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Primary School Teachers' Competence Level in The Early Identification of Gifted Children

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A B S T R A C T

The research explores the competence of teachers in recognizing and differentiating gifted students from their peers, which is crucial for providing appropriate educational interventions and support tailored to their unique needs. The methodology employed a descriptive survey design, with data collected through a questionnaire. The sample consisted of private and public primary school teachers in the area. The findings indicate a low competence level among primary school teachers in the early identification of gifted children. The study found no significant differences in competence based on gender or school type. However, there was a significant difference in competence based on teacher qualification, with those holding M.Ed./M.Sc. qualifications showing a higher level of competence. Overall, the study highlights the need for targeted professional development and support for primary school teachers in the identification of gifted children. By improving teachers' competence in this area, it is possible to enhance educational interventions and provide appropriate support to nurture the potential of gifted students.

1. INTRODUCTION

Teachers need to enhance, improve, and explore their teaching by improving their knowledge and skills. The competencies of teachers have expanded concerning educational reforms, teacher education development, scientific findings in educational science, and other fields. Lu & Zhang (2023) highlighted the need for redefining teachers' professional development to adapt to the changing educational landscape, emphasizing the importance of sustainability. The goals of education evolve rapidly based on the demands of the era, requiring teachers to possess greater capabilities. These demands directly impact the educational system, and it is the responsibility of teachers to effectively operate within it, necessitating strong and efficient professional competencies. As such, teachers' competencies must be regularly reviewed and redefined in alignment with the development of both human life and education as a whole.

According to Cohen *et al.* (2020), competencies encompass the knowledge, skills, attitudes, values, motivations, and beliefs required for success in a job. Teachers' competencies are commonly categorized into three main areas: field competencies, pedagogical competencies, and cultural competencies. Additionally, Bulajeva (2013) suggests that teachers' professional competencies can encompass dimensions beyond these three main areas. Zhumash *et al.* (2021) links teacher competence to professional performance, defining it from both cognitive and operational perspectives. From a theoretical standpoint, teacher competence refers to a cognitive structure that facilitates specific behaviors, while operationally, it encompasses higher-order knowledge, skills, attitudes, strategic thinking, metacognition, and behaviors that enable teachers to navigate complex and unpredictable situations.

Abdulla Alabbasi *et al.* (2021) defines gifted children as individuals who perform at a significantly higher level than their peers and require special provisions, along with social and emotional support, from their family, community, and educational context. Morelock (2016) characterizes gifted children as those who process information rapidly, enjoy engaging with abstract and complex ideas, often prefer solitary play or interaction with older children, and struggle to find mental peers.

Gifted preschool children exhibit less egocentrism compared to their peers, displaying sensitivity to their own needs and the emotions of others. They demonstrate heightened imagination, the ability to generate original ideas and solutions and exhibit creativity in their unconventional use of everyday materials. Characteristics of gifted and talented children at an early age, as outlined by Dağlıoğlu (2004), include extraordinary energy, prolonged attention span, early recognition of caregivers, heightened sensory reactions, accelerated developmental milestones (e.g., walking, and speaking), exceptional memory, enjoyment and rapid acquisition of knowledge, advanced language skills, increased interest in books, curiosity, sense of humor, abstract thinking, problem-solving skills, vivid imagination, sensitivity, and constant questioning.

Sankar-DeLeeuw (2009a) and Sankar-DeLeeuw (2009b) provides insights into the characteristics of gifted children based on reports from their families and teachers. These traits include divergent thinking, focused attention, early reading skills, high verbal ability, a well-developed sense of humor, curiosity, determination, and the ability to make abstract connections in the learning process. Parents participating in the research also highlight their gifted children's curiosity, determination, strong math skills, advanced sense of humor, and early literacy skills. Gifted preschool children engage in thought-provoking questions, and discussions on various topics and ideas, and provide detailed and descriptive explanations. Gifted and talented children have different friendship expectations compared to their peers,

often preferring friendships with other gifted individuals or those older than themselves (Gross, 2002). Similarly, Pfeiffer (2003) found disparities in educational practices for gifted students in mixed-ability classrooms due to a lack of experience, training, and knowledge among teachers regarding the specific needs of gifted students.

Gender, teacher qualification, and school type are important variables in this study. Gender is a socially constructed phenomenon that assigns different roles, behaviors, and characteristics to the two sexes (Mangvwat, 2006). It encompasses cultural attributes associated with males and females (Akpochafo, 2009). Lahey (2003) defines gender as a psychological experience related to being male or female, encompassing personality traits and self-concept components. Gender goes beyond biological distinctions and includes roles, orientations, and identities based on an individual's self-perception. Consequently, gender disparities in education can lead to psychological alienation or depression among female students (Joel & Aride, 2006). This results in boys dominating subjects like Social Studies, Chemistry, Physics, Mathematics, and Environmental Studies, while girls gravitate toward language and arts subjects.

Elijah (2017) researched gender differences in literacy education and found no significant difference in the performance of male and female students in literacy. Huang & Moon (2009) documented that teacher qualification accounted for approximately 40% to 60% of the variance in students' average achievement. The influence of different types of public schools, such as traditional public schools versus privately managed public schools (charter schools), on the identification of gifted and talented students by teachers, remains a complex question with mixed results. Reports from the American Federation of Teachers indicate that public schools outperform charter schools (see https://www.nytimes.com/2004/08/18/us/study-finds-charter-schools-lagging-behind.html).

This study aims to determine the competence level of primary school teachers in the early identification of gifted children in the Irepodun Local Government Area of Kwara State. It fills a gap in empirical evidence regarding primary school teachers' competence in identifying gifted children in this specific area, as no prior studies have been conducted.

The primary objective of education is to facilitate the holistic development of all students, including those who possess exceptional abilities and talents. However, in the context of the Irepodun Local Government Area of Kwara State, there is a lack of understanding and awareness regarding the identification and support of gifted children within the primary school system. Specifically, the problem at hand is the low competence level of primary school teachers in the early identification of gifted children.

Gifted children exhibit advanced intellectual, creative, or artistic abilities that require specialized educational strategies to nurture their potential fully. Early identification of gifted children is crucial to provide appropriate educational interventions and support tailored to their unique needs. However, primary school teachers in Irepodun Local Government Area may lack the necessary knowledge, skills, and training to effectively recognize and differentiate gifted students from their peers.

The problem of low competence in the early identification of gifted children among primary school teachers can have significant implications. Gifted children may remain unidentified, leading to underutilization of their potential and diminished academic growth. These children may become disengaged, and unchallenged, and may experience social and emotional difficulties in the absence of appropriate educational provisions. Furthermore, inadequate identification may contribute to a lack of targeted professional development opportunities for teachers and a limited understanding of the importance of catering to gifted students' specific needs.

The following research questions will be answered: What is the primary school teachers' competence level in the early identification of gifted children?

The following research hypotheses were raised:

(i) **H₀1**: There is no significant difference in primary school teachers' competence level in the early identification of gifted children based on gender.

(ii) **H₀2**: There is no significant difference in primary school teachers' competence level in the early identification of gifted children based on school type.

(iii) **H₀3**: There is no significant difference in primary school teachers' competence level in the early identification of gifted children based on teachers' qualifications.

2. METHODS

The research adopted a descriptive survey design, as it was used to examine the primary school teachers' competence level in the early identification of gifted children in the Irepodun Local Government Area of Kwara State. The descriptive survey method allows the researcher to pose a series of questions to willing participants, summarize their responses with percentages, frequency counts, or more rigorous statistics, and draw inferences about a particular population from the responses of the sample. The population of this study comprised all private and public primary school teachers in the Irepodun Local Government Area of Kwara State. There are 1,181 private primary school teachers and public primary school teachers 570 (Annual School Census Report, Kwara State Ministry of Education and Human Capital Development, 2019/2020).

To determine the sample size, a research advisor (2006) was used for teachers, and 285 teachers were recommended for the population of teachers in the locale. Researcher designed questionnaire was used to obtain information. The instrument tagged Primary School Teachers Competence Level Early Identification of Gifted Children Test (PSTCLIGCQ). The Instrument provided information about respondents on teachers' competence level in the early identification of gifted children.

The instrument was divided into two (2) sections. Section A and B, section A is designed to get demographic data like gender and school type while section B seeks to elicit data on the primary school teachers' competence level in the early identification of gifted children, it is also consisting of 10 items to measure primary school teachers' competence level in the early identification of gifted children. The data collected were analyzed using descriptive statistics of frequency counts, percentage, and mean for demographic data and research questions while research hypotheses were tested using t-test and ANOVA were used to test the hypotheses.

3. RESULTS
3.1. Basic Data

Table 1 shows the gender respondents on primary school teachers' competence level in the early identification of gifted children. 129 respondents representing (45.3%) were while 156 respondents representing 54.7% were female. From the analysis above, it was indicated that female respondents were found to be more in number than male respondents. Thus, because of the above result, female respondents' responses prevailed on the primary school teachers' competence level in the early identification of gifted children.

Table 1. the gender respondents on primary school teachers' competence level in the early identification of gifted children in Irepodun Local Government Area, Kwara State.

Gender	Frequency	Percentage (%)
Male	129	45.3
Female	156	54.7
Total	285	100

3.2. Research Question: What is the Primary School Teachers' Competence Level in the Early Identification of Gifted Children?

Table 2 shows the primary school teachers' competence level in the early identification of gifted children in the Irepodun Local Government Area of Kwara State. The primary school teachers' competence level in the early identification of gifted children was low (Mean = 19.37).

Table 2. Summary of frequency, count, mean, and percentage showing the primary school teachers' competence level in the early identification of gifted children in Irepodun Local Government Area of Kwara State.

Variable	Mean	Std. Deviation
Teachers' Competence Performance Test	19.37	12.797

3.3. Research Hypothesis One: There is No Significant Difference in Primary School Teachers' Competence Level in the Early Identification of Gifted Children Based on Gender

Table 3 shows the significant difference in primary school teachers' competence level in the early identification of gifted children based on gender. There was no significant difference in primary school teachers' competence level in the early identification of gifted children based on gender (t = 1.806; df = 283; P>0.05). Therefore, in the light of the result, the hypothesis is not rejected, hence there was no significant difference in primary school teachers' competence level in the early identification of gifted children based on gender since the significant level (0.072) is greater than 0.05.

Table 3. Summary of independent sample t-test showing the difference in primary school teachers' competence level in the early identification of gifted children based on gender.

Gender	n	Mean	Std. Deviation	T	Df	Sig.	Remark
Male	129	40.87	12.686	1.806	283	0.072	Not Significant
Female	156	38.13	12.795				

3.4. Research Hypothesis Two: There is No Significant Difference in Primary School Teachers' Competence Level in the Early Identification of Gifted Children Based on School Type

Table 4 shows the significant difference in primary school teachers' competence level in the early identification of gifted children based on school type. There was no significant difference in primary school teachers' competence level in the early identification of gifted children based on school type (t = 1.632; df = 283; P>0.05). Therefore, in the light of the result,

the hypothesis is not rejected, hence there was no significant difference in primary school teachers' competence level in the early identification of gifted children based on school type since the significant level (0.104) is greater than 0.05.

Table 4. Summary of independent sample t-test showing the difference in primary school teachers' competence level in the early identification of gifted children based on school-type.

School-type	n	Mean	Std. Deviation	t	df	Sig.	Remark
Public	130	40.72	13.000	1.632	283	0.104	Not Significant
Private	155	38.24	12.554				

3.5. Research Hypothesis Three: There is No Significant Difference in Primary School Teachers' Competence Level in the Early Identification of Gifted Children Based on Teachers' Qualifications

The results of the analysis of variance as presented in **Table 5** revealed that the calculated value of F was 3.944 ($F_{2,282}=3.944$) and the observed probability value is 0.020 which is less than the fixed probability value of 0.05($P<0.05$). This indicated that the null hypothesis which stated that, there was no significant difference in primary school teachers' competence level in the early identification of gifted children based on teachers' qualifications was rejected. This implied that there was a significant difference in primary school teachers' competence level in the early identification of gifted children based on teachers' qualifications ($F_{2,282}=3.944$, $p<0.05$). In light of the result, there was a significant difference in primary school teachers' competence level in the early identification of gifted children based on teachers' qualifications.

Table 5. Summary of Analysis Variance (ANOVA) showing significant differences in primary school teachers' competence level in the early identification of gifted children based on teachers' qualifications.

Source	Sum of Square	df	Mean Square	F	Sig	Decision
Between Groups	1265.336	2	632.668			
Within Groups	45240.980	282	160.429	3.944	0.020	Rejected
Total	46506.316	284				

Table 6 revealed that the significant difference exposed by **Table 5** was because of the significant difference among the following qualifications: M.Ed./M.Sc., B. Sc/ Ed d., and NCE/OND. It was indicated that teachers who have M.Ed. qualification (Mean = 43.34) have a significant difference in primary school teachers' competence level in the early identification of gifted children based on teachers' qualification.

Table 6. Summary of Bonferroni's Post Hoc pairwise comparison of qualification.

Qualification	Mean Score	M.Ed/M.Sc	B. Sc/ Ed	NCE/OND
M.Ed/M.Sc	43.34	*		
B. Sc/ Ed	38.39		*	
NCE/OND	36.37			*

4. DISCUSSION

The first finding of this study revealed that primary school teachers' competence level in the early identification of gifted children was low. This reason for this finding may be a result of a lack of knowledge about gifted children. Many studies suggest that teachers often receive inadequate training and support in recognizing and identifying gifted students. Research by Baum et al. (2005) found that teachers reported feeling unprepared and uncertain about identifying gifted children.

To corroborate the finding of this study, Ford (2008) conducted a study on teacher competence level in the early identification of gifted children where he posited that teachers' competence was low and he, therefore, adduced reasons for this finding that some teachers may hold misconceptions about giftedness, such as equating it solely with high academic achievement. This can result in the under-identification of gifted students who do not fit the traditional stereotype.

Another finding of this study revealed that there was no significant difference in primary school teachers' competence level in the early identification of gifted children based on gender. The finding of this study supports the study of Reis & McCoach (2002) who found no significant gender differences in teachers' identification of gifted students. The study showed that teachers were equally likely to identify gifted boys and girls. Similarly, gender bias can exist in various domains, including education. However, when it comes to identifying gifted children, studies like those conducted by Renzulli & Park (2002) indicate that gender bias may not play a significant role. The focus is more on individual characteristics and abilities rather than gender-specific criteria.

Another study revealed that there was no significant difference in primary school teachers' competence level in the early identification of gifted children based on school type. This finding supports the study conducted by Plucker & Callahan (2014) where they stated that different school types, such as public schools, private schools, and charter schools, may have different approaches to identifying and supporting gifted children.

The variation in practices across schools can impact teachers' competence levels in identifying gifted students. Similarly, the availability of resources, such as funding for gifted programs, professional development opportunities, and specialized assessment tools, can differ between school types. These resources can significantly impact teachers' abilities to accurately identify gifted children (Gubbins & Barrett, 2009).

Another finding revealed that there was a significant difference in primary school teachers' competence level in the early identification of gifted children based on teachers' qualifications. This corroborates the findings of Baum et al., (2005) where they posited that teachers with specialized training in gifted education are more likely to demonstrate higher competence levels in identifying gifted students.

Courses, workshops, and professional development opportunities focused on gifted education can enhance teachers' understanding of the characteristics and needs of gifted children. Similarly, teachers with a stronger foundation in educational psychology, child development, and understanding of giftedness are better equipped to identify gifted children (Kerr et al., 2010). Teachers' qualifications, including their academic degrees, certifications, and endorsements, can contribute to their expertise in recognizing giftedness.

5. CONCLUSION

In conclusion, the findings suggest that the competence level of primary school teachers in the early identification of gifted children tends to be low. This implies that teachers may face challenges in accurately recognizing and addressing the needs of gifted students within the classroom. Despite this overall low competence level, the study reveals that there is no significant difference in teachers' competence based on gender or school type. This suggests that gender and the type of school (public or private) do not appear to be significant factors influencing teachers' ability to identify gifted children. However, an important finding emerges regarding the impact of teachers' qualifications on their competence level. The research indicates a significant difference in the competence level of primary school teachers in the early identification of gifted children based on their qualifications, highlighting the importance of specialized training and ongoing professional development in improving teachers' ability to recognize giftedness in students. Based on the findings of this study, the following were recommended.

(i) Given the low competence level of primary school teachers in the early identification of gifted children, it is crucial to invest in targeted training programs and professional development opportunities. These initiatives should focus on increasing teachers' understanding of giftedness, dispelling myths and biases, and equipping them with effective identification strategies. By providing teachers with the necessary knowledge and skills, they can improve their competence in identifying gifted students.

(ii) Establishing clear and standardized identification protocols can help mitigate potential biases and inconsistencies in the identification process. These protocols should encompass multiple criteria, including intellectual ability, creativity, motivation, and academic performance. By adopting a holistic approach, teachers can be guided to identify a diverse range of gifted students who may not fit traditional stereotypes. Additionally, utilizing various assessment tools and instruments can contribute to more accurate identification.

(iii) Encouraging collaboration among teachers, schools, and educational institutions can facilitate the exchange of best practices and expertise in the identification of gifted children. Establishing professional learning communities, organizing conferences, and creating online platforms can provide opportunities for teachers to learn from one another and stay updated with the latest research in gifted education. By fostering a culture of collaboration and knowledge-sharing, teachers can enhance their competence and collectively improve the early identification of gifted students.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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