Demands Faced by Sign Language Interpreters at University of Education, Winneba

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Abstract: This study aimed at exploring the Demands for Sign Language Interpreters (SLI) at University of Education, Winneba. This study employed an Explanatory Sequential Mixed Methods Design to answer the research questions. The researcher first conducted quantitative research, analyzed the results and then built on the results to explain them in more detail with qualitative responses. Out of a target population of 14 respondents, eight (8) were purposively sampled for this study due to the practical skills they had acquired in Sign language, including assistance given to the deaf at the University. Core issues include environmental, interpersonal, paralinguistic, and intrapersonal demands. The two main instruments used to gather data were a 24-item questionnaire with a four-point Likert scale and interview guide. Descriptive statistics involving simple percentages, mean, standard deviations and thematic approach were computed and used for the analysis. The findings indicated that Sign Language Interpreters (SLI) expressed strong concerns about the obstructions they encountered during an interpreting assignment, such as the speaker's accent, power dynamics and authority, the use of technical vocabulary and interpreting for long hours without rest. Therefore, it is recommended that there is a need to encourage SLI to go for further studies in the area of interpreting. Besides, the University can employ and retain experienced Sign Language Interpreters to work as interpreters for deaf students.

Keywords: Sign Language, Interpreter, Demands, Environmental, Interpersonal, Paralinguistic Intrapersonal

1. Introduction

Communication between persons who use spoken language and those who are deaf or hard of hearing is made possible thanks to the vital and complex field of sign language interpreting. An expert level of proficiency in both sign language and the spoken language they are interpreting, as well as knowledge of the cultures and groups they work with, are requirements for sign language interpreters [1, 2]. The capacity to work under pressure in high-stakes situations, outstanding interpersonal skills, and the ability to preserve objectivity and secrecy at all times are all requirements for sign language interpreters in addition to their language proficiency [3-5]. Sign language interpreters are essential to ensuring that everyone can effectively communicate and participate fully in society, whether they are employed in educational settings, medical settings, judicial procedures, or public events [6].

Everyone must engage with people in order to survive and grow as a person [7]. Everyone also needs to communicate.

One must know sign language or use gestures to communicate with the deaf. Due to the fact that they share the same communication method, Deaf and hearing persons can typically communicate more effectively. The communication between Deaf and Hard of Hearing (DHH) pupils, their teachers, and hearing peers is greatly facilitated by sign language interpreters. The information that is transferred by interpreters is from a source message to a message that is intended for a specific audience; the performance and expertise of the interpreter have a significant impact on the communication's outcome. The Salamanca framework for action on special needs education was created by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in June 1994. It stated that all children and adults, regardless of their physical, intellectual, social, emotional, linguistic, or other illnesses, should receive an education in schools. The right of Persons with Disabilities (PWDs) in Ghana to engage in social, educational, political, economic, creative, or recreational activities is emphasized in section 1 of the Disability Act, Act 715 (2006), and this includes the right to education for those who are Deaf and Hard of Hearing (DHH).

The University of Education, Winneba (UEW) is one institution that provides people with special needs with a wonderful opportunity to further their education. Inclusive schools have been established to equip students with disabilities with necessary educational skills. Additionally, many students who are Deaf or Hard of Hearing have been admitted to some tertiary schools in order to give DHH students the same access and opportunities as their hearing counterparts since Sign language interpretation services have become a standard part of educational delivery.

Sign language interpreters in Ghana are untrained volunteers eager to aid in the social integration of the deaf. At UEW, historically deaf inclusion commenced in 2005. A four-level course with three credit hours per level is typically used to deliver the education. Workshops for interpreters may be offered by the special education department, but they are not sufficient in and of itself to qualify someone as a qualified professional sign language interpreter for the deaf. According to Akyeampong [1], there has recently been a steady increase in the number of deaf students enrolled in higher education in Ghana. Deaf and hard-of-hearing (DHH) students at the University of Education, Winneba (UEW) are assisted by sign language interpreters during lectures and university-sponsored events. These interpreters are a crucial link for DHH students to participate in academic and social activities. The ideal sign language interpreter should possess proficiency in sign language, strong communication skills, effective listening abilities, and the capacity to accurately interpret messages.

Demands in sign language interpreting are the challenges or barriers the interpreter faces, which have an impact on their ability to make decisions during the interpretation exercise. It encompasses (interpersonal, paralinguistic, intrapersonal, and environmental needs). The assignment's environment included requirements for the responsibilities of the participants, specialist language, the location's space limitations, the weather, and odors. Interaction between the parties involved creates interpersonal demands that may include cultural differences, dynamics of power, views of the event, or aims for it. These demands are related to consumers' expressive communication and are paralinguistic in nature. Customers who speak with a strong accent or a Deaf person who signs while carrying something in his or her hand are two examples of paralinguistic demands. Lastly, the interpreter's mental and psychological state is what makes up intrapersonal needs. All these demands are placed on interpreters as they work on an assignment.

Interpreting in sign language is a challenging job that requires a high level of talent and knowledge. Numerous occupational expectations that interpreters must meet can have an impact on the caliber of their work and hinder spoken language and sign language communication. The amount of time spent interpreting throughout the day is one significant requirement that contributes to added stress, exhaustion, and burnout. Another problem is a dearth of qualified sign language interpreters, which leads to interpreters who are not fluent in sign language. Long work days can also result in fatigue and burnout, making it difficult for interpreters to retain the concentration and focus necessary for quality interpretation. Addressing these demands is crucial to ensure that deaf individuals have access to effective communication and the ability to participate in society fully. This placed additional stress and fatigue on the decision-making process made by the interpreter.

Purpose of the study

The purpose of the study is to ascertain the demands of interpreters in the areas of

1. environmental demand,
2. interpersonal demand,
3. intrapersonal demands and
4. paralinguistic demand

2. Literature Review

2.1. Sign Language Interpreting in an Educational Setting

Educational sign language interpreters facilitate communication between deaf and hard-of-hearing students, teachers, and hearing peers in educational settings. As communication links, they must possess excellent knowledge of the sign and spoken language they are working with [8]. In addition, to sign language interpretation, inclusive education in most educational settings may also include related services such as note-taking, real-time captioning, and tutoring to improve the academic and social experiences of deaf students [9]. In order to effectively carry out their responsibilities, educational interpreters must have a deep understanding of the unique needs and challenges faced by deaf and hard-of-hearing students in an educational environment [10].

Interpreting for deaf or hard-of-hearing students in an educational setting is a complex and essential task that requires a wide range of skills and knowledge. The

interpreter must have a deep understanding of sign and spoken language, allowing them to accurately and effectively convey the intended meaning of a message [11]. Additionally, interpreting requires quick and informed decision-making and the ability to translate complex concepts, cultural references, and humour from one language to another [9]. The role of the interpreter is to facilitate communication between the deaf or hard-of-hearing students and their teachers and classmates, creating a bridge between two different worlds [8]. Therefore, interpreting in an educational setting requires specialized training and must be a recognized profession to serve both deaf and hearing individuals. Lederberg, Schick and Spencer [12] emphasize that the success of interpreting for deaf and hard-of-hearing students depends on their vision to receive language and information. Therefore, sign language interpreters should be mindful of their appearance's impact on these students' viewing experience. Brookfield [6] stresses the importance of considering clothing, make-up, and other personal hygiene factors in any interpreting situation, as deaf students rely on vision, and the interpreter must make the viewing task as easy as possible. The interpreter's attire should contrast with their skin colour, and clothing made of white or shiny fabrics should be avoided as they may cause glare and make viewing difficult. Brookfield emphasizes the importance of a professional appearance for sign language interpreters.

2.2. Interpretation as a Means of Communication

McQuail and Windahl [14] describe a communication event as the expression of a message by one person, the sender, to another person, the receiver. The act of conveying this message from the sender to the receiver is referred to as interpreting. This 'act' may include a shift in the mode of communication utilized by the sender, a modification in the language used by the sender, or a change in both the mode of communication and language.

Deaf and hard-of-hearing students rely on interpreters for immediate access to communication within the academic environment, including access to curriculum and instruction and social interactions [14]. However, the interpreter's role as a communication facilitator must be maintained. An interpreter should not become the initiator or focus of the communication but should convey the messages, including the attitudes of communicators, as faithfully as possible. Interpreters who work in an educational setting may be assigned many different roles. Deaf students assign interpreters a social role in addition to their interpreting role [15]. Teachers and lecturers may see the interpreter as a supervisor, supporter or educator; schools also occasionally have certain expectations of interpreters following the rules set out by the code of ethics for interpreters in educational settings whilst also maintaining a positive relationship with the service users may prove to be a delicate balancing act for interpreters.

Currently, in Ghana, there is one deaf-blind student who was admitted in the 2018/2019 academic year at the University of Education, Winneba and is receiving tactile interpreting services. Shariff [16] opines that in a good practice inclusive setting, the deaf-blind also benefit from interpreting services known as tactile interpreting. Shariff further stated that tactile interpreting is done to enhance understanding and help the deaf-blind achieve a higher academic status and participate in all social activities. Dammeyer [17] is of the view that most people who are deaf-blind have a combination of vision and hearing loss. For example, a person may be born deaf or hard of hearing and lose his or her vision later in life. Another person may grow up as a blind or visually impaired person and experience hearing loss later. Some people are born with combined vision and hearing loss or lose their vision and hearing at an early age. According to Stinson, Kluwin and Marschark [18], for the deaf-blind to attain a better academic status, there are other support service provided in an inclusive setting which includes tactile fingerspelling, print on palm and braille are carried out to add more meaning to what is taught and learnt at the lecture hall.

According to Hersh [19], tactile interpretation can help those who are hard of hearing or blind and deaf communicate. Hersh emphasized that one person, the tactile interpreter, places their hand above or below the deaf-blind person's hand. In order for the deaf-blind person to feel the shape, movement, and position of the signs and comprehend what is being said, the interpreter then creates tactile signs with their hand. However, two hands can also be used for this kind of communication. To make the communication process clearer, the interpreter also explains the client's environment, body language, and facial characteristics.

A study on sign language interpreting services for children with hearing impairment in inclusive secondary high schools in Uganda was done by Omugur [20]. The goal of the study was to comprehend the difficulties that sign language interpreters encounter in the educational setting. Four sign language interpreters, two children with hearing impairments, two classroom teachers, and two hearing peers who were specifically chosen for the study made up the group of participants. In order to learn more about the respondents' opinions and experiences in inclusive secondary high schools in Uganda, the study employed a qualitative case study design. The study's conclusions showed that teachers and sign language interpreters have comparable communication difficulties while attempting to improve the learning of children with hearing impairment in an inclusive school setting. The study's results also showed the importance of encouraging sign language interpreters to pursue additional education in the field of interpreting in order to improve their communication abilities. In order to help realize the principle of inclusive education, the study concluded that school officials should provide a great working environment with sign language interpreters and qualified teachers in the field of special needs education.

Using recorded examples and interviews, Gran and Kellett [21] assessed interpreters' abilities in K–12 educational contexts in the United States of America (USA). Assessments took into account things like the grade levels of

the children and their communication styles. Less than half of the 59 interpreters Gran and Kellett tested performed at a level deemed at least acceptable for instructional interpreting. Their findings showed that a large number of deaf students are excluded from classroom communication due to the proficiency of their interpreters. Because the demands sign language interpreters encounter while performing an interpretation task, the current study differs from the one by Gran & Kellett [21]. Interpreters should be mindful that some tactics, such omission, may conflict with instructional procedures intended to introduce new language in context in educational settings. For instance, the student might not acquire the new vocabulary the teacher is introducing if the interpreter omits some information because he or she is unfamiliar with a particular sign. Deaf students can effectively engage and actively participate in the learning and teaching environment when there is an interpreter present in the lecture hall [22, 23].

Verwey-Jonker [24] investigated how deaf sign language users felt about how well the daily news was translated into sign language in the Netherlands. The study focused on how deaf viewers rated the interpreters, what deaf adults expected from newscasts, and suggestions for how the deaf thought the quality of interpretation should be raised. The study's findings showed that different interpreters had varying degrees of proficiency. Respondents noted the following as lacking while observing interpreters: managing more complicated circumstances, interpreting in Dutch Sign Language, and knowledge of the deaf community and deaf culture. They also recognized the key skills interpreters would need to possess that apply to all interpreting contexts, including substantial use of facial expressions and lip movements, adapting signing style to the context, and learning new signs (via training). Verwey-Jonkeer's study had a flaw in that it wasn't done in a classroom and left out the needs of sign language interpreters in an inclusive environment. The goal of the current study was to close that gap. The success of a student's educational experience, according to Napier [25], is significantly influenced by the accessibility and caliber of interpreting services. The role of interpreters is to improve communication between a hearing person who does not utilize sign language and a deaf learner. Napier feather explained that interpreting services aim at bridging the communication gap between two or more people using different languages. In addition, Barnett, McKee, Smith and Pearson [3] indicated that one of the most critical mechanisms for any program for deaf students embraces interpreting services.

In a public tertiary institution in Ghana, Oppong, Fobi, and Fobi [26] investigated the perceptions of deaf students regarding the caliber of sign language interpreting services provided to them. A descriptive survey approach was used to gather respondents' opinions about the caliber of sign language interpreting services that were provided to them; 23 respondents were randomly selected for the study from a target group of 34 respondents. Among other conclusions, it was found that students who are deaf and who use Sign Language interpreting services to obtain information during lectures were significantly concerned about the quality of these services. The study suggested that in order to prepare skilled interpreters for deaf students, the school add Sign Language interpreting to its normal program of study. Mason [27] claimed that a deaf student generally does not get to pick their interpreter in educational settings. Instead, deaf pupils are forced to accept whichever interpreter is offered; notwithstanding any criticism of the interpreters, the deaf consumer is unable to refuse the chosen interpretation. Mason stated that the deaf learner can become frustrated as a result. Additionally, it takes a lot of effort and commitment to interpret for deaf students, and there are many factors to take into account as an interpreter to make sure that hearing and deaf students can communicate with one another. Facial expressions, attitude, nuance, technique selection, and word choice are frequently used in conjunction with interpretation in educational settings and can convey a variety of meanings, further elaborating the lecturer's initial concept [28, 23].

Based on a three-state survey of K–12 interpreters in the United States, Jones [29] identified four key tasks for educational interpreters. Jones stated that "all school personnel are expected to do" the following essential job duties: interpreting or transliterating, tutoring, consulting, and acting as a teacher's assistant. Additionally, educational interpreters are in charge of explaining teacher instructions, promoting peer engagement, tutoring, and informing administrators and other members of the educational team on students' progress. Winneba sign language interpreters at Ghana's University of Education, in particular, link classroom material between the lecturer, the deaf student, and other hearing students based on the student's language proficiency and the goal of the lesson. Additionally, it's crucial for sign language interpreters working in educational settings to comprehend the lesson's goal in order to properly communicate it to deaf or hard-of-hearing pupils. The translator should be able to communicate with the students by understanding the lecture's important themes and using the right verbal clues and facial expressions. Additionally, the use of fingerspelling can help deaf pupils' reading vocabulary grow. According to Hlavac [30], in order to obtain a professional certificate as a certified sign language interpreter in an educational setting, sign language interpreters must complete a program that is documented and offered by a reputable organization.

2.3. Demands of Interpreting

Dean and Pollard [31] developed the Demand-Control Schema for Interpreting work (DC-S), drawing from the occupational research conducted by Karasek [32]. In using the DC-S, interpreters identify various personal and environmental factors that comprise working conditions to increase professional competency and quality. In addition, the interpreter assesses for contextual factors. Specifically, job challenges know as demands. According to Lederberg, Schick and Spencer [12], the decisions made by sign language interpreters can significantly impact the lives of

deaf and hard-of-hearing students. However, the question of what interpreters must do in the classroom to enhance the school experience of deaf and hard-of-hearing students remains unanswered. More research is needed on the factors that educational interpreters consider when deciding what to do in an interpretation assignment. These decisions determine the actual classroom practice of working interpreters, yet, to date, interpreters have not been given a chance to reflect on their work and explain the thought processes behind their decisions.

Dean and Pollard [31] applied the demands and control schema to sign language interpreting and came out with many factors impacting interpreting work. The first factor, demands, is grouped into four main categories. These include environmental, intrapersonal, para-linguistic and intrapersonal demands (EIPI).

2.3.1. Environmental Demands

The first category, environmental demands, addresses broad aspects of the communication setting in which the interpreter is employed [33]. However, the environmental demand category includes a range of specific demands that fall into four sub-categories:

1. The goal of the environment.
2. Demands related to the physical surroundings and characteristics of that work environment.
3. The personnel and clientele who are present in that environment.
4. The specialized terminology that is likely to be used in that environment.

Environmental demands set the stage for what will develop into interpersonal demands environmental demands are an essential first step in preparing for what will unfold later during interpreting assignments. The interpreter must be proactive in setting up an optimal physical environment for the interpretation process. Donovan [34] highlights the importance of the interpreter's role in ensuring a suitable physical environment for educational interpreting, including factors such as lighting, seating, and positioning for a clear view. Interpreters must take responsibility for creating a comfortable and unobstructed environment for their interpreting assignments. Mindess [35] stressed that sign language interpreters go through many trials to help deaf understanding and facilitate communication. Sometimes it is unavoidable that the audio equipment the speaker uses suddenly fails, affecting the quality of sound or voice the interpreter depends on. Educational interpreters also need to ensure that any modification of the physical environment is mutually agreeable to the teacher, the interpreter and the deaf student.

An educational interpreter may be positioned in many different ways, such as sitting or standing in direct line with the deaf students and the teacher to prevent the deaf student from shifting his or her head but can see the teacher, the board or the overhead screen, and the interpreter. Environmental demands usually are the easiest for practitioners to identify. Most of them are observable and concrete [31].

2.3.2. Interpersonal Demands

Interpersonal demands arise from interaction between individuals present in the interpretation situation, including the deaf, and hearing students and their lecturer. Typically, these interactions occur between the consumers as well as connections between the consumers and the interpreter [31]. However, anyone else present in the environment, whether or not they are a consumer directly involved in the interpreted situation, also can stimulate interpersonal demands [31]. Mindess [35] stated that interpersonal demands are most often the relationship between the client who is deaf and the interpreter. It happens mostly before, during and after an interpreting assignment. According to Oppong, Fobi and Fobi [26], though the delivery of services using sign language is a crucial feature in the education of deaf students, having Ghanaian sign language (GSL) interpreters do not guarantee the students' successful inclusion into mainstream classes. For example, a student who is deaf may have difficulty adjusting to a GSL interpreter in lecture halls after years of being without this support at the school for the deaf. This situation created an interpersonal struggle between the interpreter and the deaf. Sometimes the deaf find it challenging to understand the interpreter during lecture hours. Other examples of interpersonal demands include, emotional tone or mood factors, power and authority dynamics, relationship characteristics, communication flow such as turn-taking, role, and cultural differences such instances affect the quality of the message the interpreter gives out to its users [31]. Interpersonal skills play a significant role in effective interpretation, as they encompass many aspects of the interaction between the interpreter and participants, such as cultural differences, power dynamics, and alignment issues. Interpreters can work to improve these skills and become more effective in their communication by understanding and addressing the interpersonal demands they face in their work. Dean and Pollard [31] stress that these demands make up the bulk of the challenges that interpreters face, and it is crucial for interpreters to be aware of and effectively handle them to provide high-quality for interpreters to effectively navigate these interpersonal demands in order to provide accurate and effective communication between parties.

2.3.3. Paralinguistic Demands

The third demand category of the demand-control schema is the paralinguistic demand category. Paralinguistic demands can best be explained not as what is being said or signed but how it is being said or signed by the interpreter; they are the things that surround the speech of the speaker, it may include (e g. pace, volume, accent, clarity of the linguistic forms that the interpreter hears and sees). The prefix para relates to the terms around, surrounding, or approaching. Thus, paralinguistic demands pertain to the "packaging" surrounding a language utterance. Factors that affect the perceptual quality of that language utterance as opposed to the meaning of the utterance from the speaker [31,

23]. When a person's speech volume deviates from a typical range, talking either quite loudly or softly becomes a paralinguistic demand that affects the interpreter's work.

Lapteva [36] opines that paralinguistic includes the anatomical components that work in concert to produce language, the brain, the vocal cords, tongue, teeth, mouth, and lungs, whereas, in the case of sign language, the fingers, hands, arms, face, neck, and upper part of the body used by the sign language interpreter during interpretation. Each of these anatomical structures and their functioning contribute to what eventually meets the eyes and ears of the interpreter and, in general, may affect the interpretation process, which will have an adverse effect on the listener. In addition, many linguistic factors eventually influence the task of interpretation. They include the language fluency of the parties involved in the communication exchange, the clarity in articulation or signing, and the interpreter's knowledge and fluency in each language [31, 23].

Additionally, there may be issues with the individual speaker that can affect the quality of interpretation. This is particularly prevalent in consecutive, simultaneous, or face-to-face interpreting scenarios. For example, according to Chernov [37], difficulties can arise when the speaker's audio equipment malfunctions, he/she speaks too softly or speaks too quickly for the interpreter to comprehend and translate into sign language. This can lead to delays and even result in the interpreter forgetting important information for the deaf audience. For example, an interpreter once said he was interpreting when suddenly, there was light out, giving a problematic environmental demand. The interpreter was quiet while sitting down; suddenly, the speaker abandoned the microphone, distressed and displaced from his presentation plan, and the lecturer began to speak faster and less organized, increasing the linguistic demand for the interpreter. At a point in time, the interpreter delayed the speaker's message and was experiencing what is known as lag time.

2.3.4. Intrapersonal Demands

In contrast, intrapersonal demands are those that come from within the interpreter and are significant enough to have an impact on their work. Examples of these demands include fatigue, hunger, cultural differences, power dynamics, cold, fear, and concerns about their performance. Unknown or undiscovered intrapersonal demands may affect an interpreter's objectivity during an interpretation [33]. The best way to characterize intrapersonal needs is as unique to the cognitive, physiological, and psychological experiences of the interpreter. Examples include physical discomfort, hunger, exhaustion, and the interpreter's attitudes or ideas about their profession [33].

An interpreter may be concerned about a number of things when working on a project, including safety, performance, and liability, according to Dean and Pollard [31]. The relationships and interactions among the participants in the conversation as well as the interpreter's emotions and ideas can also affect how well the translation is conveyed. An

international study of sign language interpreter disposition was carried out by Bontempo, Napier, Hayes and Brashear [4] in 38 nations, primarily English-speaking nations like Australia, the US, UK, the Republic of Ireland, Canada, and New Zealand. However, interpreters were also represented from Finland, Belgium, France, The Netherlands, Malaysia, China, Colombia, Nigeria, Israel, Argentina, Austria, Spain, The Philippines, Poland, Nicaragua, Japan, Kenya, Switzerland, Malta, South Africa, Ireland, Singapore, Norway, Germany, Brazil, Ghana, Sweden, Venezuela, Korea, and Greece. Using the survey creation tool Survey Monkey (in English), a web-based questionnaire was developed. It contained 22 questions to gather information on demographics, linguistics, training and certification, and assessments of perceived ability. Additionally, a Likert scale with five options was provided for the responders to choose from. It is the largest ever international study on the characteristics of sign language interpreters. The goal of the study was to pinpoint the personality characteristics of interpreters that might be indicative of their occupational performance. Using the survey creation tool Survey Monkey (in English), a web-based questionnaire was developed. It contained 22 questions that required respondents to choose an answer from one of five options on a Likert scale in order to gather demographic, language, certification, and ratings of perceived competence data. Two thousand one hundred ninety-three people responded to the survey, including both deaf and hearing signed language interpreters.

The study's conclusions showed that sign language interpreters should have a high level of confidence and good general mental ability. They also scored highly on self-esteem, conscientiousness, emotional stability, and openness, which are all good indicators of their ability to make wise decisions when interpreting. The study also determined that the most significant predictors of interpretation success are intrapersonal characteristics. Atkinson and Crezee [2] emphasize the significance of self-efficacy in interpreting, particularly in light of how it influences the behavior and decisions of student-interpreters. But no proof is shown to back up the effectiveness of this strategy. According to Camayd-Freixas [38], translators cannot properly translate into a target language unless they have determined the meaning of an incoming message or source message. In fact, as processing times are shorter, there are more misunderstandings, which affects how well the deaf are able to communicate. According to Brandt [5], many deaf and hard-of-hearing students become frustrated by this timing gap and come to believe that they are unable to fully participate in group and class conversations while using an interpreter.

Fairclough [39] attests that ample evidence exists that interpretation in the classroom is not always clear or ideal because they may have internal factors influencing the decision-making. Interpreters suffer as content becomes more complex and specialized. They only give out what they can remember but are not content-specific. Although the subject matter is a significant consideration, interpreters might often

be subscribed to courses with little regard for their background in these subjects; it greatly affects the quality of messages sent to the deaf. Marschark, Shaver, Nagle, & Newman [40] believe that college students have shown that hearing students' comprehension of a lecture is significantly greater than deaf students who rely on interpreters.

3. Methodology

3.1. Research Design

The researcher used explanatory sequential design to investigate the Demands of sign language interpreters at the University of Education, Winneba. According to Creswell & Clark [41], in sequential explanatory design, the researcher first conducts quantitative research, analyses the results, and then builds on the results to explain them in more detail with qualitative research. Creswell & Clark added that it is considered explanatory because the initial quantitative data results are explained further with the qualitative data. Again, it is considered sequential because the qualitative phase follows the initial quantitative phase.

Explanatory sequential design is a two-phase design. First, the researcher focuses on a qualitative approach to explain quantitative results. The qualitative study rests on the quantitative results; quantitative data collection is the priority. This mixed design first collects and analyses quantitative data, identifying specific quantitative results that need additional explanation.

3.2. Population and Sample Size

The population for the study was 14 interpreters. The study population was comprised of all sign language interpreters at UEW. This University was chosen for the study because it is the only institution that offers special education at the degree level, has a course in sign language and employs sign language interpreters to interpret for the deaf and hard-of-hearing students. The sample size for the study was 8 sign language interpreters. The sample comprises five (5) males and 3 females aged between 25 and 40. 1- Permanent interpreter, 4 - national service personnel and 3 completed service personnel who have been assigned as sign language interpreters from the Department of Special Education at UEW.

3.3. Sampling Technique

Purposeful sampling techniques were used to select the study's sign language interpreters. According to Creswell [42], purposeful sampling is a qualitative procedure in which researchers intentionally select individuals and sites to learn or understand the fundamental phenomenon. Moreover, Creswell maintained that the sample could provide useful information for answering the research questions.

The researcher chose purposive sampling because the respondents involved in the study were the specific people from whom data required for the study could be acquired. Denscombe [43] contended that in purposive sampling, specific settings, persons or events are deliberately selected for information which otherwise could not be obtained elsewhere. However, Gentles, Charles, Ploeg and McKibbon [44] point out that qualitative and quantitative research generally depend on the purposive selection of participants. These participants are selected so that they can provide rich data concerning the research topic. The researcher tries to build up a sample acceptable to their specific needs. For example, the sign language interpreters were purposefully selected for the research to talk about the Demands of their experiences at UEW.

3.4. Instrumentation

The instruments used for the study were a self-designed questionnaire and an interview guide. The choice of instruments was necessary since the study was a sequential explanatory design that required detailed information from a natural classroom setting. The researcher constructed research instruments that involved an in-depth investigation of the problem, ensuring the credibility of the findings. The researcher goes directly to the particular setting where he is interested in collecting data. The researcher personally went to the University of Education, Winneba to administer questionnaires and interview sign language interpreters on their demands during an interpreting assignment..

3.5. Data Analyses

The statistical reliability of the questionnaires was extracted using SPSS, Cronbach's Alpha is a convenient test used to measure the internal consistency or reliability of a set of data scores [45]. The computed Cronbach's Alpha value of the reliability coefficient was 0.74, which is greater than the standard Cronbach's Alpha value set at 0.70. This shows that the questionnaires can be described as valid and reliable.

This study used descriptive statistical methods involving simple percentages and tables to analyze the data collected. Semi-structured interview guides and questionnaires were analyzed item by item and arranged under various sub-headings both qualitatively and quantitatively.

4. Results and Discussions

What are the Demands faced by Sign Language Interpreters at UEW?

To answer this Research Question One, the following four themes were derived:

1. Environmental demands
2. Interpersonal demands
3. Paralinguistic demands
4. Intrapersonal demands

4.1. Quantitative Analysis

Besides, to describe the Demands of the interpreters, at UEW means and standard deviation were used to analyze the responses of the items of the comments to Research Question One. Table 1 shows the results of the descriptive statistics of

the Demands of the interpreters.

Table 1. Descriptive statistics of Demands faced by interpreters.

S/N	Item	N	Mean	Std. Dev.
	Environmental demands			
1.	The accent of the speaker affect the interpretation process.	8	3.40	.632
2.	A favorable room temperature is need when signing at the lecture hall.	8	3.47	.516
3.	Good ventilation and lighting system enhances the interpretation process.	8	3.53	.516
	Mean of means	8	3.47	0.555
	Interpersonal demands			
4.	Interpreters need to possess excellent knowledge of all languages they work with.	8	3.53	.516
5.	Interpreters should have good rapport with the speaker and the consumers.	8	3.60	.507
6.	Position yourself at a place where you can see your client.	8	3.53	.640
	Mean of means	8	3.55	0.555
	Paralinguistic demands			
7.	The use of technical vocabularies by the speaker at lectures affect the signing skills of the interpreter.	8	3.40	.632
8.	How slow or fast the speaker speaks affect the signing skills of the interpreter.	8	3.60	.507
9.	The voice volume of the speaker affects the interpreters' signing skills in the communication process.	8	3.33	.488
	Mean of means	8	3.43	0.542
	Intrapersonal demands			
10.	I get worried if there is visual noise interfering with my signing receptive comprehension.	15	3.13	.834
11.	Interpreting for long hours affect the quality of message the interpreter gives out.	15	3.60	.507
12.	I feel uneasy when I am aware of making interpreting errors.	15	3.47	.516
	Mean of means	15	3.40	0.619
	Overall Mean of means	15	3.47	0.568

The table shows the descriptive statistics of the demands faced by interpreters in the discharge of their duty. The results showed that the respondents generally expressed that they strongly agreed (M = 3.47, SD = 0.568) to all statements on the demands facing them. This is shown by the overall mean of means which lies in the cut-off point for strongly agree.

This means that, in total, the interpreters have confronting demands. Specifically, the respondents strongly agreed with all components of demand; Environmental demands (M = 3.47, SD = 0.555), Interpersonal demands (M = 3.55, SD = 0.555), Paralinguistic demands (M = 3.43, SD = 0.542) and Intrapersonal demands (M = 3.40, SD = 0.619).

4.2. Thematic Analysis of Qualitative Data

Sign language interpreters (SLI1-8) have expressed strong concerns about the obstacles or barriers they encountered, which adversely affect the message quality they pass on to their consumers.

4.2.1. Environmental Demands

From the statements of the Sign Language Interpreters (SLI), it was revealed that the environment has an adverse effect on the quality of the message given to deaf consumers: The speaker's accent, room temperature and the lighting quality. For instance, three of the interpreter remarked as follows:

SLI: 1. "Even though I have been interpreting for years, I have signed words wrongly because of the speaker's accent, especially when the speaker is from the Northern or the Volta part of Ghana".

SLI: 4. "At times, I am not clear with certain pronunciations made by the speaker. This affects my interpreting work".

SLI: 5. "I also interpreted in a class where the speaker was a foreigner. It was not easy to sign the technical words correctly. Even though I heard it, how it was pronounced differed from what I signed. Others were written on the board, but I realized I had signed them wrongly. So I continue with the interpretation till the end of the lecture. In fact, I felt bad that day because most of my comprehension skills were wrong".

SLI: 7 "Sometimes you go for an assignment, and the public address system is placed a few distances from where you, the interpreter, sit. Most of the time am confused when the system is not functioning properly and it makes some irritating noise. I find it difficult to listen to the speaker and participate in the interpreting process. It distracts my work".

Another interpreter also said:

SLI 3: "I had an assignment in one of the Art classes where the windows were fitted with sliding glasses. Though it was opened, ventilation and lighting were poor. At a point I have to wipe my face consistently while the speaker spoke and I was sitting very close to the deaf because the class was not spacious".

Another interpreter also said:

SLI 1: "I attended a lecture, and it was done in PowerPoint. I observed that most of the time the deaf ignored watching me, but rather their attention was on what had been projected whiles the lecturer explained from one slide to the other using speech".

All the interpreters also indicated that they enjoy their work as interpreters at the University. However, they stressed that the environment poses a difficult task to their work.

Two respondents said:

SLI 6: "I have no problem at all in the university because I get to the lecture hall and do my interpreting work. I don't

care much about what I see".

SLI 2: "As for me, no matter how the lecturer speaks, I am able to reach out to the deaf and accomplish my as an interpreter".

4.2.2. Interpersonal Demands

Participants were also allowed to express their experiences on interpersonal demands as they worked in an educational setting. The interpreters gave mixed expressions since different interpreters had different encounters during an interpreting assignment.

Three respondents said that:

SLI: 1: "Sometimes, I am faced with a situation where a lecturer has power over the interpretation process. For instance during an interpretation, a lecturer may ask you not to sign what has been said, in a case where information will negatively affect the listeners".

SLI: 8 "I was interpreting when a deaf student said the signing was full of English. He was reluctantly watching me whiles I interpreted. This adversely affected the communication process".

SLI: 5 "At times, a deaf student may be late but prefer to be at the far end of the class `without alerting you to the interpreter".

One interpreter responded:

SLI: 3 "As for me, most lectures are friendly towards us; sometimes they give us free ride after class and try to learn more about sign language".

One interpreter responded:

SLI: 2 "One thing I don't feel comfortable with is that some lecturers do direct questions to you, the interpreter, rather than asking the deaf to answer the question".

Another interpreter responded:

SLI: 1 "At times, a lecture may start classes late, he starts the lesson without showing any acknowledgement to you, the interpreter likewise greeting, but start lecturing in a faster mood".

Also, another interpreter responded:

SLI: 7 "Most often, I video call or send text messages to the deaf students when I realize they are late for classes. I reserve seats for them and position myself where they can easily see me".

4.2.3. Paralinguistic Demands

Another key issue explored in this study was discovering experiences of Paralinguistic demands that hinder the work of sign language interpreters. The interpreters' offered varied expressions since different interpreters had different encounters during an interpreting assignments. On the issue of whether interpreters have difficulty signing the technical words used by the speaker in the teaching and learning process. One interpreter said this:

SLI 8 "I always face difficulties interpreting in lessons like information and communication technology and mathematics. Sometimes the technical words used are very difficult to sign, and they are new to me".

Another interpreter said:

SLI 5 "Also noted that it was challenging for him to

interpret scientific vocabulary in science subjects like Chemistry and Biology and information and communication technology".

Another interpreter said:

SLI: 2 "At times, I am not able to sign specific words because they are too technical, I don't even know the meaning of that word".

When interpreters were asked about their opinions on the pace of the speaker during classes' one interpreter said:

SLI: 6 "It is difficult to understand lecturers because some lecturers talk fast and I am left behind at a point. This makes it difficult for me to go along with the speaker during the interpretation process also, when the speaker speaks at a slower pace, it makes the interpretation very boring for me".

Another interpreter said this:

SLI: 3 "Sometimes these lecturers are so fast in class that when you try to pardon them some do not pardon but will tell you that they are working with time".

A comment from another was:

SLI: 1 "Most young lectures convey their lessons at a faster skip when doing power point presentation without considering the comprehension skills of the interpreter".

4.2.4. Intrapersonal Demands

Another key issue explored in this study was the Intrapersonal demands sign language interpreters experience when they are called to render an interpreting assignment at the lecture halls. The interpreters gave different accounts of their Intrapersonal demands and how they affected their interpretation work at the University. Most interpreters registered their dissatisfaction regarding negative comments from most lectures during classes. Two interpreters remarked this way:

SLI: 2, SLI: 6 "Many a times when you are at post a lecture will ask you the interpreter if you are signing the right message to the deaf. This makes you feel uncomfortable, and it also kills your confidence level".

SLI: 1, "during one of my assignments, a lecture was talking about a Muslim group in Nigeria who have kidnap some youth in a village and made a general statement that Muslims are very wicked; in fact, I felt uncomfortable because I was a Muslim and this real affected my interpretation that day, I did not give out my best I was distracted".

On the question about interpreting for long hours, the following were comments from the interpreters. First, one of the interpreters said:

SLI: 3 "sometimes when I interpret for more than an hour, I get tired and exhausted as a result of these I don't fully give out all the information from the speaker".

Another interpreter commented that:

SLI: 7 "My hands become weak, and I feel tired; most often I shorten the message and leave out other detailed information".

A third interpreter asserted that:

SLI: 5 "Most often, when I interpret for long hours, I

develop neck, shoulder and back pains; this really affects my work because I don't give out my best, I ignore other details just to relief me of the pains".

Another interpreter also said that:

SLI: 8 "Sometimes, working for long hours, I become stressed because I do a lot of brain work by processing information and then changing it to sign language. I become exhausted, and as a result, I give out few information and leave out other facts".

It was also evident that most often during an interpreting assignment, the interpreter makes interpreting errors during work.

Two of the interpreters said:

SLI: 3, SLI: 5 "Sometimes when you go for an interpreting assignment you do make mistakes but there is no time for you to do correction the correction. I keep it to myself and continue with the speaker's message".

Another interpreter also commented that:

SLI: 7 "Yes I do make errors whiles interpreting, but I only say to myself that nobody knows how to sign and there is nobody here to supervise my work. I continue with the interpretation".

Another interpreter also mentioned that:

SLI: 4 "I feel bad when I realized I have given the wrong information. I continue with the interpretation process without doing any corrections because there is no time I have to catch up with the speaker".

5. Discussions

The quantitative results in Table 1 revealed that interpreters are confronted with a lot of demands during interpretation. This was confirmed in the interview with the respondent, which revealed that the speaker's accent affects the interpretation process. The interview responses further revealed that sign language interpreters incorrectly signed words because they were unfamiliar with the speaker's accent or how the speaker pronounced a word. The result of the current study confirms Dean and Pollard [31], who indicated that the accent of the speaker, room temperature, chemicals and odours, seating arrangements, lighting quality and visual distractions in the environment has a negative influence on the quality of message interpreters give out to the deaf. Dean and Pollard further stress that sign language interpreters must work on such demands to make the interpretation more understandable to deaf consumers.

The study also found that large class sizes, lighting, ventilation and visual distractions influence interpreters' mental information processing. This is in line with Donovan [34], who states that it is important for educational interpreters to assume responsibility for ensuring a suitable physical environment for classroom interpretation. Such factors as lighting, seating, appropriate distance, and positioning for a comfortable and unobstructed view need to be addressed. He further states that interpreters should be decently dressed. This is in line with Grayson [46], who found that clothing acts as a backdrop upon which the deaf read the interpreter's signs. He further stressed that it was a good idea for sign language interpreters to wear a solid colour in contrast with the skin colour when signing. This helped the deaf audience to be more comfortable because they could easily read and understand the interpreter's signs. The researcher believes that most interpreters in classroom settings do not send the right information or sign the correct information to students who are deaf. As a result of the demands, interpreters have adverse effects on the quality of the message they pass on to the deaf resulting in poor performance in terms of academic work.

Again on Interpersonal demands, the results indicated that the relationship between the speaker and the listener plays a vital role in communication. The interview revealed that lectures have control over the interpretation process. Participants' responses indicated that lecturer generally has power over the entire communication process. For instance, during an interpretation, a lecturer may ask you the interpreter not to sign what has been said. This prevents the deaf student from having access to information. At times lecturers do direct questions to the interpreter rather than asking the deaf to answer the question, which creates discomfort for the interpreter and lowers the confidence level. This is in accordance with Valdés [47], who demonstrates that power dynamics bring about conflict between the interpreter and the speaker. The speaker always feels that the interpreters have no idea what has been said or taught and will always command the interpreter to do what he says. Finally, this may lead to misunderstanding between the interpreter and the speaker, affecting the entire message the interpreter gives. The researcher believes that sign language interpreters must establish a strong and effective collaboration between the people they work with and develop a positive attitude toward work.

On the issue of Paralinguistic demands, the results showed that most participants expressed the difficulties they encountered in signing some of the technical words lectures used during teaching. However, these interpreters are not conversant with such vocabulary because they have not gone through some of the courses they interpret. It was also noted that sometimes lecturers speak faster without considering the comprehension and the mental processes of the entire information that the interpreter changes to sign language, which requires more time and skills to perform. However, interpreters ignored the early message and immediately continued to be in line with the speaker. This brings about inconsistency in the communication process; the deaf students seem not to follow the entire communication. The findings correspond to Marschark, Shaver, Nagle and Newman [40] suggested that educational interpreters are unlikely to provide deaf students full access to instruction because some vocabularies are very technical and have no signs to explain. They concluded that many deaf students are denied access to understanding of what is being taught.

Again, Intrapersonal demands with a mean score of ($M = 3.40$, $SD = 0.619$) were recorded. Besides, the interview confirms that interpreters are confronted with intrapersonal demands when

they go for an interpreting assignment. On the issue of interpreting for long hours, the interview responses showed that most sign language interpreters, develop neck, shoulder and back pains when they sit or stand for long hours. It also came to light that interpreters become stressed, give out less information, and leave out other facts when they go for an assignment.

The result of the interview is supported by Flashcards [48], who is of the view that intrapersonal demands are internal feelings such as pains in the body, the neck regions and wrist pain, shoulder awkward position, hunger and emotional fatigue, affect the quality of message interpreter's gives out to the deaf during classes. Also, Bontempo, Napier, Hayes & Brashear [4] attest to the fact that sign language interpreters should have a high level of confidence, good general mental ability, good self-esteem, emotional stability, and openness are a strong position to succeed in making good judgment and decision making when interpreting. They further stated that intrapersonal factors are the highest predictive value on interpreter performance. The findings suggest that interpreters get tired, exhausted, and weak and often develop neck, shoulder and back pains from sitting or standing for long hours. Moreover, in their preference, interpreters overlook some of the speaker's messages and give out little information to the deaf because they feel weak and exhausted after sitting or standing for long hours at the lecture halls.

6. Recommendations

Based on the findings of the study, the following recommendations are made to improve the services provided by sign language interpreters in an inclusive setting:

Encouragement of professional development: The study highlights the need for sign language interpreters to upgrade their skills and knowledge in interpreting continuously. This can be achieved by providing opportunities for in-service training programs and attending workshops and conferences, both locally and internationally.

Employment of experienced sign language interpreters: The University should prioritize the employment and retention of experienced sign language interpreters to ensure the highest quality of services.

One-on-one supervision: Regular one-on-one supervision should be implemented to enhance the standards and ethics of the interpreting profession, providing sign language interpreters personalized guidance and feedback.

These recommendations aim to address the challenges sign language interpreters face in an inclusive setting and help improve the services they provide to children with hearing impairments.

Data Availability

As this study is a topic being led by the first author, the datasets generated and/or analyzed in the study are currently not publicly available, and this study is part of the topic but is available from the corresponding author upon reasonable request.

Conflict of Interest

There is no conflict of interest.

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