

Alternative Assessment for Learners with Special Needs in The Zambian Education System: A Case Study of Grade 12 Candidates with Cerebral Palsy at Dagama School for The Physically Challenged

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Transforming Educational Assessment for Quality, Equality and fairness in the Fourth Industrial Revolution (4IR)

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Abstract

A case study was conducted on Grade 12 candidates with Cerebral Palsy at Dagama School for the Physically Challenged in Luanshya District of the Copperbelt Province of Zambia who were very good at typing on the computer but could not write properly using a pen and depended on a teacher to transcribe the answers in an examination. The study objectives were to assess the levels of difficulty between the handwritten and typing skills of the candidates, to establish the learner's abilities at using a computer when writing the examinations and the challenges candidates with cerebral palsy face when writing their exams as well as to find out alternative assessments that could be given to candidates with cerebral palsy for fairness to prevail.

A descriptive study research design was used to conduct the study. The study sample included 1 Principal Examinations Specialist under the Special Education Unit from Examinations Council of Zambia, 5 teachers from Dagama School for the Physically Challenged, 5 teachers from University Teaching Hospital Special School and 4 learners with special needs making a total sample of 15 participants. Data was collected through structured interviews, participant observation and assessment typed by the student. The findings revealed that students with Cerebral Palsy found it easier to type their answers on a computer than writing using their pens since they were not stable where writing was concerned. The findings also revealed that the Zambian Education system had not considered learners with Cerebral Palsy so much where assessment was concerned because they were able to type faster than writing using a pen. It was also found that learners with Cerebral Palsy were willing to use computers unlike writing answers using their handwriting as they were slow and missed some letters or words which led to them writing wrong answers. The study made several recommendations of which some of them were that; the assessment during regional and national examinations for learners with Cerebral Palsy should be optioned to using computers unlike writing using pens and that the Examinations Council of Zambia through the Ministry of Education should have a deliberate policy to help the learners with Cerebral Palsy to have an option to type their examination answers or give them online examinations.

Keywords: Alternative Assessment, Learners with Cerebral Palsy, Education Assessment

Chapter One

Introduction

Background of the Study

Special education is the provision of education to learners with different impairments. The provision of special education in Zambia has been in existence for over a century now. It be-

gan with the missionaries who took a leading role in educating learners with disabilities. The missionaries concentrated on students who had visual and hearing impairments [1]. The Zambian education system began administering special education in 1977 and at this point, a number of special schools and institutions were built. This was in a quest to embrace inclusive

education with the fact that disability is not inability. This saw the establishments of special units and classrooms within the so-called normal schools. By the late 1980s and early 1990s, a number of children with disabilities were placed in general education settings [2].

The disabilities of the learners differ from child to child or student to student. They range from visual impairments, hearing impairments, autism spectrum disorders, mentally challenged, physically challenged, intellectually challenged, cerebral palsy and many more. However, the Ministry of Education in Zambia only recognizes five categories of disability. These categories include: intellectual disability, hearing impairment, visual impairment, physical impairment, and emotional (behavioural) disorders (Ministry of Education, 2009b). This entails that such learners will require different special education services to help them attain their education. This has not been easy on the part of the government though it has tried to level the grounds for all the learners to acquire education despite their impairments. Eunice, acknowledge that despite these challenges, Zambia is taking conscious steps in the provision of special education services [3, 4]. Among the conscious steps being taken include the provision of education assessments that befit them. These are like; the Examinations Council of Zambia preparing braille examination papers for the visually impaired, large print for those who can see but their sight is not very good, modified papers for the visually impaired and additional 25% of the exam time [5].

Statement of the Problem

Despite the Ministry of Education taking conscious steps in the provision of special education services in Zambia, it has not yet recognized cerebral palsy as a disability or an impairment that needs special consideration like the other five. Taking it that cerebral palsy falls in one of the categories already recognized by the Ministry of Education is not ideal as cerebral palsy is a different condition all together and candidates with cerebral palsy face different challenges even as they write their examinations. From the research conducted, no study had been conducted on alternative assessment for learners with special needs in the Zambian education system especially on grade 12 candidates with cerebral palsy at Dagama School for the Physically Challenged [6].

Purpose of the Study

The purpose of this study was to find out alternative educational assessments that the Ministry of Education through the Examinations Council of Zambia could give to learners with cerebral palsy to help them bring out the best of their abilities and for fairness to prevail.

Objectives of the Study

The study was guided by the following objectives to:

1. Ascertain the levels of difficulty between the handwritten and typing skills of learners with cerebral palsy
2. To establish the learner's abilities at using a computer when writing the examinations

3. Establish the challenges candidates with cerebral palsy face when writing their exams.
4. Find out alternative assessments that can be given to candidates with cerebral palsy in order to help them and to be fair to them.

Research Questions

The study aimed at answering the following questions:

1. How are the levels of difficulty between the handwritten and typing skills of learners with cerebral palsy?
2. How are the abilities of the learners with cerebral palsy at using a computer when writing examinations?
3. What challenges do candidates with cerebral palsy face when writing their exams?
4. What alternative assessments can be given to candidates with cerebral palsy to help them and to be fair to them?

Significance of the Study

It was vital to carry out this study as it was hoped that the findings of the study would inform the curriculum developers, the Examinations Council of Zambia and other higher learning institutions through the policy makers of the challenges that candidates with cerebral palsy face when writing their examinations. The findings would also help the examining boards to get information on how best they could further improve the services they offer to candidates with special needs such as those with cerebral palsy and how best they could be fair to them. The study could as well add literature to the existing one in the field of special education.

Theoretical Framework

The study was guided by the constructivism theory. This is a learning theory that teachers use to help their learners understand. It is founded on the notion that individuals actively establish their understanding through experiences, rather than just passively accepting information. As individuals experience the world and reflect upon their experiences, they build on their learning and add new ideas into their pre-existing knowledge [7, 8].

The key aspect of constructivism is cognitive development. The theory emphasizes the importance of learners actively engaging with new information and building their existing knowledge. Through this process, learners can develop critical thinking skills and problem-solving abilities. Constructivism promotes experiences which open up opportunities for further learning. It focuses on real life problem solving and problem-based learning. Cognitive and Technology Group at Vanderbilt, 1990; Larson & Keiper, 2007 say a constructive learning environment should focus on authentic tasks similar to what people see in every day practice similar to on-the-job experiences that would benefit all students.

In line with the current study, giving Computer Access Technology (CAT) to candidates with cerebral palsy can be fairer and of great benefit to them as that can help them even pursue their education further [9, 10].

Scholarly Contributions on Special Education Needs

Author	Study	Methodology	Findings	Gap(s)
Molly Merrab Akinyi Ogalloh(2004)	Teachers' use of Cooperative Learning Strategy for Enhancing Academic Performance of Students with Cerebral Palsy in Special Secondary Schools for the Physically Disabled in Kenya	Descriptive survey design	1. The study revealed that majority of the teachers preferred cooperative learning because all students get involved in the lesson 2. Performance in Kenya Certificate of Secondary Examination amongst learners with cerebral palsy in special secondary schools for the physically disabled in Kenya has remained poor compared to those in regular secondary schools	1. The study did not look at alternative assessments that could be given to candidates with cerebral palsy to help
Dickson Banda (2014)	Accessibility to the General Curriculum by Learners with Special Education Needs a Case Study of Selected Special Schools and Units in Lusaka	Qualitative and quantitative approaches	1. The majority of the teachers did not find the general curriculum relevant 2. The current Zambian curriculum is not relevant to respond to the immediate needs of learners with Special Education Needs.	1. The study concentrated on selected special schools and units in Lusaka and not Dagama School for the Physically Challenged
Masauso Chirwa (2011)	Inclusive Education A Study of Opportunities and Challenges for Children with Disabilities A Case of Zambia	Qualitative study	The findings were; 1. People have negative attitudes towards people with disabilities; 2. Disability is associated with cursing; 3. Poor families fail to send children to school.	1. The study did not look at the academic challenge candidates with special education needs especially those with cerebral palsy face during exams. 2. The study also looked at Zambia in general and not candidates at Dagama School for the Physically Challenged
Chila Carolyne and Harrison Daka (PhD)	An Assessment of the Quality Service Provided to Children with Special Education Needs in Zambian Primary Schools	Descriptive design	1. Teachers handled learners with special needs by giving them special attention. 2. The study also revealed that most of the teachers made sure that the learners with special needs were always put in front of the classroom in order for easy and proper guidance. 3. The study further revealed that the best strategy that most of the school administrators used was motivation.	The study had nothing to do with the quality of service provided to learners with special needs during exams
Brightlin N. Et'al(2014)	Use of Computer Access Technology as an Alternative to Writing for a Pre-School Child with Athetoid cerebral Palsy- A Case Report	Case Study	The findings indicated that the child could manage to at least type even though he did not have the motor skills required to hold a pencil.	The report looked at a pre-school child who was not writing an exam

Motivation for the Study

Looking at the literature reviewed and from the researcher's knowledge, no research ventured into looking at the alternative assessments that could be given to learners with special needs in the Zambian Education System and paying much attention to Grade 12 candidates with cerebral palsy at Dagama School for the Physically Challenged which the current study did [11, 13].

Chapter Three

Research Methodology

Research Design

This study utilised a qualitative research methodology and adopted a descriptive research design which sought to look at the alternative assessment for learners with special needs in the Zambian Education System. The research was a case study of Grade 12 candidates with cerebral palsy at Dagama School for the Physically Challenged.

Location of the Study

The study was carried out in Luanshya District on the Copperbelt Province of Zambia at Dagama School for the Physically Challenged and partly in Lusaka District of Lusaka Province of Zambia at The University Teaching Hospital Special School.

Target Population

The target population comprised Principal Examinations Specialist under the Special Education Unit at the Examinations Council of Zambia, teachers from Dagama School for the Physically Challenged, teachers from The University Teaching Hospital Special School and learners with special needs.

Study Sample

The study sample consisted of 15 participants. These were one Principal Examinations Specialist under the Special Education Unit at the Examinations Council of Zambia, five teachers from Dagama School for the Physically Challenged, five teachers from The University Teaching Hospital Special School and four learners with special needs.

Sampling Techniques

This study employed purposive sampling which is a non-probability sample that is selected based on the characteristics of a population and the objectives of the study.

Methods of Data Collection and Research Instruments

The descriptive case study research design that was adopted triangulated the data collection methods and instruments in order to have a deeper and better understanding of the topic. This is supported by Simwinga (2006) who said researchers should not only consider which is the most appropriate method for the study of their chosen problem, but also combinations of research methods that will produce a better and deeper understanding of it [14].

With regards to this study, the researcher triangulated methods of data collection and instruments in order to ensure reliability and validity of the research findings in order to develop a comprehensive understanding of the topic under study. The methods of data collection employed included; interviews, observation and document analysis where assessment typed by the candi-

dates were analysed. On the other hand, the instruments triangulated included; participant observation, structured interviews and document checklist [15].

Ethical Issues in Research

The researcher assured the respondents that their identity would be treated with high confidentiality and anonymity and were offered the option of withdrawing from the study at any time. The researcher ensured that all participants understood that their participation in the study was voluntary and they were assured that data collected from the study would be used solely for the stated purpose.

Presentation and Discussion of Research Findings

Levels of Difficulty Between the Handwritten and Typing Skills of Learners with Cerebral Palsy

The first research objective was to ascertain the levels of difficulty between the handwritten and typing skills of learners with cerebral palsy. The findings of the study revealed that learners with cerebral palsy had varying difficulties when it came to writing using a pen or using a computer. It was discovered that generally, most of the candidates with cerebral palsy had a very bad handwriting. This was due to the motor development anomalies that affected their motor skills. It was discovered that most of them struggled to write. The teachers said copying of notes was a challenge for such learners. Hence most of the times, they just had to photocopy the notes for them to save them from the trouble of writing.

In comparison with the typing skills, it was reviewed that some candidates with cerebral palsy were good at using the computer while others had challenges even with the usage of the computer depending on the gravity of their conditions. However, the teachers revealed that most of them found it easier to use a computer than to write using a pen. They said this was better for them because even the issues of bad handwritings were sorted when they used a computer [16].

The research showed that most of the candidates with cerebral palsy had very bad handwritings and that those who had computer skills preferred typing to writing. It was discovered that it was easier for them to type their work than writing. Kenneth C. et al carried out a study on keyboarding accuracy for a student with physical disabilities: A synergistic approach and the results showed a significant increase in typing accuracy using technologies in an integrated manner. This shows that allowing candidates with cerebral palsy to type their responses during exams can be of great help to them. Apart from bad handwritings, it was also mentioned that candidates with cerebral palsy struggled to write and they easily got tired.

Abilities of the Learners with Cerebral Palsy at Using a Computer when Writing Examinations

The second objective of the study aimed at establishing the abilities of the learners with cerebral palsy at using a computer when writing examinations. The findings revealed that a good number of candidates with cerebral palsy who were exposed to computers were good at using computers and preferred using a computer to writing. The teachers said learners with cerebral palsy who were good at using computers were even faster when they used a

computer than when they were writing. The candidates with cerebral palsy who were good at using the computers than writing indicated that they would like the Examinations Council of Zambia to be allowing them to be using computers because it was faster for them. Teachers from other special schools indicated that they would prefer those candidates who were good at using a computer be allowed to use a computer during exams because they were faster than when they wrote on answer sheets and the issues of handwriting would not be there. They suggested that they would even prefer that such learners be given online exams.

The study showed that there are learners with cerebral palsy who know how to operate computers and would prefer using a computer than writing. The research showed that typing for candidates with cerebral palsy who had the typing skills was a faster way of doing their work and they preferred being allowed to use a computer during the exams than having someone write for them.

Challenges Candidates with Cerebral Palsy Face when Writing Their Exams

The third research objective aimed at establishing the challenges which candidates with cerebral palsy face when writing their exams. Among the challenges identified were bad handwriting, slowness, stress when writing information subjects because of their bulkiness and in the end, they tend to lose focus as they easily get tired. It was also indicated that certain topics like construction, earth geometry and others in mathematics were not favorable to them. The teachers indicated that comparing the candidates with cerebral palsy to the so-called normal candidates when preparing exams was a challenge to them. The teachers also said that the 25% added time given to them was not enough as scribing for a cerebral palsy candidate was time consuming because they tend to be so moody especially if the teacher was having challenges to get what they were putting across. This agrees with Office of the Auditor General performance audit on the provision of Education in primary schools in Zambia for the period 2014 to 2018 which stated that "Learner examination process LSEN are expected to sit the same exam as children in the mainstream, except they are eligible to 25% extra writing time. However, these guidelines did not consider the different disabilities as well as the degrees of disability in these children." The teachers at schools without an examination center said changing the environment for an exam for candidates with cerebral palsy was a challenge. They said just the change in environment could affect a child with cerebral palsy because their conduct is a bit different from the so-called normal candidates [17].

The findings of the study showed that less consideration was given to candidates with cerebral palsy as they were being treated like normal children when it came to writing exams which was not very fair to them. The only considerations were the 25% added time when writing the exams which they said was not enough and providing them with scribes to write for them. The issue of modifying the paper for them was not considered which affected their performance. Driver, L. et'al defines modifications as changes in the curriculum or instruction that will affect what a child learns. He says modifications may change instructional level, content, and/or performance criteria. The findings also revealed that change of environment when writing exams affected candidates with cerebral palsy.

Alternative Assessments that can be Given to Candidates with Cerebral Palsy in Order to Help Them and to be Fair to Them

The last objective of the study sought to find out alternative assessments that could be given to candidates with cerebral palsy in order to help them and to be fair to them. One of the alternatives that were suggested was paper modification in challenging learning areas. The teachers said components like composition in English Language needed to have the word limit reduced for candidates with cerebral palsy. They also suggested that information subjects that required candidates to write essays like History, Religious Education and Civic Education needed to be modified into note form answers and the rest be one word or short answers, multiple choice and diagrams where they should just be identifying or labeling. The teachers said in maps and diagrams, the candidates do better because there is less stress to write as information is summarized. Furthermore, the teachers suggested that Mathematics for learners with cerebral palsy be basic mathematics that can help them in their daily lives. The teachers also suggested that candidates with cerebral palsy who were good at using the computer needed to be allowed to use computers instead of having someone write an exam for them when there was an alternative of them managing to do it on their own.

From the findings above, it shows that the Ministry of Education through the Examinations Council of Zambia needs to go back to the drawing board to see how best they can help candidates with cerebral palsy. The findings revealed that there were a lot of information gaps between the schools with such learners and the Examinations Council of Zambia. The findings also call for policy makers to think of revising certain policies in order to accommodate learners with cerebral palsy such as providing certain Individualized Education Programmes such as providing computers or tablets for the candidates with cerebral palsy to use during exams.

Chapter Five

Conclusion and Recommendations

Conclusion

Alternative assessment for learners with special needs in the Zambian education system has not been holistic. Some categories of impairments like cerebral palsy have not been recognized and given special considerations like other impairments. Candidates with cerebral palsy are being treated like the so called normal when it comes to examination question papers which disadvantages them.

The study established that most of the candidates with cerebral palsy have bad handwritings and that those who have computer skills prefer typing to writing. The study also established that candidates who had computer skills were faster at typing than writing. The research further identified the challenges candidates with cerebral palsy were facing during exams. Among them were; slowness, stress when writing information subjects because of their bulkiness and in the end, they tend to lose focus as they easily get tired. Certain topics like construction, earth geometry and others in mathematics are not favorable to them. The 25% added time given to them was not enough as scribing for a cerebral palsy candidate was time consuming. The change of environment when writing exams affects the performance of candidates with cerebral palsy.

Recommendations

In view of the above findings and conclusion, the study wishes to make recommendations at various levels to see how alternative assessment can be enhanced to help candidates with cerebral palsy.

Recommendations to Examinations Council of Zambia

- i. Examination question papers for candidates with cerebral palsy to be modified.
- ii. Examinations Council of Zambia to think of conducting on-line examinations for candidates with cerebral palsy who are able to type so that they can just be typing their responses.
- iii. Examinations Council of Zambia to invite teachers who are trained in Special Education and are practicing to prepare examinations for candidates with cerebral palsy.
- iv. Examinations Council of Zambia to give center statuses to all special schools that have candidates for each exam.
- v. Examinations Council of Zambia through the special unit section to sensitize special schools to report or inform them of any special cases that may need the attention of ECZ.

Recommendations to Curriculum Development Center

- i. The Curriculum Development Center to think of coming up with a syllabus for candidates with cerebral palsy
- ii. Practicing teachers trained in Special Education to be involved in the formulation of the syllabus for candidates with cerebral palsy
- iii. CDC to reduce the number of subjects to be taken by candidates with cerebral palsy.

Recommendation to the Ministry of Education

- i. The Ministry of Education through the policy makers to permit the use of technology or assistive devices such as laptops and tablets for candidates with cerebral palsy.
- ii. The Ministry of Education to provide tablets or laptops for candidates with cerebral palsy

Recommendation for Further Research

For further research, the study recommends;

- i. A study that will compare the alternative assessments that are given to candidates with cerebral palsy in Zambia and other countries.

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