

Acquisition of Sign Language Skills among Trainee Teachers in Selected Private and Public Universities in Zambia

Juliet Chibwe¹, Penda Annie², Joseph Mate³

¹Juliet Chibwe Special Education Dept. Kwame Krumah University, (KNU) Kabwe, Zambia

²Penda Annie Special Education Dept. Kwame Krumah University, (KNU) Kabwe, Zambia

³Joseph Mate Education Dept. Kwame Krumah University, (KNU) Kabwe, Zambia

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ABSTRACT

The study focused on acquisition of sign language skills among trainee teachers at (X, Y, Z and W) both at public and private universities. The objective administered established the factors in support of acquisition of sign language skills among trainee teachers in the study areas. The approach was qualitative, a case study research design was used and the sample comprised of eighty students from four universities with twenty from each university. The unstructured interview was administered to all respondents. The main purpose was to explore what determines the acquisition of sign language among trainee teachers. The major finding of the study revealed that sign language skills among trainee teachers was acquired using factors such as individual signing and being observed by the lecturer or friends, interacting and practicing the signs with friends, for it being a requirement for the award of the degree, personal interest, practical exams, having someone disabled in the family and using it for further studies, for using it in classrooms, schools, in a wider community such as churches, banks and non-governmental organization. Therefore, this study suggests that sign language skills are a must as mode of communication to learners with hearing impaired and must be learnt or acquired by trainee teachers.

Keywords: Sign language, Skill, Acquisition, Trainee, Teachers, Communication and Learner

INTRODUCTION

Acquisition of sign language skills among trainee teachers is a concern raised in Zambia in universities because factors that lead to acquisition of sign language skills among trainee teachers remain hidden. For example, the study by [6] found that factors for acquiring sign language need to be known because acquisition of sign language has been a challenge to most people.

Sign language is a language which uses manual and gestural communication instead of sound to convey meaning-simultaneously combining hand shapes, orientation and movement of the hands, arms or body and non – manual facial expression to fluidly express a speaker's thought [10]. It is upon this communication that allows them to understand information during instructions and is in turn motivated to perform well academically. Teachers training refers to the policies, procedures and provision designed to equip teachers with the knowledge, attitude, behaviors and skills they require in performing their tasks effectively in the classroom, schools and wider community. This is enforced in Education for All of 1990 which calls for the need to meet the needs of all learners inclusive of those with disabilities [12].

Hearing impairment is a disability in which a learner may have challenge hearing in one or both ears or may not hear at all. Hearing impairment includes learners who are deaf and hard of hearing. In this context, deaf learners are those with a congenital or early- acquired hearing loss of 85 decibel (dB) or greater in the better ear [15]. A hearing loss is defined as inability to perceive sound for the persons with hard of hearing and the deaf. Hard of hearing is an impairment in hearing that may be permanent or fluctuating. This study focus is on persons who are deaf. [7] defines deafness as “a hearing loss that is severe enough that the child cannot process linguistic

information through hearing even when using amplification or hearing aids”. Deafness and hard of hearing adversely affect the child’s education performance.

Historically, the education of learners with hearing impairment has not been viewed as successful. The oral approach, which prohibited the use of signing, was the traditional method for teaching academic subjects to learners with hearing impairment during the 1970s, oralism gave way to the total communication approach [2]. This method utilized the simultaneous manual oral component. The literature has revealed that, communication barrier that learners with hearing impairment suffer from could be addressed simply by teaching the learners with hearing using total communication by teachers.

The academic of learners with hearing impairment still lag significantly behind to that of their hearing peers even after exposure to Zambian sign language found in the dictionary because factors of acquiring it is not known in spite of its recognition by linguistics as a tool for learners with hearing impairment. Zambian sign language is used by some teachers while teaching the learners with hearing impairment during education process at a low profile while American Sign Language is preferred and continues to be the language of instruction for learners with hearing impairment whose factors contributing to acquiring it remain silent. The communicative competence of learners with hearing is defectively associated with their acquisition of sign language by trainee teachers. It cannot be over emphasized that, trainee teachers need to acquire sign language accurately because learners with hearing impairment depend on these teachers for their academic success. [8] stated that trainee teachers’ proficiency in their sign language is critical for facilitating communication and academic success of learners with hearing impairment.

Despite the inclusion of manual system for learners with hearing impairment instruction, the education of learners with hearing impairment is largely considered a failure in terms of all subjects. [14] Indicated that the best avenue for learners with hearing impairment to learn any Zambian sign is through the acquisition of a natural sign language, which for the learners with hearing impairment meant American Sign Language (ASL). Minority languages, for the most part, have had only a marginal place in the educational system of the fact that a learner’s language is normally the best instrument for learning. Minority language teaching also promotes a positive self-image in a learner [5]. So many learners with hearing impairment are illiterate in all subjects because the systematic denial of their primary manual sign language shouts out the most. The effective means for teaching them the second sign language is not producing acceptable results in all academic areas. It is time to consider factors of acquiring sign language by trainee teachers which will help hearing impaired learners to perform well academically.

The ministry of Education, Science, Vocation and Early Childhood Education policy on education of learners with special needs ensures that equality and particularly good quality of educational opportunity is provided to them by strengthening the supervision and management across the country [12]. The policy includes the education of learners with hearing impairment where they learn through the mode of sign language. There are a number of universities in Zambia that offer special education needs training for teachers who would handle learners with hearing impairment which include but not limited to X and Y universities. However, the factors that lead to acquisition of sign language among trainee teachers remain hidden and there is no specific policy in Zambia that has been put in place to address issues of acquisition of sign language skills and harmonization of sign language that could be followed in the education of these students. Therefore, this study aimed at identifying the factors that lead to acquisition of sign language among trainee teachers in universities

Significance of the study

The study was significant because it established factors in support of acquiring sign language skill among trainee teachers at X and Y universities.

LITERATURE REVIEW

Factors in support of acquisition of sign language skills among trainee teachers

In a study conducted by [1] in America on acquisition of sign language skills among trainee teachers in university, it was found that sign language tends to develop with a certain degree of proficiency in its articulation

of signs and grammatical order acquired while from the instructor. The discovery of the authors was good which was equally discovered by the current study.

[3] in Ghana conducted a study on acquisition of sign language skills among trainee teachers. The study found that in sign language development when acquiring sign language those who are learning need to be engaged in various processes of communication with the existing native signers concerning different topical issues while they continue acquiring the language through engagement in various settings. Sign language learning is also helped when those who are learning begin paying attention to particular elements of the language structures which constitute grammar and hand movement facial expressions. However, the author did not mention that practicing and physical engagement in activities that enable one use sign language often strengthens the good understanding of it just like we learn to write by writing, to read by reading a variety of books and develop a language through meaningful engaging with others verbally.

In a study conducted by [16] in Washington on acquisition of sign language skills among trainee teachers, it was found that sign language like oral language is equally complex and cannot be learned or taught all at once but signing skills develop through various aspects which include manual, interpersonal, expressive, social, cultural, affective and cognitive elements. However, the author did not highlight that sign language can be acquired by factors such as personal interest discovered by this study.

[9] in Nigeria conducted a study on acquisition of sign language skills among trainee teachers. The study found that acquiring a sign language, requires total engagement of the mind which embarks on application of memorizing and customising signing skills which in turn builds systematic, standard patterns of signing. Hence, active learning occurs only when the mind is set to take in information and uses such information and prior knowledge to interpret and make sense out of new information acquired. Furthermore, it was found that, sign language is acquired through the factor of effective interactions coupled with tasks that are cognitive in nature which was also discovered by the current study.

In a study conducted by [14] in Zambia, it was found that sign language develops in an effective manner if acquired skills connect well to a general topic or theme available for discussion. However, the author did not find that, acquiring of sign language becomes rather difficult if factors leading to it are not known.

In the study conducted by [1] in South Africa, on acquisition of sign language of sign language skills among trainee teachers, it was established that acquisition of sign language is an important achievement because modern society demands high quality teaching and learning of learners with hearing impairment from teachers. However, the authors did not bring to light that acquisition of sign language by trainee teachers requires an interactive environment among themselves which this study discovered.

[14] and [13] indicates that it is found that against all odds, the Zambian government has promulgated into its newly revised educational curriculum framework of 2013 a policy that espouses that familiar (local) languages be used and taught in pre-schools and lower grade, (grade 1-4) to counteract the foreign languages in children as they enter primary school levels and sign language was considered. Although the document has articulated and explicitly recognized sign language as form of communication or delivery of educational material content factors of acquisition of sign language among trainee teachers were only discovered in this current study.

Research Gap

In conclusion, from the revealed literature on the acquisition of sign language skills among trainee teachers most studies that have been conducted revealed that little research has been done on it. More research needs to be done in order to have a clear understanding on the factors leading to acquisition of sign language skills among trainee teachers. Hence this study was conducted in order to identify factors that contribute to acquisition of sign language skills among trainee teachers. This is because trainee teachers need sign language skills in order to perform well academically and deliver lessons to pupils with hearing impairment effectively in classrooms, schools and wider communities.

METHODOLOGY

Research approach

This study was guided by the qualitative research approach since it focuses on views of students from the two selected universities.

Research design

Since this is a qualitative study, a case study research design was used because it helped in describing information about the institution and its people for this an in-depth study. Similarly, this study sought to collect data on acquisition of sign language skills among trainee teachers from various participants. In addition, the case study design helped to collect qualitative data. For instance, [5] stated that the purpose of using a case study is to describe and interpret the experiences of participants with the aim of understanding the experiences as perceived by the participants.

Target population

The target population of this study comprised both distance and full-time second- and third-year students at the four selected and two being public and other two as private universities (X, Y, Z and W).

Sample size

The sample size consisted of eighty (80) respondents who were second- and third-year students. This sample comprised twenty (20) second year and twenty (20) third doing distance, twenty (20) second year full-time and twenty (20) third year full-time students. Second years were taking the course called Teaching Learners with Hearing Impairment and the third years were doing the course called Advance Studies in Sign language. However, both groups were learning sign language during their training.

Gender distribution:

Of the total distribution of eighty (80) students' respondents, forty (40) were male and forty (20) females.

Instruments for data collection

The instruments for data collection were unstructured interview guide and a participant observation checklist. The unstructured interview guide was used because it was suitable for the qualitative research and it avoided opportunities of biasness. The participant observation checklist was used by the researchers to gather data on aspects that were seen and heard in the study site.

Ethical consideration

Permission was obtained from the administrators before administration of unstructured interview guide and for the researchers to participate in classrooms and in co-curricular activities. The participants were advised to answer questions truthfully. Participation was voluntary and any participant who wanted to withdraw was free to do so without any condition attached. The researchers explained that the results would only be used for academic purposes.

RESULTS

Results on Factors Influencing Acquisition of Sign Language Skills Among Trainee Teachers was generated using systematic coding. The results comprised of an introduction to analysis, coding and theme development, emergent themes and their frequency, evidence of data saturation, thematic ranking matrix, thematic summary for curriculum prioritization and observational corroboration.

Introduction to Analysis

To identify key factors supporting the acquisition of sign language skills among trainee teachers, a systematic thematic analysis was conducted using manual coding techniques. Responses were collected from second- and third-year students (both full-time and distance education) from public and private universities (X, Y, Z, W). Thematic analysis involved coding responses, grouping codes into themes, assessing frequency and salience, and organizing the data into thematic matrices.

Coding and Theme Development

Step 1: Initial Manual Coding

All responses were read and manually coded line-by-line to identify recurrent ideas, words, or phrases related to sign language acquisition. Codes were then grouped into broader themes.

Step 2: Theme Consolidation

After the first round of coding, overlapping or redundant codes were merged to form concise themes. These themes were defined and verified through repeated readings of the transcripts.

Emergent Themes and Their Frequency

Theme	Sub-Themes	Frequency (f)	Salience
Practical Engagement	Individual signing, peer teaching, mirror use, classroom interaction	16	High
Personal Interest and Motivation	Passion, family connection, personal relevance	14	High
Examination and Certification	Degree requirement, formal assessment	11	High
Communication and Community Use	Communicating with Deaf peers/family/community	9	Moderate
School Experience (Practicum)	Use during inclusive teaching placement	8	Moderate
Instructor Influence	Lecturer modeling, instructor proficiency, feedback	7	Moderate
Learning Materials	Visual aids, textbooks, digital tools	6	Low
Institutional Support	Events, policies, outreach programs	6	Low
Career Development	Future studies, employment goals	5	Low

Evidence of Data Saturation

Data saturation was evident as no new significant themes emerged after analyzing multiple groups of respondents across both public and private institutions. Particularly, the top three themes—practical engagement, personal motivation, and examination requirements—were consistently cited by students regardless of university type, mode of study, or year level.

Thematic Ranking Matrix

This matrix shows which factors were most and least influential, based on student responses.

Rank	Factor	Frequency	Sample Condensed Quote
1	Practical engagement	16	"I practiced individually, signed in a mirror, and used peer teaching."
2	Personal motivation	14	"I learned it to teach my deaf child" / "I have interest in sign language."
3	Examination requirements	11	"We must pass a practical exam in sign language to get our certificate."
4	Communication and community use	9	"I need it to talk to Deaf people in my community and family."

5	School practicum exposure	8	"I learned during teaching practice in inclusive schools."
6	Lecturer influence	7	"I observed and copied the lecturer's signing."
7	Availability of learning materials	6	"We used pictures, textbooks, and videos to learn signs."
8	Institutional involvement	6	"We attended national Deaf awareness events and outreach programs."
9	Career goals	5	"I plan to pursue a master's degree in sign language."

Thematic Summary for Curriculum Prioritization

The following matrix aligns key themes with curriculum implications.

Theme	Core Components	Curriculum Implication
High Priority	Practical use, motivation, and assessment	Emphasize practice-based learning and exam preparedness
Moderate Priority	Community needs, practicum, lecturer modeling	Link theory to real-world Deaf community engagement
Low Priority	Materials, institutional support, career planning	Enhance support structures and long-term learning paths

Observational Corroboration

Observations from both public and private universities support the above findings. Peer teaching, classroom interaction, and examination readiness were key. Some students faced challenges due to limited practice or incorrect signing.

This thematic analysis identified nine core factors influencing the acquisition of sign language among trainee teachers. Prioritizing practical application, personal motivation, and assessment alignment in curriculum design will support student competence in Zambian Sign Language.

DISCUSSIONS

The discussion was based on what was discovered during this study in which the factors that contributed to the acquisition of sign language by students were established. The factors that were discovered having contributed to the acquisition of the sign language skill in this study were: the individual signing and being observed by the lecturer or friends, interacting and practicing the signs with friends, being a requirement for the award of the degree of bachelor of arts with education, personal interest, for having someone disabled as deaf in the family and using it for further studies, practical examinations, societal needs such as classrooms, schools, in a wider community such as churches, banks and non-governmental organization. Some of the findings of this study were similar to the findings found by some authors.

For instance, the study was conducted by [4] and discovered that for trainee teachers to acquire sign language he or she need to practice sign language skills consistently. This is in line with what was discovered in this study concerning the consistence in practicing of sign language skills though the current study found more factors. [17] discovered many factors in support of acquiring sign language which included: manual, interpersonal, expressive, social, cultural, affective and cognitive elements. This is in line with what was discovered in this current study. [10] who had similar findings to what was discovered in this current study by finding that trainee teachers' proficiency in their sign language is critical for facilitating communication and academic success for learners who are deaf. They can also practice at some selected schools and wider community as supported by [16] who indicated that the best avenue for students to learn any Zambian sign and perform well is through the acquisition of a natural sign language using different ways in a friendly atmosphere.

The researchers' voice was that, students need to be encouraged to use the factor which can help them acquire sign language easily for their benefit academically as discovered in this study. The other argument from the

researchers was that, these factors discovered in this study need to be upheld because they are in support of acquisition of sign language skills among trainee teachers. This is supported by [15] who stated that to communicate effectively to learners with hearing impairment, students has to use sign language skill. In addition, in the study conducted by [2] in South Africa, established that the importance of teacher learning of sign language is for student's achievement and because modern society demands high quality teaching and learning from teachers. Thus, there is a great need to consider these factors while students are acquiring sign language in order to produce quality teachers by universities.

CONCLUSION

The factors that were discovered having contributed to the acquisition of the sign language skill in this study were ultimately personal and societal needs such as the individual interest and consistently practicing sign language, teaching practice, observation by the lecturer or friends, interacting and practicing the signs with friends, being a requirement for the award of the degree of bachelor of arts with education, for having someone disabled as deaf in the family and using it for further studies, practical examinations, using it in classrooms, schools, in a wider community such as churches, banks and non-governmental organization. It is therefore, inevitable that these trainee teachers are exposed to factors in support of acquisition of sign language skills. Instruction of sign language should be clear and instructors or lecturers teaching sign language to students should make sure that the concept is clearly presented to the students. The worry is, if trainee teachers fail to acquire sign language skills this would lead to learners with hearing impairment performing poorly academically due to lack of effective communication.

RECOMMENDATIONS

Basing on this finding this study recommends that the factors needed for acquisition of sign language by university students include personal and societal needs such as:

Personal interest

Consistently practicing sign language

Being observed by the lecturer or friends while signing

Interacting and practicing the signs with friends

Sign language to be a requirement for the award of the degree.

To be used during practical examination of sign language

The factor of having someone disabled in the family

To be used in the classrooms while teaching the deaf, schools' assembly, in a wider community such as churches, banks and non-governmental organization.

Teaching practice

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