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Readiness of Primary School Mathematics Teachers for the Implementation of the Inclusive Education Programme

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Abstract

The Ministry of Education Malaysia, in ensuring that students with special needs receive equal learning rights in mainstream classrooms, has introduced the Inclusive Education Programme (IEP). The readiness of teachers in managing students' learning needs holistically and effectively will determine the success of this programme. This study aims to examine the readiness level of primary school Mathematics teachers in implementing the Inclusive Education Programme (IEP), focusing on three main aspects: knowledge, skills, and attitudes. This survey study, which employed a quantitative approach, investigated 25 Chinese National-Type Primary Schools (SJKC) in the district of Pontian, Johor. An adapted online questionnaire was used for data collection. A total of 86 respondents were randomly selected from 112 Mathematics teachers using simple random sampling. Data were analysed using SPSS version 27.0. The findings indicated statistically significant differences in teachers' knowledge, skills, and attitudes according to teaching experience. Teachers with longer teaching experience demonstrated higher levels of knowledge and more positive attitudes compared to those with less experience. These findings suggest that continuous training, professional guidance, and systematic support are essential to enhance the readiness of Mathematics teachers to implement inclusive education effectively.

Keywords: Inclusive Education Programme, Mathematics Teachers, Primary Schools, Knowledge Level, Skills

Introduction

Inclusive education gives equal learning chances to all pupils, including pupils with special educational needs (SEN), to learn together in mainstream classrooms (Kamarudin & Yunus, 2023). This idea is based on the right of every child to receive fair education without physical, social, or emotional discrimination (Ibrahim et al., 2022). In Mathematics, inclusive education helps SEN pupils build thinking, reasoning, and problem-solving skills with typical classmates (Zainal et al., 2024). It also increases participation in learning and teaches empathy and cooperation among pupils (Salleh & Roslan, 2022).

In Malaysia, inclusive education is strengthened under the Malaysia Education Blueprint (2013–2025), which encourages more SEN pupils to join mainstream schools (Jelas et al., 2021). This includes all subjects such as Mathematics (Nik Azis et al., 2021). However, the implementation still faces problems such as lack of facilities, limited prepared materials, and teachers who are not fully ready (Lim et al., 2024). These issues are more serious in Mathematics because the subject needs understanding of abstract numbers, symbols, and logic (Zainal et al., 2024).

Mathematics teachers play a key role in making inclusion successful. They must change teaching content, methods, and assessments to suit different learning needs (Salleh & Roslan, 2022). They must move away from traditional teaching and apply flexible, student-centred methods (Mohamed Hata & Mahmud, 2020). Teachers with knowledge about SEN are more willing to adjust lessons such as counting and geometry so that SEN pupils can understand better (Nik Nurul Afiqah Wan Zainodin et al., 2022). Therefore, teacher readiness is important for the success of inclusive Mathematics (Hanapi et al., 2024).

Teacher readiness includes knowledge, skills, and attitudes (Lim et al., 2024). Knowledge helps teachers understand SEN characteristics and adjust Mathematics topics accordingly (Nik Nurul Afiqah Wan Zainodin et al., 2022). For example, pupils may need concrete objects to learn fractions (Mohd Noor et al., 2020). Without knowledge, teachers use one-way teaching that is difficult for SEN pupils (Ibrahim et al., 2022).

Skills are also important (Mohamed Hata & Mahmud, 2020). Teachers must know strategies such as group learning, game-based teaching, and assistive technology (Lim et al., 2024). Skilled teachers can simplify abstract concepts such as algebra or statistics for different ability levels (Zainal et al., 2024).

Attitudes influence success too (Demirdis, 2024). Positive attitudes lead teachers to accept challenges and adjust their plans (Salleh & Roslan, 2022). Negative attitudes make teachers view SEN pupils as burdens (Nik Azis et al., 2021). Training and experience can build positive attitudes (Hanapi et al., 2024).

Teaching experience also affects readiness. Experienced teachers understand classroom behaviour but may lack modern inclusive training (Mohamed Hata & Mahmud, 2020). New teachers may be more familiar with digital tools (Lim et al., 2024). Hence, research is needed to understand readiness differences based on experience (Zainal et al., 2024).

Although many studies explore inclusion, few focus on Mathematics teacher readiness and few examine knowledge, skills, and attitudes together (Nik Nurul Afiqah Wan Zainodin et al., 2022). Therefore, studies like this are important to guide improvement (Salleh & Roslan, 2022).

Problem Statement

Although the Inclusive Education Programme (IEP) has been in place in Malaysian primary schools for several years, questions remain regarding its actual effectiveness, particularly in the teaching of Mathematics (Rahman & Jamaludin, 2023). Mathematics is a subject that requires pupils to engage in abstract thinking, logical reasoning, and structured problem

solving. These demands pose considerable challenges for pupils with special educational needs (SEN). Consequently, the success of inclusive Mathematics education relies heavily on teachers' readiness, especially in terms of their knowledge, teaching skills, and attitudes towards inclusion (Salleh & Roslan, 2022). However, existing research consistently suggests that many primary school Mathematics teachers are not yet fully prepared to support SEN pupils effectively in mainstream classrooms (Nik Nurul Afiqah Wan Zainodin et al., 2022).

One of the main challenges relates to teachers' limited knowledge of special education and the diverse learning characteristics of SEN pupils. Mathematics teachers are expected to recognise and respond to the needs of pupils with conditions such as dyslexia, autism spectrum disorder, and dyscalculia, each of which requires specific instructional approaches (Zainal et al., 2024). In practice, however, many teachers report insufficient exposure to special education training during both pre-service and in-service programmes (Sani et al., 2020). As a result, teachers often struggle to adapt Mathematics lessons using visual aids, concrete materials, or simplified instructional steps that are essential for supporting SEN pupils' understanding of abstract concepts (Mohd Ariffin & Ismail, 2021).

This limitation in knowledge has direct implications for classroom practices. Teachers who lack a strong understanding of inclusive pedagogy tend to rely on traditional, teacher-centred instructional methods that do not adequately address the learning needs of SEN pupils (Jelas et al., 2021). From a classroom perspective, this issue is particularly evident in topics such as fractions and percentages, which require clear demonstrations and hands-on learning experiences. The inconsistent use of manipulatives such as fraction blocks, number cards, and grid boards limits pupils' engagement and makes it difficult for SEN learners to grasp key concepts (Tan et al., 2021). Such practices highlight a clear gap in teachers' knowledge of effective inclusive Mathematics instruction.

Beyond knowledge, teaching skills present another significant concern. Many Mathematics teachers encounter difficulties in modifying lesson plans, instructional strategies, and assessment tasks to match the abilities of SEN pupils (Kamarudin et al., 2022; Abdullah et al., 2023). For example, in basic numeracy topics such as addition and subtraction, tasks are often presented in uniform formats without the use of real objects or scaffolded activities that could support conceptual understanding (Mohd Noor et al., 2020). When such instructional support is lacking, SEN pupils may fail to develop strong foundational skills, which subsequently affects their ability to understand more advanced Mathematics topics (Lim et al., 2024).

Teachers' skills in integrating educational technology into inclusive Mathematics lessons also remain limited. Digital tools such as GeoGebra, Desmos, and child-friendly Mathematics applications offer opportunities for visual and interactive learning that can support SEN pupils' understanding (Nik Nurul Afiqah Wan Zainodin et al., 2022). However, many teachers lack confidence in using these tools due to inadequate training and limited hands-on experience (Lim et al., 2024). At the school level, infrastructural challenges such as limited access to digital devices and unstable internet connections, particularly in rural areas, further constrain the effective use of technology in inclusive classrooms (Tan & Halim, 2023).

In addition to knowledge and skills, teachers' attitudes towards inclusive education play a crucial role in determining the quality of implementation. Research indicates that while some

teachers demonstrate positive and supportive attitudes, others perceive SEN pupils as unable to cope with certain Mathematics topics and therefore restrict them to basic skills only (Nik Azis et al., 2021). Such perceptions may result in SEN pupils being excluded from group activities and higher-order problem-solving tasks, limiting their opportunities for meaningful learning (Abdullah et al., 2023). Factors such as heavy workload, time constraints, and the additional effort required to prepare differentiated materials often intensify negative attitudes towards inclusive teaching (Lee & Goh, 2020).

Despite increasing attention to inclusive education, research focusing specifically on inclusive Mathematics teaching in Malaysia remains limited (Jelas et al., 2021). Many previous studies have emphasised policy implementation or general classroom practices, rather than the subject-specific demands of Mathematics instruction (Nik Azis et al., 2021). Mathematics involves reasoning, logical thinking, and structured problem solving, which cannot be effectively developed without adaptable and well-planned instruction (Zainal et al., 2024). This underscores the importance of examining Mathematics teachers' readiness within inclusive settings.

Furthermore, most existing studies tend to focus on only one dimension of teacher readiness, such as knowledge or attitudes, without examining how knowledge, teaching skills, and attitudes interact to influence classroom practices (Nik Nurul Afiqah Wan Zainodin et al., 2022; Salleh & Roslan, 2022). In reality, these three components are interrelated and collectively determine teachers' ability to implement inclusive education effectively. Examining a single aspect in isolation does not provide a comprehensive understanding of teachers' readiness (Tan & Halim, 2023; Zainal et al., 2024).

Another notable gap relates to professional development and continuous support. Many in-service training programmes remain largely theoretical and provide limited opportunities for practical application in real classroom contexts (Mohd Noor et al., 2020). Mathematics teachers require hands-on experiences such as collaborative lesson planning, peer observation, and guided practice to develop confidence in teaching SEN pupils (Kamarudin et al., 2022). Without such support, teachers may struggle to translate theoretical knowledge into effective instructional practices (Rahman & Jamaludin, 2023).

In summary, the implementation of inclusive Mathematics education continues to be hindered by challenges related to teachers' knowledge, teaching skills, and attitudes. Limited knowledge restricts teachers' understanding of SEN pupils' learning needs, insufficient skills reduce the effectiveness of instructional practices, and negative attitudes affect teachers' commitment to inclusive teaching (Salleh & Roslan, 2022). These challenges ultimately impact SEN pupils' Mathematics achievement and prevent the full realisation of inclusive education goals (Nik Azis et al., 2021).

Therefore, this study seeks to examine the readiness of primary school Mathematics teachers to implement inclusive education by focusing on their knowledge, teaching skills, and attitudes. By addressing the identified gaps, the findings of this study aim to inform policymakers, teacher education institutions, and district education offices in designing targeted training and support initiatives that better meet teachers' professional needs (Rahman & Jamaludin, 2023).

Research Objectives

1. To identify differences in knowledge readiness based on teaching experience among primary school Mathematics teachers in implementing the inclusive education programme.
2. To identify differences in teaching skill readiness based on teaching experience among primary school Mathematics teachers in carrying out the inclusive education programme.
3. To identify differences in attitude readiness based on teaching experience among primary school Mathematics teachers in implementing the inclusive education programme.

Research Questions

1. Are there differences in the knowledge readiness of primary school Mathematics teachers in implementing the inclusive education programme based on teaching experience?
2. Are there differences in the teaching skill readiness of primary school Mathematics teachers in implementing the inclusive education programme based on teaching experience?
3. Are there differences in the attitude readiness of primary school Mathematics teachers towards the implementation of the inclusive education programme based on teaching experience?

Hypotheses

1. There is no significant difference in the knowledge of primary school Mathematics teachers regarding the implementation of the inclusive education programme based on teaching experience.
2. There is no significant difference in the teaching skills of primary school Mathematics teachers for the inclusive education programme based on teaching experience.
3. There is no significant difference in the attitudes of primary school Mathematics teachers towards the implementation of the inclusive education programme based on teaching experience.

Research Methodology

Research Design

This study adopts a quantitative approach using a descriptive and inferential survey design. According to Parthiban Govindasamy (2022), quantitative methods are straightforward to administer and provide accurate and objective insights into the study population. This design aligns with the study's aim of identifying differences in knowledge, skills, and attitudes of primary school Mathematics teachers based on their teaching experience.

Population and Sample

The study population comprises Mathematics teachers from 25 Chinese National-Type Schools (SJKC) in the Pontian district, Johor. SJKCs were selected because most previous studies have focused on national schools (SK), while research on teacher readiness and knowledge in SJKCs remains limited (Lim & Tan, 2022). According to the Pontian District Education Office, there are 112 Mathematics teachers in these SJKCs. Using the Krejcie and Morgan table (1970), a sample size of 86 respondents is required for this population. Consequently, 86 SJKC Mathematics teachers were selected as respondents through simple random sampling, ensuring that every individual in the population had an equal chance of selection and reducing sampling bias (Chua, 2021).

Research Instrument

Data were collected using an online questionnaire administered via Google Forms. Google Forms was chosen for its cost-effectiveness and efficiency in gathering data from a large sample within a short period (Gholve, 2020). The questionnaire was developed based on the study objectives and relevant literature (Fraenkel et al., 2019), adapting items from the instrument used by Nirmala Palaniandy and Mohd Hanafi Mohd Yasin (2021). The instrument consists of four main sections. Section A collects demographic information, including gender, age, academic qualifications, and teaching experience. Section B measures teachers' knowledge of inclusive program implementation. Section C evaluates teachers' ability to plan and implement inclusive teaching. Section D assesses teachers' readiness in terms of mental and emotional preparedness for implementing inclusive programs. Sections B, C, and D employ a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, 5 = strongly agree) to enable statistical analysis. According to Joshi et al. (2015), a 5-point Likert scale strikes a balance between accuracy and ease for respondents, encouraging consistent responses.

Data Analysis Methods

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 27. Two statistical methods were employed to achieve the study objectives. One-way ANOVA was used to compare the means of dependent variables across independent variables, as all three objectives involve group comparisons. One-way ANOVA is appropriate for identifying significant differences between independent groups for scaled dependent variables (Field, 2020). Previous studies in education have also applied ANOVA to examine differences based on teaching experience, demonstrating its effectiveness in detecting significant mean differences when assumptions are met (Ahmad et al., 2021; Hasim & Sulaiman, 2022). Prior to ANOVA, normality (Shapiro-Wilk test) and homogeneity of variance (Levene's test) were assessed to ensure the assumptions of parametric analysis were met. If ANOVA results indicated significant differences, post hoc tests such as Tukey HSD were conducted to determine which groups differed (George & Mallery, 2021). Post hoc analysis is crucial to avoid Type I errors when comparing multiple groups (Rahim & Othman, 2023). If data did not meet normality or homogeneity assumptions, non-parametric tests were applied. The Kruskal-Wallis test was used to identify differences among three or more independent groups, suitable for ordinal or non-normal data (Chua, 2021; Samsudin & Aziz, 2022). For example, in this study, teachers' skill levels did not meet parametric assumptions, making the Kruskal-Wallis test the appropriate alternative. For comparisons between two groups, such as differences in attitudes based on teaching experience, the Mann-Whitney U test was applied. This test is suitable for ordinal and non-normal data and allows for accurate median comparisons between two groups (Noor & Majid, 2021). Lim and Harun (2023) note that the Mann-Whitney U test remains valid even when sample sizes are unequal, which is particularly useful in educational research where group sizes may differ.

Research Findings

A total of 86 respondents, all of whom were Mathematics teachers from Chinese National-Type Schools (SJKC) in the Pontian district, participated in this study. Table 1 presents a summary of the respondents' demographic characteristics in terms of frequency and percentage.

The results indicate that 59 respondents (68.6%) were female, while 27 (31.4%) were male, showing that female teachers outnumbered males by 32. The majority of respondents were aged between 31 and 40 years (30 respondents, 34.9%), followed by 24 respondents (27.9%) aged 41 to 50 years. The remaining respondents were aged 21 to 30 years (24.4%) and over 51 years (12.8%). This suggests that most respondents are mid-career teachers with significant professional experience. Regarding academic qualifications, most respondents held a Bachelor of Education (73 respondents, 84.9%), 10 respondents (11.6%) held a Diploma in Education, and 3 respondents (3.5%) held a Master's degree. No respondents held SPM or PhD qualifications. This indicates that the majority of Mathematics teachers in SJKCs possess sufficient academic qualifications to perform professional duties effectively. In terms of teaching experience, 32 respondents (37.2%) had 11 to 20 years of experience, 24 respondents (27.9%) had 1 to 10 years, 20 respondents (23.3%) had 21 to 30 years, and only 10 respondents (11.6%) had over 31 years of experience. This demonstrates that the respondents are generally experienced and professionally competent.

Table 1
Respondents' Demographic Information

Demographic	Frequency	Percentage (%)
Gender	Male	27
	Female	59
Age	21–30 years	21
	31–40 years	30
	41–50 years	24
	51 years and above	11
Academic Qualification	SPM	0
	Diploma in Education	10
	Bachelor of Education	73
	Master's Degree	3
	PhD	0
Teaching Experience	1–10 years	24
	11–20 years	32
	21–30 years	20
	31 years and above	10

Normality tests using the Shapiro-Wilk test were conducted for the variables of teachers' readiness in knowledge, teaching skills, and attitudes toward the implementation of inclusive education, according to teaching experience. As shown in Table 2, all groups had significance values greater than 0.05, indicating that the data were normally distributed across all categories of teaching experience. Therefore, the data were suitable for analysis using one-way ANOVA.

Table 2
Shapiro-Wilk Test for Normality of Teachers' Readiness by Teaching Experience

Teaching Experience	N	Shapiro-Wilk Statistic	Significance
1–10 years	29	0.943	0.118
11–20 years	15	0.967	0.807
21–30 years	38	0.955	0.131
31 years and above	4	0.781	0.072

Levene's test was conducted to assess the assumption of homogeneity of variances. As shown in Table 3, the test indicated a significance value of $p = 0.051$, exceeding 0.05, suggesting that

variances between groups were homogeneous. Therefore, the assumptions for one-way ANOVA were met.

Table 3
Levene's Test for Homogeneity of Variances for Knowledge Readiness by Teaching Experience

Levene's Test	Statistic	df1	df2	Significance
Based on Mean	2.707	3	82	0.051

One-way ANOVA was conducted to determine whether significant differences existed in teachers' knowledge scores according to teaching experience (Table 4). The results showed a significant difference between groups, $F(3, 82) = 4.189$, $p = 0.008$, indicating that teachers' knowledge levels differed significantly based on teaching experience. Thus, the null hypothesis was rejected.

Table 4
One-Way ANOVA for Knowledge Readiness by Teaching Experience

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	203.979	3	67.993	4.189	0.008
Within Groups	1331.102	82	16.233		
Total	1535.081	85			

For teaching skills, Levene's test (Table 5) showed a significance value of $p = 0.510$, indicating homogeneous variances. One-way ANOVA results (Table 6) revealed a significant difference between groups, $F(3, 82) = 3.221$, $p = 0.027$. Since $p < 0.05$, post hoc analysis was necessary to identify which groups differed significantly. Thus, the null hypothesis was rejected.

Table 5
Levene's Test for Homogeneity of Variances for Teaching Skills Readiness

Levene's Test	Statistic	df1	df2	Significance
Based on Mean	0.778	3	82	0.510

Table 6
One-Way ANOVA for Teaching Skills Readiness by Teaching Experience

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	84.290	3	28.097	3.221	0.027
Within Groups	715.350	82	8.724		
Total	799.640	85			

For teachers' attitudes, Levene's test (Table 7) showed a significance value of $p = 0.063$, indicating homogeneity of variances. One-way ANOVA results (Table 8) revealed a significant difference in attitudes between teaching experience groups, $F(3, 82) = 4.213$, $p = 0.008$. This indicates that teachers' attitudes differed significantly according to teaching experience. Thus, the null hypothesis was rejected.

Table 7
Levene's Test for Homogeneity of Variances for Attitude Readiness

Levene's Test	Statistic	df1	df2	Significance
Based on Mean	2.530	3	82	0.063

Table 8
One-Way ANOVA for Attitude Readiness by Teaching Experience

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	123.841	3	41.280	4.213	0.008
Within Groups	803.508	82	9.799		
Total	927.349	85			

Discussion

The results of the ANOVA analysis indicated significant differences in Mathematics teachers' readiness in terms of knowledge of inclusive education based on teaching experience. Experienced teachers are better able to develop both content knowledge and pedagogical skills, including aspects related to the implementation of inclusive education programs (Motallebzadeh et al., 2020). According to Omar et al. (2021), direct classroom experience allows teachers to build practical knowledge in lesson planning, integrating technology, and designing both formative and summative assessments suitable for inclusive students. Therefore, teachers gain deeper and more relevant knowledge through hands-on teaching experience.

In the context of Mathematics teaching, knowledge of inclusive education is critical because teachers must know how to adapt content, processes, and learning outcomes for students with special needs, such as those with dyslexia, dyscalculia, or other specific learning difficulties. Experienced teachers are generally more proficient in using concrete manipulatives, differentiating content, and simplifying complex problems into more accessible forms (Ng & Tan, 2020).

Chong et al. (2021) found that experienced Mathematics teachers demonstrate deeper understanding of applying differentiated instruction in inclusive classrooms, including visual approaches, tactile methods, and reinforcement strategies. This knowledge is acquired through training, repeated interactions with students with special needs, and reflective practice based on successes and challenges in daily teaching.

In contrast, less experienced teachers may lack confidence in adapting topics such as fractions, probability, or problem-solving for students with diverse learning abilities. This limitation stems from limited exposure to inclusive contexts during teacher training and the technical challenges of applying effective pedagogical strategies within restricted classroom time (Sulaiman et al., 2024).

Therefore, Mathematics teachers' knowledge of inclusive education does not rely solely on theoretical understanding; practical experience and focused professional training are essential. This is particularly important for differentiating instruction and adapting teaching materials to meet the needs of students with special needs. This aligns with the findings of Amemasor et al. (2025), which indicated that teacher knowledge and competence improve significantly when professional development interventions are implemented systematically. These findings highlight the need for school administrators and policymakers to provide continuous, targeted training programs to strengthen teachers' knowledge across all levels of experience.

Teachers' teaching skills in inclusive Mathematics education are also influenced by their teaching experience. ANOVA results indicated that more experienced teachers tend to demonstrate higher skill levels compared to less experienced teachers. Experienced teachers are better able to adapt instructional methods, such as using blocks, tokens, or diagrams to explain number concepts, fractions, and ratios to students with special needs (Jamaludin & Shaffeei, 2023; Hanini & Rashid, 2024; Salleh, 2024). They are also more competent in designing Mathematics questions of varying difficulty levels and providing assignments appropriate to students' abilities. Experience enables teachers to understand students' challenges more effectively and apply scaffolding strategies to support comprehension of abstract concepts (Samiran, Shaffeei, & Razalli, 2024).

Although teaching experience contributes to skill development, professional training remains crucial to enhance inclusive Mathematics instruction. Mohtar and Khairuddin (2024) highlighted that even experienced teachers require training in using interactive Mathematics software, such as GeoGebra, for teaching algebra and geometry. Indek and Hamid (2022) emphasized the importance of differentiated instruction, grouping students according to ability, and providing tailored tasks to ensure effective learning for all. Samiran et al. (2024) also recommended combining concrete-to-abstract approaches, such as using physical manipulatives to explain fractions, to enhance student understanding.

In addition to experience and training, school support plays a vital role. Nazirah & Shaffeei (2023) reported that teachers who attend inclusive Mathematics workshops, group sessions, and peer observations develop their skills more quickly. Alassaf (2025) found that co-teaching between Mathematics and Special Education teachers improves students' understanding of topics such as percentages and ratios. Hanini & Rashid (2024) highlighted the importance of administrative support, such as providing planning time and teaching resources, in helping teachers enhance their skills in inclusive classrooms.

Overall, this study demonstrates that teaching experience is closely linked to teachers' skills in inclusive education. Experienced teachers are more adept at using appropriate pedagogical strategies for students with special needs. However, experience alone is insufficient; professional training, school support, and suitable teaching materials are crucial for effective inclusive Mathematics instruction (Jamaludin & Shaffeei, 2023; Salleh, 2024; Samiran et al., 2024). With a combination of experience and strong support, teachers can facilitate students' understanding of Mathematics concepts and improve their academic outcomes in inclusive classrooms.

The findings also revealed significant differences in teachers' readiness in terms of attitudes toward inclusive education based on teaching experience. This aligns with the literature review by Farida Kurniawati et al. (2021), which indicated that experienced teachers demonstrate more positive attitudes toward inclusive education. Positive attitudes among Mathematics teachers are particularly important, as the subject is often perceived as challenging, especially for students with special needs. Experienced teachers have observed the progress of students with special needs in Mathematics, which encourages a more open, confident, and proactive approach in ensuring every student has the opportunity to succeed (Yusof & Bakar, 2023).

Novice teachers, on the other hand, may doubt their ability to implement inclusive Mathematics strategies. This uncertainty may arise from limited time for differentiated lesson planning, lack of training, or perceptions that students with special needs cannot cope with complex topics (Ismail et al., 2021). They may also worry that focusing on students with special needs could negatively affect overall class performance.

Alsubaie et al. (2022) emphasized that teachers' attitudes toward inclusive education are closely linked to professional confidence and positive classroom experiences. Without such experience, teachers may feel overwhelmed and less motivated. To foster positive attitudes, schools need to provide support, appropriate teaching resources for students with special needs, and ongoing mentorship from experienced teachers. This enables novice Mathematics teachers to build confidence and perceive inclusive education as both effective and impactful. In conclusion, the discussion highlights that teaching experience significantly affects Mathematics teachers' readiness in implementing inclusive education programs. Experience has a notable impact on teachers' knowledge and attitudes, while teaching skills appear less influenced by experience. Teachers with moderate to high levels of experience tend to have higher knowledge and more positive attitudes compared to less experienced teachers. However, skills show minimal variation across groups. This underscores the importance of continuous training, practical exposure, and school support for all Mathematics teachers, regardless of experience level, to ensure inclusive education is implemented effectively and comprehensively.

Conclusion

Overall, this study indicates that there are significant differences in Mathematics teachers' readiness in terms of knowledge and attitudes toward the implementation of inclusive education programs based on teaching experience. In contrast, teachers' readiness in terms of skills did not show significant differences. These findings have important implications for schools and policymakers in enhancing training and support for teachers, particularly novice teachers, to better prepare them in knowledge, skills, and attitudes for addressing the needs of students with special needs.

The implementation of mentor-mentee programs, continuous practical training, and revisions of teacher education curricula are among the recommended initiatives. To strengthen understanding of inclusive education implementation, further studies using qualitative or mixed-method approaches are suggested to explore teachers' real experiences in the classroom. Additionally, researchers could consider other factors, such as administrative support, workload, and academic qualifications, and expand the scope to include teachers of other subjects and various types of schools to gain a more comprehensive understanding of inclusive education needs.

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