INCLUSIVE PRACTICES FOR LEARNERS WITH INTELLECTUAL DISABILITIES IN PRIMARY SCHOOLS IN BOTSWANA: WHAT ARE TEACHERS DOING TO ENHANCE INCLUSION?

Boitumelo Mangope
Department of Educational Foundations
University of Botswana
mangopeb@mopipi.ub.bw

Abstract

Students with moderate and severe 'Intellectual Disabilities' (ID) present unique challenges to school systems when they are included in general classrooms. Despite these challenges, the government of Botswana requires schools to implement inclusive intervention practices in the special unit classroom settings in order to enhance the chances for such students to be included in general education classrooms, and the classroom teacher is predominantly the person who plays a pivotal role in this process. This study aims to explore the inclusive teaching strategies employed by the special education teachers in the special unit classrooms in Botswana primary schools. Using a qualitative research approach, classroom observations, document analysis and face-to-face interviews were conducted with eight special education teachers from four schools about the teaching strategies they used to enhance the inclusion of students with intellectual disabilities into the general education classrooms. Content Data Analysis approach was adopted to analyse data. The findings indicated that most of the teachers in this study demonstrated some degree of knowledge on the generic strategies of teaching which were not specifically aligned to students with intellectual disabilities. Most of the teachers in the study used peer tutoring and group work. The findings of the study further showed that teachers had limitations in the knowledge and usage of systematic instructional procedures such as constant and or progressive time delay, backward and forward chaining and prompting.

Keywords: Inclusive education, Botswana, special education, intellectual disabilities, primary education, teaching strategies

1.0 Introduction

The Government of Botswana has identified inclusive education as an essential component in the education of students with disabilities (Government of Botswana 2008). This commitment was intensified when Botswana signed the Salamanca statement of 1994. To this end, considerable progress in the area of educating children with disabilities, including those with intellectual disabilities, has been made. Through the Revised National Policy on Education (RNPE) and the Inclusive Education Policy (IEP), the government has extended the development of inclusion on all levels such as education and community (Otukile-Mongwaketse, Mangope & Kuyini, 2016).

These policies which emphasize access to education for all children, also sought to capacitate teachers in implementing school reforms that include inclusive education. As a result, the training of Special Education (SE) teachers in Botswana has been a priority since the 1990s (Mangope & Mukhopadhyay, 2015).

This is shown by a number of initiatives like the introduction of SE in both Pre-service and In-service programs at all Colleges of Education and at the University of Botswana. Teacher training programs work as pillars, which enhance the successful implementation of inclusive education as well as strengthening teachers' competencies on inclusive practices (Mukhopadhyay, Molosiwa & Moswela, 2009).

Other policy initiatives to ensure that students with disabilities, such as those with ID, access education in Botswana are evidenced in programs set up in various educational

settings. For example, students with learning disabilities (LD) are taught alongside their peers without disabilities in the general education classrooms (Otukile-Mongwaketse, Mangope & Kuyini, 2016); those with visual impairment (VI) and hearing impairment (HI) are partially included in the general education classrooms and are co-taught by both the general and the special education teachers. Students with ID, who are the major concern of this study, are taught in special unit classrooms in some selected primary schools. This arrangement (special units) for students with ID minimizes their chances of accessing the general curriculum as they pursue a different curriculum compared to their counterparts with VI and HI and as a result their chances to advance to higher levels of education and employment opportunities are minimized (Dart, Didimalang & Pilime, 2002; Hopkin, 2004).

The term 'special unit classroom' as used in this study refers to a classroom within the general school, consisting of students with a similar type of disability (homogeneous grouping) for the purposes of receiving specifically designed instruction. Thus, such students receive their primary instruction separate from their peers without disabilities and only meet their peers without disabilities during recess, social or sporting activities (Hopkin, 2004). Though the government of Botswana has adopted these unit classrooms as an interim measure, this can be viewed as a good practice since the students receive special attention from a teacher who has been specifically trained to address their needs. However, this environment does not give them the opportunity to mingle with their peers without disabilities and to learn the expected social and academic skills (Dart et al., 2002; Hopkin, 2004). As a result children with ID end up being excluded from educational opportunities available to other children.

The researcher developed interest in this recently adopted strategy of including students with ID into the general classrooms. This initiative is the first real stance the government of Botswana has taken in accordance with the policy on inclusive education. Research has also shown that unit classrooms are inhibiting access to inclusion for such group of students (Dart et al., 2002; Hopkin, 2004; Nthitu, Kithard & Sayed, 2012). This study investigated inclusive teaching strategies practiced in the unit classrooms for students with moderate and severe ID at primary schools, with the aim of understanding how the intervention strategies work in enhancing the successful inclusion of these students into the general education classrooms.

The practice of inclusive education is relatively new in Botswana and a noticeable gap remains between policy and the actual situation on the ground for students with disabilities (Mukhopadhyay, Nentty & Abosi, 2012), especially for those with ID (Mangope, 2013). This study is pertinent; it will illuminate life for students with ID in the special unit classrooms in preparation for inclusion into the general education classrooms. The knowledge generated in this study is also aimed at informing, contributing and supporting the national imperative towards inclusion of students with disabilities with a focus on students with ID.

2.0 Inclusive education and teaching strategies for students with ID

Inclusive education is justified as a basic human right as it exposes all students to similar educational experiences, hence the support for its implementation (Gresham, 2004; Mastropieri & Scruggs, 2010). Advocates of inclusive education also argue for its application based on positive research findings, which show students with ID attaining positive results in both academic and social skills (Browder & Spooner, 2011; Freeman & Alkin, 2000). Unfortunately for students with moderate to severe ID, who are often thought to perform below par in academic skill areas, those assumptions have denied them the opportunity to benefit from such relevant experiences in the general education classrooms in Botswana (Nthitu, et al., 2012). Inclusive education is indeed essential for those individuals with moderate to severe intellectual disabilities (ID) who are frequently left out of the education processes on the excuse that they cannot learn academic skills. Before the introduction of inclusive education, it was generally believed that children with moderate to severe intellectual disabilities had diverse

social and learning needs that varied from those of their counterparts without disabilities, and that they required a separate education system to address such necessities (Griffin & Shelvin, 2011). However, recent studies have shown such students can and do learn within the general education system (Carter & Hughes, 2006; Downing & Peckham-Hardin, 2007).

According to Browder and Spooner (2011) and Downing and Peckham-Hardin (2007), students with moderate to severe intellectual disabilities are those with substantial functional limitations in major life activities, who may require some intensive support that is individually planned and coordinated (Collins, 2007). These children may be able to make substantial social changes and profit from learning in a general classroom with some realistic degree of support (Browder & Spooner, 2011). Thus, these children have reasonable social competencies and intellectual potential to meaningfully intermingle and learn together with their peers without disabilities (Carter & Hughes, 2006; Hopkin, 2004). Such children are mainly confined to the special unit classrooms in Botswana. It is for this reason that this study focused on such students to find out what strategies teachers in the unit classrooms are using to enhance their transition into the general classrooms so that they can learn alongside their peers without disabilities.

In this study, inclusive education should be understood as a systematic approach of reacting to the diverse needs of all students by enhancing their involvement in the general education classroom activities and reducing exclusionary practices (Molosiwa & Mangope, 2011). Thus, to attain the aims of inclusive education, research revealed various relevant factors that could support or inhibit the realization of inclusion for students with intellectual disabilities, and among them is the use of appropriate systematic instructions/adaptations (Collins, 2007). Browder and Spooner (2011) and Browder, Wood, Thomson and Ribuffo (2014) have emphasised the role of systematic or adapted instructions in the inclusive settings as an essential strategy to cater for the needs of students with intellectual disabilities. The extent to which students with ID benefit from these interventions in the classrooms is to a large extent determined by the classroom teachers' competencies and understandings to implement inclusive practices (Downing, 2008). Most experts in the area of ID suggest systematic teaching techniques as the most effective measures for teaching students with ID (Browder et al., 2014; Downing, 2008). Systematic instruction as used in this study refers to well-organized and straightforward approaches used to teach new behaviours and skills (Browder et al., 2014; Downing, 2008). Such techniques include forward and backward chaining, constant and or progressive time delay, simultaneous prompting and least to most instructional prompting. Research has revealed such strategies to be useful in teaching such skills as communication (Kurt, & Tekin-Iftar, 2008), literacy (Bradford, Shippen, Alberto, Houchins & Flores, 2006) and community skills (Collins, 2007) to students with ID.

Nonetheless, despite the important role that systematic approaches play in the implementation of inclusive education programs for students with ID, research has shown teachers to be inadequately trained in such areas (Browder, 2008; Dart et al., 2002; Nthitu et al., 2012); and teachers have often used more of lecture methods and group work approaches with minimal modifications to meet the needs of students with disabilities who are included in the general classrooms (Otukile-Mongwaketse, Mangope & Kuyini, 2016). In line with this argument, the findings of a study by Kuyini, Yeboah, Kumar Das, Alhassan, & Mangope (2016), conducted in Ghana, has also revealed that the use of such non-specific teaching practices (cooperative learning, peer tutoring, lecture method, group work) resulted in failure of the teachers to address the needs of students with disabilities included in the general education classrooms in Ghana.

Teachers need to have exact expertise and understanding of each of these techniques in order to practice them in their classrooms. There is less evidence about the implementation of these recognized strategies in both special and the general education classrooms in the context

of Botswana (Mangope, 2013; Mukhopadhyay et al., 2009). The lack of very well-informed and skilled teachers on these competencies also has an adverse effect on the prospective accomplishments of students with ID in the unit classrooms in Botswana. By and large, literature posits that adequate preparation of the teachers in areas that have been revealed by research to yield positive results for students with disabilities needs to be intensified (Downing, 2008). Thus, teachers who embark on inclusive education for students with ID in particular need to be conversant with the necessary individualized and systematic research-based strategies to employ in order to adequately address the needs of the ID students in their classrooms. Thus, teachers need to be equipped with the necessary skills in order for them to address the unique needs of students with ID and help them to achieve to their full potential. In some countries like the USA, such commitments are authorized under the Individual with Disabilities Education Improvement Act (IDEIA) (2004).

3.0 Evidence based research practices

Some literature reveals evidence-based usage of systematic instructional approaches to teach both academic and social skills to such students with moderate and severe ID (Browder, Ahlgrim-Delzell, Spooner, Mims & Baker, 2009; Morse & Shuster, 2004), which may enhance their successful inclusion into the general classrooms. In one study supporting this conclusion, Jameson, McDonnell, Johnson, Riesen and Polychronis (2007), adopted a constant time-delay strategy to teach symbol and word recognition to students with moderate ID. The students showed significant improvement. Similarly, studies by Browder et al., (2009) and Downing (2008) also revealed research-based support for time delay and prompting systems as strategies that can be used to teach picture and word recognition skills, as well as vocabulary and definitions of words in various subject areas to students with moderate and severe disabilities. Constant time delay and video prompting strategies have also been shown to be effective when used to teach students with moderate intellectual disabilities the steps to follow when conducting an internet search (Walker, 2008; Riesen, McDonnell, Johnson, Polychronis & Jameson 2003). Moreover, research has also revealed that students with moderate and severe intellectual disabilities demonstrated improvement in academic skills when using simultaneous prompting system strategy (Browder & Spooner, 2011). This strategy was similarly used with success to teach commonly used words in restaurants, academic skills such as sounds and blending skills, early literacy skills and listening comprehension to students with moderate and severe ID (Browder, Mims, Spooner, Ahlgrim Delzell & Lee, 2008; Browder, Trela & Jimenez, 2007; Browder, Hudson, & Wood, 2013; Smith, Schuster, Collins & Kleinert, 2011; Waugh, Fredrick & Alberto, 2009). Generally, these strategies have been revealed to be effective for teaching academic skills to such groups of students with ID (Browder, et al., (2013).

Emerging evidence also suggests that 'generalization', coupled with systematic instruction, is another research-based strategy which has been revealed to be effective to teach students with moderate and severe ID (Browder & Spooner, 2011; Collins, 2007). According to Collins, (2007), in order to enhance the generalization of skills for students with ID, teaching academic, behavioural and social skills such as boarding a taxi, purchasing a meal, washing dishes and vocabulary should take place in contexts in which skills are most likely to occur naturally (e.g., bus rank, supermarket, home, and general classroom). In this light, Riesen and colleagues (2003) employed this strategy successfully in teaching students to generalize academic skills by identifying academic grade-aligned vocabulary in natural contexts of general and special education classrooms. Similarly, Browder, Trela & Jemenez (2007), Copeland, Hughes, Agran, Wehmeyer, Fowler (2002) and Downing (2008) embedded such academic skills during school context in activities such as break time and sporting activities.

There are no known studies regarding inclusive education teaching strategies for students with moderate and severe ID in Botswana, except for one which explored general

education teachers' actual practices around adapting instruction for students with intellectual disabilities in the general classrooms. This exploratory study by Molosiwa and Mangope (2011) also influenced the undertaking of this research. In this study, teachers reported having knowledge of adaptive inclusive strategies. Although teachers mentioned adaptive strategies, most of those used were more generic (peer tutoring, group work, direct instruction, use of songs and pictures), and as such did not reflect the strategies reported in literature as the most effective for students with ID. These concerns identified in the literature require an exploration into the inclusive practices employed in the special unit classrooms for the effective inclusion of students with ID into the general education classrooms in Botswana.

4.0 Inclusive education initiatives in Botswana

Literature on inclusive education initiatives in Botswana shows that more students with different types of disabilities are being admitted in the general education classrooms. Generally, literature on inclusive education points to the fact that participation in the core academic curriculum may not be possible when students are taught in separate settings, and should be availed to all students in an equitable respect, especially to those with ID (Government of Botswana, 2013; Molosiwa & Mangope, 2011). Considerable numbers of students with moderate and severe ID are reportedly being excluded from the general classrooms (Dart, Didimalang & Pilime, 2002; Nthitu et al., 2012) and are taught in segregated special unit classrooms as a form of 'inclusion'. The researcher was surprized by the number of years the students spent in the unit classes without making any progress to the general classrooms, in spite of what literature has revealed about the achievement of these students. Recent studies conducted in some countries (Adams, 2009; Downing, 2008; Westling & Fox, 2009) reveal that there is a general view that all individuals can and do learn, and that students with ID can learn in the general education environment as long as there are skilled teachers to provide the necessary adaptations for the students to succeed.

In this regard, the researcher was motivated to find out why the majority of students with moderate and severe ID in Botswana did not seem to be progressing to the general education classrooms in spite of the usage of inclusive education practices, which the teachers in the preliminary study reported that they were implementing (Molosiwa & Mangope, 2011). Specifically, the educational intervention practices (peer tutoring, group work, task analysis and direct instruction) purported to be provided by the teachers attracted the attention of the researcher. This study intended to confirm or dispute the findings of the exploratory study done by Molosiwa and Mangope (2011), and to determine which inclusive practices were being implemented and if the practices were being implemented with fidelity.

5.0 Theoretical framework

The Interpretivist paradigm guided this research. Interpretivism contends that reality is not independent but is socially constructed and can have varied meanings. Thus knowledge is constructed through interaction of people (researchers included) and objects of inquiry (Lotz-Sisitka, Fien & Ketlhoilwe 2013). In other words, the findings of this research were a culmination of the interaction that the researcher had with special education unit teachers. This enabled the researcher to understand their meaning of 'inclusive education' and their interpretation of how they implement government policy and pedagogical practices applicable to inclusive education. Interpretivism supports the use of case studies, narrative inquiry and interviews as used in this study to understand inclusive education as a phenomenon.

This study was also guided by the social model of disability (Oliver, 1996). Traditionally, disability was viewed from a medical perspective; it was understood as a problem resulting from body deficits. As a result, people with disabilities were often exposed to medical and rehabilitation interventions and were part of health policies resulting in segregated educational

settings. However, the social model of disability moves the attention from the individuals, as is often the case with the medical lens, but focuses on the socio-economic obstacles, which act as barriers to the same prospects enjoyed by peers without disabilities (Barton, 2008). The barriers include inaccessibility to buildings, lack of reading materials, inappropriate teaching strategies, just to mention a few. The social model therefore proposes the removal of such excluding factors for the successful inclusion of individuals with disabilities. Students with moderate and severe ID are not given full access to the general education classrooms in primary schools in Botswana. As a result, they tend to miss out on the educational opportunities available to other students without disabilities. Without education, children with moderate and severe ID will typically grow into unemployed, isolated adults, and cycles of poverty are perpetuated. In this sense, if special education teachers in the unit classrooms use the necessary inclusive strategies to teach students with ID, then such students should be successfully included into the general education classrooms and succeed to their potential.

As a result, the aim of this study was to find out the sort of inclusive education teaching strategies employed to cater for students with ID in primary schools in Botswana. The vital intent of this study was to improve programming efforts in inclusive education in Botswana. In light of this, the following specific research questions guided the study:

(a)   What knowledge of inclusive education teaching strategies for students with ID do special education teachers have?

(b)   How do teachers employ inclusive teaching strategies in the special unit classrooms to teach students with ID?

6.0 Methodology

This study used a qualitative research methodology in the form of a multiple case study research design. Merriam (1998) posits that in order to derive an in-depth understanding of a situation and its contextual factors, a case study design is often the most appropriate, which in this case is inclusive education, learners and teachers. Each special unit classroom became a case and hence multiple case sites were investigated within the four schools.

This approach gave the researcher the opportunity to gather information directly from the participants in their natural setting (in this case; schools with special units) without or with as little alterations as possible (Merriam, 1998). Furthermore, in this study, multiple-case study research design was adopted to allow the researcher to analyse within and across each setting, as well as giving the chance to perform further examination and illuminate issues as and when they arise. This method was adopted to discover obstacles probably hampering the successful inclusion of students with ID into the general classrooms.

Since this study focused on understanding inclusive education as a phenomenon, the researcher had to understand the participants' point of view, and hence allowed them to tell a story in their own words. This made interviews a very important data collection method. As noted by Long and Godfrey (2004), qualitative research gathers and analyses data using visual and verbal (conceptual or thematic) techniques, thus explaining why it became a method of choice. This is why methods such as interviewing, observation and document analysis (analysis of policies, classroom documents) were all employed in this research. The different data collection methods formed a methodological triangulation, which made the data more trustworthy and credible as one source was checked against the other (McMillan & Schumacher, 1993, p. 497; Lincoln & Guba, 1985, p. 283).

7.0 Setting

Four special education unit classrooms from four general education government primary schools in South Central section of Botswana were chosen purposively. Each school

was selected from urban, semi-urban, rural and remote areas. The criteria or bracketing that was used in the selection was that the unit program must have been in operation for at least five years or more, must be within a government-funded primary school; and the program should be for students with intellectual disabilities. This helped the researcher to ultimately come up with a bounded system (Yin, 2003), which set boundaries to the area of study, and only four schools met the defined criteria. The purpose for selecting schools in dissimilar locations was to determine if teaching in such regions had any influence on the instructional strategies for teaching students with ID. Each unit currently has an average of fifty students with moderate to severe ID.

8.0 Participants

Eight special education teachers who are teaching in the special education unit classrooms were purposively selected from the four identified government primary schools in the South Central section of Botswana. According to the teaching establishment register (Government of Botswana, 2008), each school with a unit classroom should have a maximum of two qualified special education teachers, and thus two teachers per school participated in the study. The number of participants was sufficient since qualitative data collection methods are labour-intensive. Many hours were needed to transcribe interviews, code and extract themes. Given the small population of special education teachers per district in Botswana, and that the aim of the study was not to generalise but to learn and understand, the eight teacher participants were sufficient for the study. The teachers in the study had an age range of 35–45. All of the participants selected for the study had more than five years of teaching experience in the unit classrooms, had minimum qualifications of a diploma in special education, and most of them had acquired their training from the 1990s to the early 2000s. Teachers were selected to provide an educationist point of view on inclusive education as well as their experiences in implementing inclusive practices for students with ID. As Yin (1994) suggests, selection of participants are based on their relevance in generating in-depth information on the subject under investigation.

9.0 Instruments

Data was collected using semi-structured interviews, observation checklists and document analysis. An interview instrument, entailing 30 semi-structured items was adopted to collect data from all teachers. The instrument was developed through an examination of studies concerning inclusive teaching practices for students with intellectual disabilities and was further checked by colleagues in the special education section of the University of Botswana to verify its trustworthiness. All the eight teachers were interviewed face-to-face to gain insights on the inclusive intervention strategies practiced in the classrooms. An interview for each teacher was audio recorded and lasted about fifty minutes.

Classroom observations were also conducted for each teacher in each school using an adapted Effective Teaching Observation checklist by Kuyini (2004). The main aim was to find out how teachers implement inclusive practices in their classrooms; that is, what sort of activities they did, and how they were implementing the curriculum. One special unit classroom from each school was observed twice. Moreover, informal follow-up discussions were held with each teacher about their lessons for further illumination.

Document analysis of government policy documents, lesson plans, Individualized Educational Programs (IEPs) and class tests was also used to extract information on inclusion.

10.0 Data analysis

Content analysis was used to analyse data. The audio-recorded data was first transcribed word-for-word by the researcher. The transcripts were then thoroughly analysed,

creating themes and categories. Themes were subsequently developed through a constant comparison method of data analysis (Strauss & Corbin, 1990). No software was employed to analyse the data since the sample size was manageable. As an initial step, interview items were paraphrased to produce an outline of the transcripts. This helped in compressing chunks of data into manageable items. Each transcript was then studied distinctly in the second step, and new themes were underlined every time they appeared. Step three involved further identification and comparing of themes within and across the transcripts. Ultimately, the fourth and final step entailed the development of the major themes. This process was applied for every single transcription. All transcripts were then gathered together as a summary in which sub-themes were subsequently matched to produce complete themes that were subsequently used to report the findings of the study. The observations and documents data were likewise employed to support data from the interviews, and data was also double-checked for trustworthiness.

With regard to credibility of the findings addressed in this study, the researcher used member checks to confirm trustworthiness. This was done by allowing the participants to confirm or disconfirm their interpretations after a preliminary analysis of data had been conducted. This enhanced a better understanding of the data and aided in precise interpretation of the ideas. Moreover, audio recordings were used to cross check the data several times to enhance credibility. This was also carried out through discussions with colleagues in the Special Education Section of the University of Botswana.

11.0 Findings

The themes which emerged from interviews and observations in relation to the first research question which sought to identify the type of knowledge that the special education teachers have on inclusive education, and the second research question which sought to understand how teachers employed inclusive education strategies are discussed herein under the headings: lesson planning and presentation, adaptive instruction, curriculum, accommodations, effective inclusive strategies and experiences.

11.1 *Lesson planning and presentation*

The majority of the participants appeared to be knowledgeable about lesson preparation as expressed in their views on the implementation of the Individualized Educational Programs (IEP) for students with ID. Subsequent to identification and assessment, intervention should take place. The use of an IEP therefore becomes critical. In this regard, one of the participant teachers said that in using an IEP: "I provide students with necessary materials and instruction suitable for their level." Observation data corroborated this as most of the students in the classrooms had IEPs, and that the lessons that had been developed were based on the IEPs. However, one of the participants raised a critical argument about lack of the necessary resources and materials to enhance their efforts in implementing IEPs for the students. Most of the teachers were of the view that they ought to be provided with the necessary resources to enable them to implement IEPs. They also opined that a large number of students with ID were not effectively assisted, as teachers did not have the necessary facilities to assist them. One of the participants said: "I do not use IEP because when dealing with students with ID you need to use equipment and material available in your school to make things simple for them." This teacher further said: "I was supposed to teach the skill of brushing the teeth, but I failed because there were no toothbrushes and mouthwash for the students."

It emerged from the data that some of the participants of this study expressed that they had the knowledge of introducing a lesson to capture the attention of the students and also to find out if the previously learned material had been mastered. Most of the participants revealed that they reviewed the previous material before introducing new ones. When asked how they introduced a new topic to a class, one of the participants of the study revealed: "I review the previous lesson to be sure students fully understood before introducing a new

topic." Observation data support this data as students in most classrooms were asked questions on the previously learned material with the aim of building the new concepts onto the old ones for better understanding. Nonetheless, the focus was mainly on those students who could answer the oral questions asked by the teachers.

When asked how they provided reinforcement to the students, some participants revealed that they were aware of the importance of giving reinforcement or feedback. However, one participant indicated she did not frequently give immediate feedback. She said: "I use a bit of both, but usually late feedback because they take time to answer me so my feedback is sometimes delayed because I would have to guide them…" Observation data also confirmed that most of the teachers in the study gave students immediate feedback as reflected in utterances like "good," "try again," "take five" and the giving of some stickers. However, it was observed that such feedback was not consistent as there were times when students were not reinforced. When asked why they did not reinforce consistently, most of the teachers indicated that they were not aware that they were not consistent in reinforcing the students' efforts. This was summarised by one teacher when he said: "I am not aware that I sometimes do not reinforce, maybe it is because I do not have that in my lesson plan as well." In a way, the teacher was highlighting the need for planning for such reinforcement in advance in order for them to maintain consistency.

11. 2 *Modifications*

All of the participants of this study indicated that they did modify the curriculum to meet the needs of the students with ID. One of the participants further expressed that they provided the modifications "just as they are drawn from the lesson plan," which indicated that teachers did make prior plans on how the curriculum ought to be modified, and all the modifications were incorporated into the lesson plans which the teachers followed. In the same manner, another teacher disclosed that they group such students according to their severity of disability in order to provide them with the necessary assistance: "I put them together in small groups according to their own level of intellectual disability, then I teach them step by step". This type of grouping was evident in most of the classrooms observed.

11.3 *Adapted instruction*

It was also noted that most of the participants of this study appeared to have some knowledge on adapted instructional strategies, though limited in the sense that they all did not show a variety of adaptations. For instance one of them said: "I use an audible voice and show a lot of patience, I never show impatience." This sentiment was further shared by another participant who said: "I give straightforward instructions to students."

When asked how they usually offer instruction to students, the participants of the study demonstrated that they often used group-work. One participant said: "I always group them in twos or more, it always helps them to learn better even though they are a little noisy." It was similarly observed that paired students were pursuing similar objectives but engaging in different activities. For example in mathematics, while some were counting numbers as written on the board, others were using counters, fingers or oranges with the aim of making learning more meaningful.

11.4 *Inclusive instructional strategies*

Effective inclusive education strategies have been found to enhance the success of including students with ID into the regular classrooms. When asked about such strategies, the participants showed knowledge of such strategies as demonstrated in responses such as: "Collaboration with other teachers and peer tutors, which is one of the common instructional strategies used in special units". One other participant also further expressed the same

sentiment and said: "I use peer tutoring, if that is not working, then try cooperative learning from each other."

When asked further to show how they demonstrated such practices the participants also showed knowledge of how such practices were implemented. One of the participants noted: "Since I know my students, I group them with each other, one who understands and one who doesn't yet". Similarly, another participant expressed the same issue by saying: "Peer tutoring is accompanied by students who understand the subject in order to help those who are a little bit slower".

In relation to collaboration with parents as a teaching strategy, most of the teachers reported that most of the parents were not forthcoming. However, one teacher explained that "it is not that parents are not being cooperative or something, but the problem lies with all of us, we do not know how to involve them." The implication of this finding is teachers have limited knowledge on the collaboration skills, particularly with parents. One teacher further indicated that "parents help us during sporting activities, that is where they are effective".

This study found that most of the teachers observed in the special unit classrooms demonstrated good practice of some instructional strategies than others. Teaching behaviours such as clarity of lesson presentation, dealing with non-compliance, pace of instruction, maintaining student attention, scanning classroom, teacher positions self, maximise engagement time, providing lesson overview, arranging instructional environment and using rules and procedures in existence to manage classrooms were consistently practised by teachers. The teaching behaviours not consistently practised included individual instruction, adapted activities and curriculum materials, reinforcement, independent practice, forecast of next lesson, additional systematic instructional strategies (simultaneous prompting, constant time delay and generalization) summary of content and modelling.

11.5 Experiences

It is important to underscore that most of the teachers reported that the inclusion of students with ID was a major challenge. They were concerned with the lack of support in their schools. One participant said: "It is hard to control students with ID alone without the help of teacher assistants." Another participant also expressed the same feeling, though in a slightly different manner: "If people want to be teachers like I am, they have to build patience and passion for teaching, and we also need support especially with students who lack self-help skills." The majority of the participants were of the opinion that they required training, particularly on inclusive education practices, as they had only been trained on special education for students with intellectual disabilities but not on their inclusion in mainstream classes. Also, various participants specified certain areas of need in special/inclusive education that they needed in order to enhance their competencies. It was promising to realise that majority of the participants thought of further preparation on the practices of inclusive education, such as adapting the curriculum, adapting materials, specific instructions for students with ID and development of IEPs.

12.0 Discussion

The themes outlined in this study represent the trend of focusing on preparing teachers on systematic teaching procedures for effective learning of students with ID (Bradford, et al., 2006; Browder & Spooner, 2011). The reasons students with ID are not being effectively included into the general education classrooms (limited competencies on inclusive strategies, systematic strategies; limited knowledge of developing and implementing IEPs, limited knowledge in adaptations and accommodations and limited support) are represented in the current literature and continue to support findings of previous studies.

The inclusive systematic instructional strategies in the reviewed articles are strategies that had been identified to enhance the successful inclusion of students with intellectual disabilities (Browder & Spooner, 2011; Idol, 2006). The main findings from this study suggest that most special education teachers in special unit classrooms had limited knowledge about the systematic strategies (task analysis, constant or progressive time delay, simultaneous prompting, and least to most instructional prompting) as most of the strategies reported and applied were rather more generic than being specifically directed to students with ID. Thus in this study, teachers seemed to confine themselves to some instructional strategies over other important practices like task analysis, constant or progressive time delay, simultaneous prompting, and least to most instructional prompting that have been identified by research as effective for the successful inclusion of students with ID (Browder & Spooner, 2011). Though research is showing such strategies as effective to include students with disabilities (Otukile-Mongwaketse, Mangope, & Kuyini, 2016); Kuyini, et al., (2016) asserted that such strategies were rather too general and as such limit the students' opportunity to reach their greatest potential. These findings imply that special education teachers in the unit classrooms may not be properly assimilated into the inclusive education system, which puts emphasis on differentiated instruction to enhance effective inclusion of students with ID in the general education classrooms rather than strategies that separate students based on ability. All this indicates the requirement for a changed educational approach in the in-service and pre-service teacher training programs. Most of the teachers in this study seemed to have acquired their special education qualifications before the introduction of inclusive education, hence the need for professional development programs.

It was encouraging that despite their limited knowledge on the systematic instructions processes required for students with ID, some of the special education teachers in this study showed some degree of knowledge of adapting their instructional strategies to meet the needs of students with ID. Research has shown that students with ID learn better when curriculum instruction is tailor-made to their needs (Browder, et al., 2007). In this way they are able to achieve some degree of success and thus become motivated to learn (Copeland, et al., 2002). For example, in this study, a teacher from one school was able to differentiate the teaching of mathematics by giving students different activities to perform, while focusing on the same objective of addition. Thus while some students were using counters, others were using calculators and real objects to add.

It was also worth noting that the teachers in this study used group work or peer tutoring approaches, which research has shown to be effective in developing the social skills of students with ID (Browder, 2011; Idol, 2006). This finding also corroborates the findings of a study by Molosiwa & Mangope (2011). However, it was in fact disappointing to realize that such groupings were mainly homogeneous rather than mixed. In this regard, such homogeneous groupings do not create enough room for students with ID to learn appropriate social skills from their general education peers. Moreover, such groupings were more of sitting arrangements than learning groups. Research has also identified such homogeneous groupings to be not progressive in nature (Browder & Spooner, 2006), as students with ID need on-going opportunities to learn from their peers who are different from them.

Similarly, in the study by Molosiwa and Mangope, (2011), special education teachers also indicated they used peer tutoring as strategies to enhance learning for effective inclusion of students with ID. Though peer tutoring is a strategy recommended for effective inclusion, the peer tutoring in the classrooms observed in this study were not planned or directed by the teachers to promote natural interactions. Peer tutoring can benefit students with ID particularly when it is structured, so that there are equal opportunities of participation by all students, including those with moderate to severe ID. This will also minimize the chances of dependency by students with severe ID on other students (Mitchell, 2008). For instance, students with moderate and severe ID could act as tutors for students with mild disabilities in a planned

activity, which allows them to demonstrate their unique talent. Such structured activities can improve their self-esteem and also help students with severe ID make friends with their peers with moderate and mild disabilities (Browder & Spooner, 2011).

Future consideration should be given to provide special education teachers with more systematic instructional procedures and opportunities for practical experiences of such practices. The research in this area shows the impact of proper hands-on experiences on systematic procedures can have on the successful inclusion of students with intellectual disabilities (Browder & Spooner, 2011; Idol, 2006). Instead of identifying the problems as lying solely on the students, it is important to reconsider the teaching strategies and learning environments in order to minimize the barriers to include students with intellectual disabilities.

13.0 Conclusion and recommendations

The purpose of this study was to explore the inclusive education teaching strategies which are practiced for students with ID in the special unit classrooms in primary schools in the South Central region of Botswana. The findings reflected that most of the teachers in the study demonstrated some degree of knowledge on the generic strategies of inclusive education, but not specifically for students with intellectual disabilities. Strategies such as peer tutoring and group work were commonly used by teachers in their classrooms and that was encouraging. However, such strategies were not properly planned and conducted to enhance effective learning, and subsequently, this practice posed a significant barrier to effective inclusion of students with ID into the general classrooms.

The findings of this study further showed limitations in the knowledge and usage of systematic instructional procedures such as task analysis, constant or progressive time delay, simultaneous prompting and least to most instructional prompting by special education teachers, which also culminated in a barrier for effective inclusion of students with ID in the schools studied. The findings of this study are in line with the proposed social model of disability, which argues that individuals with disabilities are excluded from participating in school and community activities by external barriers which have been imposed by the society, and not the individual's disability. In this study, teachers' limited knowledge on the systematic instruction procedures for students with ID poses a significant barrier to their inclusion into the general classrooms.

Given the findings of this study, it is recommended that systematic professional development programs for teachers on the new trends in special/inclusive education should be intensified by the Ministry of Education and Skills Development, in collaboration with teacher training institutes to update teachers on the new trends and developments in their area. In addition, the training workshops should also include exposure to practical experiences of the practices of inclusion for students with ID. The researcher learned that more than half of the participants wished to advance their knowledge and competencies. If such interests could be supported, then more students with ID would be successfully included into the general education classrooms. Based on the findings of this study, programs addressing teacher education in Botswana are challenged to evaluate their current special education programs and put more emphasis on inclusive education practices for the successful inclusion of all learners, including those with ID, into the general classrooms.

References

Adams, F. (2009). Intervention practices in Kokebe Tsibah special unit for children with intellectual disabilities: An Ethiopian experience. *International Journal of Early Childhood Special Education, 1*(1), 15-31.

Barton, L. (2008). *Inclusion, disabled learners: barriers and possibilities*. Paper presented

at the Centres for Excellence in Teacher Training (CETT) for Inclusive Learning Conference, Northumbria University. Accessed 14 June 2010 from http://www.cettil. org.uk/len%20barton-paper-newcastle-march-08.pdf

Bradford S., Shippen, M. E., Alberto P., Houchins D. E., Flores M. (2006). Using systematic instruction to teach decoding skills to middle school students with moderate intellectual disabilities. *Education and Training in Developmental Disabilities*, *46*(4), 333-343.

Browder, D. M., Wood, L., Thompson, J., & Ribuffo, C. (2014). Evidence-based practices for students with severe disabilities (Document No. IC-3). Retrieved 21st November 2016 from http://ceedar.education.ufl.edu/tools/innovation-configurations/

Browder, D. M., Hudson, M. E., & Wood, L. (2013). Teaching students   with moderate intellectual disability who are emergent readers to comprehend text. *Exceptionality*, *38*, 17- 29. doi:10.1080/09362835.2013.802236

Browder, D. M., Mims, P., Spooner, F., Ahlgrim-Delzell, L., & Lee, A. (2008). Teaching elementary students with multiple disabilities to participate in shared stories. *Research and Practice for Persons with Severe Disabilities*, *33*, 3-12. doi:10.2511/rpsd.33.1-2.3

Browder, D. M., Trela, K., & Jimenez, B. A. (2007). Training teachers to follow a task analysis to engage middle school students with moderate and severe developmental disabilities in grade-appropriate literature. *Focus on Autism and Other Developmental Disabilities*, *22*, 206-219. doi:10.1177/10883576070220040301

Browder, D. M., & Spooner, F. (2011). *Teaching students with moderate and severe disabilities.* New York, NY: Guilford.

Browder, D. M., Ahlgrim-Delzell, L., Spooner, F., Mims, P. J., & Baker, J. N. (2009). Using time delay to teach literacy to students with severe developmental disabilities. *Exceptional Children*, *75*(3), 343-364.

Carter, E. W., & Hughes, C. (2006). Including high school students with severe disabilities in general education classes: Perspectives of general and special educators, paraprofessionals, and administrators. *Research and Practice for Persons with Severe Disabilities*, *31*, 174-185.

Collins, C. B. (2007). *Moderate and severe disabilities: A fundamental approach*. New Jersey: Pearson Prentice Hall.

Copeland, S. R., Hughes, C., Agran, M., Wehmeyer, M. L., & Fowler, S. E. (2002). An intervention package to support high school students with mental retardation in general education classrooms. *American Journal on Mental Retardation*, *107*, 32-45.

Dart, G., Didimalang, C. & Pilime, S. (2002). *An evaluation of units at Botswana primary schools for children with mental handicap*. Gaborone: Botswana Educational Research Association.

Downing, J. E., & Peckham-Hardin, K. D. (2007). Inclusive education: What makes it a good education for students with moderate to severe disabilities. *Research & Practice for Persons with Severe Disabilities, 32*(1), 16–30.

Downing, J. E. (2008). *Including students with severe and multiple disabilities in typical classrooms: Practical strategies for teachers* (3rd ed.) Baltimore (MD): Brookes Publishing Co.

Freeman, S. F. N. & Alkin, M. C. (2000). Academic and social attainments of children with mental retardation in general education and special education settings. *Remedial and Special Education*, *21*(1), 3–18.

Government of Botswana (2008). *National report on education*. Gaborone: Government Printers.

Government of Botswana, (2013). *National report on the development of education: "Inclusive education: The way of the future*". Gaborone: Government Printers.

Gresham F. M. (2004). Current status and future directions of school-based behavioural interventions. *School Psychology Review*, *33*, 326–43.

Griffin, S. & Shelvin, M. (2011). *Responding to special educational Needs: An Irish Perspective*. Dublin: Gill and MacMillan.

Hopkin, A. G. (2004). Special education in Botswana: Social inclusion or exclusion. *Pula Botswana Journal of African Studies*, *18*(1), 88–120.

Idol, L. (2006). Toward inclusion of special education students in general education: A program evaluation of eight schools. *Remedial and Special Education, 27*(2), 77-94.

Individuals with Disabilities Education Improvement Act (IDEIA). (2004). PL108-446, 20 U.S.C. §§ 1400 et seq.

Jameson, M., McDonnell, J., Johnson, J., Riesen, T., & Polychronis, S. (2007). A comparison of one-to-one embedded instruction in the general education classroom and one to one massed practice instruction in the special education classroom. *Education and Treatment of Children, 30*(1), 23-44.

Kurt, O., & Tekin-Iftar, E. (2008). A comparison of time delay and simultaneous prompting within embedded instruction on teaching leisure skills to children with autism. *Topics in Early Childhood Special Education, 28,* 53-64.

Kuyini, A. B., Yeboah, K. A., Kumar Das, A., Alhassan, A. M., & Mangope, B. (2016). Ghanaian teachers: competencies perceived as important for inclusive education. *International Journal of Inclusive Education*, *20*(10), 1009-1023.

Kuyini, A. A. B. (2004). *Principals' and teachers' attitudes toward and knowledge of inclusive education as predictors of inclusive school practices in Ghana*. (Unpublished doctoral dissertation). University of Melbourne, Melbourne, Australia.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverley Hills: Sage Publications, Inc.

Long, A. F. & Godfrey, M. (2004). An evaluation tool to assess the quality of qualitative research studies. *International Journal of Social Research Methodology Theory and Practice*, *7*(2), 181-196.

Lotz-Sisitka, H., Fien, J., & Ketlhoilwe, M. (2013). Traditions and New Niches: An overview of environmental education curriculum and learning research. In R. B. Stevenson, B. Michael, D. Justin, & E. J. Arjen (Eds.), *International Handbook on Research on Environmental Education* (pp. 194 - 205). New York: AERA Routledge.

Mangope, B., & Mukhopadhyay S. (2015). Preparing teachers for inclusive education in Botswana: The role of professional development. *Journal of International Special*

Needs Education, 18(2), 60-72.

Mangope, B. (2013). Inclusive education of learners with intellectual disabilities in Botswana primary schools: A case study. *National Teacher Education Journal*, *6*(1), 31–35.

Mastropieri, M & Scruggs, T. (2010). The inclusive classroom: Strategies for effective instruction. (4ᵗʰ ed). Upper Saddle River: Prentice Hall, Inc.

McMillan, J. H. & Schumacher, S. (1993). *Research in education: A conceptual understanding*. New York: Haper Collins.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.

Molosiwa, S. & Mangope, B. (2011). Inclusive education of learners with intellectual disabilities in Botswana primary schools: Is it happening? *International Association of Special Education, 12*(1), 54-57.

Morse, T. E. & Schuster, J. W. (2004). Simultaneous Prompting: A review of the literature. *Education and Training in Developmental Disabilities*, *39*, 153–168.

Mukhopadhyay, S., Nenty, H. J., & Abosi, O. (2012). Inclusive Education for learners with disabilities in Botswana primary schools. Sage Open.

Mukhopadhyay, S., Molosiwa, S. & Moswela, E. (2009). Teacher trainees' level of preparedness for inclusive education in Botswana schools: Need for change. *International Journal of Scientific Research in Education*, *2*(2), 51–80.

Nthitu, J.M., Kathard, H. & Sayed, A. (2012).Teachers' perspectives on inclusion of disabled learners in Botswana. Accessed 13ᵗʰ June 2013, from www.lcint.org/download. php?id=941

Oliver, M. (1996). *Understanding disability*. Basingstoke: Macmillan.

Otukile-Mongwaketse, M., Mangope, B., & Kuyini, A. B., (2016). Teachers' understandings of curriculum adaptations for learners with learning difficulties in primary schools in Botswana: Issues and challenges of inclusive education. *Journal of Research in Special Educational Needs*, *16*(3), 169-177. doi: 10.1111/1471-3802.12069

Riesen, T. McDonnell, J., Johnson, J. W., Polychronis, S. Jameson, M. (2003). A comparison of constant time delay and simultaneous prompting within embedded instruction in general education classes with students with moderate to severe disabilities. *Journal of Behaviour Education*, *12*(4), 241-259.

Smith, B. R., Schuster, J. W., Collins, B., & Kleinert, H. (2011). Using simultaneous prompting to teach restaurant words and classifications as non-target information to secondary students with moderate to severe disabilities. *Education and Training in Autism and Developmental Disabilities*, *46*(2), 251-266.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications, Inc.

Walker, G. (2008). Constant and progressive time delay procedures for teaching children with autism: A literature review. *Journal of Autism and Developmental Disorders, 38*, 261-275.

Waugh, R. E., Fredrick, L. D., & Alberto, P. A. (2009). Using simultaneous prompting to teach sounds and blending skills to students with moderate intellectual disabilities. *Research in Developmental Disabilities*, *30*, 1435-1447. doi:10.1016/j.ridd.2009.07.004

Westling, D. L., Fox L. (2009). *Teaching students with severe disabilities* (4th ed.). Upper Saddle River (NJ): Merrill/Pearson.

Yin, R. K. (2003). Case study research: Design and methods (3rd ed.). Thousand Oaks, CA: Sage.

Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Newbury Park, CA: Sage Publications.