

A qualitative analysis of performance of student teachers with hearing impairments in tests and assignments at Kitwe College of Education-Zambia

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ABSTRACT

Assessment is the basis for understanding students' abilities to demonstrate their knowledge, skills and understanding of learned concepts. This study sought to analyse assessment items of student teachers with hearing impairments at Kitwe Colleges of Education in Zambia and a qualitative case study was used as the research design. The study comprised seven (7) participants of which three (3) were Lecturers and four (4) were student teachers with hearing impairments, who were purposively sampled. The study revealed that students with hearing impairments were able to answer assignments accordingly despite exhibiting referencing and grammatical errors, and experienced more challenges answering tests. The findings also indicated that lecturers viewed the performance of student teachers with hearing impairments in assignments as being influenced by their hearing peers and that students with hearing impairments wrote their assignments and tests using sign language that was not making sense to lecturers. The study concluded that student teachers with hearing impairments were able to perform better in assignments and that they experienced more challenges answering test questions. The study recommended the need for assessment items for students with hearing impairments to be adapted to make them appropriate for the students and that educators for students with hearing impairments should take a keen interest in acquiring knowledge of Zambia Sign Language grammatical structure to enable them to assess and mark assessment items of students with hearing impairments without difficulties.

ARTICLE HISTORY

Received 2022-02-24

Accepted 2022-04-29

KEYWORDS

Assessment
Hearing Impairment
Performance
Student Teacher

INTRODUCTION

Assessment is used to determine the cognitive abilities of learners (Mooka & Kumatongo, 2020) as well as means of evaluating learners' academic performance. Educational assessments are also aimed at determining how well students are learning (National Research Council, 2001). To determine how well students are learning or evaluate students' academic performance, Norm-referenced or criterion-referenced assessments are used. The norm-referenced assessment compares an individual student's performance to the performance of a particular group (the norm group), that is comparing a student's performance to other students in the same class or same age range in a learning institution (Hussain, Tadesse & Sajid, 2015; Mashingaidze, 2012). Criterion-referenced assessment is primarily designed to find out whether a student can

demonstrate mastery levels in the knowledge and skills about the goals and objectives of educational curricula (Chatterji, (2019). Criteria can also be considered in terms of the standard of performance or cut-point for decision making that is expected for passing the assessment or course (Hussain, Tadesse & Sajid, 2015). In this paper, the criterion was deemed more appropriate to analyse the performance of student teachers with hearing impairments in assessment items. Regarding the academic performance of learners with hearing impairments, studies have shown high levels of academic competitiveness among students with hearing impairments (Magongwa, 2008), whereas other studies have revealed low academic performance in standardised examinations (Chifinda, 2017), inability to attain high scores and difficulties to comprehend concepts by students with hearing impairments and poor (Nonde, 2013; Chibwe, 2013; Manchishi, 2015).

Studies conducted in Zambia on the academic performance of learners with hearing impairments by Nonde (2013); Manchishi (2015) and Chibwe (2013) have revealed low academic performance among the learners. However, analysing the marked assessment items of students with hearing impairments may provide answers as to what may lead to the perceived low academic performance, thus the motive for conducting this study.

The study sought to analyse the performance of student teachers with hearing impairments in tests and assignments at Kitwe Colleges of Education in Zambia. The study further sought to find out the views of lecturers on the performance of student teachers with hearing impairments in assessment items.

LITERATURE REVIEW

Performance of students with hearing impairments in assessment items

Students can be assessed individually or in groups. Individually, students can be given projects, assignments in written form or practicals. Test items and examinations are administered to students to determine their understanding of concepts and promotion to the next level of their academic programme. The National Research Council (2001) indicates that educational assessments help to determine how well students are learning and also notes that the use of tests for students with hearing impairments may not accurately indicate how the students are learning (National Research Council, 2004) due to challenges associated with the use of English language. Concerning the academic performance of students with hearing impairments, studies have shown that they have challenges with comprehension and answering standardised examination questions (Manchishi, 2015; Chifinda, 2017; Moonga, 2013; Kumatongo & Muzata, 2021a).

Assessment items for students with hearing impairments have been termed to be inappropriate for the students (Chifinda, 2017). A study by Chifinda (2017) revealed that insistence on the use of written standard British English as a communication mode had a negative bearing on the performance of the student with hearing impairments in examinations in that students had challenges with written standard British English. Mitchell (2016) notes that until high-quality assessment practices are brought to the education of students with hearing impairments, it will be difficult to know what students with hearing impairments know. Assessment items for students with hearing impairments should therefore eliminate barriers likely to be perpetuated by standardised tests (Kumatongo & Muzata, 2021a; Muzata, 2015), and consider adaption/modification of assessment items for students with hearing impairments should be considered (Chifinda, 2017).

Another study by Moonga (2013) revealed that learners with hearing impairments had challenges with written Standard British English in examinations which demanded learners understand the meaning of words, sentences, and text making. The study further indicated that learners with hearing impairments performed poorly academically in that examination papers for candidates with hearing impairment in schools, colleges, and universities including the Examinations Council of Zambia (ECZ) assessed learners with Hearing Impairment in written Standard British English.

The reading skills of grade seven (7) learners with hearing impairments were reported to be poor in a study by Chibuye(2013). The study also revealed that learners with hearing impairments exhibited poor writing skills. Poor reading skills in learners can contribute to their inability to read and comprehend assessment items and subsequently affect their performance. In a similar study, Moores(2001) found that students with hearing impairments experienced difficulties with reading which resulted in their facing difficulties in other subjects, whereas lack of understanding of concepts and terminologies in examinations was found to influence the performance of students with hearing impairments(Kumatongo & Muzata, 2021b). Student teachers with hearing impairments also indicated that they had the interest to learn but perceived their academic performance in examinations to have been influenced by their lack of understanding of concepts.

Despite some studies indicating students with hearing impairments face challenges in assessment items, others studies have shown that students with hearing impairments are likely to exhibit positive performance. For instance, an average performance of students with hearing impairments in academic tests was established by Erika-Brophy et al. (2012). Deaf students and hard of hearing students' performance was found to be average and similar to their hearing classmates. The study by Erika-Brophy et al. (2012) therefore provides evidence of students with hearing impairments' likelihood to perform the same with their hearing equals provided appropriate intervention measures are put in place. Similarly, a high level of academic success was reported among students with hearing impairments in a study by Magongwa (2008) at Wits University in South Africa.

Views of educators on the performance of student teachers with hearing impairments in assessment items

Assessment items for students may vary depending on what is being assessed and teachers are likely to have different views on students' performance. However, concerning tests and examinations, studies have shown that students with hearing impairments tend to be ungrammatical, lacking appropriate vocabulary size and sentence formation skills (Wilbur, 2000; Luckner, Sebald, Cooney, Young & Muir, 2005) in their communication and writing.

The performance of students with hearing impairments in examinations was also perceived to be average and/or below average by educators (Kumatongo & Muzata, 2021b). Lecturers perceived the academic performance of students with hearing impairments in assignments, tests and examinations to be generally average or below average. Implying that students with hearing impairments were perceived to be incapable of obtaining marks above average in tests and examinations. Learners with hearing loss were found to exhibit knowledge in phonemic tasks. A study by Chikopela and Ndhlovu(2019) revealed that hard of hearing learners displayed insufficient knowledge in phonemic awareness tasks. Students with or without hearing impairments are also likely to exhibit referencing challenges when writing assignments (Muzata & Banja (2019) spelling errors(Chibuye,2013), whereas post-lingual students with hearing impairments were viewed as being able to perform better than their pre-lingual hearing impaired counterpart by educators(Kumatongo & Muzata,2021b).

METHODS

The study employed a qualitative case study as the research design and the sample size of seven (7) participants was used of which three (3) were lecturers and four (4) students with hearing impairments. Student teachers with hearing impairments who participated in the study were in the third academic year of their Primary Teachers Diploma course at one of the colleges of education in Zambia. Participants were purposively selected because purposive sampling is used when choosing participants that have specific qualities to the study (Alvi, 2016).

Interviews guides and document analysis guides were used to generate data. Data from Lecturers was generated using interviews whereas data from student teachers with hearing impairments was generated using interviews and analysis of documents. Interviews allow participants to talk about their views, attitudes and beliefs about a particular subject, concept or idea (Canals, 2017). Semi-structured interviews were used to collect data from lecturers whereas document analysis was used to generate data on students' performance in assessment items. Document analysis is a systematic procedure for reviewing, evaluating and interpreting data in documents that are print or electronic (computer-based and Internet-transmitted) material (Bowen, 2009). Documents may contain text (words) and/or images recorded without a researcher's intervention. Hence the researcher has to examine and interpret data to elicit meaning and gain an understanding for the development of empirical knowledge (Corbin & Strauss, 2008). In this study, marked assignments and test items for student teachers with hearing impairments were documents that were used to generate information on their performance academically.

The researchers approached participants and explained the nature of the study. The participants voluntarily accepted to participate in the study and sign consent forms. Individual interviews were conducted with lecturers at their own appropriate times and the researcher requested to take notes of the interview respondents. Student teachers with hearing impairments were individually approached and requested to participate in the study. Student teachers were later requested to provide their marked test papers and assignments for a purpose of document analysis. Paragraphs of marked assignments and marked test items were captured using a phone camera which became extracts from the documents to provide the basis for analysing the performance of student teachers with hearing impairments in assignments and test items.

Thematic and document analysis techniques were used to analyse data. This is because using thematic analysis helps to illustrate the data in great detail based on salient themes that emerged inductively from the texts, and the themes often consist of words or short phrases that symbolically assign an essence-capturing, and/or evocative attributes (Neuendorf, 2019). Thematic analysis is considered most appropriate for studies that seek to establish information using interpretations and provides a systematic element to data analysis which allows the researcher to associate analysis of the frequency of themes and is most suitable for qualitative descriptive studies (Ibrahim, 2012).

Concerning reliability, the performance of student teachers with hearing impairments in assignments may not be reliable despite the students being the purported authors of the assignments; this is because assignments can be written with the help of others. However, the performances of student teachers with hearing impairments in test items were reliable because tests are written individually.

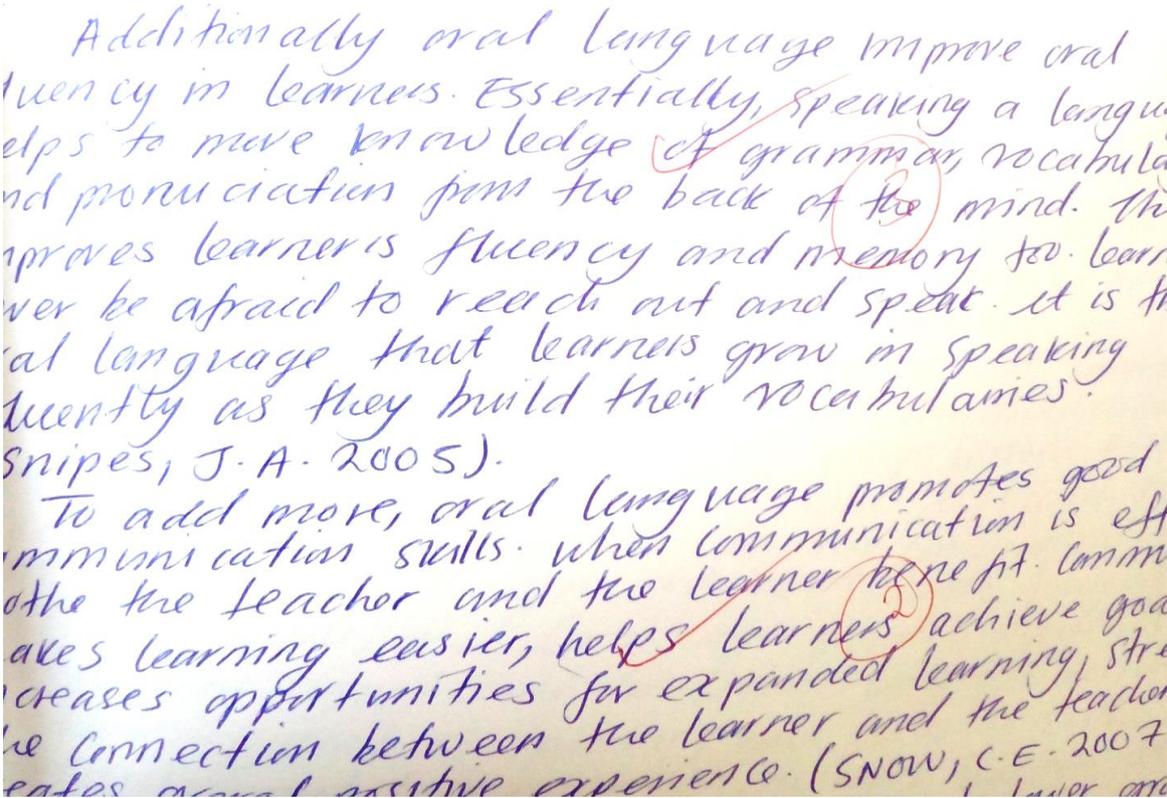
Before undertaking this study, ethical clearance was sought from the University of Zambia (UNZA) Ethics committee and permission from Kitwe College of Education to conduct the study and permission was granted to conduct the study. The following ethical issues were considered; Participants in the study were informed about the nature and purpose of the study, and informed consent was sought before interviewing participants of which the participants signed the consent forms. Participants were also assured of high levels of confidentiality and issues of anonymity observed during data collection, analysis and discussion. To ensure the anonymity of participants, terms such as lecturer 1, 2 or 3 were used in reference to lecturers who participated in the study, whereas student 1, 2, 3 and 4 were used to refer to student teachers with hearing impairments.

RESULTS AND DISCUSSION

Information on the performance of student teachers with hearing impairments was generated from their marked test items and assignments. The documents are presented alongside the perceptions of lecturers on the performance of students with hearing impairments in assignments and tests. The main themes that emerged from perceptions of lecturers on assessments items of student teachers with hearing

impairments were that; (1) student teachers with hearing impairments performed better in assignments than on tests and examinations, (2) student teachers left some questions in tests and examinations unanswered and that (3) student teachers with hearing impairments wrote assignments and tests in sign language which did not make sense to lecturers.

Document 1: Shows an extract from a marked assignment paper for student-teacher 1.



Additionally oral language improve oral fluency in learners. Essentially, speaking a language helps to move knowledge of grammar, vocabulary and pronunciation from the back of the mind. This improves learner's fluency and memory too. Learners never be afraid to reach out and speak. It is through oral language that learners grow in speaking fluently as they build their vocabularies. (Snipes, J. A. 2005).

To add more, oral language promotes good communication skills. When communication is effective between the teacher and the learner benefit. Communication makes learning easier, helps learners achieve goals, increases opportunities for expanded learning, strengthens the connection between the learner and the teacher and creates a more positive experience. (SNOW, C. E. 2007)

Document 1 Source: (Extract from Student Teacher 1's Assignment; 17/07/2020)

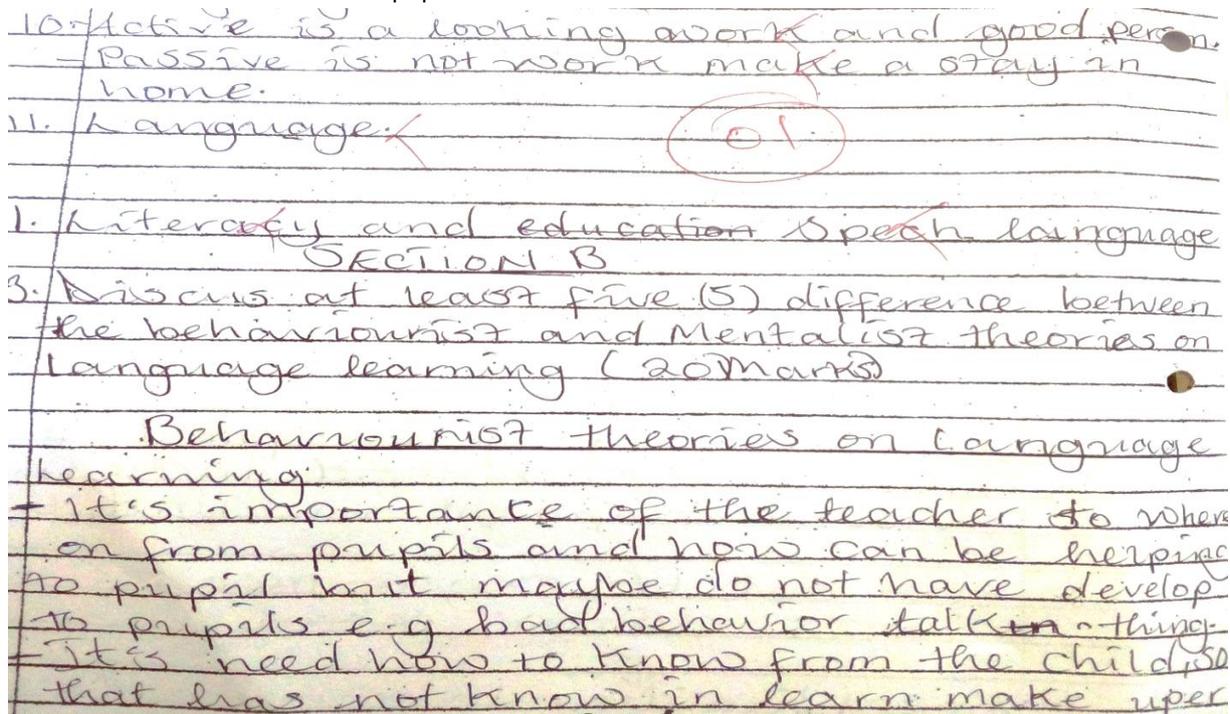
Document 1 shows that student-teacher 1 was able to answer an assignment accordingly, despite some noticeable referencing errors in the document. The information depicted in document 1 can be linked to comments of lecturer 2 on the performance of student teachers with hearing impairments in assignments, who perceived the performance of student teachers with hearing impairments as different in assignments as compared to examinations as expressed in the verbatim below:

"Performance in assignments is somehow different from exams because some of the work is done in groups, and they (students with hearing impairments) are helped by their colleagues,"
(Lecturer 2).

The views of lecturer 2 in the verbatim above were that the differences that existed in examinations and assignment marks of student teachers with hearing impairments were due to the help that student teachers with hearing impairments received in assignments from their colleagues. Despite being viewed that their performance in assignments was due to help from their hearing peers to some extent, the performance of student-teacher 1 in document 1 indicates the ability of the student to answer assignment questions to the satisfaction of the lecturer in that the awarded marks are a sign of a lecturers' approval of the student's answers. However, it must be noted that document 1 had some citation errors which may be attributed to the inability to master academic writing skills on the part of the student and/or lecturers' inability to correct students' mistakes in the assignment so that students develop appropriate referencing skills. However, referencing difficulties may not be likened to the hearing challenges students with hearing impairment face but may be due to other factors such as lack of impartation of referencing and citation skills in students as

earlier reported by Muzata & Banja (2019) which challenges in referencing and citation even among ordinary students without disabilities at the University of Zambia and that lecturers did not support students adequately in referencing and citation. Considering the performance of students with hearing impairments in the assignment as being necessitated by their hearing peers may be too judgmental for students with hearing impairments and may inhibit lecturers not to paying particular attention to the individual difference that may exist among students with hearing impairments in terms of performance in assignments in that difference may exist within the same domain of hearing impairments. Nevertheless, viewing the performance of students with hearing impairments as being influenced by their hearing peers should be used as a basis for promoting social interaction and teamwork between students with hearing impairments and their hearing peers now that such interactions are likely to yield positive performance among students academically.

Document 2: Shows a marked test paper for deaf student teacher 2



Document 2: Source; Extract from Student Teacher 2's Test Paper; 26/07/2020)

Document 2 shows that student-teacher 2 had difficulties answering test questions, in that the document shows that some questions seem to have been misunderstood by the student. Grammatical errors can also be detected in that document. For instance, the phrase, "passive is not work make a stay in the home," in document 2 does not depict a standard British English grammatical structure, which is expected to be used by students in Zambian schools, colleges or Universities.

The findings on students with hearing impairments exhibiting grammatical errors and difficulties answering assessment items concur with studies by Chifinda (2017); Moonga (2013); Wilbur (2000) & Luckner et al. (2005). However, despite grammatical errors being detectable in document 2, answering the questions wrongly may be due to a student's inability to read and comprehend questions in that the answers provided were not only wrong but a clear reflection of a student's inability to read the questions with comprehension.

Document 3: Shows a marked assignment paper for student-teacher 2

System.
 According to Duncan (1920) explain that vertical mobility refer to the movement from one level on the social hierachy to another. In the words it is a change in social status. change in any of the factor that influence social status has the potential to mobility. For example, a change in Malcolm's wealth and occupation caused him to make up the social hierachy.
 However it is import to that vertical mobility refer to any change in social status, whether its moving up to a hight level or many moving down. For example, had Malce not played the lottery and instead become homeless, that would also be an example of

Document 3: Source (Extract from Student Teacher 2's Assignment; 22/07/2020)

Document 3 shows that student 2 was able to answer an assignment despite some grammatical errors that can be detected in the document. The marking by the lecturer and the allocation of marks indicate that the student-teacher was able to answer the assignment satisfactorily. Based on the marks in document 3, it can be noted that student-teacher 2 was able to perform better in assignments. The findings are similar to studies by Erika-Brophy et al. (2012) and Magongwa (2008) in which students with hearing impairments were able to perform well academically. However, although the marking was fair, the lecturer needed to highlight areas that the students had difficulties with as part of the feedback. For instance, the student in some cases wrote incomplete words such as "Import" instead of "Important" in paragraph 2. While it is acknowledged that lecturers need to be considerate of the telegraphic of students with hearing impairment, effort should always be made to provide effective feedback that maybe none be punitive in terms of marks but informative for future change in learning behaviour by students. However, it must be noted that the authenticity of students' assignments may not reflect the true picture of an individual's academic strength in that consultation, sharing of information or plagiarism may characterise processes of handwritten assignments and may be difficult to detect.

Document 4: Shows a marked test paper for deaf student teacher 1

Q.10 - identifying pictures and discerning sequences or location by through learner to show for charts on the board.

Q11. - lesson plans
 - Scheme of work
 - Weekly forecast
 - Comprehensions

Q12. - To help can not do write through lesson plan.
 - all difficulties to be write.

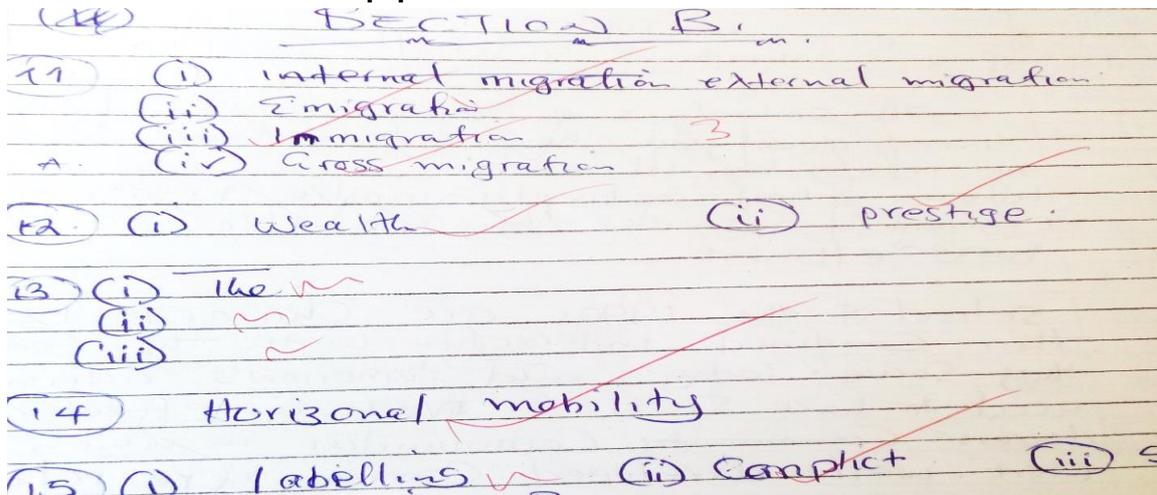
Document 4: Source (Extract from Student Teacher 2's Test Paper; 25/07/2020)

Document 4 shows that the student-teacher answered the questions wrongly and the written information in document 5 seems to have grammatical errors. Commenting on the written work of student teachers with hearing impairments, Lecturer 1 had this to say:

"Deaf students write in sign language when writing assignments and tests and lecturers find it difficult to mark their work. Some of the written language doesn't make sense," (Lecturer 1).

The comment by lecturer 1 was that students with hearing impairments were writing their assignments and tests using the language that was perceived not to make sense to the lecturers. From the verbatim of Lecturer 1, two(2) themes emerged, the first theme of the theme(1) was that students with hearing impairments were perceived to write assignments and tests using sign language which was not making sense to lecturers and the second theme was that lecturers faced difficulties to make written work of student teachers with hearing impairments. Considering written work of student teachers with hearing impairments in sign language not making sense may indicate lecturers' inability to understand that sign language has a different grammatical structure to Standard English and lecturers finding it difficult to make written work of student teachers with hearing impairments work maybe a sign of lack of knowledge and skills for lecturers to teach students with hearing impairments. Adaptation of tests students for student teachers with hearing impairments to suit their sign language grammar have one of the measures taken by lecturers in this context, failure to which, the assertion by the National Research Council (2004) that the use of standardised tests for students with hearing impairments may not accurately indicate how the students are learning as earlier cited could reflect the scenario in document 4 and views of lecturers in this context.

Document 5: Shows a marked test paper of student-teacher 4



Document 5: Source; (Extract from Student Teacher 4's Test paper; 28/08/2020)

Document 5 shows that student 4 was able to answer some questions correctly and some answers were unanswered as can be noticed in the document. Commenting on the performance of student teachers with hearing impairments on tests and examinations Lecturer 2 had this to say;

"When it comes to tests and exams, you find that they have a problem in terms of answering questions. Sometimes their (student teachers with hearing impairments) papers are blank, and that much of the work is not answered," (Lecturer 2).

The comment by lecturer 2 in the verbatim above indicates that student teachers with hearing impairments were perceived to experience problems when answering questions in tests and examinations, which lead them not to answer some questions. However, based on the performance of student-teacher 4 on the test in document 5, the student was able to answer some questions correctly whereas some questions were unanswered. Leaving some test or examination questions unanswered can affect the performance of

students. Leaving questions unanswered in tests may be due to the inability of students to understand concepts and terminologies in examinations as earlier cited in a study by Kumatongo & Muzata (2021b) in which student teachers with hearing impairments cited their perceived academic performance in examinations as being affected due to their lack of understanding of concepts.

CONCLUSION

Based on the findings, the study concludes that student teachers with hearing impairments were able to perform better in assignments than in test items and that student teachers with hearing impairments experienced challenges answering test questions, in that most of the test questions were wrongly answered whereas some questions were unanswered. The study can further conclude that lecturers viewed the performance of student teachers with hearing impairments in assignments as being influenced by their hearing peers and that their answering of assessment items was characterised by leaving some questions in tests and examinations unanswered as well as student teachers with hearing impairments write assignments and tests in sign language which did not make sense to lecturers.

Assessment items for students with hearing impairments should be adapted assessment items for students with hearing impairments to make them appropriate for the students. Educators for students with hearing impairments should take a keen interest in acquiring knowledge of Zambia Sign Language grammatical structure to enable them to assess and make assessment items of students with hearing impairments without difficulties. There is a need to conduct studies on the grammatical structure of written texts of students with hearing impairments in Zambia so that their adaptations are made in their academic curriculum.

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