to pay for special education for the minority of children who are gifted.	21.8	27.3	32.7	7.3	10.9	18.2
Special programs for gifted children have the drawback of creating elitism.	20	14.5	43.6	18.2	3.6	21.8
Since we invest supplementary funds for children with difficulties, we should do the same for the gifted.	1.8	7.3	16.4	43.6	30.9	74.5
Children with difficulties have the most need of special education services.	5.5	7.3	29.1	40	18.2	58.2
Average children are the major resource of our society, so they should be the focus of our attention.	3.6	10.9	41.8	29.1	14.5	33.6
By separating students into gifted and other groups, we increase the labelling of children as strong-weak, good-less good, etc.	9.1	16.4	30.9	23.6	20	43.6

1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Discussion

Overall findings imply that teachers tend to possess positive attitudes toward the gifted and their education, which are supported by previous studies (Jawabreh, Salha, & Danju, 2023; Juriševič & Žerak, 2019; Laine, Hotulainen & Tirri, 2019; Ozcan, 2016; Teow, 2016). The primary aim of this study was to learn more about Malaysian teachers' attitudes toward the gifted and their education, which often influence teaching behavior, and in turn, pedagogical and learning outcomes. Current findings generally reflect a positive picture of teacher attitudes since most statements have received average to high percentages of agreement. Nevertheless, Malaysian policymakers should continue to inculcate positive teacher attitudes toward the gifted and their education to promote quality education for all, which is in line with United Nations Sustainable Development Goal 4.

Copenhaver and McIntyre (1992), implying that teachers' attitudes toward the gifted tend to be influenced by grade level taught and whether they have taken courses or workshops on gifted education, have recommended that teachers require more grade-specific coursework and involvement with the gifted. Tortop and Kunt (2013), asserting that teachers' attitudes underscore the success of gifted education, have highlighted that teachers should enroll in seminars or receive in-service training to augment their knowledge on the gifted and their attributes, while differentiated, enriched, and individualized education programs should be implemented to enhance the problem-solving skills, analytical thinking, and creativity among the gifted.

On the other hand, Nugent and Shaunessy (2003) have suggested that cinematography be used to foster positive attitudes toward the gifted and their education among preservice teachers, in-service teachers, and graduate students. For example, watching movie clips about the characteristics, stereotypes, socioemotional needs, diverse populations, and educational challenges can deepen teachers' awareness on the issues and problems encountered by the gifted.

Positive teacher attitudes should be inculcated because they play a crucial role in addressing the needs of the gifted and their education (Yong & Chuah, 2024). First, teachers need to acknowledge that differentiated instruction is one of the most effective methods in nurturing the unique talents and interests among the gifted. The idea that one hat fits all is inadequate to deal with all students in an equal and equitable manner, especially among the gifted. They also need to accept the fact that most classrooms are not homogeneous because they contain students of varying abilities. They need to adopt appropriate teaching approaches for the gifted, which include differentiated instruction as a primary solution. To develop positive attitudes toward its implementation, preservice and novice teachers should receive special training and professional development to support and practice differentiated instruction. By demonstrating positive attitudes toward student-centered pedagogies, they will be able to tailor their lessons to meeting individual students' strengths, interests, and needs. Second, to develop positive attitudes toward the gifted and their education, teachers need basic knowledge on how students process information and learning preferences. In general, the gifted process information differently from other cognitive types (such as how the environment can support or hinder processing) which in turn affects learning. Learning preferences of the gifted include conceptual thinking, the need of purpose and relevance prior to following instruction or topic, and brainstorming prompts. Gifted learners with more than one area of learning potential tend to thrive best at the intersection of their multi-potentialities. Teachers therefore need to adjust their teaching style to ensure that all students are actively engaged in class by integrating their individual learning styles and preferences into the curriculum and pedagogical practices.

Yong and Chuah (2024) added that teachers need to eliminate their egalitarian attitudes toward the gifted and their education and demonstrate cultural acceptance (for example, rights, norms, and values) in terms of providing differentiated education. First, they should not regard the allocation of resources and support as a special privilege that gives them priority over other groups. Many of the gifted may not distinctly exhibit exceptional achievements since they tend to possess both strengths and challenges, which underscores the importance of identifying and providing them with the necessary mental, emotional, and social scaffolding. In brief, teachers need to see that accommodating to the needs of the gifted can enhance their cognitive, affective, and psychomotor development, while offering them the opportunities to fulfill their untapped potential; therefore, they should help implement a more comprehensive, equitable, and inclusive educational environment for all students, including the gifted. Second, teachers need to

acknowledge that students with special needs, including the gifted, have the right to receive specialized education to realize their potential for academic achievement and career success. While integrated education can increase inclusion, differentiated learning programs help meet the scholastic, intrapersonal, and interpersonal needs among the gifted more effectively in various contexts. Additionally, teachers should be aware of cultural norms and context that can influence their own attitudes toward the gifted and their education. Their pedagogical practices are often influenced by their cultural and ideological ways of thinking, speaking, and acting, which ultimately result in specific reasoning styles and assumptions. Teachers should therefore examine their own values that influence their attitudes toward the gifted and their education as value-laden perceptions can potentially expand or limit students' access to professional, emotional, and social support.

Finally, to instill positive teacher attitudes toward the gifted, differentiated education should be clearly featured in national policy documents and teacher training programs to better serve the gifted. Historically, there was a dearth of legislation and guidelines on the gifted and their education in Malaysia; nevertheless, with the growing emphasis on equity and inclusivity in the current education system, differentiated education is gradually garnering more attention to meet the diverse needs of the gifted. Lastly, there is an urgent need to gain an understanding of how teachers perceive giftedness and what attitudes they hold toward gifted education. Teachers should be encouraged to elaborate on their perceptions of the gifted and their education, and how they uphold their views and practices (Yong & Chuah, 2024).

To conclude, this study poses some limitations that might affect the generalizability of findings. Future research on the topic should adopt a larger and random sample recruited from different parts of Malaysia, besides examining the possible relationships among teacher attitudes, perceived knowledge of giftedness, cultural values and norms, and pedagogical practices. Moreover, the use of a non-random, private-school-only sample could reduce the generalizability of findings; therefore, future studies should include public schools and rural regions. Besides, current findings were mostly based on numerical data, which could limit thematic insights into why teachers agreed or disagreed with specific items or how their responses reflected broader pedagogical or cultural patterns. Therefore, future research should explore the trends or variations within subgroups (e.g., median scores, ranges, tendencies across age/experience groups), which could provide more in-depth information. Lastly, the present study also relied exclusively on quantitative data; hence, the absence of qualitative data could limit understanding of the reasons underlying teachers' attitudes. Future research should therefore incorporate open-ended responses or interviews to obtain more explanatory, rather than solely statistical findings.

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