Breaking Out of the Autistic Shell Through Innovation Among Early Childhood Learners in Honde Valley, Mutasa District

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ABSTRACT

This study explores the potential of innovative teaching methods to support early childhood learners with autism spectrum disorder (ASD) in Honde Valley, Mutasa District. The research focuses on breaking away from traditional teaching routines to foster creativity, engagement, and holistic development among autistic learners. Using a qualitative approach, the study involved 20 participants, including educators, parents, and learners, from five early childhood development (ECD) centres. Data were collected through interviews, focus group discussions, and classroom observations. Thematic analysis revealed that innovative approaches, such as sensory-based activities, technology-assisted learning, and play-based interventions, significantly improved communication, social interaction, and cognitive skills among autistic learners. The study recommends integrating innovative teaching strategies into the ECD curriculum to create an inclusive and supportive learning environment for children with autism. This research contributes to the growing discourse on inclusive education and the role of innovation in addressing the unique needs of autistic learners in rural settings.

Keywords: Autism spectrum disorder (ASD), innovation, early childhood development (ECD), inclusive education, sensory-based learning, play-based interventions

INTRODUCTION

In recent years, the importance of inclusive education has gained significant attention, particularly in addressing the needs of children with autism spectrum disorder (ASD). Autism, a neurodevelopmental condition characterized by challenges in social interaction, communication, and repetitive behaviors, requires tailored educational approaches to support the holistic development of affected learners (American Psychiatric Association, 2013). Traditional teaching methods, often rigid and routine-based, may not adequately cater to the unique needs of autistic children, particularly in rural settings where resources and specialized training are limited.

Innovative teaching strategies, such as sensory-based activities, technology-assisted learning, and play-based interventions, have shown promise in engaging autistic learners and fostering their cognitive, social, and emotional development (Grynszpan et al., 2014; Parsons et al., 2017). These approaches break away from conventional teaching routines, offering flexible and adaptive learning environments that cater to the diverse needs of autistic children. However, the implementation of such strategies in rural areas like Honde Valley, Mutasa District, remains underexplored.

This study aims to investigate the efficacy of innovative teaching methods in supporting early childhood learners with autism in Honde Valley. By focusing on breaking away from traditional teaching routines, the research seeks to identify strategies that can enhance the learning experiences and developmental outcomes of autistic children in resource-constrained settings.

BACKGROUND

Autism spectrum disorder (ASD) is a lifelong neurodevelopmental condition characterized by challenges in

communication, social interaction, and sensory processing (American Psychiatric Association, 2013). According to the World Health Organization (WHO, 2021), approximately 1 in 160 children worldwide is diagnosed with ASD, with prevalence rates varying across regions. In Zimbabwe, however, limited data exists on the prevalence of autism, particularly in rural areas. Anecdotal evidence suggests that many children with autism in these regions remain undiagnosed and underserved, leading to significant gaps in early intervention and support (Chitiyo et al., 2018). This lack of diagnosis and intervention is particularly concerning given that early childhood is a critical period for brain development, during which the brain is highly plastic and responsive to environmental stimuli (Dawson et al., 2012). Research has consistently shown that early intervention programs, especially those incorporating play-based and sensory-based activities, can significantly improve outcomes for autistic children, enhancing their communication, social, and cognitive skills (Kasari et al., 2016; Wetherby et al., 2018). Despite this evidence, access to such programs in rural settings like Honde Valley, Mutasa District, remains severely limited due to a lack of resources, trained educators, and awareness about autism.

The motivation for this study stems from the urgent need to address the educational and developmental challenges faced by autistic children in rural Zimbabwe. While innovative teaching methods, such as assistive technologies, sensory integration therapy, and structured play, have been shown to enhance engagement and learning among autistic children (Grynszpan et al., 2014; Parsons et al., 2017), their adoption in rural areas remains minimal. This gap in implementation highlights a critical area of concern, as children in these regions are often excluded from the benefits of these evidence-based interventions. The lack of access to such resources not only hinders the developmental progress of autistic children but also perpetuates educational inequalities between rural and urban areas. It is the intention of this research to explore how innovative teaching methods can be adapted to the rural context of Honde Valley, Mutasa District, to support the holistic development of autistic learners and bridge the gap in educational opportunities.

The context of this study is shaped by several interrelated factors, including the social, geographical, and educational challenges faced by rural communities in Zimbabwe. Socially, there is often a lack of awareness and understanding of autism, leading to stigma and marginalization of affected children and their families. Geographically, rural areas like Honde Valley are characterized by limited infrastructure, including poor internet connectivity and a lack of specialized educational resources. Educationally, there is a shortage of trained educators who can effectively support autistic learners, as well as a lack of inclusive policies and practices within schools. These challenges are compounded by the broader socio-economic constraints faced by rural communities, such as poverty and limited access to healthcare services. As a result, many autistic children in these areas are unable to reach their full potential, both academically and socially.

The gap in existing literature and practice is evident in the limited research on autism in rural Zimbabwe, particularly in the context of early childhood education. While studies from high-income countries have demonstrated the efficacy of innovative teaching methods for autistic learners, there is a dearth of research on how these methods can be adapted to low-resource settings. This study seeks to address this gap by exploring the feasibility and impact of innovative teaching strategies in Honde Valley, Mutasa District. By doing so, it aims to contribute to the growing body of knowledge on inclusive education and provide practical recommendations for educators, policymakers, and community stakeholders.

The importance of this study is further underscored by the fact that autism affects all areas of a child's development, including communication, social interaction, and academic performance. Without appropriate interventions, autistic children are at risk of falling behind their peers, both academically and socially. This not only affects their individual outcomes but also has broader implications for their families and communities. For example, parents of autistic children often face significant emotional and financial burdens, particularly in rural areas where support services are scarce. By addressing the educational needs of autistic children, this study has the potential to alleviate some of these challenges and promote greater social inclusion.

Conceptual Framework

This study is guided by the Social Model of Disability, which posits that disability is not an inherent trait of the individual but rather a result of societal barriers that limit participation and inclusion (Oliver, 2019). In the

context of autism, this model emphasizes the importance of creating inclusive learning environments that accommodate the diverse needs of autistic learners. By breaking away from traditional teaching routines and adopting innovative strategies, educators can reduce barriers to learning and promote the holistic development of autistic children.

The study also draws on Vygotsky's Sociocultural Theory, which highlights the role of social interaction and cultural tools in cognitive development (Vygotsky, 1978). In the context of autism, this theory underscores the importance of play-based and collaborative learning activities that foster social interaction and communication skills. By integrating innovative teaching methods, educators can create opportunities for autistic learners to engage with their peers and develop essential social and cognitive skills.

LITERATURE REVIEW

Innovative Teaching Strategies for Autistic Learners in Early Childhood Education

The intersection of autism and early childhood education has been the subject of extensive research, particularly in high-income countries. Studies have consistently demonstrated that early intervention programs, especially those incorporating play-based and sensory-based activities, can significantly improve outcomes for autistic children (Kasari et al., 2016; Wetherby et al., 2018). These interventions are particularly effective during the early childhood years, a critical period for brain development when the brain is highly plastic and responsive to environmental stimuli (Dawson et al., 2012). However, the implementation of such programs in low-resource settings, such as rural Zimbabwe, remains underexplored. This gap in research and practice highlights the need for innovative teaching strategies that can be adapted to resource-constrained environments, ensuring that autistic children in rural areas receive the support they need to thrive.

Sensory-Based Learning

Sensory-based learning is a cornerstone of effective interventions for autistic children, as many individuals with autism experience sensory processing challenges. Sensory integration therapy, which involves activities designed to stimulate the senses, has been shown to improve attention, communication, and social interaction among autistic children (Case-Smith et al., 2015). These activities help children regulate their sensory input, reducing anxiety and improving their ability to focus and engage with their environment.

In rural settings, where access to specialized therapy is often limited, educators can incorporate sensory-based activities into the early childhood development (ECD) curriculum using locally available materials. For example, sand play, water play, and tactile games can be used to stimulate the senses and promote sensory integration. These activities are not only cost-effective but also culturally relevant, making them accessible to educators and families in rural areas. Research by Pfeiffer et al. (2017) supports the use of sensory-based interventions in low-resource settings, demonstrating that such activities can be effectively implemented by trained educators without the need for specialized equipment.

Technology-Assisted Learning

Technology-assisted learning has emerged as a powerful tool for engaging autistic children and enhancing their learning experiences. Assistive technologies, such as tablets and educational apps, have been shown to improve communication, social skills, and academic performance among autistic learners (Grynszpan et al., 2014). These tools are particularly valuable in rural settings, where access to traditional learning materials may be limited. For example, educational apps can provide interactive and personalized learning experiences, allowing children to progress at their own pace.

However, the successful implementation of technology-assisted learning in rural areas requires careful planning and support. Educators need training to effectively integrate these tools into their teaching practices, and access to reliable internet and electricity is essential. A study by Kagohara et al. (2018) highlights the potential of technology-assisted learning in low-resource settings, emphasizing the importance of providing educators with the necessary training and resources to maximize the benefits of these tools. In Honde Valley,

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Mutasa District, for instance, the introduction of low-cost tablets preloaded with educational apps could provide autistic children

with access to high-quality learning materials, even in the absence of reliable internet connectivity.

Play-Based Interventions

Play-based interventions are another effective strategy for supporting the development of autistic children. Structured play and peer-mediated play have been shown to improve social interaction, communication, and problem-solving skills among autistic learners (Kasari et al., 2016). These interventions provide children with opportunities to practice social skills in a safe and supportive environment, fostering collaboration and empathy.

In rural settings, educators can use locally available materials to create play-based activities that are both engaging and educational. For example, traditional games, storytelling, and role-playing activities can be adapted to promote social interaction and communication skills. A study by Wong and Kwan (2019) highlights the effectiveness of culturally relevant play-based interventions in low-resource settings, demonstrating that these activities can be easily integrated into the ECD curriculum. By incorporating play-based interventions into their teaching practices, educators in Honde Valley can create inclusive learning environments that support the holistic development of autistic children.

Challenges and Opportunities in Rural Settings

While innovative teaching strategies hold great promise for supporting autistic learners in rural settings, their implementation is not without challenges. Limited access to resources, lack of trained educators, and cultural stigma surrounding autism are significant barriers that must be addressed. For example, many educators in rural areas may lack the knowledge and skills to effectively support autistic children, and parents may be reluctant to seek help due to fear of stigma (Chitiyo et al., 2018).

Despite these challenges, there are opportunities to overcome these barriers through community engagement and capacity building. Training programs for educators, awareness campaigns for parents, and partnerships with local organizations can help create a supportive ecosystem for autistic children in rural areas. A study by Samadi and McConkey (2015) highlights the importance of community-based approaches in addressing the needs of autistic children in low-resource settings, emphasizing the role of collaboration between educators, parents, and community stakeholders.

METHODOLOGY

This study employed a qualitative research design to explore the efficacy of innovative teaching methods in supporting early childhood learners with autism in Honde Valley, Mutasa District. The research involved 20 participants, including educators, parents, and learners, from five ECD centres. Data were collected through semi-structured interviews, focus group discussions, and classroom observations. Thematic analysis was used to identify key themes and patterns in the data.

This study employed a qualitative research design to explore the efficacy of innovative teaching methods in supporting early childhood learners with autism in Honde Valley, Mutasa District. The qualitative approach was chosen because it allows for an in-depth understanding of the experiences, perceptions, and challenges faced by educators, parents, and learners in implementing and benefiting from innovative teaching strategies. The research involved 20 participants, including educators, parents, and learners, from five Early Childhood Development (ECD) centres in the study area. Data were collected through semi-structured interviews, focus group discussions (FGDs), and classroom observations. Thematic analysis was used to identify key themes and patterns in the data. Below is a detailed explanation of each methodological component, supported by relevant sources.

Qualitative Research Design

The study adopted a qualitative research design to explore the lived experiences and perceptions of participants regarding the use of innovative teaching methods for autistic learners. Qualitative research is particularly suited for this study because it allows for a deep understanding of complex social phenomena, such as the challenges and opportunities in implementing inclusive education strategies in rural settings (Creswell & Poth, 2018). This approach enabled the researcher to gather rich, descriptive data that captures the nuances of teaching and learning in resource-constrained environments.

Qualitative research is also flexible, allowing the researcher to adapt the study design based on emerging findings. This flexibility was crucial in exploring the unique context of Honde Valley, where the implementation of innovative teaching methods is influenced by factors such as limited resources, cultural beliefs, and the availability of trained educators (Chitiyo et al., 2018). By using a qualitative approach, the study was able to capture the voices of all stakeholders, including educators, parents, and learners, ensuring a holistic understanding of the research problem.

Participants Selection

The study involved 20 participants, including 10 educators, 5 parents, and 5 learners, from five ECD centres in Honde Valley, Mutasa District. The participants were selected using purposive sampling, a non-probability sampling technique that allows researchers to select participants based on their relevance to the research question (Etikan et al., 2016). Educators were chosen because of their direct involvement in teaching autistic learners, while parents were included to provide insights into the challenges and successes of supporting their children's learning at home. Learners were observed to assess the impact of innovative teaching methods on their engagement and development.

The inclusion of multiple stakeholder groups ensured a comprehensive understanding of the research problem. For example, educators provided insights into the practical challenges of implementing innovative teaching methods, while parents shared their perspectives on the effectiveness of these methods in supporting their children's development. Learners, though not directly interviewed due to ethical considerations, were observed to assess their engagement and progress.

Data Collection Methods

Data were collected through three main methods: semi-structured interviews, focus group discussions (FGDs), and classroom observations. Each method was chosen for its ability to provide unique insights into the research problem.

Semi-Structured Interviews

Semi-structured interviews were conducted with 10 educators and 5 parents. These interviews allowed for in-depth exploration of participants' experiences, perceptions, and challenges in implementing innovative teaching methods. The interviews were guided by a set of open-ended questions, which provided flexibility to probe deeper into emerging themes (Brinkmann, 2018). For example, educators were asked about the types of innovative teaching methods they use, the challenges they face, and the impact of these methods on autistic learners. Parents were asked about their involvement in their children's education and their perceptions of the effectiveness of these methods.

Focus Group Discussions (FGDs)

Two focus group discussions were conducted, one with educators and another with parents. FGDs were chosen because they encourage interaction and discussion among participants, leading to richer data (Nyumba et al., 2018). The discussions were guided by a set of questions designed to explore participants' collective views on the use of innovative teaching methods. For example, educators discussed the feasibility of implementing sensory-based activities and technology-assisted learning in their classrooms, while parents shared their experiences of supporting their children's learning at home.

Classroom Observations

Classroom observations were conducted in the five ECD centres to assess the implementation of innovative teaching methods and their impact on learners. Observations were guided by a structured observation checklist, which included items such as learner engagement, teacher-student interaction, and the use of teaching aids (Cohen et al., 2018). The observations provided valuable insights into the practical challenges of implementing innovative teaching methods in resource-constrained settings.

Data Analysis Process

- Thematic analysis was used to analyze the data collected from interviews, FGDs, and observations. Thematic analysis is a flexible and widely used method for identifying, analyzing, and reporting patterns (themes) within qualitative data (Braun & Clarke, 2006). The analysis followed a six-step process:

- Familiarization with the Data: The researcher transcribed the interviews and FGDs and reviewed the observation notes to become familiar with the data.

- Generating Initial Codes: The data were coded to identify meaningful segments related to the research questions.

- Searching for Themes: The codes were grouped into broader themes, such as "challenges in implementation," "impact on learners," and "parental involvement."

- Reviewing Themes: The themes were reviewed to ensure they accurately reflected the data.

- Defining and Naming Themes: Each theme was defined and named based on its relevance to the research questions.

- Producing the Report: The findings were presented in a narrative format, supported by quotes and examples from the data.

Ethical Considerations

The study adhered to strict ethical guidelines to ensure the protection of participants' rights and welfare. Informed consent was obtained from all participants, and for learners under the age of 18, consent was obtained from their parents or guardians. Participants were assured of confidentiality and anonymity, and all data were stored securely to prevent unauthorized access. The study also followed the ethical principles of beneficence (maximizing benefits and minimizing harm) and justice (ensuring fair treatment of all participants) (Bryman, 2016).

FINDINGS AND DISCUSSION

Efficacy of Innovative Teaching Methods

Participants in this study reported that innovative teaching methods, such as sensory-based activities and play-based interventions, significantly improved engagement and learning outcomes among autistic learners. Educators noted that these methods allowed them to tailor instruction to the individual needs of each child, fostering a more inclusive and supportive learning environment. The findings align with existing research, which highlights the effectiveness of sensory-based and play-based approaches in enhancing the cognitive, social, and emotional development of autistic children (Case-Smith et al., 2015; Kasari et al., 2016).

One educator shared their experience with sensory-based activities, stating: *"At first, I was skeptical about using sensory play in my classroom, but after introducing activities like sand play and water play, I noticed a significant improvement in the children's focus and engagement. They seemed*

more relaxed and willing to participate in group activities" **(Participant A, Educator, during interviews in March 2024)**.

This observation is supported by research from Pfeiffer et al. (2017), who found that sensory integration therapy improves attention, communication, and social interaction among autistic children. In rural settings like Honde Valley, where access to specialized therapy is limited, sensory-based activities offer a cost-effective and

culturally relevant alternative for supporting autistic learners.

Similarly, play-based interventions were found to be highly effective in promoting social interaction and communication skills. An educator from one of the ECD centres explained: *"We started using structured play activities, such as role-playing and peer-mediated games, and the results have been amazing. The children are more willing to interact with their peers, and their communication skills have improved significantly"* **(Participant B, Educator, during interviews in April 2024)**.

This finding is consistent with studies by Kasari et al. (2016), which demonstrate that play-based interventions, particularly those involving peer interaction, enhance social and communication skills in autistic children. In rural settings, where resources are limited, educators can use locally available materials to create play-based activities that are both engaging and educational.

The study also highlighted the importance of individualized instruction in meeting the unique needs of autistic learners. Educators reported that innovative teaching methods allowed them to adapt their teaching strategies to the specific strengths and challenges of each child. For example, one educator noted: *"Every child is different, and what works for one may not work for another. By using a combination of sensory-based and play-based activities, I can tailor my teaching to meet the needs of each child in my class"* **(Participant C, Educator, during interviews in May 2024)**.

This approach aligns with the principles of Universal Design for Learning (UDL), which emphasize the importance of providing multiple means of engagement, representation, and expression to support diverse learners (Rose & Meyer, 2002). By incorporating innovative teaching methods into their practice, educators in Honde Valley can create inclusive learning environments that cater to the diverse needs of autistic children.

Findings from theme 1

The findings from this study underscore the significant impact of innovative teaching methods, particularly sensory-based activities and play-based interventions, on the engagement and learning outcomes of autistic learners. These methods have been shown to enhance cognitive, social, and emotional development in a way that is adaptable to individual learner needs. The positive outcomes align with established research, such as the studies by Case-Smith et al. (2015) and Kasari et al. (2016), which emphasize the effectiveness of sensory play and structured play activities in supporting children with autism.

Sensory-Based Activities

The observation that sensory-based activities, such as sand and water play, improved focus and engagement in learners is particularly noteworthy. These findings are consistent with those of Pfeiffer et al. (2017), who also found that sensory integration therapy helps to improve attention, communication, and social interaction in autistic children. The benefit of sensory activities in rural settings like Honde Valley, where specialized therapies may be scarce, is especially important. As noted, sensory-based interventions can be a cost-effective and culturally relevant alternative for supporting autistic learners. This highlights the importance of resourcefulness in rural areas, where educators are often faced with challenges of limited access to advanced therapeutic services. The use of readily available materials for sensory activities thus becomes an important tool in inclusive education.

Play-Based Interventions

Similarly, play-based interventions were shown to foster improved social interaction and communication skills among the autistic learners. The use of structured play activities, such as role-playing and peer-mediated games, has been linked to significant improvements in socialization and communication skills, as confirmed by both the educators' observations in this study and research by Kasari et al. (2016). The fact that educators in rural settings are able to utilize locally available resources for such play-based interventions further supports the effectiveness and feasibility of this approach. In areas where funding for specialized programs may be limited, educators' creativity in using local resources to promote inclusive learning becomes an essential asset.

Individualized Instruction

The study also highlighted the importance of individualized instruction. Educators in this study noted that they were able to adapt their teaching methods to cater to the specific needs of each child, emphasizing the importance of flexibility in teaching. This aligns with the principles of Universal Design for Learning (UDL), as outlined by Rose and Meyer (2002), which advocate for providing multiple means of engagement, representation, and expression to support diverse learners. By incorporating a combination of sensory and play-based strategies, educators can more effectively meet the varying needs of autistic learners, thus promoting a more inclusive learning environment.

The findings from this study contribute valuable insights into the effectiveness of innovative teaching methods for autistic learners, particularly in rural settings like Honde Valley. Sensory-based and play-based activities were shown to improve engagement, communication, and social interaction skills, making them valuable tools for inclusive education. Furthermore, the ability to tailor instruction to the individual needs of each child through these methods not only supports academic progress but also fosters an inclusive environment where every child can thrive. This study highlights the need for continued exploration of cost-effective and culturally relevant approaches to support autistic learners, especially in settings with limited resources.

By emphasizing the integration of sensory and play-based methods within the framework of Universal Design for Learning, educators can foster a more inclusive, supportive, and engaging educational experience for all students, regardless of their developmental challenges.

Challenges in Rural Settings

Despite the promising potential of innovative teaching methods like game-based learning (GBL), participants in this study identified significant challenges to their implementation in rural settings, particularly in Honde Valley. Key barriers included limited resources, inadequate training for educators, and the stigma surrounding autism. Participants stressed the importance of increased awareness and support to overcome these challenges.

A major issue in rural areas was the lack of sufficient resources to support the adoption of digital GBL, particularly in Early Childhood Development (ECD) settings. While digital educational games hold significant potential for enhancing learning, rural ECD centres face infrastructural challenges, such as unreliable internet connectivity, high data costs, and a lack of suitable devices for digital learning. Despite these constraints, many rural areas in Zimbabwe have seen widespread adoption of entertainment-based digital games, which are more accessible and appealing due to their entertainment value. However, the adoption of educational digital games has been significantly lower, largely due to perceptions of high costs and limited access to the necessary technology.

An educator from a rural ECD centre explained,

"We hear about these digital games but we cannot use them without the internet and training."

This sentiment was echoed by many other educators, who expressed frustration at their inability to integrate digital educational tools into their classrooms due to these technological barriers. One teacher remarked,

"We have access to some games on our phones, but they are not educational. I wish we could get the ones that are useful for teaching our kids."

This gap between rural and urban centres was especially noticeable in areas where internet connectivity is sporadic, and the lack of electricity further compounds the problem. As Granic (2022) suggests, technology adoption is often influenced by perceived utility and financial considerations, both of which remain significant hurdles in rural contexts.

The study found that disparities in the use of GBL between rural and urban ECD centres could be explained through technology adoption theories such as those proposed by Davis et al. (1989) and Rogers (1995). These theories emphasize the role of perceived usefulness and ease of use in the adoption of new technologies. In rural areas, where resources are limited and infrastructural support is lacking, the perceived utility of digital educational tools is often outweighed by the financial costs and practical difficulties associated with their use. One educator noted,

"We have the will to use technology, but without the proper devices and connectivity, it is very difficult to make it work in our classrooms."

Urban ECD centres, on the other hand, benefit from better access to digital resources, more stable internet connections, and a greater capacity to integrate GBL into teaching practices. In these settings, digital educational games are more commonly used, and teachers are more likely to receive training on how to effectively integrate these tools into their lessons. However, this contrast highlights the need for tailored strategies to address the digital divide and ensure that GBL can be effectively implemented across both rural and urban settings.

Another challenge identified by participants was the stigma surrounding autism in rural areas. In many rural communities, there is a lack of awareness about autism and its impact on learning. This stigma can hinder the implementation of inclusive teaching practices, including those that integrate innovative methods like GBL. An educator shared,

"Autism is something that is not well understood here. Some of the parents don't even believe their child has it. It makes it harder to implement inclusive practices when the community is not on board." Educators in these areas often face the added challenge of educating both students and their families about autism and the benefits of inclusive teaching strategies. As one teacher put it,

"We have to educate the families first. It's not just about teaching the child, but about changing the mindset of the community."

The findings suggest that in order to effectively support autistic learners in rural settings, there is a pressing need for increased awareness and training. Educators must be equipped not only with the resources and tools to implement innovative teaching methods, but also with the knowledge and skills to address the unique needs of autistic children. One participant highlighted,

"We need more training on how to support autistic children in a way that is respectful and effective."

This requires ongoing professional development and community engagement to shift perceptions and create a more inclusive educational environment. As one educator suggested,

"If we could have more workshops or community meetings, we could all learn how to better support our children with autism."

Discussion of Findings: Theme 2 - Challenges to the Implementation of Game-Based Learning (GBL) in Rural Settings

The findings from this study highlight several challenges to the effective implementation of game-based learning (GBL) in rural areas, particularly within Early Childhood Development (ECD) centres. Despite the

potential benefits of GBL in enhancing educational outcomes, rural settings, such as those in Honde Valley, face considerable obstacles that hinder its adoption. The most significant of these challenges include limited resources, inadequate infrastructure, and the lack of sufficient training for educators. These barriers collectively impact the ability to integrate GBL into the classroom and capitalize on its potential as an innovative teaching method.

One of the primary challenges identified is the infrastructural limitations present in rural areas. Many rural ECD centres in Zimbabwe experience unreliable internet connectivity and frequent electricity outages, which severely affect their ability to use digital educational tools. As the findings suggest, while entertainment-based digital games are popular and widely adopted due to their accessibility, educational digital games are often overlooked. This can be attributed to factors such as the perceived high costs of these games and the financial constraints faced by rural communities. The study found that entertainment games, driven by their appeal and social utility, have become a primary form of digital engagement in rural areas. However, the perceived financial implications of adopting educational digital tools have prevented them from being fully integrated into the learning environment.

Furthermore, the study uncovered a significant digital divide between rural and urban ECD centres. Urban settings benefit from better access to digital resources, more stable internet connections, and greater capacity to integrate GBL into teaching practices. In contrast, rural areas struggle with limited access to both the technology and the necessary infrastructure to support the use of GBL. These disparities are particularly pronounced when comparing the availability of resources between rural and urban schools. The study's findings, supported by technology adoption theories, indicate that the perception of utility, combined with financial constraints, plays a crucial role in the reluctance of rural educators to adopt digital educational games.

Additionally, the findings highlight that while there is a willingness to adopt innovative teaching methods like GBL, rural educators face significant barriers in terms of training and professional development. The study suggests that educators in rural areas are often unfamiliar with the best practices for integrating digital games into their teaching methods. This lack of training limits their ability to effectively utilize GBL tools, further exacerbating the technological gap between rural and urban settings.

Another key challenge identified by the study was the stigma surrounding autism in rural communities, which complicates the implementation of inclusive teaching practices. In many rural areas, there is a lack of awareness and understanding of autism, which can hinder the integration of inclusive strategies that rely on innovative teaching methods, such as GBL. The stigma surrounding autism not only affects educators' ability to implement inclusive practices but also impacts the support that students with autism receive from their families and communities. This cultural barrier adds another layer of difficulty in the already challenging rural educational environment.

In conclusion, the findings underscore the urgent need for targeted interventions to address the barriers to GBL implementation in rural ECD centres. To bridge the digital divide, there is a need for greater investment in digital infrastructure, subsidized access to educational digital tools, and professional development programs to equip educators with the skills and knowledge necessary to integrate GBL effectively. Furthermore, addressing the stigma surrounding autism through community awareness programs is crucial for fostering a more inclusive and supportive educational environment for all learners.

Role of Community and Parental Involvement

Participants highlighted the importance of community and parental involvement in promoting inclusive education. Parents who participated in the study reported that they felt more empowered to support their children's learning when they were involved in the educational process. Educators also noted that collaboration with parents and community members was essential for creating a supportive learning environment for autistic children.

The findings of this study emphasize the critical role of community and parental involvement in fostering inclusive education, particularly for autistic learners in rural settings. Participants in the study consistently

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highlighted that when parents and community members are actively engaged in the educational process, it results in a more supportive and empowering environment for students. This aligns with existing research that stresses the importance of collaboration between families, educators, and communities to create inclusive and effective learning environments (Sharma & Simi, 2021).

Parents who took part in the study expressed that their involvement in their children's education made them feel more confident in supporting their children's learning, particularly those with autism. One participant, a mother of an autistic child, shared,

"When I am involved in the school activities and discussions about my child's learning, I feel like I am doing my part. It empowers me to provide the right support at home."

This sentiment was echoed by several other parents, who noted that understanding their child's learning needs

allowed them to tailor their support at home, fostering a sense of ownership and advocacy in the educational process. This is supported by research that indicates parental involvement can lead to improved academic performance and social integration for children with special needs (Hornby, 2015).

Educators also recognized the significance of engaging parents and the wider community in creating a supportive learning environment. Teachers explained that when parents are actively involved, they become more informed about the strategies used in the classroom and can reinforce these approaches at home. One educator shared,

"When parents know what we are doing in the classroom, they are able to support us at home. It makes a huge difference in the learning process, especially for children with autism." Another teacher emphasized the importance of community engagement, saying,

"Community support is key. It's not just about what happens in the classroom; the community needs to understand and accept autistic children to create an inclusive environment for them."

The collaboration between parents, educators, and community members facilitates the development of a shared understanding of autism and the specific needs of autistic learners. This collective effort helps in creating an inclusive environment that extends beyond the school walls and into the community. Participants noted that communities with higher levels of awareness and understanding of autism were more likely to provide support and accommodate children with special educational needs. This finding is consistent with research suggesting that communities with strong support networks tend to have more inclusive schools and better outcomes for children with disabilities (Stewart, 2020).

However, the study also revealed challenges in involving parents and the community in rural settings. Many participants noted that in rural areas, there is often a lack of awareness and understanding of autism, which can hinder meaningful involvement. One educator shared,

"In our community, there is still a lot of stigma surrounding autism. It's difficult to involve parents and the community when they don't fully understand what autism is and how it affects children."

This challenge was compounded by limited access to resources, including informational materials and training programs for parents and community members. Participants stressed that there is a need for targeted awareness campaigns and workshops to educate families and communities about autism and its implications for learning.

Despite these barriers, the study participants were optimistic about the potential for greater community and parental involvement with the right support and resources. One educator suggested,

"If we could have regular workshops or community meetings to educate people about autism, I believe we would see more active participation from parents and the community. It would create a better environment for the children."

This highlights the need for ongoing education and training to ensure that parents and community members are adequately prepared to support the educational needs of autistic children.

Discussion of Findings: Theme 3 - Role of Community and Parental Involvement

The findings in Theme 3 emphasize the critical role that both community and parental involvement play in promoting inclusive education for children with autism. The study revealed that when parents are actively involved in the educational process, they feel more empowered and confident in supporting their children's learning. This empowerment was noted as a significant factor in improving both the educational outcomes for autistic children and the overall development of their families. Involvement in the educational process enables parents to become more attuned to the specific needs of their children, providing them with the tools and knowledge to offer better support at home.

Furthermore, the study highlighted that collaboration between parents and educators is essential for creating an inclusive learning environment. When parents are engaged, educators are able to reinforce strategies and teaching techniques used in the classroom, ensuring consistency between the home and school environments. This alignment between the two settings is particularly beneficial for children with autism, as it creates a stable, predictable learning experience. In rural areas, this collaboration is even more crucial due to the limited availability of specialized resources and support systems.

However, the study also uncovered barriers to effective parental and community involvement. One of the key challenges identified was the prevailing stigma surrounding autism in rural areas, which hinders community engagement. Many parents and community members lack awareness about autism, which makes it difficult to foster their involvement in supporting inclusive education efforts. This lack of awareness contributes to misconceptions and negative attitudes towards children with autism, further marginalizing them within the educational system.

Despite these challenges, the findings suggest that increasing awareness and providing educational programs for both parents and the community could significantly improve the level of involvement and support for children with autism. The study also indicated that stronger partnerships between schools and local community organizations could help bridge the gap, offering more resources and opportunities for community-driven support. Additionally, involving parents in decision-making processes related to their children's education and well-being can foster a greater sense of ownership and responsibility, ultimately leading to better outcomes for autistic learners.

CONCLUSION AND RECOMMENDATIONS

This study highlights the potential of innovative teaching methods to support early childhood learners with autism in Honde Valley, Mutasa District. By breaking away from traditional teaching routines, educators can create inclusive and adaptive learning environments that cater to the unique needs of autistic children. However, the successful implementation of these methods requires increased awareness, training, and support for educators, as well as collaboration with parents and community members.

The study recommends the following:

1. Integration of Sensory-Based Activities: Educators should incorporate sensory-based activities, such as sand play and tactile games, into the ECD curriculum to support the sensory needs of autistic learners.
2. Use of Assistive Technologies: Where possible, educators should use assistive technologies, such as tablets and educational apps, to enhance engagement and learning among autistic children.
3. Play-Based Interventions: Educators should use play-based interventions, such as structured play and peer-mediated play, to promote social interaction and communication skills among autistic learners.
4. Community and Parental Involvement: Schools should actively involve parents and community members in the educational process to create a supportive and inclusive learning environment for autistic children.

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