

## Assessing the utilization of Information and Communication Technologies in inclusive classes in the Oshana region of Namibia

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### Abstract

*The introduction of Information Communication and Technology (ICT) in the 21<sup>st</sup> century has transformed education processes in inclusive classes, including the role of teachers and learners. Inclusive classes typically comprised learners with and without extensive special needs. While hand-made and technology-based teaching and learning materials are vital for the process of learning for all learners, it becomes more important for learners with special educational needs who are likely to miss the acquisition of competency attainment if ICTs are not used or not used properly. The major objective of this study was to assess the utilisation of ICTs to enhance the teaching of learners in inclusive classes in Namibia, with specific reference to the Oshana region. The study assumed a qualitative case study design. The researchers adopted a purposive sampling to draw information-rich cases. This made it easier for the researchers to understand the subject under enquiry. Schools A and B were selected based on the fact that they were the only inclusive secondary schools pronounced as spaces for sampling the implementation of inclusive education by the Ministry of Education in 1995, and are thus still regarded as intentional inclusive secondary schools, teaching children with special educational needs in the Oshana Region. All the sixteen teachers for inclusive classes from the selected schools were also purposively selected to take part in the study as they were the ones directly involved in the teaching and learning process of inclusive learners at these two schools.*

*Based on qualitative analysis of data collected through interviews and observations, the study concluded that ICT tools were indispensable teaching aids when teaching learners in inclusive classes. The study also concluded that teachers were faced with a myriad of ICT-related challenges, but there are possible solutions to address them and improve the teaching and learning of learners in inclusive classes, especially those with special educational needs (SEN). The study recommended the training of teachers in ICTs among others, as possible solutions to challenges that inhibit the successful integration of ICTs in inclusive classes. It also recommended that teachers should receive pre-service training on ICT use and how to integrate ICT tools during lessons in inclusive classes. Teachers for inclusive classes should be provided with sufficient and efficient ICT gadgets, so that they utilise them to enhance the teaching of learners with special educational needs. Lastly, in keeping track with dynamics in the space of technology, teachers should undergo Continuous Professional Development to ensure that they are easily adaptable in Information and Communication Technologies relevant to the inclusive school environment.*

**Keywords:** *Continuous Professional Development, special educational needs, Information and Communication Technologies, inclusive education*

### Introduction and background

This research assessed the utilisation of Information Communication and Technologies (ICTs) in enhancing teaching and learning in inclusive classes in the Oshana region of Namibia. The researchers also identified ICT challenges faced by teachers in teaching learners with Special Educational Needs (SEN) in inclusive classes. Lastly, the paper identified strategies that could be implemented to solve the ICT-related changes faced by teachers in teaching learners with Special Educational Needs in inclusive classrooms. The paper concludes with recommendations on how the

utilisation of ICTs could be improved to enhance the teaching of all learners in inclusive classrooms.

Prior to the drive toward inclusive education, learners were taught in segregated school settings. Those with perceived severe to profound special needs and/or disabilities were referred to special schools or missed the opportunity to receive education altogether. In cases where children with special needs found themselves in mainstream schools, there was barely responsibility on the part of the teachers to use all possible tools at their disposal to

include them (learners) and accord them access to education (Emvula, 2007; Davids, 2008). Developments in the space of special education, especially the Jontien Education for All Conference in 1990 and the Salamanca Declaration (UNESCO, 1994) introduced new thinking about learners with diverse learning needs and barriers to learning. Many countries started to redesign their education approaches from segregation to integration and later to inclusive education. Namibia has adopted a Sector Policy on Inclusive Education (Ministry of Education, 2013) by which all schools should assume a transformed role of being not only open to all kinds of learners, but also meet their educational needs. One of the best ways of including learners with diverse needs is using Information and Communication Technologies. Rapid developments in ICTs have profoundly impacted every aspect of human life and the field of modern education is no exception. The Namibian ICT Policy for Education was published in 2005 (Shafika, 2007), in order to promote effective learning. This policy is concerned with the provision of clear objectives and basic competencies for both learners and teachers to achieve key ICT knowledge and skills (Ministry of Education, 2013). The ICT Policy encourages the use of ICTs to overcome barriers and inequalities and thus reducing exclusion within classrooms. The powerful ICT tools have supported and transformed education in many ways; from making it easier for teachers to create instructional materials to enabling new strategies for learners to learn and work together (Prajapati & Singh, 2021). The Namibian government has hitherto acknowledged the significant role which ICTs can play as the country moves towards a knowledge-based society, which is stipulated in the Vision 2030 document (NDP 5), (Malumo, 2012). For learners with special educational needs, ICT is a valuable tool as it can increase their participation in education. By so doing, it can improve their quality of life, as stipulated in the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006).

The Education Sector Policy on Inclusive Education was adopted by the Ministry of Education in 2013. The policy comprises five strategies of which strategy five highlights the utilisation of ICTs including, the internet, to promote teaching and learning. By utilising ICTs, teachers can use digital assessment strategies, for example, creating tailor-made

tests that learners can take online to evaluate their knowledge base. Furthermore, utilising ICTs in education can help to improve teaching and learning in inclusive classes. However, the major question is whether teachers are utilizing ICTs to enhance the teaching of learners in inclusive classes. The under-performance and under-achievement of learners in Namibian secondary schools are evident every year, especially in the Grade 10 and 12 results. In 2016 and 2017 respectively, only 53.6% and 60% of the Grade 10 learners managed to proceed to Grade 11 (Ministry of Education, 2018). Among the multiple reasons why learners under-performed could be that learners' diverse needs are not met in their classes. Whilst the teacher is one of the most important axes in the educational processes, in most schools, teachers are not appropriately proficient in managing inclusive classes (Al-Husseiny, 2019). Some teachers find it difficult to disseminate information to learners with SEN in inclusive classes (Al-Husseiny, 2019). These learners are confronted with many barriers to learning in secondary schools as they work to acquire knowledge in a variety of subjects (Al-Husseiny 2019). However, most of these barriers are likely to be addressed through the utilisation of ICTs (Al-Husseiny, 2019). This paper presented and discussed practices on the utilisation of ICTs in enhancing the learning of SEN in inclusive classes in Oshana of region of Namibia.

### **Literature review**

There are different strategies in which ICT tools can be utilised in the teaching and learning of learners with special educational needs. Numerous studies such as Alharbi (2016), Course (2006), Haddad and Daxler (2002), Berger and Luckmann (1996), Ernest (2009), Means (1994), and Shotter (1993) outline some of the strategies in which ICT tools can be utilised in teaching and learning. Some of the strategies include the presentation of lessons to learners in inclusive classes, and the utilisation of overhead projectors to present lessons through power point presentations with pictures and sounds inserted. If effectively utilised, ICTs can promote a learner-centred and self-directed learning. Learners easily acquire knowledge as it becomes more accessible and the concepts in learning areas (Fu, 2013) and develop autonomy, capability, and creativity in the learning processes (Fu, 2012). Furthermore, the ICT environment can foster learners' higher critical thinking skills

and develop their understanding in different areas of learning (Chai, Koh, & Tsai, 2010) cited in Fu (2012). By employing assistive technology devices and services such as visual aids, argumentative communication devices and specialised equipment for computer access, learners with SEN can benefit from education (Jellinek & Abraham, 2012). It helps to break some of the challenges leading to underachievement and educational exclusion (Jellinek & Abraham, 2012). Most of these barriers are likely to be addressed through the utilisation of ICTs (Al-Husseiny, 2019).

The implementation of ICTs for teaching in inclusive classes is faced by many challenges. Studies carried out by Mikre (2011) in the Caribbean revealed that the inadequacy of skills and knowledge of ICT by teachers made it problematic for them to utilise ICT tools. Limited technical support and limited time are ICT-related challenges which impede the effective utilisation of ICTs in the teaching and learning process in schools. Mikre (2011) noted that a lack of sufficient ICT resources in inclusive classes was another challenge, and it resulted in poor performance since the available ICTs did not address the needs of all learners. Studies by Rastogi and Malhotra (2013) also revealed a lack of teacher training in the use of ICTs as a challenge.

There are strategies that can be implemented to promote the utilisation of ICTs in inclusive classes. A quantitative study was conducted by Starcic (2010) to investigate solutions for the successful implementation of ICTs in schools. The study revealed the need for teachers' training in the efficient utilisation of ICT in teaching learners in inclusive classes. All teachers, both in regular and special education programmes, need training in the ways that technology can be utilised. According to Mingaine (2013), the education ministry should be fully in charge of the implementation of ICT to ensure that there is internet connection in all schools. This will help schools that are not financially stable to have the privilege of internet connection, which subsequently enables teachers to utilise ICTs in inclusive schools.

### **Problem statement and research objectives**

Learners are confronted with many barriers to learning in secondary schools as they worked to acquire knowledge in a variety of subjects (Al-Husseiny 2019). Most of these barriers are likely to be addressed through the utilisation of ICTs, (Al-Husseiny, 2019). This

paper assesses the utilisation of ICTs in enhancing the learning of SEN in inclusive classes in Oshana of Region of Namibia. The objective of the research study on which this article is based is three-fold:

1. To assess the different uses of ICTs in enhancing learning in inclusive classes in the Oshana Region of Namibia;
2. To identify ICT-related challenges experienced by teachers teaching inclusive classes; and
3. To identify strategies that can be implemented to solve the ICT-related challenges faced by teachers in inclusive classes.

### **Methodology**

This study adopted a qualitative research approach to a descriptive research design. According to Creswell (2013), qualitative methodology encompasses a study of objects in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meaning people bring to them. By means of this methodology, life experiences, perceptions, feelings, opinions and aspirations are disclosed by the respondents as they offer detailed accounts of why, what, who and how of their daily routines from their point of view (Punch & Oancea, 2014).

The population of the study comprised 16 secondary school teachers of learners with special educational needs in inclusive classes in the Oshana region of Namibia. The study employed purposive sampling, which is a non-probability sampling strategy, in which the researchers made use of their subjective opinion to choose respondents based on the research problem and significance of the issue being studied (Neuman, 2014). Purposive sampling was employed in the study because it drew information-rich cases and made it easier for the researchers to create the much-needed understanding of the subject under enquiry (Cohen, Manion, & Morrison, 2011).

The researchers employed qualitative research instruments to collect data. The instruments were semi-structured interviews and observation checklists. The semi-structured interview guide had the advantage that the researchers could probe for more information and could observe and record the body language of the participants and incorporate these in the overall meaning of the data. Observations enabled the researchers to observe life as it happened naturally in order to

add weight and substance to the research findings obtained by means of the semi-structured interviews.

### **Presentation and discussion of findings**

The study revealed that twelve out of the sixteen teachers made use of both digital and non-digital ICTs in their classes. Some teachers who were observed indicated that they used the audio recorder as a key tool for teaching and learning. The participants in the study revealed that ICT devices such as audio recorders allowed learners with special educational needs to revisit lessons at their own time; hence, they progressed in learning at their own pace. This finding supports the study by Kanner (2009) who argues that a tape recorder helps to individualise the instruction to the learning needs of learners with special educational needs. Assistive technology is ideal for learners who have trouble keeping up with lessons, so the use of audio recorders is essential when teaching learners with special educational needs in inclusive classes who cannot cope with the pace of the lessons. Learners can benefit from the recorded learning material as their mastery of concepts is enhanced. Twelve out of the sixteen teachers interviewed indicated that they used recorded videos, which they believed appealed to both the senses of sight and hearing. The videos could be watched again and again by learners with learning difficulties, which enhanced their understanding. This is in line with Rossiter, Nortcliffe, Griffin and Middleton (2009) who posit that utilising captions and subtitles with videos has proven to be effective in helping learners to access and process information, especially when considering diverse learner populations, including non-native English speakers and those with special needs. It promotes more powerful long-term memory by pairing text with images (Rossiter, Nortcliffe, Griffin, & Middleton, 2009). Learners can both see and listen to the concept being taught (Rossiter et al., 2009). Equally, learners with sensory disabilities still benefit from the videos by using either the vision or the hearing element.

The researchers established that ICT can be utilised to facilitate communication. Josjö (2012) posits that assistive ICT tools help learners with communication difficulties to exhibit their abilities in an appropriate way. Learners can communicate, participate in lessons and learn more effectively (Josjö, 2012). This current study shows that ICT could

be utilised to promote learner-centred models of learning. It therefore supports the study by Skutil and Manenova (2013) who posit that didactic tools, such as visual aids and organisational forms of teaching, contribute to the overall effectiveness of the teaching process. When ICT resources are utilised, learners perceive, observe, imagine and develop aesthetic senses during learning. This was confirmed through observations, which clearly revealed that, in lessons where ICTs were used, the level of participation of learners with diverse needs was high, compared to those lessons in which minimal ICTs were used. It also implies that, without ICT tools, the teaching of learners with special needs was less effective since these learners learn best when they are communicating or being communicated to by means of ICTs.

Eight of the sixteen teachers interviewed indicated that they used specialised ICT tools such as Braille machines and projectors. These findings show that specialised ICT tools make the teaching and learning environment conducive for both teachers and learners. According to Martínez (2011), ICT can be utilised as a tutor. The use of individualised, computer-based software and different ICT tools help learners to understand the subject content and enhance their performance (Martínez 2011). Eight teachers out of the six further indicated that utilising ICT tools in the class helped teachers to attend to the diversity of learners. Effective utilisation of ICTs played an important role in promoting new instructional methods for teaching and learning. Ezekoka (2015) asserts that ICTs can engage learners in collaborative learning, as well as enhance their social interaction. As such, teachers should utilise ICTs such as sophisticated visual and auditory media into lesson presentations to appeal to diverse learners in order to make learning more stimulating.

It also emerged that the utilisation of data projectors and other ICT-related tools encouraged learners to participate actively during class activities, as ICTs helped teachers to overcome the obstacles of time and space, supplementing vital human functioning and supporting the development of crucial skills (Martínez, 2011). One teacher (T03) said that *“when using ICTs such as data projectors, the learners’ participation is just amazing”*. Another teacher (T05) said that *“I enjoy teaching when I am using a projector because it awakens my learners and they become*

*lively*". ICTs therefore minimise learners' obstacles to learning, subsequently enhancing their learning. The results of this study confirmed that, when using ICT, teachers need not be on their toes constantly, in order to get learners to pay attention to the material being taught. Lesson observations showed that teachers were able to maintain the learners' attention and motivated them to pay attention. There was no making of noise from the diverse learners. Bester and Brand (2013) argue that technology has the potential not only to maintain attention but also to motivate learners to pay attention, and when motivated to a task, learners' commitment, enjoyment and self-efficacy increases (Bester & Brand, 2013).

It also emerged from the findings that ICTs can be utilised as assessment tools which can provide prompt feedback. Lesson observations confirmed that ICTs enabled teachers to develop specialised and individual-centred instructions within inclusive classes. The result was also confirmed during the interviews when teacher T04 indicated that *"ICT is a crucial management tool, especially when utilised for learners with diverse needs"*. According to Wong and Yang (2017), ICT applications enable instant, system-facilitated feedback. ICT tools such as Google Forms enable teachers to deliver timely and immediate feedback on learners' assessments (Black & Wiliam, 1999) cited in Siegle (2014). ICTs allow learners to acquire independence and efficiency as learners can overcome their difficulties. Teacher T05 said that *"in my class one cannot tell whether a learner is visually impaired because they will all be working and participating independently"*. In addition, teacher T09 said that *"I am impressed with how technology is bridging the gap between learners with diverse needs and those without"*. The researchers also observed that when special needs learners used gadgets such as braille machine during reading, they enjoyed some independence. According to Lindström et al. (2012), ICTs can be utilised as educational tools to provide learners in inclusive classes with the opportunities to participate independently in educational activities, in the same way as their peers do. Joshi and Poudel (2019) indicate that *"learner autonomy and learner independence can be sought in the classroom through the integration of ICTs in classroom intervention and in students' self-study"* (p. 70).

The researchers established that the integration of ICT devices in teaching and

learning enabled teachers to develop individual education plans designed to address the difficulties of learners in the inclusive classes. Teacher T04 indicated that *"ICT is a crucial management tool, especially when utilised for learners with diverse needs. It enables teachers to develop specialised and individual-centred instructions within inclusive classes"*. Ridwan (2015) asserts that ICTs provide a way to create and maintain electronic records and databases, which are easy to update, amend and transfer into many different formats to suit individual learners. The participants highlighted many challenges in the utilisations of ICTs in inclusive classes. All the sixteen teachers interviewed highlighted that they did not know how to utilise computers and other ICT devices since they did not undergo training to this effect. Teacher T02 said that *"I personally struggle with using computers since I never received proper training in that field, and this affects my performance"*. The finding was confirmed by the researchers' lesson observations. Teachers struggled to use Microsoft computer applications as they attempted to instruct learners.

Habibu, Al-Mamun, and Clement (2012) posit that teachers need training courses in dealing with new devices, modern technologies and new pedagogical approaches. During the observations, the researchers noted that a lack of requisite skills discouraged teachers from integrating ICTs during lessons. Continuous malfunctioning of computers was another challenge that emerged. Teacher T06 said that *"sometimes you switch on the computers, and you find some things which are uninstalled and some deleted"*. The researchers discovered that teachers lacked pedagogical knowledge, which inhibited their self-confidence and engendered incompetence when they tried to use ICTs. From both the interviews and lesson observations the researchers found that some teachers lacked confidence in using computers. Teacher T12 was quoted as saying that *"some of us feel like we are not confident enough to integrate ICT during teaching because we do not possess enough competencies. We fear that our lack of confidence in using ICTs when teaching might lead students to lose confidence as well. One of the learners sometimes comes to my rescue."* In fact, during observations, some teachers realised that some of their learners were more sophisticated in their utilisation of technology than them. This finding concurs with Peterson's (2011) view that teachers' lack of confidence in the

utilisation of ICT impedes the effective integration of technology in the teaching and learning of learners with special educational needs in schools.

Another challenge identified by teachers was the lack of ICT technical support, as some of them narrated that *“if technical faults arise the technicians will not be able to fix them on time and sometimes if the faults occur, it takes about a month before they are fixed”* (T04). Teacher T07 had this to say, *“a lack of technical support results in the poor technical maintenance of ICT tool. We are usually disturbed during lessons due to technical breakdowns”*. Teacher T09 added that *“these faults discourage teachers from utilising ICT resources because of the fear that the equipment might break down amidst lessons”*. The findings support Amuko, Miheso, and Ndeuthi (2015) who argue that lack of technical support is an impediment to effective integration of ICT in the teaching and learning of learners with SEN. From the lesson observations made, the researchers established that when technical faults arose there was need for technicians who can fix the computers on time. One teacher got stranded when computer keyboard developed faulty pads and the lesson almost flopped.

Furthermore, whilst schools are supposed to access Wi-Fi every day, every time, the researchers were informed that the Wi-Fi was down most of the time. Therefore, this lack of constant internet connectivity was another challenge identified. Johnson, Jacovina, Russell, and Soto (2016) assert that, without adequate and fast internet connection, the implementation of educational technology is not feasible. Mingain's (2013) studies also recommended that, for successful implementation of ICTs in schools, there is need to ensure that there is internet connection in all schools. This enables teachers to effectively utilise ICTs when teaching inclusive classes. The researchers also found that inaccessibility of ICT devices was one other stumbling block in the effective teaching and learning of learners in inclusive schools. Teacher T07 pointed out that *“the school does not have a person designated specifically to monitor and account for the issuing of the ITC tools from the storeroom. If I want to use Braille machines for example, but no one is ready to issue them out, it disturbs me from teaching learners the concept planned”*.

The researchers established through observations that some gadgets such as

desktops, printers and projectors were in dire need of repair. Therefore, the number of computers which would be available for use would not be enough to accommodate all learners. Further, the computers had to be booked in advance but due to their busy schedules, the teachers would forget to do so. In addition, the computers were in short supply. Sometimes teachers were unable to book them for several periods in a row when they wanted to work on several projects with the learners. Johnson, Jacovina, Russell, and Soto (2016) argue that the inaccessibility of ICT devices in schools discourages the teachers from incorporating ICT devices in the teaching and learning of learners with special educational needs. The inaccessibility of ICTs hinders the integration of ICT in teaching learners with special educational needs. In order to develop teachers' ICT-related skills, teachers should have regular access to functioning and relevant ICT equipment. Findings also indicated that ICT devices in schools were out-dated and needed replacement or repair. *“Many times, I was disappointed to realise that some computers had keyboards with sticky pads or mousses that did not respond when clicked”* (T09). This hindered teachers from integrating ICT tools in the teaching and learning of learners with special educational needs. According to Johnson et al. (2016), updating technology makes it easier for utilizers to store and locate information, as well as streamline their workflow. This implies that out-dated ICT gadgets may consume productive time through repairs, updates, maintenance and security fixes. All the sixteen teachers indicated that insufficient time was an obstacle for teachers to utilise ICT tools when teaching learners with special educational needs. For example, teacher T03 said that *“we lack of sufficient time to scrutinise the ICT tools and make use of them in teaching learners. There is too much work which needs to be done concurrently and this inhibits the aptitude to complete the workloads as stipulated in the work plan”*.

Introducing and using ICTs to support teaching and learning was time-consuming, as teachers attempted to shift pedagogical practices and strategies. Teachers therefore continued with their traditional pedagogies, which were less time consuming, but to the disadvantage of the diversity of learners. It also emerged from the study that poor implementation of the Sector Policy on Inclusive Education was a barrier to the

utilisation of ICTs in teaching learners with diverse needs. Teacher T02 had this to say on the issue, *“poor implementation of ICT tools and devices stemmed from a poor inclusive education policy on integrating learners with different learning abilities into mainstream classes. It becomes problematic for a teacher to attend to all learners and remedy their problems. When the [fast] learners understand what is taught, the teacher moves to another concept and the slow learners are left behind, not understanding what they are taught”*. These findings support Ghavifekr, and Rosdy (2015) who argue that preparations for technology-based teaching and learning begin with proper policy implementation. The very first stage of ICT integration should therefore start with the successful implementation of the Sector Policy on Inclusive Education. The Ministry of Education, Arts and Culture must enforce the implementation of the Sector Policy on Inclusive Education and government should put in place plans for enhancing teachers' capacity for inclusive education.

The study found that there were several strategies that could be implemented in order to overcome ICT-related challenges faced by teachers teaching learners with SEN in inclusive classes. Eight teachers out of the sixteen pointed out provision of pre-service training on the utilization of ICT as conducive in providing them with pedagogical skills. This is in line with Rastogi and Malhotra (2013) who posit that most teachers lack skills and knowledge when it came to the utilization of ICTs in teaching. By acquiring skills and knowledge, teachers who teach learners with special educational needs, will have robust capabilities in applying ICT software and devices to improve the academic performance of learners. The idea also concurs with Balanskat, Blamire, and Kefala (2006) who advocate the provision of ICT training courses for teachers in order to capacitate them for the integration of ICTs in inclusive classes. What was surprising was that, almost all teachers had smartphones, yet they did not demonstrate transferability of skills from using their cellphones as a private communication tool to using it as a teaching tool.

Fourteen teachers out of the sixteen interviewed cited that the provision of ICT-related experts was the possible solution to ICT-related challenges. If technicians are well vested in ICT technical maintenance, they could help resolve the technical problems, troubleshoot and fix the internet software

problems at schools. In-service training is another strategy that can be implemented by way of workshops on a regular basis. Eight of the sixteen teachers interviewed concurred that workshops can enhance teachers' skills in using ICTs when teaching learners in inclusive classes. The findings of this study concur with Archar, Childs, Covadu, and De Young (2012) in Angula, Chirimbana, and Uugwanga (2019) who believe that teachers need relevant training in ICTs to improve their utilization in teaching and learning. Rastogi and Malhotra (2013) concur and reveal that the absence of technological training and workshops regarding ICT-assisted teaching and learning in teacher education programmes is the main hindrance to the effective utilization of ICT devices and software in teaching inclusive classes. In addition to the need for training teachers in the use of technology for teaching, all the sixteen teachers indicated that installing software that gives instructions that can assist both learners and teachers would also be useful to both teachers and learners with special educational needs. This supports Petty (2012) who noted that ICT can be utilised as a tutor and the utilisation of individualised computer-based software and different ICT tools help learners to understand the subject content and enhance their performance.

Eight out of the sixteen teachers who participated in the study highlighted that schools can resolve challenges by providing projectors and enough computers. Teachers believed that projectors would help to make the teaching and learning process more interesting, lively and colourful by showing videos and pictures through projectors. Teacher T02 said that *“the projectors will help us to make the teaching and learning process more interesting, lively and colourful by showing videos and pictures through projectors. We also save the time we spend writing on the boards”*. Whitaker (2018) asserts that, projectors enable teachers to create bulleted PowerPoint presentations or other highly organised notes for the class. Another solution would be provision of computers by the government. This can assist teachers to integrate ICT tools in their lessons. Subsequently, all learners will have access to the devices. This supports Starcic (2010) who argues that the efficacy of integrating ICT in schools can be enhanced by providing and ensuring that there are adequate ICT resources in relation to learners with special educational needs. Constant supply of electricity or any

other reliable source is another remedy to achieve a sustainable integration of ICTs in class since unavailability of electricity and the sudden electrical power cuts disrupt lessons, especially when the teachers and learners are making use of internet websites to search for information.

The findings of this study supports Harman (2018) who asserts that e-books ensure that learners are pro-actively interacting with the learning material by way of videos, animations, augmented reality, changing displays, and taking notes, among others. The researchers found that it is essential to provide requisite infrastructure that promotes successful integration of ICT in teaching in inclusive classes. The idea supports Ogbomo (2011) who says that, before any ICT-based programme is launched, policymakers and planners must carefully consider that there are appropriate rooms or buildings available to house the technology. Similarly, this study supports Mndzebele (2013) who assert that providing adequate facilities and resources are paramount for effective integration and utilisation of ICTs by teachers of inclusive classes.

### Conclusion

The major objective of the study was to assess the utilisation of ICTs to enhance the teaching of learners in inclusive classes in Namibia, with specific reference to the Oshana Region. Based on the qualitative analysis of the data, this study concluded that ICT tools were indispensable teaching aids when teaching learners in inclusive classes. The study also concluded that teachers may face a myriad of ICT-related challenges, but there were possible solutions to address them to improve the teaching and learning of learners in inclusive classes, especially those with special educational needs. In addition, the study concluded that, teachers should be introduced to ICT during their pre-service training so that they use the knowledge to enhance the teaching of learners with special needs in inclusive classes. This will help to bridge the gap between their learning and that of learners with less complex learning needs.

### Recommendations

Based on the findings of the study the researchers recommend that, teachers should receive pre-service training on ICT use and how to integrate ICT tools during lessons in inclusive classes. In addition to this, trends in

education, both in terms of ICT and Inclusive education are dynamic. Refresher courses in both areas are needed as what teachers have learned in the past five years could easily become redundant. The research therefore recommends that teachers should undergo Continuous Professional Development on the use of ICTs in order to cope with the continuous advances in Information and Communication Technologies. Such professional development courses should include the use of ICTs in teaching all learners, but more so, those with special educational needs in inclusive classrooms. This can be achieved through conducting regular workshops, seminars and conferences with the objectives of updating the teachers' existing knowledge and competences on ICT use in education and in inclusive classes, specifically.

Current trends in education do not necessarily acknowledge teachers who teach learners with special needs by rewarding them differently. Teachers for inclusive classes should be provided with sufficient and efficient ICT gadgets, so that they utilize them to enhance teaching of learners with special educational needs.

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