International Journal of Learning, Teaching and Educational Research
Vol. 24, No. 8, pp. 356-375, August 2025
https://doi.org/10.26803/ijlter.24.8.15
Received Apr 23, 2025; Revised Jun 26, 2025; Accepted Jul 10, 2025

Challenges of Inclusive Mathematics Teaching in Primary Schools: Perspectives of Inclusive Education Experts

Nurul Nadiha Abdulah, Muhammad Sofwan Mahmud*, Mohd Syazwan Zainal, Mohd Norazmi Nordin, Siti Mistima Maat, Roslinda Rosli
Universiti Kebangsaan Malaysia
Selangor, Malaysia

Lim Chin Yin
Institute of Teacher Education – Special Education Campus
Kuala Lumpur, Malaysia

Abstract. Inclusive education is crucial in today's global education system, focusing on equal learning opportunities for all students. However, efforts to integrate students with special needs into the mainstream, particularly in mathematics, still face various challenges requiring holistic solutions. The research identifies the main challenges in implementing inclusive mathematics teaching from the perspective of experts' insights from Malaysia which demonstrating global development from inclusive integration to true inclusion. These challenges reflect broader international concerns in inclusive education implementation, providing global insights relevant to similar educational contexts. This study employs a case study design with a qualitative approach involving semi-structured interviews. The participants were identified through purposive sampling depending on their expertise and experience in inclusive education. The study participants comprised of six experts, four PhD-qualified lecturers, and two are senior Department of Education officers with over 15 years of experience in inclusive education. Data was analyzed using Atlas.ti software through collaborative coding and theme development processes. The findings reveal five main challenges in implementing inclusive mathematics teaching: (1) pedagogical constraints including overemphasis on mathematical procedures rather than conceptual understanding and time constraints and workload; (2) curriculum issues including Standard Curriculum and Assessment Document (DSKP) difficulty level and modular curriculum alignment; (3) teacher attitude issues characterized by lack of commitment and inadequate

*Corresponding author: Muhammad Sofwan Mahmud; *sofwanmahmud@ukm.edu.my*

collaboration between mainstream and resource teachers; (4) policy implementation challenges particularly with the 'Zero Reject Policy' and parental mentorship programs; and (5) social and behavioral issues including social isolation and discrimination of special needs students, and difficulties in behavior management. This study contributes to a deeper understanding of implementing inclusive mathematics teaching. It suggests a holistic approach involving the cooperation of all stakeholders to enhance the effectiveness of inclusive education programs.

Keywords: challenges in inclusive mathematics; inclusive mathematics; inclusive education; primary schools; education experts

1. Introduction

Inclusive education has become a significant agenda on the global education landscape, with statistics showing a 67% increase in its implementation worldwide reflecting this growing recognition of its importance in fostering equity and social cohesion (UNESCO, 2020). UNESCO has positioned inclusive education as a core pillar in Sustainable Development Goals (SDG 4), which alignswith the objectives of the 1994 Salamanca Statement, which emphasizes equal rights in education. The Salamanca Statement affirms schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic, or other disabilities.

In alignment with this global mission, Malaysia has taken proactive steps by implementing the Inclusive Education Program (PPI) in 1996 as provided under the Special Education regulations for students with special needs. Ministry of Education Malaysia (2013) defines PPI as an educational program enabling special needs students to learn together with typical students in the same learning environment.

Before discussing the peculiarities of the problem of mathematics education, it is necessary to draw the line between two essentially diverse types of education commonly mixed in education discourse. Educational integration can be defined as the physical location of special needs student in ordinary schools with minor or no structural reorganization to meet the needs of special needs students where students are supposed to fit into the established education buildings and procedures (Rodriguez & Garro-Gil, 2015).

Educational inclusion, in contrast, requires progressive transformation in teaching practices, content taught, and learning context to enable all students to learn according to their abilities through systematic adaptation of the educational environment. This difference is especially notable in the Malaysian context where Salleh, Alias, and Jelas (2009) note that inclusive education continues to reflect integration instead of actual inclusion.

Along with the development of inclusive education, emphasis is also given to mathematics. Mathematics is one of the core areas in the curriculum system.

Mastery of mathematics can develop problem-solving skills and foster students' ability to think analytically and logically (Cresswell & Speelman, 2020). Research has highlighted the need to identify the challenges that mathematics teachers face when teaching word problem-solving skills to elementary students, as well as to examine how they adapt their teaching approaches to overcome these challenges (Ling & Mahmud, 2023). Therefore, inclusive mathematics teaching must be emphasized so all students have equal opportunities to build these essential skills. The importance of inclusive mathematics teaching can be divided into two aspects: cognitive and social aspects.

From a cognitive perspective, inclusive mathematics teaching opens opportunities for special needs students to gain knowledge with their classmates. This makes the learning atmosphere in the classroom fun and supportive. Meanwhile, from the social aspect, two-way communication will develop through various teaching activities in the class. This will simultaneously create good relationships between students and build intrinsic motivation within them (Liu et al., 2025).

However, achieving effective inclusive mathematics teaching faces significant implementation challenges. Despite guidelines provided by the Special Education Division (2018) to improve inclusive teaching quality, substantial barriers that require comprehensive solutions persist. Furthermore, among the issues faced is the difference in student abilities within the same group (Roos, 2018). Mathematics teachers must be highly competent in modifying teaching strategies and methods to suit student diversity. This situation requires a high level of professional efficiency from teachers to foster effective inclusive mathematics teaching: "diversity among students demands diversity in mathematics education" (Roos, 2018).

This issue becomes more complex when mathematics teachers may not understand the special education syllabus. This is because Mathematics teachers are typically not exposed to the special needs' syllabus, which may cause them to face several issues in implementing inclusive mathematics teaching. This is supported by Amin and Yasin (2016) study which revealed mainstream teachers teaching PPI classes without any basic knowledge of special education or how to handle students with special needs. This situation can lead to a wider gap in providing effective inclusion for Mathematics teaching and learning.

According to Rousseau and Powell (2005), several other factors can hinder the improvement of inclusive mathematics learning opportunities, such as the problem of having too many students in one class. In large groups, the diverse needs of students may not be met. The test assessment system also puts pressure on teachers and students, limiting learning and hindering the development of critical thinking. Rousseau and Powell (2005) also explain issues related to student absenteeism make it difficult for teachers to build intense learning cycles. This results in a widening knowledge gap in inclusively taught classrooms.

Strong parental support networks have also become one of an issue in implementing inclusive mathematics teaching. The lack of such support networks often stems from teachers' attitudes and high workload, limiting their ability to engage effectively with parents. Effective inclusive mathematics teaching requires cooperation and support from various stakeholders including mathematics teachers, special education teachers, school principals, education departments, and parents (Strogilos & Tragoulia, 2013). As a result, although efforts have been mobilized through PPPM to promote inclusive education in Malaysia, specific inclusive mathematics teaching assessments and strategies still face significant obstacles.

Therefore, research on implementing inclusive mathematics teaching is fundamental to reducing the gap between policy and practice. Although inclusive education has been widely studied across educational systems worldwide, limited research has been conducted on mathematics as a subject within inclusive settings. This research gap encompasses several vital areas of practice such as teaching methods, adaptation of mathematics curriculum for students with various disabilities, and assessment of student progress in inclusive mathematics classes.

This study offers valuable insights by exploring challenges from the perspective of inclusive education experts, whose voices are often underrepresented in the research literature. Most previous studies only focused on challenges and suggestions for improving the implementation of inclusive mathematics teaching from the perspective of teachers and educators. Thus, this study can examine various perspectives and suggestions for improvement from inclusive experts such as curriculum modification, continuous development training, teaching methods and strategies, and assessment.

These gaps demonstrate the need for more in-depth research on effective teaching strategies and curriculum adaptations in the context of inclusive mathematics teaching. Research in these aspects can help develop guidelines and best practices to assist mathematics teachers in implementing inclusive teaching more effectively, thereby enhancing the learning experience and achievement of all students in inclusive mathematics classes. Based on the identified research gaps, the objectives of this study are to: (1) identify the main challenges in implementing inclusive mathematics teaching from the perspective of experts in inclusive education.

2. Literature Review

Inclusive education in mathematics learning refers to an approach combining elements of social equality ideology with practical implementation methods in the classroom, considering students' perspectives to achieve practical teaching objectives (Roos, 2019). According to a study by Vodickova et al. (2023), this approach requires systematic changes in the education system and society. The Inclusive Education Program (PPI) in Malaysia began around 1987 under the administration of the Ministry of Education (Azam, 2017). The focus at that time was to provide opportunities for capable special needs students to learn in a

regular classroom environment, with appropriate support to enable them to interact and learn alongside typical students. However, the concept of inclusive education was officially introduced in 1995, although inclusive approaches had long been practiced in the country through integration or merger education programs (Salleh, Alias & Jelas, 2009).

The implementation of inclusive education in Malaysia is underpinned by a comprehensive policy framework, encompassing the Education Act 1996, Education Regulations (Special Education) 2013, Malaysia Education Blueprint 2013-2025, and various operational guidelines issued by the Ministry of Education Malaysia. This framework provides a solid foundation for implementing inclusive mathematics teaching, by establishing clear stakeholder standards and guidelines. According to Kollosche et al. (2019), various issues, faced by mathematics teachers and resource teachers in implementing inclusive mathematics teaching have been identified.

The main challenge is the diversity of student abilities in inclusive mathematics classes. According to Roos (2018), this makes mathematics teaching complex because each student has different levels of ability and learning needs, where some students require more support in learning mathematics such as needing more detailed conceptual explanations and procedures, as well as more in-depth mathematical discussions with peers who are not of equal ability levels. This diversity will place more demands on teachers, who must be more sensitive to diversity (Wong, 2025). Additionally, Culajara and Culajara (2023) explain in their study that the lack of understanding in providing excellent services in inclusive classes makes it difficult for teachers to be prepared and demonstrate their competency in various teaching approaches.

This includes teachers being less skilled in adapting various appropriate teaching methods and strategies and implementing differentiated teaching objectives. The challenge of providing effective feedback becomes even more complex in inclusive mathematics classrooms, where research has shown that teaching experience does not significantly impact feedback quality in oral questioning (Mahmud & Yunus, 2018). These problem factors are due to teachers' time constraints in planning and preparing lessons, besides the absence of clear and comprehensive guidelines for reference and guidance (Paliwal & Fain, 2019).

Rousseau and Powell (2005) explain that factors acting as barriers to inclusive mathematics teaching include large class sizes, high-risk standardized tests, student absence and movement, and lack of high-quality curriculum. Fortes and Abdellatif (2010) explain that large class sizes have implications for the difficulty of controlling classroom conditions and student behavior. The situation becomes worse when dealing with special needs students who have behavioral or emotional problems. A study by Mulcahy, Krezmien and Maccini (2014) explains that students with emotional and behavioral disorders often fail to receive equitable and high-quality mathematics instruction.

Additionally, some mathematics teachers may not have the skills to teach special needs students, and resource teachers may not have solid mathematics content knowledge to assist special needs students in inclusive classrooms (Mahmud, Zainal & Pa, 2023). This lack of mastery in mathematical content will make teachers less skilled with strategies, techniques, and teaching aids. A study by Kirmizigul (2022) shows that mathematics teachers face the most significant difficulty in number learning and operations in special education and inclusive education. They also explain thatthe root cause of this problem is that most teachers do not receive in-service training for special and inclusive education.

Furthermore, Scherer et al. (2022) state that the issue of teacherlabeling of studentsis a complex and controversial challenge that needs to be addressed immediately. In some cases, this labeling can affect aspirations, resulting in low self-confidence and motivation among students. This can indirectly form negative stigma and create learning gaps among students. There are also issues of communication and speech problems in effective inclusive mathematics teaching. Bejarano-Martin et al. (2024) explains thatautistic students need structured, concise, and accurate mathematical language. Meanwhile, special needs students who are deaf and mute may require interpreters or assistive technology to help them communicate. This becomes more difficult when the subject teachers themselves may not understand the needs and provide feedback to the responses given by students (Mahmud, Zainal & Pa, 2023).

To address these multifaceted challenges in inclusive mathematics education, the Universal Design for Learning (UDL) framework offers a vibrant theoretical background consistent with the principles of inclusive education. UDL provides three principles: multiple means of representation (which means to present information in various ways), multiple means of engagement (various ways to encourage and engage learners), and multiple means of action and expression (different ways to allow learners to demonstrate their understanding of material) (Mhd Fauzy & Hosshan, 2024).

This framework applies especially well to inclusive mathematics instruction since it is a proactive approach to learner variability that considers the needs of all students up-front in the design of curriculum and instruction. The UDL principles are explicitly related to the numerous challenges that have been noted in inclusive mathematics classrooms such as varied student abilities, communication barriers, and the need to use a differentiated instructional method, thus giving teachers a framework within which to establish more equitable and effective learning opportunities for all students.

This literature review shows that implementinginclusive mathematics teaching in primary schools is a complex and challenging endeavor. This complexity can be seen through several key aspects that have been discussed, including the diversity of student abilities, teacher readiness and competency levels, infrastructure problems such as large class sizes and time constraints, and communication and support issues in the classroom. The effective implementation of inclusive mathematics teaching requires a holistic approach

and cooperation from all parties including top management, school administrators, subject teachers, resource teachers, and parents. The perspective and views of inclusive education experts are critical in deeply understandingthe challenges teachers face and providing input on the reality of implementation at the grassroots level. Through this study, more strategic and effective improvement measures can be implemented to enhance the quality of inclusive mathematics education in Malaysia, aligns withto providing quality education for all students.

3. Methodology

Inclusive education in the context of mathematics learning refers to an approach that combines elements of social equality ideology with practical implementation methods in the classroom, considering students' perspectives to achieve effective teaching objectives (Roos, 2019). According to a study by Vodickova et al. (2023) this approach requires systematic changes within the education system and society.

3.1 Research Design

This study's research design is a case study using a qualitative approach. According to Yin (2014), this design with a is very suitable when a study involves a group with the characteristics or criteria to be studied. This research method allows researchers to understand and explore a phenomenon in detail through the real perspectives and experiences of research subjects.

3.2 Sampling Method

Purposive sampling was conducted involving six experts in the field of inclusive education in Malaysia. Purposive sampling allows researchers to explore, know, and understand the subject more deeply (Tisdell et al., 2025). Therefore, the selection of these experts was made based on specific criteria that had been set to ensure in-depth and meaningful data collection. The participant selection criteria included a minimum of 15 years of experience in inclusive or special education, direct involvement in policy development, implementation, or research related to inclusive mathematics education. Participants with less than 15 years of experience in inclusive education and no direct involvement with mathematics education in inclusive settings were excluded from the study.

The final sample comprised four lecturers with Doctor of Philosophy qualifications and two senior officers from the Department of Education of Malaysia, all meeting the established selection criteria. In line with research ethics requirements and compliance with research principles, the researcher obtained written consent from each research participant through a consent form where the form explained in detail the purpose of the study, participant involvement procedures, participants' rights as research subjects, and guarantees of their identity confidentiality throughout and after the study was conducted.

To ensure the collected data's validity and reliability, and reduce the possibility of researcher bias, the researcher took several comprehensive steps including the appointment of four experienced interviewers. Additionally, this study also

applied data triangulation methods involving researcher triangulation which involved a collaborative analysis process between four researchers who carried out the coding process and theme formation. Member checking was also employed whereby all the interview transcripts and preliminary findings were sent back to all the participants to be checked and validated to enable the interpretations to represent the correct meanings and experiences intended.

3.3 Data Collection Method

The data collection method was implemented through semi-structured face-to-face interviews with research participants. Through this method, researchers can ask interview questions according to the needs and understanding of research participants (Tisdell et al., 2025). Interview sessions were conducted in strategic and conducive locations. The researcher took proactive steps to make the interview process smooth and reliable. To avoid data loss in case of technical failure, two digital audio recording devices worked simultaneously as a backup. Besides recording audio, the researcher also made detailed field notes, to record non-verbal behavior, emotional expressions, and other contextual aspects that could be used to add depth to data analysis in the future.

Interview sessions lasted between 150 and 180 minutes, depending on the depth of the participant's responses. Before the interview began, participants were briefed on the purpose of the study, the voluntary nature of their involvement, and the measures taken to ensure confidentiality. Informed consent was obtained prior to recording. During the sessions, the researcher used the right probing techniques including clarifying questions and prompts to get more insightful information and ensure he got the complete picture of the participants' views. This was able to gather rich data in accordance with the study's objectives.

3.4 Research Instruments

The main instrument of this study was a semi-structured interview protocol developed through a comprehensive development and validation process. This development process involved collaborative input from four expert panels in the fields of mathematics education and special education. There are 3 sections namely opening, transition, and closing which cover 21 questions.

The first part (Questions 1-5) was dedicated to creating rapport and obtaining background data about the participants such as their professional titles, experience, and current positions in the field of inclusive education. The core of the interview was the transition section (Questions 6-15), which included ten probing questions that got directly to the experiences and challenges, effective practices, and participants' suggestions on the topic of inclusive education practices in Malaysia. The final part (Questions 16-20) allowed the participants to include any further comments, to sum up the interview experience, and to give the final thought or suggestion, which allowed to gather all the essential data and at the same time offered the natural end of the interview process.

3.5 Data Analysis

The data analysis process was implemented systematically through several comprehensive analysis stages. All interview recordings were transcribed verbatim into text form at the initial stage. Then, the researcher used Atlas.ti software to organize the data more systematically, where this software allowed researchers to code and develop themes. The coding process and theme formation were done collaboratively with four researchers involved in this study, where each researcher performed coding separately before comparing and discussing the codes and themes produced to reach an agreement.

According to Charmaz (2000), the coding system makes it easier for researchers to organize and arrange raw data themes in quotations from research participants. The steps of this data analysis process have produced meaningful findings and contributed to a deeper understanding of the challenges in implementing inclusive mathematics teaching in the context of the Malaysian education system.

4. Results

The findings reveal five main challenges in implementing inclusive mathematics teaching: (1) pedagogical constraints including overemphasis on mathematical procedures rather than conceptual understanding and time constraints and workload; (2) curriculum issues including Standard Curriculum and Assessment Document (DSKP) difficulty level and modular curriculum alignment; (3) teacher attitude issues characterized by lack of commitment and inadequate collaboration between mainstream and resource teachers; (4) policy implementation challenges particularly with the 'Zero Reject Policy' and parental mentorship programs; and (5) social and behavioral issues including social isolation and discrimination of special needs students, and difficulties in behavior management.

4.1 Pedagogical and Teaching Constraints

4.1.1 Emphasis on Procedures Rather Than Concepts

The research findings show that a significantchallenge in mathematics teaching relates to the greater emphasis on procedures rather than conceptual understanding. This is evidenced by the following statement:

> "*The conceptual knowledge aspect of Mathematics is given less emphasis. Looking at TIMSS and PISA results, when the ministry revised the syllabus or changed the Malaysian Certificate of Education (SPM) question format, the failure rate in Mathematics rose significantly. In 2022, more than 56% of students failed the national Mathematics examination.*" (p.16)

This is supported by Expert 6's further statement that

> "*Teachers should focus on concepts. Students can do the procedural aspects by themselves at home.*" (p.17)

The teaching situation becomes more challenging in the context of inclusive classrooms due to the need to adapt approaches according to different learning levels. As explained by Expert 2:

> "*In that class there are various levels, so regarding students who experience learning difficulties, these students need to start from concrete, then visual and abstract.*" (p. 4)

The challenge becomes more complex when teachers need to implement differentiated teaching in the same class. As stated by Expert 5:

> "*However, there are teachers who complain about handling these inclusive classes because it requires high patience. If the teacher accepts special needs students, that's already good, but it becomes a burden in implementing differentiated daily lesson plans.*" (p. 5)

A substantial obstacle exists in mathematics education because educational institutions focus excessively on students' learning procedures rather than clear conceptual understanding. Research suggestions oppose the current mathematical teaching approach since teachers should teach concepts before letting students discover their methods. Teachers teaching in inclusive settings face great difficulty because they need to address multiple learning needs through concrete to visual to abstract progressions while handling significant workload from implementing differentiated teaching approaches.

4.1.2 Time Constraints and Workload

The implementation of differentiated teaching strategies is still limited by time constraints and teacher workload as stated:

> "*The issue in schools is that these teachers are rushing to complete the syllabus. A teacher might hold various positions, plus school programs, workshop courses, and so on. Teachers don't have time to be creative in teaching.*" (p. 10)

Teachers face complex dilemmas in implementing quality and effective inclusive mathematics teaching. The scenario of teachers "rushing to complete the syllabus" while shouldering various administrative responsibilities, coupled with the need to attend school programs, courses, and workshops, has created a situation where creativity and teaching quality must be sacrificed.

4.2 Issues with the Standard Curriculum and Assessment Document (DSKP)

4.2.1 Standard Curriculum and Assessment Document (DSKP) Difficulty Level

The main challenge in implementing inclusive mathematics teaching relates to the DSKP level being too high.

As stated by Expert 5 (p. 5):

"*DSKP poses a challenge. The DSKP for Special Education is already difficult, let alone the mainstream DSKP, which is even more advanced – even from Chapter 1. Within three months, students need to master Chapters 1 to 3. As a result, teachers have to lower the standard of each chapter to accommodate special needs students in inclusive classes. If the subject is too difficult, students will struggle to continue learning in an inclusive classroom.*"

This statement is further reinforced by Expert 3 (page 11): "Each topic is further divided into smaller subtopics. This causes Special Educational Needs (SEN) students to be unable to catch up." This problem becomes more complicated

when there is a misalignment between the mainstream curriculum and special education curriculum as stated by Expert 4 (p. 25):

> "*As we know, the mainstream curriculum follows the Malaysia Standard Primary School Curriculum. Meanwhile, the Special Education Programme follows the special education curriculum. These two cannot be directly matched. Parents often feel that if their child follows the special education curriculum, it seems too basic".*

4.3 Modular Curriculum Alignment

The difficulties in implementing curriculum and assessment are also acknowledged by the Ministry of Education Malaysia (MOE). As stated by Expert 5 (p. 12):

"*MOE is gradually transitioning to a more modular approach, but not entirely. Some topics have been unified and made modular, while others still follow the traditional structure. However, many teachers prefer the old approach, as they find it more familiar and easier to implement."*

This shows that although improvement efforts are being made, there are still challenges in aligning the curriculum to meet the learning needs of inclusive students. Therefore, these curriculum-related challenges require holistic solutions that consider the needs of all parties, especially in ensuring a more flexible and suitable curriculum for inclusive students without neglecting the established learning standards.

4.4 Teacher Attitude Issues

Teacher Attitudes and Commitment

Interview findings reveal that challenges related to teacher attitudes in inclusive mathematics teaching can be identified through Expert 6's statement (p. 3):

> "*It's difficult to find mainstream teachers who sincerely teach SEN students. Therefore, mainstream teachers and resource teachers need to work together.*"

This statement shows challenges in mainstream teachers' attitudes and readiness to teach SEN students in inclusive classes with full commitment. Moreover, according to Expert 4 (p. 9), some teachers deliberately make false reports because they are unwilling to commit to inclusive teaching, as stated below:

> "*These teachers also have various attitudes. There are some teachers who make reports that special needs students are causing problems, cannot learn, have behavioral issues, running here and there without any valid evidence or reports.*"

4.5 Teacher Collaboration

This issue is also related to the collaboration between mainstream teachers and resource teachers, which requires attention, as previously explained by Expert 6:

> "*Yes, it's true that a lot depends on the mainstream teacher. Based on my experience with this teacher, we had a good relationship and were able to work well together during lessons because the teacher was willing to spend extra time and effort to support both me and the students.*"

This statement proves that a positive attitude and strong collaboration between mainstream teachers and resource teachers are crucial factors in ensuring the success of inclusive mathematics teaching. However, it remains a challenge due to the difficulty of finding teachers who are truly sincere and dedicated to teaching students with special needs.

4.6 Policy Implementation Issues

4.6.1 Challenges of the 'Zero Reject Policy'

The implementation of the "Zero Reject Policy" has been found to place a burden on teachers and schools.

As stated by Expert 4 (p. 8):

> "*This Zero Reject Policy is very burdensome for us as teachers. The policy gives full authority to parents to place their children according to their preferences.*"

Based on Expert 4's statement, it is evident that granting full authority to parents in determining their children's educational placement—without considering the school's readiness and capacity—has led to various operational and pedagogical challenges. The impact of this policy was further explained by Expert 4 as follows (p.8-9):

> "*If parents refuse to place their children in Special Education Classes due to personal reasons, such as embarrassment, these children will be placed in regular schools without Special Education Programme. As a result, they will attend full inclusive classes without proper procedures and teachers who are skilled in managing their behavior.*"

This situation undoubtedly affects the students' learning process, as they do not receive the necessary support and assistance. Regardless of the school's infrastructure readiness, teacher expertise, and required support, these students may struggle to receive a quality education. In contrast, placement in Special Education schools would provide them with trained teachers and facilities tailored to their specific needs.

4.7 Challenges in Implementing the Parental Mentorship Program

In addition, the Ministry of Education (MOE) has introduced a policy encouraging parental involvement in inclusive classrooms.

According to Expert 2 (p.14):

> "*Besides teachers and inclusive peers, according to the outlined module, we also have a parental involvement module. Parents can attend as student mentors... However, there are challenges in terms of school acceptance. Some schools refuse to implement it because teachers feel uncomfortable with parents being present in their classrooms.*"

Based on Expert 2's statement, although the parental mentorship program has been introduced as part of the ministry's efforts, its implementation still faces challenges, particularly regarding acceptance from schools and teachers.

4.7 Social and Behavioral Issues

4.7.1 Social Isolation and Discrimination

> Interview findings revealed challenges related to social isolation and discrimination from peers, as stated by Expert 5 (p. 13):
> "*Social issues in schools often result in students with special need struggling to integrate into the mainstream. Their peers tend to mock weaker students, and this happens frequently.*"

This situation negatively impacts the learning experience and emotional well-being of students with special needs. Even if they excel academically in certain areas, experiences of social discrimination can undermine their self-confidence and motivation to learn. This statement is further explained in the following excerpt:

> "*Even if students with SEN are the smartest in the Special Education Programme, they often rank among the lowest in inclusive classes. This leads to issues such as mathematics anxiety. Before the teacher even enters the classroom, they already feel anxious, restless, or even experience stomach aches and other symptoms.*" (p. 13)

This statement highlights how social isolation and discrimination not only affect SEN students emotionally but also contribute to anxiety and stress, ultimately hindering their academic performance in inclusive settings.

4.7.2 Challenges in Behavior Management

Expert 6 also highlighted specific cases where teachers struggled to manage student behavior, as demonstrated in the following statement:

> "*There was a case in Paroi, Negeri Sembilan, where an SEN student's behavior became uncontrollable to the point that they ended up swimming in a fishpond. The mainstream class teachers were unable to manage the student.*" (p. 9)

This statement illustrates teacher's significant challenges in handling students with special needs, particularly when their behavior becomes unpredictable. The lack of specialized training and support for mainstream teachers in behavior management can exacerbate these challenges, making it difficult to maintain a conducive learning environment for all students.

This incident highlights the behavioral challenges faced and exposes the gap in preparation and support for mainstream teachers in managing diverse students in inclusive classrooms. Teacher's inability control student behavior underscores the urgent need to enhance their competency in handling students with special needs. This situation reflects the necessity for more comprehensive training programs that include behavior management strategies. Strengthening teachers' skills in this area would help create a more supportive and effective learning environment for SEN students and their peers.

5. Discussions

This study has identified five key challenges in implementing inclusive mathematics teaching in primary schools from the perspective of inclusive

education experts. This study presents extensive research findings regarding various educational challenges in inclusive mathematics instruction which line up with broader inclusive education research.

The research demonstrates that teaching mathematical procedures instead of conceptual understanding is the main educational obstacle. This aligns with the findings of Meles and Ali (2024), which indicate that mathematics teaching remains largely rooted in traditional approaches that focus on procedural memorization. The fact that 23% of students failed 2023 SPM mathematics exam may reflect the weaknesses of this approach. Procedural learning methods used excessively create negative effects on the educational development process. Students using this method learn to remember solution procedures yet fail to understand the essential concepts that form the basis of those procedures (Ma, 2020).

The teaching challenge expands in inclusive classrooms because mathematics instruction demands differentiation of lesson plans. Teachers face difficulties adjusting their educational methods to suit students withdiverse ability levels particularly in concrete, visual, or abstract teaching styles. Research has demonstrated that strategic oral questioning approaches can effectively improve students' mathematical language fluency and help them better understand mathematical concepts (Mahmud et al., 2020).

However, implementing such interactive teaching strategies becomes more complex in inclusive settings, where students have varying communication abilities and learning needs. These findings align with the study by Onyishi and Sefotho (2020), which found that teachers' implementation of differentiated instruction remains low due to time constraints. Large class sizes andinsufficient infrastructure for differentiated mathematics learning worsenconditions (Culajara & Culajara, 2023). As a result, teaching professionals must commonly sacrifice personalized attention to their students according to their learning abilities.

The implementation of inclusive mathematics teaching faces substantial difficulties because of an advanced curriculum. The misalignment between the mainstream Standard Curriculum and Assessment Document (DSKP) and the special education DSKP creates a difficult gap to bridge in inclusive classrooms. These findings support the study by Akintayo et al. (2024), highlightingthe need to review and align the curriculum to better accommodate better students with varying abilities in inclusive settings across diverse national contexts.

From a teaching planning perspective, teachers face challenges in designing and delivering lessons that effectively integrate both DSKP's. Special needs students require teaching materials modified for their learning requirements necessitating additional time from educators. Complexities arise for teachers since they need to maintain special needs students in regular classes while substantial gaps exist between the curriculum content. This misalignment also impacts the assessment system, as teachers struggle to develop and implement fair and appropriate

evaluations for both groups of students (Lutz et al., 2024). The main challenge issetting minimum achievement standards for students with special needs while learningwithin mainstream curriculum contexts.

The study demonstrated that teaching attitudes arethe main determining factor in attaining effective inclusive mathematics programming consistent with international inclusive educational findings. The major obstacle involves identifying teachers in mainstream classrooms who demonstrate real dedication toward teaching students with special needs. This aligns with the findings of Vodickova et al. (2023), which indicate that teachers' attitudes toward inclusive mathematics teaching still require improvement.

A teacher who sincerely triesto educate special needs students in mathematics will always adopt the most effective instructional methods, even though they encounter numerous hurdles. Single efforts by individuals will not fulfill the needs of inclusive education since it requires robust collaborative work procedures. The study revealed that classroom cooperation between mainstream teachers and resource teachers still needs improvement because it has not achieved its best potential state.

The Zero Reject Policy faces unique implementation obstacles because parents select mainstream schools whose facilities and expertise may not meet student needs. This aligns with the findings of Ensimau et al. (2022) which emphasize the need to balance inclusive education rights with schools' readiness to provide the necessary support. According to Ensimau et al. (2022) some mainstream schools must accept students with special needs even when they have not established strong support programs. The reception of low-quality education across these students occurs simultaneously with an excessive workload on untrained teachers responsible for fostering diverse mathematical learning needs.

Recognizing these challenges, the Ministry of Education has introduced the Parental Mentorship Program as a support strategy. Acceptance issues with teachers persist regarding the Parental Mentorship Program as some resist having parents present in their classrooms thereby generating school resistance to implementing the initiative, a barrier to family-school partnerships observed in diverse cultural settings.

Social and behavioral challenges that students with special needs face in inclusive classrooms are significant issues. Social isolation together with peer discrimination creates negative influences that harm their experiences with learning and emotional health. These findings align with Roos (2023), who found that mathematics anxiety is more pronounced among students with special needs in inclusive environments. Research shows that this anxiety exists because students with special needs prefer learning in smaller groups which presents a less stressful environment versus complete mainstream schooling. Additionally, Roos (2023) found that factors such as feeling undervalued and a

dislike for mathematics can further hinder students' participation in learning, ultimately increasing their anxiety toward the subject.

These research results present essential implications for global educational systems efforts to establish inclusive mathematics education practices. From a teaching and learning perspective, the study highlights the need to shift mathematics instruction from rote memorization and procedural approaches to a deeper conceptual understanding. Implementing adequate differentiated instruction methods requires teachers to receive proper training and methods to adapt content to diverse student abilities. The findings also emphasize the urgent need to review and align the mainstream DSKP with the special education DSKP to facilitate inclusive teaching. The curriculum needs to develop an enhanced adaptive structure supporting various learning needs. A modular system of curriculum organization presents an effective educational strategy for teaching mathematics.

By structuring the curriculum into learning modules, each with clear objectives and diverse activities, lessons can be tailored to different ability levels. Regarding teacher professional development, training programs should focus on fostering positive attitudes toward inclusive education and enhancing collaboration between mainstream and special education teachers through Professional Learning Communities (PLCs). Effective programs should use workshop-based designs that combine math content with practical activities, while supporting teacher commitment through careful planning, sufficient duration, and follow-up (Johari et al., 2022).

To support these efforts, the Parental Mentorship Program should be strengthened with clear guidelines to address teachers' concerns, recognizing that parental involvement is a key factor in the success of inclusive education. Beyond parental support, a full support framework should be implemented in educational institutions that delivers social-emotional help to students with special needs and an effective system of inclusive mathematics instruction.

7. Conclusion

The research identified and explored five primary obstacles facing inclusive mathematics instruction delivery in primary education spaces through expert insights into an inclusive education setting. The study uncovers that the root problem lies in mathematics education's overemphasis on procedural learning rather than conceptual understanding, which becomes even more problematic in inclusive settings where students need concrete-to-abstract learning progressions.

Structural incompatibility between general and special education curricula (DSKP) leaves insurmountable gaps, requiring teachers to make compromises that affect the quality of education. The study also reveals teacher attitude is still a significant obstacle as most mainstream teachers are not sincere towards inclusive instruction and policy measures such as the Zero Reject Policy send students to schools that are not ready to take them. The research indicates that

students with special needs are continually subjected to social isolation and discrimination which develops into mathematics anxiety, damaging their academic performance and emotional safety. These interconnected challenges demonstrate that current inclusive mathematics education practices often fall short of true inclusion, operating more as integration without the systemic transformations required for effective inclusive education. This study produces results leading to crucial improvements in inclusive education adoption worldwide specifically for mathematics education which demands a thorough and uniform pedagogical structure.

8. Limitations and Recommendations

However, this study has several limitations that need to be considered. First, it only considers the perspectives of inclusive education experts, without involving the views of mainstream mathematics teachers, special education teachers, parents, and students with special needs. The perspectives of these various stakeholders could provide a more comprehensive understanding of the actual challenges in implementing inclusive mathematics education. Second, this study is limited to the context of primary schools, whereas the challenges in implementing inclusive mathematics education may differ at the secondary level. Third, this study does not examine the effectiveness of specific strategies or interventions in addressing the identified challenges, which could provide more practical guidance for implementation at the school level.

The following are some suggestions for future research based on the limitations of this study. First, future studies could adopt a multiple-case study approach to examine the implementation of inclusive mathematics education in schools that have successfully implemented this program. Such research could provide examples of best practices that other schools can follow. Further studies could focus on developingand evaluating of mathematics teaching modules integrating the Universal Design for Learning (UDL) approach within inclusive education frameworks internationally.

This includes research on the effectiveness of assistive technology in supporting the mathematics learning of students with special needs. Lastly, future research could focus on the impact of parental support programs on the mathematics achievement of students with special needs in an inclusive setting, including an analysis of the factors influencing the success of such programs.

In conclusion, although implementing inclusive mathematics education still faces various challenges, a deeper understanding of these issues, along with support and commitment from all stakeholders, can help realize the goal of establishing a more inclusive and effective mathematics education system. The proposed future research is expected to contribute to developing of best practices in inclusive mathematics education that can be adapted to diverse educational contexts.

9. Acknowledgment

The research was supported by the Ministry of Higher Education (MOHE) through the Fundamental Research Grant Scheme (FRGS) ((FRGS/1/2023/SSI07/UKM/02/3).

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