

Inclusive Grade 8 Mathematics Teaching in Mainstream Classrooms: A Study of Teaching Strategies and Learning Outcomes for Students with Diverse Disabilities in Oshana Region, Namibia

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ABSTRACT

This qualitative study aimed to investigate the strategies employed by grade 8 mathematics teachers when teaching learners with disabilities in a mainstream classroom, with a specific focus on the Oshana Region in Namibia. In pursuit of this objective, face-to-face interviews were conducted with 12 grade 8 teachers, providing valuable insights into the practical approaches utilized in inclusive mathematics education.

The findings of this study revealed several key strategies utilized by these teachers to promote inclusive education. Differentiated instruction emerged as a cornerstone, with teachers tailoring their teaching methods to meet the unique learning needs of each student. Collaborative learning played a pivotal role, fostering peer support and problem-solving. The integration of hands-on learning made abstract mathematical concepts more tangible, and technology was effectively employed to engage students with diverse learning styles. Scaffolded instruction provided structured support to facilitate student learning, ensuring that each student received the right level of assistance. These strategies were underpinned by inclusive education principles that recognized the unique strengths and challenges of every student, creating an inclusive and welcoming learning environment.

In light of these findings, it is recommended that the Oshana Region Directorate of Education and the Ministry of Education, Arts, and Culture (MoESC) collaborate to enhance teacher training in inclusive education, allocate resources to support these strategies, and implement a comprehensive inclusive education policy. Additionally, further research is needed to explore the long-term impact of inclusive education practices on students' academic and social outcomes and to assess the effectiveness of inclusive curriculum development and assessment practices in the region. These efforts will contribute to the advancement of inclusive mathematics education in the Oshana Region and beyond.

Keywords: Inclusive Education, Mainstreaming, Disabilities, Strategies

INTRODUCTION

Inclusive education stands as a cornerstone of modern educational policy, aiming to provide equitable opportunities for all students, regardless of their physical or cognitive abilities, especially within the context of grade 8 level mathematics education.

The Oshana Region in Namibia, like many regions worldwide, faces the significant challenge of ensuring that students with diverse

disabilities can access inclusive mathematics teaching within mainstream grade 8 classrooms, in line with the principles of inclusive education (Artiles & Trent, 1997).

The inclusion of students with disabilities in mainstream grade 8 level mathematics classrooms is not without its complexities. These students may have a wide range of needs, including visual impairments, hearing challenges, mobility issues, and speech disabilities. The mainstream mathematics

teachers responsible for educating them often (Dettmer et al., 2005). This situation raises important questions about the effectiveness of the educational practices in place and the extent to which students with disabilities are able to access quality grade 8 level mathematics education, aligning with the disability policy for the Ministry of Education, Arts, and Culture (MoESC) in Namibia. Historically, the debate around inclusion has evolved considerably. In the late 20th century, the overrepresentation of minority students in special education programs became a contentious issue, highlighting the need for more inclusive mathematics teaching practices (Artiles & Trent, 1997). This debate continues to shape the direction of inclusive mathematics education in Namibia and worldwide.

Furthermore, teachers' perceptions play a crucial role in the success of inclusive mathematics teaching at the grade 8 level. Teacher attitudes, collaboration, and the use of appropriate strategies are pivotal factors in ensuring that students with disabilities can access inclusive mathematics education effectively (Scruggs & Mastropieri, 1996; Salend & Duhaney, 1999).

In the context of mathematics education at the grade 8 level, inclusive practices face specific challenges. Students with significant cognitive disabilities require tailored teaching methods (Browder et al., 2008). Additionally, educators must consider the diverse communication needs of students, such as those with autism, and explore augmentative and alternative communication strategies (Mirenda, 2003). Beyond cognitive challenges, physical education for students with disabilities also necessitates specialized strategies (Beck & Johnson, 2000). This research endeavors to shed light on the state of inclusive mathematics education in the Oshana Region of Namibia at the grade 8 level. It seeks to explore the teaching strategies employed by mainstream mathematics teachers, the learning outcomes for students with diverse disabilities, and the extent to which the principles of inclusive mathematics education, as outlined in the MoESC disability policy, are being realized.

By investigating these aspects, this research aims to contribute to the ongoing debate surrounding inclusive mathematics education at the grade 8 level. It seeks to provide valuable insights that can inform policy development, teacher training, and classroom practices to create a more equitable and inclusive

lack specialized training in special education mathematics educational environment for all grade 8 level students in Oshana Region, Namibia. The issue at hand is the implementation of inclusive mathematics education at the grade 8 level within mainstream classrooms in Namibia's Oshana Region. Within this context, students with diverse disabilities, ranging from visual impairments and hearing challenges to mobility issues and speech disabilities, are integrated into general education settings. Compounding this challenge is the notable absence of specialized training in special education among many mainstream mathematics teachers in the region.

This problem unfolds in two primary dimensions: Mainstream educators in the Oshana Region often lack the specialized training necessary to effectively address the unique needs of students with disabilities, particularly concerning grade 8 level mathematics teaching. This lack of training poses challenges in implementing suitable teaching strategies that cater to the diverse learning requirements of these students. The presence of students with disabilities in mainstream grade 8 mathematics classrooms, coupled with the absence of specialized support, raises concerns about whether they can genuinely access quality mathematics education on par with their peers without disabilities. This situation potentially contradicts the principles of inclusive education outlined in the disability policy of the Ministry of Education, Arts, and Culture (MoESC) in Namibia.

The implications of this problem extend beyond the classroom to the broader goals of Namibia's Vision 2030, particularly concerning the grade 8 level: Inadequate inclusive mathematics education for grade 8 students with disabilities perpetuates inequality and exclusion, which contradicts the vision of an inclusive and equitable knowledge-based society as outlined in Vision 2030. Grade 8 students with disabilities, when provided with appropriate education, can become contributing members of society, enhancing the nation's potential for economic growth and development. Inadequate education restricts not only their individual potential but also hinders the country's ability to harness their talents and skills. An inclusive mathematics education system that caters to the diverse needs of all grade 8 students fosters social cohesion and harmony, aligning with the social development goals.

The problem underscores the critical need for alignment between educational policies, such as the disability policy of MoESC, and the broader national development goals articulated in Vision 2030. In essence, addressing the challenges of inclusive mathematics education at the grade 8 level for students with disabilities in the Oshana Region is not only a matter of educational equity but is also a crucial component in achieving the overarching objectives of Namibia's Vision 2030. This research aims to investigate the extent of the problem, its far-reaching impact, and recommend solutions that can contribute to a more inclusive and equitable educational system in the region, thereby advancing the realization of Vision 2030, especially at the grade 8 level in mathematics teaching.

The current study was informed by the Inclusive Education Theory. The choice of the Inclusive Education Theory for the current study is well-founded and substantiated by the provided in-text references: Firstly, the theory aligns seamlessly with the primary objectives of the research, which center on investigating the implementation of inclusive mathematics education within Namibia's Oshana Region, particularly at the grade 8 level. This alignment is a key strength as the Inclusive Education Theory underscores the right of all students, including those with disabilities, to participate in general education classrooms. This theory resonates with the study's purpose by emphasizing the importance of inclusivity and its relevance to the research goals (UNESCO's Salamanca Statement, 1994). Secondly, the theory is deeply rooted in internationally recognized principles and guidelines for inclusive education, as exemplified by UNESCO's Salamanca Statement. This statement is widely acknowledged as a foundational document advocating for inclusive education practices. By adopting the Inclusive Education Theory, the study positions itself in harmony with these globally accepted principles, lending credibility and relevance to the research (UNESCO's Salamanca Statement; 1994).

Thirdly, the Inclusive Education Theory advocates for a comprehensive assessment of both policy and practice in accommodating diverse student needs. This aligns perfectly with the research's focus, which extends beyond classroom practices to encompass the broader policy context in the Oshana Region. The

theory's emphasis on policy and practice alignment is vital in providing a holistic understanding of the effectiveness of inclusive mathematics education (Mirenda, 2003). Moreover, equity is a central theme in the Inclusive Education Theory. The study's objective of exploring whether inclusive mathematics education ensures equitable access to quality education for students with disabilities is in harmony with this equity-oriented approach. The theory's focus on promoting fairness in education echoes the research's goal of assessing equity in the context of grade 8 level mathematics teaching (Mirenda, 2003).

LITERATURE REVIEW

In the ever-evolving landscape of education, the pursuit of equity and inclusivity stands as an imperative mission, a beacon guiding us toward a more just and equitable society. Central to this quest is the need to address the diverse learning requirements of students with disabilities, who represent a significant segment of our educational community. This endeavor is not merely a moral imperative; it is deeply rooted in a robust foundation of research, expert insights, and best practices that underscore the profound significance of tailoring teaching strategies to optimize learning outcomes for this unique and valued student population.

Understanding Diverse Disabilities

Students with disabilities form a diverse tapestry, akin to the stars that adorn the night sky, each with its unique brilliance. They encompass a wide spectrum of needs, from physical disabilities, such as mobility impairments, to cognitive challenges, including autism and learning disabilities. Within this diverse array, as elegantly illuminated by Mirenda's research on augmentative and alternative communication for students with autism (2003), lies a tapestry of individuality. Each student's experience, characterized by distinct communication needs and cognitive landscapes, is as unique as a fingerprint.

Differentiated Instruction

To embark on the journey of enhancing learning outcomes for these diverse learners, educators can turn to the guiding principles of Differentiated Instruction (DI), a multifaceted key that unlocks the potential within each student. As artfully articulated by Beck and Johnson (2000), DI provides a repertoire of pathways through which students can actively

engage with the curriculum. It is the harmonious symphony where content, process, and products of learning are finely tuned to meet individual needs, ensuring that each student is both suitably challenged and abundantly supported. The education landscape, in this regard, mirrors an orchestra, with each instrument playing its unique part to create a harmonious whole.

Assistive Technology

In this modern educational landscape, Assistive Technology (AT) emerges as a powerful ally. AT, as highlighted by Dettmer, Thurston, and Dyck (2005), is a bridge to empowerment, connecting students with diverse disabilities to the world of learning and beyond. It encompasses a spectrum of tools, from screen readers that facilitate access to text for students with visual impairments to communication devices and adaptive software that open doors to uncharted possibilities of self-expression and interaction. For students with physical disabilities, AT provides avenues for independent learning and active participation, ensuring they are not merely spectators but active participants in the grand narrative of education.

Collaboration and Teamwork

Success in this endeavor hinges on the symphony of collaboration, where educators and specialists work in synergy to craft individualized education plans that are both comprehensive and exquisitely tailored to the unique needs of each student. It is through collaboration, as eloquently underscored by the research synthesis of Scruggs and Mastropieri (1996) that the educational journey of students with diverse disabilities becomes an orchestrated symphony, with every note in perfect harmony. It is a testament to the power of collective efforts in shaping an inclusive and equitable learning landscape.

Inclusive Education Framework

A cornerstone of this transformation is the comprehensive framework of inclusive education, championed by Grünke and Semmel (2002). This framework, rather than setting boundaries, creates a culture of inclusion that unfurls a vibrant tapestry of diversity. It beckons students from all walks of life to the same learning table, where their differences are not just accepted but celebrated. It imparts the profound message that every student, regardless of abilities or disabilities, belongs in this dynamic narrative of learning. The inclusive

classroom is a mosaic where each unique piece contributes to the beauty of the whole.

Teacher Attitudes and Training

The role of teachers in this narrative is pivotal, as they are the conductors of this educational symphony. The research conducted by Salend and Duhaney (1999), De Boer, Pijl, and Minnaert (2011), and Vogel and Adelman (1991) accentuates the critical influence of teacher attitudes and training. The heart of inclusive education lies in the heart of the educator. To create truly inclusive classrooms, it is paramount to address and, when necessary, reshape teacher attitudes. Professional development, thoughtfully designed, becomes the forge in which educators are equipped with the knowledge, skills, and most importantly, the belief in the power of inclusive education. In this transformational journey, the teacher is not just an instructor but a guide, a mentor, and a champion of diversity and inclusion.

Learning outcomes for students with diverse disabilities are not just enriched but transformed through a combination of differentiated instruction, the strategic embrace of assistive technology, the harmonious collaboration among educators, and the wholehearted embrace of inclusive education principles. As we draw upon the insights of experts, both renowned and unsung, we move closer to realizing a more inclusive, equitable, and just educational landscape. It is a landscape where every student, regardless of their unique needs, possesses the opportunity to not only learn but to thrive, not only academically but socially. It is the dream we ardently pursue, the promise we passionately uphold, and the future we relentlessly shape. In this symphony of education, every note, every instrument, every voice, contributes to the harmonious and inclusive melody of learning for all.

METHODOLOGY

In this comprehensive qualitative study, an in-depth, face-to-face interview approach was employed as the data collection tool. The study was designed to explore the landscape of inclusive mathematics education at the grade 8 level within the Oshana Region of Namibia, with the active participation of twelve teachers. To ensure a representative sample, a purposeful selection process was utilized to handpick twelve schools from the Oshana region. This approach was chosen to ensure that the study provides a rich and nuanced understanding of

inclusive mathematics education in this specific context.

RESULTS

Subtheme 1.1: Differentiated Instruction

Differentiated instruction is a crucial subtheme within the teaching strategies employed by

mainstream grade 8 mathematics teachers in the Oshana Region. It involves tailoring instruction to meet the diverse needs of students in the classroom, accommodating various learning styles and abilities. Let's hear from two teachers to understand how this strategy is put into practice.

Theme	Subtheme
<p>Theme 1:Teaching strategies employed by mainstream grade 8 mathematics teachers in Oshana Region</p>	Differentiated Instruction
	Collaborative Learning
	Hands-On Learning
	Technology Integration
	Scaffolded Instruction
	Inclusive education principle

On this aspect Teacher 1 had this to say, *"I've found that not all my students grasp mathematical concepts at the same pace. Differentiated instruction allows me to provide multiple entry points for understanding. For instance, I might offer problem-solving tasks with varying levels of difficulty. This way, I can challenge advanced students while supporting those who need more time."* This was supported by Teacher 12 who also said that, *"I often use flexible groupings to implement differentiated instruction. I group students based on their readiness, interests, or learning profiles. It's remarkable how students help each other when they can work with peers who share their learning preferences. This promotes a more inclusive learning environment."*

Teacher 1 uses differentiated instruction to adapt the complexity of tasks to cater to the diverse abilities within the classroom. This ensures that both high-achieving and struggling students receive appropriate challenges and support. Teacher 12 highlights the use of flexible grouping as part of differentiated instruction. This strategy involves pairing or grouping students based on their individual learning needs, ensuring that each student receives instruction in a way that suits their learning style. Differentiated instruction aligns with research findings in the Oshana Region. It echoes the importance of adjusting instruction to cater to the diverse learning abilities in grade 8 mathematics classrooms. Scholars like Beck & Johnson (2000) have emphasized the significance of this approach in ensuring all students receive appropriate challenges and support.

Subtheme 1.2: Collaborative Learning

Introduction: Collaborative learning is another subtheme frequently employed by grade 8 mathematics teachers in the Oshana Region. It involves fostering collaboration among students, encouraging them to work together on mathematical problems and projects. Let's hear from two teachers to gain insights into how they implement this strategy.

On this aspect, Teacher 11 had this to say, *"Collaborative learning isn't just about students working together; it's about learning from one another. I often use group projects where students have to solve math problems as a team. This way, they learn different problem-solving approaches and can teach each other. It's a win-win."* Teacher 3 supported by saying that, *"Peer teaching is a significant part of my collaborative learning approach. I assign students to teach a particular math topic to their peers. This not only reinforces their own understanding but also encourages them to explain complex concepts in a way their classmates can understand."* Teacher 3 underscores the idea that collaborative learning goes beyond teamwork. It promotes a deeper understanding of mathematical concepts as students share their unique problem-solving strategies, creating a mutually beneficial learning environment. Teacher 11 adopts a peer teaching approach within collaborative learning. This approach enhances the students' comprehension of mathematical concepts while promoting the development of teaching skills among peer. Collaborative learning aligns with existing research in the region, which recognizes its potential for promoting peer learning, problem-

solving, and teamwork skills. Scholars like (Salend & Duhaney, 1999) have highlighted the importance of collaborative strategies in enhancing students' engagement and understanding of mathematics.

Subtheme 1.3: Hands-On Learning

Hands-on learning is a prominent subtheme among mainstream grade 8 mathematics teachers in the Oshana Region. This approach involves incorporating tactile and real-world experiences into the mathematics curriculum to make abstract concepts more accessible. Here are perspectives from two teachers on how they employ hands-on learning in their classrooms.

On hands on, Teacher 5 had this to say, *"Math can often seem abstract and distant for students. To bridge this gap, I frequently use concrete manipulatives like geometric shapes and number cubes. Students can physically manipulate these objects, which brings mathematical concepts to life. It's like learning by doing."* This was supported by Teacher 10 who also said that, *"One of the most effective hands-on strategies I use is incorporating real-life examples into my math lessons. I show students how mathematical concepts apply in everyday situations. For instance, we might work on budgeting exercises or measure the angles of objects in the classroom. It makes math more relatable."*

Teacher 5 employs hands-on learning by using tangible objects that students can manipulate to understand mathematical concepts better. This approach provides a bridge between abstract mathematics and real-world experiences, making learning more engaging and accessible. Teacher 10 underscores the use of real-life examples as a hands-on strategy. By linking mathematics to practical, everyday scenarios, students can connect with the subject matter on a personal level, enhancing their understanding and motivation. Hands-on learning aligns with research in the Oshana Region, emphasizing the importance of using concrete materials and real-life applications to enhance students' understanding of mathematics. Scholars like Browder et al. (1999) have highlighted the effectiveness of these hands-on strategies in making math more tangible and relatable to students.

Subtheme 1.4: Technology Integration

Technology integration is a significant subtheme in the teaching strategies employed by grade 8

mathematics teachers in the Oshana Region. This approach involves the use of educational software, interactive whiteboards, and online resources to supplement mathematics lessons. Let's explore how two teachers incorporate technology into their teaching. Teacher 7 had this to say, *"Technology has become an integral part of my math lessons. I use interactive apps and software that offer immediate feedback. This helps students practice and reinforce mathematical concepts independently. Plus, it's engaging and fun for them."* This was supported by Teacher 8 who also said that, *"Online resources are a treasure trove for math teaching. I curate a collection of instructional videos and virtual simulations. These resources cater to various learning styles, and students can access them outside the classroom, supporting personalized learning."*

Teacher 7 integrates technology by leveraging interactive software that enhances students' independent practice and provides instant feedback. This approach makes learning more engaging and allows students to receive immediate support. Teacher 8 utilizes online resources to support technology integration. This strategy allows for personalized learning and accommodates different learning styles, as students can access a variety of instructional materials at their own pace. The integration of technology in mathematics instruction resonates with research findings in the Oshana Region, which highlight the benefits of using interactive tools and online resources to enhance students' engagement and understanding of mathematics. Scholars like Grünke & Semmel (2002) emphasize the role of technology in providing interactive, visual, and adaptive learning experiences.

Subtheme 1.5: Scaffolded Instruction

Scaffolded instruction is a vital subtheme in the teaching strategies employed by mainstream grade 8 mathematics teachers in the Oshana Region. This approach involves providing structured guidance and support to students as they progress through mathematical concepts. Here, we listen to two teachers and how they apply scaffolded instruction in their classrooms. On scaffolded instruction, Teacher 9 had this to say, *"Scaffolded instruction is about offering students the right level of support. For instance, I start with more guided practice to build their confidence and gradually release responsibility as they become more proficient. It's like*

teaching them to ride a bike with training wheels before they can balance on their own. "This was supported by teacher 2 who also said that,:" I often employ graphic organizers and step-by-step problem-solving guides to scaffold instruction. These tools provide a clear framework for students to follow when tackling complex math problems. It's about breaking down big tasks into manageable steps."

Interpretation: Teacher 9 uses scaffolded instruction to gradually transition students from guided practice to independent learning. This approach allows students to build confidence and competence step by step, mirroring the process of learning a complex skill. Teacher 2 utilizes visual aids and structured guides to scaffold instruction. These tools assist students in breaking down complex mathematical tasks into smaller, more manageable components, promoting a deeper understanding of the problem-solving process. Scaffolded instruction aligns with existing research in the Oshana Region, emphasizing the importance of providing students with the appropriate level of guidance and support as they navigate mathematical concepts. Scholars like De Boer et al. (2011) underscore the significance of scaffolding to help students develop problem-solving skills and mathematical proficiency.

Subtheme 1.6: Inclusive education principle

Inclusive education principles are at the core of teaching strategies employed by mainstream grade 8 mathematics teachers in the Oshana Region. This approach focuses on creating classrooms where all students, regardless of abilities or disabilities, are welcomed and encouraged to learn side by side. Here, we explore how two teachers implement inclusive education principles.

On this aspect, Teacher 1 had this to say, *"Inclusivity is about recognizing the unique strengths and challenges of every student. I ensure that my lessons have options for engagement. For instance, when we explore geometry, students can choose between drawing, building, or explaining concepts in writing, allowing them to excel in their preferred mode of learning."* Teacher 12 also supported by saying that, *"I often organize peer support sessions, where students work together to tackle math challenges. It's heart-warming to see the camaraderie and mutual assistance. This not only fosters inclusion but also reinforces the*

idea that we're all here to learn from each other."

Teacher 1 implements inclusive education principles by providing multiple means of engagement and representation. This strategy ensures that students with diverse abilities can access and contribute to the curriculum in ways that align with their strengths and preferences. Teacher 12 embraces the spirit of inclusive education through peer support sessions. These sessions promote a culture of collaboration, empathy, and shared learning experiences, reinforcing the belief that every student has something valuable to offer.

Inclusive education principles resonate with research in the Oshana Region, emphasizing the importance of creating inclusive classrooms that celebrate diversity and promote collaborative learning. Scholars like Snell & Brown (2011) underscore the significance of fostering a learning environment where all students, regardless of their abilities or disabilities, feel valued and encouraged to participate.

DISCUSSION

The findings from the study on teaching strategies employed by mainstream grade 8 mathematics teachers in the Oshana Region are intricately interwoven with the broader theme of inclusive education. These subthemes reflect the practical strategies utilized by teachers to ensure that students with diverse learning needs are not only included but also succeed in the mathematics classroom. Differentiated instruction is a cornerstone of inclusive education. It involves tailoring teaching to cater to the unique learning needs of each student. This approach is consistent with Inclusive Education Theory, emphasizing the importance of accommodating diverse learning abilities (Artiles & Trent, 1997). Collaborative learning plays a pivotal role in creating an inclusive classroom environment. It fosters peer support and problem-solving, aligning with the principles of inclusive education that encourage teamwork and mutual assistance (Salend & Duhaney, 1999).

Incorporating hands-on learning in mathematics instruction makes abstract concepts more tangible and relatable. This approach resonates with the theory, which underscores the use of real-life examples to connect students with the

subject matter (National Council of Teachers of Mathematics, 2014). Technology integration is a valuable tool in enhancing the inclusivity of mathematics education. It offers interactive and adaptive learning experiences, aligning with the theory's emphasis on using technology to engage and support students with diverse learning styles (McLeskey & Waldron, 2010). Scaffolded instruction is a methodology that provides structured guidance and support to students as they progress in their learning. This approach is consistent with the theory, which advocates offering the right level of support to facilitate learning (Dettmer, Thurston, & Dyck, 2005).

Inclusive education principles lie at the heart of these strategies. These principles recognize the unique strengths and challenges of every student, creating an inclusive and welcoming learning environment. This embodiment of inclusive education aligns with the theory's core tenets (Grünke & Semmel, 2002). These subthemes not only encapsulate effective teaching strategies but also reflect the principles and ideals of inclusive education. By employing these strategies, teachers in the Oshana Region are actively contributing to the realization of inclusive education, ensuring that all students, regardless of their abilities, have the opportunity to thrive academically and socially.

CONCLUSION AND RECOMMENDATIONS

In conclusion, this study sheds light on the essential strategies employed by grade 8 mathematics teachers to foster inclusive education in the Oshana Region, Namibia. The findings underscore the significance of differentiated instruction, collaborative learning, hands-on approaches, technology integration, and scaffolded instruction in creating an inclusive learning environment. These strategies align with the principles of inclusive education, recognizing the diverse strengths and challenges of every student. To further advance inclusive education in the Oshana Region, collaboration between the Oshana Region Directorate of Education and the Ministry of Education, Arts, and Culture (MoESC) is recommended. This collaboration should focus on enhancing teacher training, allocating resources to support these strategies, and implementing a comprehensive inclusive education policy.

Furthermore, it is crucial to conduct additional research to assess the long-term impacts of these inclusive education practices on students'

academic and social outcomes. Additionally, the effectiveness of inclusive curriculum development and assessment practices should be closely examined to ensure continuous improvement. By implementing these recommendations and continually exploring ways to enhance inclusive education, the Oshana Region can serve as a model for promoting inclusivity in mathematics education, not only in Namibia but also beyond its borders. In doing so, we can work towards a future where all students, regardless of their abilities, have the opportunity to thrive academically and socially in the mathematics classroom.

Recommendations to the Ministry of Education, Sports, and Culture

Recommendations for the Oshana Region Directorate of Education and the Ministry of Education, Arts and Culture (MoESC) to promote inclusive education in the Oshana Region:

- Organize regular workshops and training sessions for teachers and school staff on inclusive education principles and effective teaching strategies. Ensure that these training programs are practical and focused on real-world classroom application.
- Collaborate with the MoESC to revise and adapt the regional curriculum to be more inclusive. Ensure that the curriculum materials and resources cater to diverse learning needs.
- Allocate resources to schools to support the implementation of inclusive education practices. This includes providing assistive technology, additional teaching assistants, and materials for students with disabilities.
- Establish a monitoring and evaluation system to assess the effectiveness of inclusive education practices in schools. Regularly collect data on student outcomes, teacher satisfaction, and resource utilization to make informed decisions.
- Develop and enforce policies that explicitly promote inclusivity within all schools in the region. Encourage schools to create Individualized Education Plans (IEPs) for students with special needs and ensure that these plans are followed.
- Engage parents and the local community in supporting inclusive education. Hold regular meetings and workshops to educate parents about the benefits of inclusive education and

seek their input on improving the inclusive environment.

- Establish teams of specialists, including special education teachers, speech therapists, and occupational therapists, to provide individualized support to students with disabilities. These teams can work with classroom teachers to tailor instruction to each student's needs.

For the Ministry of Education, Arts and Culture (MoESC)

Develop a comprehensive national inclusive education policy that outlines the principles and strategies for promoting inclusivity in all regions of Namibia, not limited to Oshana.

- Allocate additional funding to support inclusive education practices, with a focus on addressing disparities and ensuring that schools in regions like Oshana have the necessary resources and infrastructure.
- Create a nationwide framework for professional development in inclusive education for all teachers. Collaborate with regional directorates to ensure the implementation of these programs.
- Support research initiatives to continually assess the effectiveness of inclusive education practices in various regions, including Oshana. Use this data to make evidence-based decisions and improve policies.
- Launch public awareness campaigns to educate the public about the importance of inclusive education and to reduce stigma associated with disabilities. Encourage societal support for inclusive practices.
- Partner with non-governmental organizations (NGOs) and international agencies that specialize in inclusive education to access expertise and resources.
- Invest in making educational infrastructure across the country more accessible and inclusive. This includes physical facilities, transportation, and the availability of assistive technologies.
- Consider enacting or updating legislation to protect the rights and access to education for students with disabilities and to enforce inclusive education practices.
- Build the capacity of the Ministry to oversee and implement inclusive education policies effectively, including the recruitment and training of specialists in inclusive education.

AREAS FOR FURTHER STUDY

Examine the effectiveness of current teacher training programs in the region regarding inclusive education. Explore the specific areas where teachers may need additional training or support to successfully implement inclusive strategies. Study the extent to which parents and local communities are involved in supporting inclusive education. Identify the barriers to their participation and develop strategies to enhance their involvement.

CONFLICT OF INTEREST DECLARATION

We would like to express our sincere gratitude to Dr. Moses Chirimhana, Ms. Brian Makaka, and Dr. Kamati Fredinant for their invaluable contributions to the successful completion of this study. Their expertise, unwavering dedication, and collaborative efforts have significantly enhanced the quality of the research and its findings. We deeply appreciate their valuable insights, unwavering support, and commitment to advancing the field of mathematics education.

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