Ghana Journal of Education: Issues and Practices (GJE)
Vol. 7, December 2021, pp. 142 – 161

Teaching Mathematics in an Inclusive Basic School: A Case Study of the Experiences of Non-Special Education Teachers

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Abstract
There is a general notion that the teaching and learning of mathematics to all students is quite a daunting task. However, there is a general perception that the move towards inclusive education [IE] may present unique challenges to regular teachers who teach mathematics in inclusive schools. In this study, we explored the experiences of a group of professionally-trained mathematics teachers who teach in a school designated as an inclusive school located in the southern part of Ghana. This was done with the aim of uncovering the challenges these teachers face considering that they do not have extended preparation in teaching students with special educational needs (SEN). An illustrative case study design was employed. Data was collected through the use of a semi-structured interview guide containing both closed-and-open-ended items. It was revealed that the participating teachers faced a number of challenges including inadequate knowledge and skills in teaching students with SEN. Another challenge unearthed has to do with assessing students who are blind due to difficulties faced by some of the teachers and students in using Braille to facilitate teaching and learning. The implications of the findings to teaching and learning are discussed.

Keywords. Inclusive Education, Teaching, Mathematics, Visual Impairment, Ghana,

Special Education Needs

Introduction

Most educational systems separated students of school-going age with special educational needs (SEN) from their counterparts who did not need such a level of support and placed them in separate schools or different classes. In this case, students requiring special education

services were both socially and educationally separated from other groups of students leading to possible stereotyping and stigmatisation (Morley, Bailey, Tan & Cooke, 2005). The call for the education of students with SEN in the regular school setting with their peers without SEN gained attention during the Salamanca world conference which was held in Spain in 1994 (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1994). According to the Salamanca Statement and Framework for Action (UNESCO, 1994), the recognition of IE practices is the most effective means of eliminating any form of discrimination, creating welcoming communities, building an inclusive society and ensuring that individuals with SEN have the same educational opportunities. Ghana and other countries all over the world are signatories to the Salamanca statement which calls for an IE system. The shift from a separate school setting to an IE setting demands that regular education teachers teach students with and without SEN in the same classroom setting. The policy shift meant that students requiring the provision of special education services will no longer be enrolled in special schools unless there is a compelling reason to do so (Vanderpuye, 2013).

In Ghana, several efforts have been made to ensure the same educational rights for persons with special education needs and disabilities (SEND). For instance, Article 25 (1) of the 1992 constitution of Ghana confers the right to equal educational opportunities and facilities to all persons; Convention on the Rights of the Child, Act, 560 (CRC, 1998) on the "right to education and well-being", clause 8(1) also states that "No person shall deprive a child access to education... or any other thing required for his or her development"; Persons with Disabilities Act, 2006 (Act 715) which was passed into law in 2012 among others. In the 2003/2004 academic year, Ghana started piloting IE in the Greater-Accra, Eastern and Central Regions in response to the Salamanca Statement and Framework for Action (Isaac & Dogbe, 2020; Gyimah & Vanderpuye, 2011). In 2015, Ghana implemented the IE policy (Ministry of Education, [MoE] 2015) to guide the implementation of IE at all school levels, especially, the basic school level.

With all these efforts to ensure the education of individuals with SEN in Ghana, most research on IE (For example, Gyimah & Amoako, 2016; Deku & Vanderpuye 2017; Tudzi, Buguri, & Danso, 2017; Ofori, 2018; Chitiyo, Kumedzro, & Ahmed, 2019; Okai, 2022) have pointed

out several challenges in the implementation of IE and enrolment of individuals with SEN in the basic school system. For example, with regard to the enrolment of individuals with SEN, available statistics reveal that they make up less than 0.5% of total enrolment in the basic school system despite constituting 1.6% of the total pre-tertiary population (Education Strategic Plan [ESP] 2018-2030, 2018). Ofori (2018) notes that the inability of the nation to achieve enrolment of all persons with SEN is partly due to the 'regular' schools declining to admit them. According to Senadza, Ayerakwa, and Mills (2019) one of the major challenges facing the smooth implementation of IE in Ghanaian schools is funding. Deku and Vanderpuye (2017) reported that inadequate teacher expertise in teaching students with SEN affects the implementation of IE. Other challenges are physical inaccessibility (Ackah-Jnr & Danso, 2019), lack of qualified Special Education Needs Co-ordinators [SENCOs] (Okai, 2022), poor parental involvement (Vanderpuye, 2013; Amponteng, Agyei-Okyere, Afriyie & Tawiah, 2019), shortage of qualified teachers (Chitiyo, Kumedzro, & Ahmed, 2019) negative attitude and prejudice mind (Nketsia, 2016) among others. Furthermore, Meijer (2019) opined that the provision of trained subject-based special education teachers remains a challenge to the successful implementation of the inclusivity policy. This point had previously been raised by Keefe and Moore (2004) who pointed out that teachers teaching in inclusive schools with generalist backgrounds face significant challenges, especially with the teaching of mathematics.

In Ghana, studies conducted over the years on IE, although focused on teachers, (for example, Abenyega & Deku, 2011; Nketsia, 2016; Deku & Vanderpuye, 2017; Chitiyo, Kumedzro, & Ahmed, 2019; Subbey, 2020), they did not consider teachers who taught subject-specific content such as Mathematics. This study, therefore, builds on previous studies conducted on teachers by exploring the teaching and learning of mathematics in an inclusive basic school. The focus on mathematics is because mathematical literacy is necessary for students irrespective of any learning need or disability (Durmus & Ergen, 2021). Despite the importance of mathematics, it can also shape an individual's "self-esteem" which can be positive or negative (Demo, Garzetti, Santi & Tarini, 2021, p.1) and provide motivation to pursue further studies in STEM-related disciplines (Ntow, Clarkson, Chidthachack & Crotty, 2017). Considering the role mathematics plays in most countries as a filter, it is crucial that mathematics teachers are

equipped with the requisite knowledge to "support students who have problems in mathematics … and to make the necessary adaptations for their development of mathematics skills" (Durmus & Ergen, 2021, p.174). An implication of this is that the teaching of mathematics, if not done well, can create learning disabilities by making some students have a sense of not belonging or inadequacies in their capabilities to pursue the subject. We, therefore, explored how professionally trained mathematics teachers without any significant preparation in special education, apart from their participation in yearly short-term professional development programmes, teach the subject in a school which was only recently designated as an inclusive education school.

The research question that underpinned this study is as follows: What are the experiences (i.e. challenges) of non-special education teachers of mathematics in an inclusive basic school?

In the next section, we review literature related to the current study.

Theory of Inclusive Education

The term inclusive education may have been defined by various authors separately; however, the focus remains unchanged. For instance, Halvorsen (2002) defined inclusive education as "a situation where children with disabilities are supported in their chronologically age-appropriate general education classes in their home schools and receive the specialized instruction delineated by their individualized education program (IEP) within the context of the core curriculum and general class activities" (p. 12). Also, Ankutse (2006) notes that inclusive education has to do with increasing the presence of all students, including those with disabilities in schools through the restructuring of school cultures, policies and practices to adapt to the diversity of all students in their class. Inclusion, therefore, involves the process of identifying and responding to the diversity of needs of all students through growing participation in learning, cultures and communities (Vuuro, 2016). For this study, by Inclusive Education, we refer to the practice of enrolling and teaching all students in the same learning environment, irrespective of their special educational needs in the same classroom, unless there are very compelling reasons to do otherwise. That is, every school must think of inclusion first unless the nature of the educational need requires the placement of the learner in a specially designated school to cater for the identified need.

However, as pointed out by Avoke and Avoke (2014), IE is not all about placement in the regular classroom rather it is the desired end state. Typically, this is done with adequate planning, training and assistance. The goal of inclusion is reached only when students participate in the activities of the class with the help and resources they require and have a sense of belonging in the learning environment and the entire school system. That means, both the physical school, classroom environment and the pedagogical approaches used by teachers should ensure that each learner, irrespective of the special educational need, makes sufficient learning at his or her pace. In effect, inclusive education should not be seen as a one-off event but rather, as a continuous engagement with all facets of the educational system to ensure that all students are provided with the requisite resources to enable them to make sufficient progress in their learning. For instance, Ainscow and Rahrinna (2006) argued that inclusion and exclusion are linked together such that inclusion requires an aggressive battle against exclusion, and inclusion can be seen as an ongoing process.

Although the move towards the adoption of an integrated educational system was welcome news, Sharma (2015) argues that the integrated system would lead to the exclusion of children with disabilities in regular schools if nothing significant is done about the organisational structure of the integrated schools as well as the adoption of inclusive teaching practices. That is, schools which previously practised 'segregated' systems would have to undergo significant changes in both the teaching and learning approaches and the entire school environment in order for any student requiring special educational needs to be enrolled in such a school to have a sense of belonging.

Indicators of Successful Inclusive Education Programmes

The implementation of IE is dependent on factors such as school structure and culture, teachers, and school leadership. Literature on implementing IE suggests that the first step in IE implementation is to help schools understand their own challenges (Booth & Ainscow, 2011; Rieser, 2012). Mitchell (2005) identified two characteristics of effective IE programmes. The first characteristic is the right to full participation in regular, age-appropriate classes in community schools and access to adequate aids, support resources and individualised programmes, with appropriately differentiated curriculum and

assessment practices. Based on the 2015 IE policy, students with visual impairment [VI], hearing impairment, learning disabilities, and autism, among others can be found in the IE setting. In Ghana, statistics show that out of 737,743 persons with disabilities, 40.1% are visually impaired (Ghana Statistical Service [GSS], 2014) and they form greater/ a majority for the sensory deviation category in the school setting. This means that considerations should be made in the school setting to meet their needs. According to Gerber (2003), the use of computers and assistive technology will dramatically improve the lives of students with VI by enhancing schooling and job prospects, enhancing social networks and promoting independence. The use of assistive technology for the teaching and learning of students with VI enhances their overall academic performance. (Kapperman, Sticken & Heinze, 2002; Michaels & McDermott, 2003; Strobel, Fossa, Arthanat & Brace, 2006). In the teaching and learning environment, teaching with instructional materials is important since they allow students to see, hear and manage what they read. Most students with low vision require some sort of material or equipment in order to understand. For instance, a strong felt pen in a particular colour will assist the child with low vision to see what has been written. Additionally, Ainscow (2005) identified four features of quality IE programmes including an ongoing process to find ways to adapt to diversity and learn how to live and learn from differences. However, teachers often feel that IE is something they are told to do often without support and resources and it becomes a top-down burden rather than a collaborative process (Singal, 2009).

Teacher's role in inclusive education

In the implementation of IE, regular education teachers are expected to teach both students with and without SEN in the same classroom setting. However, some teachers have negative attitudes and perceptions about teaching students with SEN in the regular classroom (Nketsia, 2016; Kiester, 2000). It is a common practice for teachers to prioritise their personal beliefs in the process of welcoming policies and practices and adapting to them (Pottas, 2015). Subban and Sharma (2006) reiterate that the perception and concerns of teachers teaching in IE settings have not been given the needed attention.

According to Meijer (2001), teachers' attitude toward the practice of IE influences the effectiveness of inclusion in schools. Based on the Standard and Guidelines for the Practice of IE in Ghana,

regular education teachers are expected to play the following roles: 1) Adapt the content of the national curriculum; 2) Set appropriate objectives and achievable targets for all students; 3) Use diverse strategies in teaching; 4) Use different communication techniques; 5) Provide appropriate and adapted games and recreational equipment; 6) Provide additional time for students with SEN to complete learning activities/tasks and assignment and; 7) Provide students with SEN opportunities to participate in all activities, both within and without the schools.

With regard to these enumerated roles of teachers in the implementation of IE, it is important for teachers to have the knowledge and skills to teach inclusive classrooms, as well as for school leadership to provide an inclusive and innovative environment for teachers to flourish. In summary, it is anticipated that regular education teachers meet the expected criteria and play their roles effectively to enhance the implementation of IE. This also means that beyond the IE policy, there is a need to ensure that teachers adopt and adapt teaching approaches that are inclusive. Although a number of studies have been conducted in Ghana focusing on IE as alluded to in previous paragraphs, what remains relatively under-explored are the experiences of teachers teaching mathematics in inclusive schools. Considering that these teachers have very little preparation for teaching in inclusive classrooms an issue which has been identified in the research literature to be problematic, the findings from this study will contribute to the field's understanding of the nature of the experiences of these teachers and ultimately offer suggestions to ensure the nation derives the intended gains from the policy. In the next section, we shall discuss the research methods employed in the study.

Methodology

Research Design

A case study design was employed in this study because it enables researchers to gain concrete, contextual, in-depth knowledge about the subject of the research. According to Teddlie and Tashakkori (2009), a case study design is a research technique and an empirical investigation that examines a phenomenon in a real-life context. The case in this particular study is the teaching of mathematics in an inclusive basic school. Specifically, the illustrative case study design was adopted with the aim of describing the experiences of teachers of

mathematics in an inclusive classroom to help uncover the challenges facing the selected teachers.

Population

The population of this study included all teachers teaching in Overcomers (pseudonym) Basic School located in a metropolitan area in one of the regions in the southern part of Ghana. At the time of the study, Overcomers Basic School was the only school practising inclusive education and had students who had been identified to be visually impaired enrolled in the school. The total population of teachers in the school was 31. However, the accessible population of mathematics teachers was 8.

Sample and Sampling procedure

The selection of the school and teachers followed the purposive sampling technique. According to Bryman (2012), purposive sampling involves the process where units of analysis are intentionally chosen so that instruments for the study can be administered. Teddlie and Tashakkori (2009) also added that the purposive sampling technique is able to address critical issues for which information may be obtained from the very people selected. Specifically, a critical case sampling strategy was adopted (Patton, 2002). Considering that Ghana at the moment uses teachers who have limited preparation in teaching special education in these inclusive schools, the argument is that the experiences of the participating teachers are more likely to occur in other inclusive schools in the country that do not have subject-based special education teachers. Considering that the accessible population was eight, census method was adopted.

Data collection instrument

A semi-structured interview guide was used to obtain information from the participants. The choice of the interview was to gain an in-depth understanding of the experiences of the participating teachers from teaching in an inclusive education school.

The semi-structured interview guide was also used to examine the difficulties faced by mathematics teachers in inclusive basic schools in terms of their instructional practices such that all their students learn adequately during mathematics lessons. The interview was divided into two parts. The first part examined the knowledge and perceptions of

mathematics teachers about inclusive education while the second part assessed the challenges these teachers faced in teaching of mathematics in Overcomers' Basic School. The participating teachers were interviewed individually. The interview guide was adapted from the study of Annan (2016) and comprised both four closed and 18 open-ended items. However, it was given to some lecturers in special education to validate it before usage.

Data collection procedure and Ethic clearance

Following the presentation of an introductory letter from the researchers' institution to "Overcomers Basic School" (pseudonym), permission was granted by the relevant educational authorities for the research to be conducted in the school. The participating teachers were also given an explanation of the purpose of the study before interviewing each of them. This took place during working hours so as to get all the participants. Additionally, each of the eight teachers consented to be part of the study. Also, the researcher assured them of confidentiality and anonymity which involved the use of unique identifiers so that non-members of the study could not identify the participants. Furthermore, the participants were informed that since their participation is voluntary, they could, at any point during the study withdraw their consent. Ethical clearance was also obtained from the Institutional Review Board of the researchers' institution.

Data Analysis

In order to answer the research question underpinning this study, that is, "What are the experiences (i.e. challenges) of non-special education teachers of mathematics in an inclusive basic school?", the qualitative data collected through interviews were first transcribed and coded. The codes generated were clustered into themes in order to gain insight into the experiences of the participating teachers regarding their teaching of mathematics in an inclusive school. In all, three challenges were identified as follows: pedagogical challenge, lack of teaching-learning materials and inadequate lesson duration. These themes are presented using charts (pie and bar), frequency counts and percentages and illustrative quotes.

Results

This section presents the results of the study. On the question "What challenge(s) do you face during lesson preparations?", there were three major themes namely; pedagogical constraint, access to relevant and appropriate teaching and learning materials and inadequate duration of lessons.

Concerning the first theme, Pedagogical challenges, there were two major sub-themes namely "Learners may not have experience with the Braille" and "Difficult to teach certain topics". From the results, four out of eight teachers (50%) said the students have little or no experience with the Braille. It appears that the teachers also do not have enough expertise in the reading of the Braille which also makes it difficult to assess what is brailed. This is illustrated in the following comment*: I need a bit more training on the teaching of special needs students especially, the visually impaired on the use of Braille."* In order to make up for this feeling of inadequacy, this teacher stated that the visually-impaired students are made *"to read out their Braille so she will correct them if there was any mistake."* It must be noted that at the time of the interview, there was no special education specialist in the school to assist this teacher.

Three of the teachers representing 37% of the respondents mentioned that generally, it was difficult for them to teach certain topics like multiplication of standard numbers and division in larger figures, due to the special educational needs students in the respective classrooms. It is not surprising that one respondent indicated that varied teaching methods were employed which may be at variance with best practices. This teacher ended with a call that: "*In-service training for teachers on how to handle students with disability be given frequently".*

Table 1 presents the results of the challenges teachers face.

Table 1: Pedagogical challenges teachers face

Responses	Frequency	Percent
Learners may not have experience with the Braille	4	50.0
Difficult to teach certain topics	3	37.5
Usage of varied teaching methods	1	12.5
Total	8	100.0

On the question of access to appropriate teaching and learning material during the individual semi-structured interviews, six out of the eight respondents highlighted challenges in accessing appropriate teaching aids for use during the teaching-learning process. With regard to the question, "what challenges do you face in terms of classroom management?" more than half of the teachers, 5(62.5%) said the school has no audio recorders and speakers in the classrooms. The lack of such teaching aids compels the teachers to shout in order that students, especially those with hearing impairment, hear what is being said. Two of the respondents 2(25%) said teachers need to walk around in order to get the attention of the students as one respondent (12.5%) states that "students sleep in class especially, the special needs students". Also, 37.5% of the teachers mentioned that the school lacked TLMs including tactile. Generally, teaching is made simple and understandable if there are available teaching and learning materials. Also, at the time of the interview, the Braille was found to be inadequate. Out of the 15 visually-impaired students, only nine students had the Braille suggesting that the remaining six students could not fully participate in any written form of assessment.

Table 2 presents the results of the challenges teachers face in relation to the availability of appropriate teaching aids.

Table 2: Challenges in access to appropriate teaching aids

Responses	Frequency	Percent
Computer and recorders are not available	5	62.5
TLMs	3	37.5
Total	8	100.0

With regard to the third theme, "inadequate duration of lessons", the two sub-themes were as follows: "Time is not enough for a lesson" and "Contact hours within the week are not enough". About three-fourths of the respondents, that is, six out of eight said that the time is not enough with the remaining two indicating that the contact hours per week are not enough. In a revealing comment, one of the teachers said that the special needs students may not have "learned much" from the lesson *"because the time allocation was not enough since the students need extra time and they also need more Braille for*

practice (T 1). This teacher explained further by stating that some of the objectives for the day's lesson were not achieved (compare and order rational numbers) because the period for the class was "*woefully inadequate*" and so "*could not finish with the lesson because they* (referring to the visually-impaired students) *need more time to cover what the sighted were able to cover*". The end result is that some teachers may end up lowering the content for students with special educational needs as illustrated. For example, when one of the participating teachers was asked how students with special educational needs are supported in her class to understand the lesson, she replied: "*Not to give them complex examples but simple examples to aid better understanding*."

Table 3 shows that teachers face challenges regarding the duration used for the lessons.

Table 3: Inadequate duration of lessons

Responses	Frequency	Percent
Time is not enough for a lesson	6	75.0
Contact hours per the week are not enough	2	25.0
Total	8	100.0

Discussion

With regard to the challenges faced by the teachers, the study found that mathematics teachers face many challenges in the discharge of their responsibilities. The first challenge identified through this study is pedagogical in nature. It was found that the teachers needed additional training since the short-term training they received is inadequate to equip them to teach diverse students. This finding is consistent with the claim that these short-term training programmes hardly lead to any major change (Kuroda, Kartika & Kitamura, 2017). There is, therefore, a need for tailor-made training in areas such as classroom management, teaching in diverse classrooms and the adaption of creative pedagogies. Also, the teachers' inability to read Braille meant that they were unable to provide the immediate feedback needed by their students. This challenge re-echoes the argument by Meijer (2019) for trained subject-based special education teachers to make IE successful. Gadagbui (2010) also indicated that when good and

creative teaching methods are used, it will make children with SEND feel part of the normal school system and will also give them a sense of belonging that will enable them to learn, contributing to growth and contribution to society.

A second challenge unearthed was the inadequate teaching aids such as Braille and other teaching and learning materials to support the work of teachers despite how crucial they are in helping the visually-impaired students in the classrooms understand the concept being taught. For instance, Simon et al. (2010) indicated that teaching aids are needed in an IE class for effective teaching and learning to take place. Similarly, Ofori (2018) argued that TLMs are very important for schools so that teachers are able to teach well.

The third challenge the participating teachers faced was the inadequate duration of lessons. The school followed the official teaching timetable for all basic schools without any modification despite the diverse needs of students in such an inclusive school. For example, Vuuro (2016) highlighted the lack of teaching aids and the availability of trained resource personnel as some of the challenges facing the implementation of IE. Even though IE practices may require individualised attention as indicated in the 2015 IE policy and the Standard and Guidelines for the implementation of IE, teachers in this study explained that additional time is critical for the teaching of Mathematics in IE. The call for additional time in teaching Mathematics in IE classrooms, especially to benefit students with VI can help teachers who teach Mathematics to provide the needed individual attention in the classrooms. Consistent with the call by Ankutse (2006) for the restructuring of school policies and practices to adapt to the diversity of all students in their class, there is a need for modification of the school teaching timetable to cater for students with SEN.

Another finding was that the mathematics teachers indicated that they used a lot of repetitions to help students with VI understand mathematical concepts. Even though mathematics teachers saw the use of repetitions as a challenge, it is one of the effective tools for teaching students with special educational needs (Okyere & Adams, 2003). This suggests the need for frequent refresher courses to enhance the knowledge and skills of mathematics teachers teaching in an inclusive classroom and to support students with VI (Sharma & Pace, 2019). In the next section, we present the conclusions and implications of the findings of this study.

Conclusions and Implications

This study explored the experiences (i.e., challenges) of teachers who are mathematics specialists without any significant preparation in special education teaching the subject in an inclusive basic school. An illustrative case study design was adopted with data collection carried out through the use of semi-structured interviews. The closed-ended items were analysed quantitatively using frequencies and percentages while the open-ended items were analysed qualitatively and supported with illustrative quotes.

From the findings, the following conclusions could be inferred. The mathematics teachers sampled for this study followed most of the expectations required of regular education teachers per the outlined expectation in the Standard and Guidelines for the implementation of IE. For example, the findings show that they used varied teaching approaches and gave verbal feedback to students. However, they were faced with numerous challenges that seemed to defeat the purpose of IE based on policy expectations. These challenges include: 1) mono communication strategy which conflicts with the role expectations of teachers in the implementation of IE since more than half of the mathematics teachers in this study indicated they could not use Braille in the teaching and learning process. 2) Inadequate TLMs and assistive technologies such as recorders, speakers, and Braille contradicts the IE implementation since teachers are expected to use varied and appropriate TLMs and assistive technology that can help them teach effectively. Additionally, the teachers' lack of expertise in the use of these devices used by students with SEN meant they were handicapped in the level of support they could offer for students with visual impairment in terms of monitoring students' learning and providing timely feedback to support their next learning. 3) Inadequate time in teaching Mathematics in an inclusive setting, considering the technicalities in mathematics when it comes to symbols and other signs. It is, therefore, important for consideration to be made to the time allocated for teaching mathematics in an IE setting.

It is therefore argued that it is not enough to be a subject expert, especially for those who teach in inclusive classrooms with students who are visually impaired, for example. Instead, the mathematics teacher should also have significant preparation in special education in order to support the learning of all students. This will help minimize if not prevent the situation where students who really need more

educational support are left with a sense of learning less compared to their counterparts. Such a move calls for the various teacher education institutions in Ghana to develop a curriculum that will lead to special education teachers who also have a subject specialisation. We contend that a special education teacher with a teaching major in mathematics would have been able to support the students who did not know how to use Braille contrary to what pertained in this study. On the challenge of inadequate duration of lessons, it is important that educational authorities such as the Ghana Education Service adapt the teaching timetable for schools practising IE, especially in the teaching of mathematics. Such a move will enable the teachers to offer more personalised assistance to all students so that they do not feel that some students are not learning enough as was the case in this study. While acknowledging that this is a single case study which may limit the extent of its generalisability, we argue that the challenges we have uncovered may pertain to other schools practising IE under the conditions described in this study, that is, inadequate professional development opportunities, non-special education teaching in IE schools and a general lack of required teaching and learning materials. There is, therefore, the need for policymakers to focus on the recommendations made to further strengthen the successful implementation of the IE policy in all schools designated as such. It is the expectation that the individual needs of the visually impaired students are met to avoid a situation where they are physically included in the classroom space yet academically excluded from accessing the mathematics on offer by the teacher.

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