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The Current Status of Sign Language Interpretation for Hearing Impaired Students in Higher Education: A Small Scale Survey in Lahore

Mudassar Hussain *

Snober Bukhari †

Saira Riaz ‡

Corresponding Author: Snober Bukhari (MPhil Special Education Graduate, Department of Education, University of Management and Technology, Lahore, Punjab, Pakistan.

Email: Snoberbukari@gmail.com

Abstract: *This study investigated the current status of sign language interpretation for students with hearing impairments and the problems they face with interpretation in higher education in Lahore. A quantitative, descriptive approach was used. The population comprised students with hearing impairments in higher education; the sample included 40 students from different higher education institutes in Lahore, selected via convenience sampling. Data was collected via questionnaires: one section with demographic questions, and one with closed-ended questions for students. Most students agreed that using visual aids and the interpreter's signs simultaneously enhanced understanding, and they were satisfied with the pace, seating, explanations, opportunities to participate, and interpretation. They also agreed the interpreters gave feedback and clarified concepts. The research concluded visual aids and simultaneous interpreting optimize understanding for students with hearing impairments.*

Key Words: Sign Language Interpretation, Hearing Impairment, Higher Education, Visual Aids, Simultaneous Interpreting

Introduction

Speech and language are fundamental to human development and education. The use of speech is so common that we rarely take the time to define it (Sapir, 2004). It is essential that every child has a good understanding of speech in order to have a successful life and the development of speech plays a significant role in a child's social, emotional, and educational

development (Sapir, 2004). For students with hearing impairments, access to speech and language presents barriers that can significantly impact their education. Sign language interpretation serves as a vital accommodation to make academic content accessible for deaf and hard-of-hearing students (Bukhari, Butt, & Muhammad, 2021). However, the provision of sign language interpreting services in higher education

* Sign Language Interpreter, Department of Education, University of Management and Technology, Lahore, Punjab, Pakistan.

† M.Phil. Special Education Graduate, Department of Education, University of Management and Technology, Lahore, Punjab, Pakistan.

‡ M.Phil. Special Education Graduate, Department of Education, University of Management and Technology, Lahore, Punjab, Pakistan.

contexts faces a number of challenges. There remains a need to examine the current state of sign language interpretation for students with hearing impairments in higher education in order to identify strategies for improvement.

A considerable body of literature has examined sign language interpretation in educational settings. Marschark, Sapere, Seewagen, and Maltzen (2005) reviewed research on educational interpreting and concluded that simply providing access through interpreting services is not enough to guarantee academic success for deaf and hard-of-hearing students. They argued interpreters must be

highly qualified, work closely with teachers, and have knowledge of classroom discourse. A study by Kurz, Schick, and Hauser (2015) similarly emphasized the need for interpreters to collaborate with teachers and integrate interpretation with instructional goals. Smith (2013) also stressed the importance of collaboration, describing benefits such as interpreters gaining content knowledge when meeting with instructors.

Several studies have specifically investigated sign language interpretation at the postsecondary level.

Table 1

Author and Year	Major Findings
Napier and Rohan (2007)	Overall, deaf respondents were pleased with the interpreters' performance. Understanding the context of the situation being interpreted and maintaining a professional attitude were seen as the two most essential characteristics translators should possess. It was observed that the quality of individual interpreters varied.
Verwey-Jonker (2003)	Deaf respondents reported lacking awareness of the deaf community/culture, sign language interpretation, and difficult issue management. Adjusting the manner of signing, employing facial expressions and lip movements, and learning new signs via training were essential skills.
Hermans, Van Dijk, and Christoffels (2007)	No difference was found in quality between recently graduated and more experienced interpreters.
Wit and Sluis (2014)	Deaf respondents preferred interpreters who deliver faithful and understandable interpretations. Criteria varied based on setting like education, employment, and community. Deaf have limited awareness of interpreters' professional requirements; interpreters have limited insight into deaf expectations.
Gran and Kellett (2000)	Less than half of the interpreters performed at a minimally acceptable level for educational interpreting, indicating that many deaf children are denied full communication access in the classroom. Communication breakdowns occurred even when interpreters understood instructors, especially with unfamiliar material, visuals, and ambiguous descriptions. Sign language requires more visual-spatial detail than spoken communication.
Abbou (1994)	Students rated the printed or electronic file text saved for the purpose of after-class study as part of the speech-to-text service as more helpful than notes from a note-taker.
Stinson, Elliot, and Kelly (2017)	Both groups appreciate it if the interpreter advises them on how to organize the seating and coordinates the turn-taking.
Berge and Ytterhus (2015)	The interpreters' lack of Chinese Sign Language fluency might have contributed to the deaf viewers' lesser comprehension of the news
Xiao, Chen, and Palmer (2015)	

Author and Year	Major Findings
Julius Patrick (2007)	clips. Verbal and non-verbal communication strategies played a pivotal role in interpreting information.

In addition to perspectives on educational interpreting, prior studies have investigated specific practices interpreters can utilize to enhance learning. Smith (2013) described the benefits of visually representing concepts through drawing, gestures, and other techniques. Kurz and Langer (2004) explored strategies interpreters can use to clarify classroom discourse, such as rephrasing and examples. Kluwin and Stewart (1999) examined simultaneous communication, in which interpreters utilize sign language simultaneously with spoken English. Their findings indicated this method enhanced content transmission but had disadvantages such as increased cognitive load.

While existing research has provided valuable insights into sign language interpretation in postsecondary education, certain gaps remain. Few studies have specifically investigated the state of sign language interpretation services at colleges and universities in developing country contexts, where access to quality interpretation may be more limited. Research also tends to concentrate on interpreter or student perspectives in isolation. There is a need for research incorporating student viewpoints to provide a more holistic understanding of the strengths and weaknesses of current services. Additionally, prior studies have largely focused on interpreting practices without connecting findings to implications for interpreter training and professional development. Examining how insights can inform the preparation of interpreters for higher education settings represents a gap needing to be addressed.

The aim of this study is to examine the current state of sign language interpretation services for students with hearing impairments in higher education institutes in Pakistan. It incorporates the perspectives of both sign language interpreters and students who rely on interpretation access. The analysis focuses on

identifying challenges as well as examples of effective practice in order to derive implications for enhancing interpreter training and better meeting student needs. As a study situating analysis of sign language interpretation services within a developing world context and integrating viewpoints of both interpreters and service recipients, it occupies a valuable niche.

The study was conducted to know about the current status of sign language interpretation for students with hearing impairment in higher education. The major objectives of the study were the following. This study aimed to determine the challenges faced by students with hearing impairments in higher education when it comes to sign language interpretation. In addition, this study aimed to determine the level of satisfaction of students with hearing impairments with regard to sign language interpretation at the higher education level.

The current study emphasises the state of sign language interpreting today and the difficulties sign language interpreters encounter. Additionally, the study focuses on the difficulties that hearing-impaired students experience when learning at a higher level.

The study had certain limitations like there was no standardised instrument available, thus researchers had to create their own questionnaire. Consequently, results may be cautiously generalised. The study has the following delimitations: The sample size was reduced to 40 higher education students with hearing impairment due to a lack of resources. The study's geographic scope was also delimited to the district of Lahore.

Methods

The methodology describes how we conduct our research (Hartas, 2010). This study aimed to investigate the use of sign language interpretation for students with hearing

impairments in higher education. The present research aimed to explore the opinion of students with hearing impairment about problems faced by them in interpretation at the higher education level. The type of research is descriptive in its nature.

A population refers to a 'well-defined' group of humans or other entities to which the researcher wishes to generalize the results of their study (Akram, Butt, & Muhammad, 2022). The population of the study included students with hearing impairment from higher education institutes in Lahore city. The researchers used a convenient sampling technique for the selection of the sample. Researchers selected sign language interpreters serving students with hearing impairment in higher education institutes from Lahore city. Researchers had a sample of 40 students with hearing impairment by using a convenient sampling technique.

The researchers used a 'convenient sampling technique' (Obilor, 2023) in this study. The sample of the present study was taken from 2 universities in Lahore city. The sample consisted of the opinion of students with hearing impairment from the following universities: the University of the Punjab Lahore and the University of Management & Technology Lahore.

Choosing the appropriate instrument depends on the nature of the problem to be addressed (Roopa & Rani, 2012). The tool for the purpose of data collection was a questionnaire (Boynton & Greenhalgh, 2004; Gillham, 2008). The questionnaire was developed by keeping in view the conceptual framework (Jenn, 2006; Lydeard, 1991; Yaddanapudi & Yaddanapudi, 2019). The study was primarily concerned with sign language interpretation for students with hearing impairments in higher education.

The questionnaire developed to collect the data had 2 parts. The first part of the questionnaire consists of demographic information about the sign language interpreter's name, experience, institute, designation, and qualification, along with information about students, including name,

class, gender, and institute name. The format of the questionnaire was closed-ended. The second part of the first questionnaire consisted of 20 statements, and response options were open-ended with response options "Yes," "No," and "To some extent."

For the purpose of collecting relevant literature, the researchers consulted the Department of Special Education at the University of Punjab in Lahore, the Web, the main library at the University of the Punjab in Lahore, and the library at the University of Management and Technology in Lahore. Having defined the objectives of the study and reviewed the literature, the researchers developed a self-made questionnaire for data collection. The population of the study was sign language interpreters serving students with hearing impairments in higher education institutes. The first researcher obtained a list of students with hearing impairments. Afterwards, the first researcher obtained permission from the institute's head and approached students with hearing impairments to collect data. The researcher personally collected the data. After data collection, the first researcher coded the data using a coding scheme with the following values: 0=No, 1=To some extent, and 2=Yes.

The data collection was made through the questionnaire, which was personally presented to students with hearing impairment. The first researcher collected the data personally, and the return rate was 100%. Analysing data collected through data collection tools involves presenting and analysing the information (Farooq, Muhammad, & Mahmood, 2023). SPSS was used to tabulate and analyse the data after it was collected. Results, findings, conclusions, and recommendations have been presented in the following sections.

Results

In this section, the results of a questionnaire are presented and analyzed. In this section, data was analyzed. Instruments were developed by the researcher. In this section, the results of the analysis of the data are presented. The results of data analysis with tables and their

interpretations are given in two sections: In the first section, demographic information is presented, and in the second section, the results of item-1-20 of the questionnaire are presented.

In terms of gender, the majority of respondents (80%) were male, and 20% were female. Regarding the age of the students, the majority (62.5%) of respondents were 20 to 25

years of age, 25% were 26 to 30, and 12.5% were 31 to 35 years of age. Regarding the qualification of the students, the majority of respondents (62.5%) had MA in Special Education, 22.5% had BS in Special Needs Education, 10% had BFA, and 5% had M. Phil Special Education qualifications. In terms of Institutes, the majority of respondents (65%) were from UMT, and 35% were from PU.

Item 1. Are you taught basic signs to be used in lectures before the class?

Table 2

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	15	37.5	37.5
To some extent	13	32.5	70.0
Yes	12	30.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (37.5%) responded as

no, 32% to some extent, and 30% as yes in response to the above-asked question.

Item 2. Does the interpreter discuss signs of terminologies in the upcoming lecture with you?

Table 3

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	25	62.5	62.5
To some extent	12	30.0	92.5
Yes	3	7.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (62.5%) responded as

no, 30% to some extent, and 7.5% as yes in response to the above-asked question.

Item 3. Do the AV aids help you with a better understanding of the concept taught?

Table 4

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	3	7.5	7.5
To some extent	2	5.0	12.5
Yes	35	87.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (87.5%) responded as

yes, 7.5% as no, and 5% to some extent in response to the above-asked question.

Item 4. Do you manage the interpreter's signs and the teacher's AV aids at a time?

Table 5

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	3	7.5	7.5
To some extent	12	30.0	37.5
Yes	25	62.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (62.5%) responded as yes, 30% to some extent, and 7.5% as no in response to the above-asked question.

Item 5. Is the adapted curriculum according to your special needs?

Table 6

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	13	32.5	32.5
To some extent	5	12.5	45.0
Yes	22	55.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (55%) responded as no, 32.5% as no and 7.5% as yes, and 12.5% to some extent in response to the above-asked question.

Item 6. Is the pace of Interpretation according to your understanding level?

Table 7

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	8	20.0	20.0
To some extent	2	5.0	25.0
Yes	30	75.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (75%) responded as yes, 20% as no, and 5% to some extent in response to the above-asked question.

Item 7. Are you satisfied with your seating arrangement in class?

Table 8

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	1	2.5	2.5
Yes	39	97.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (97.5%) responded as yes, and 2.5% as no in response to the above-asked question.

Item 8. Does the interpreter explain each point of the lecture?

Table 9

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	6	15.0	15.0
To some extent	12	30.0	45.0
Yes	22	55.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (55%) responded as yes, 30% to some extent, and 15% as no in response to the above-asked question.

Item 9. Does the interpreter restate questions during the exam?

Table 10

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	7	17.5	17.5
To some extent	1	2.5	20.0
Yes	32	80.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (80%) responded as yes, 17% as no, and 2.5% as to some extent in response to the above-asked question.

Item 10. Does the interpreter give you opportunities for your active participation in class?

Table 11

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	6	15.0	15.0
To some extent	3	7.5	22.5
Yes	31	77.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (77.5%) responded as yes, 15% as no, and 7.5% as to some extent in response to the above-asked question.

Item 11. Do the interpreter's signs match your signs?

Table 12

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	8	20.0	20.0
To some extent	1	2.5	22.5
Yes	31	77.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (77.5%) responded as yes, 20% as no, and 2.5% to some extent in response to the above-asked question.

Item 12. Does your interpreter point out the important words on the board?

Table 13

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	7	17.5	17.5
To some extent	8	20.0	37.5
Yes	25	62.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (62.5%) responded as yes, 20% to some extent, and 17.5% as no in response to the above-asked question.

Item 13. Does the teacher consider you a part of the class?

Table 14

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	4	10.0	10.0
To some extent	4	10.0	20.0
Yes	32	80.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (80%) responded as yes, 10% as no, and 10% to some extent in response to the above-asked question.

Item 14. Does the interpreter give you feedback on educational performance?

Table 15

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	7	17.5	17.5
To some extent	2	5.0	22.5
Yes	31	77.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (77.5%) responded as yes, 17.5% as no, and 5% to some extent in response to the above-asked question.

Item 15. Is your interpreter an expert in PSL?

Table 16

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	9	22.5	22.5
To some extent	3	7.5	30.0
Yes	28	70.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (70%) responded as yes, 22.5% as no, and 7.5% as to some extent in response to the above-asked question.

Item 16. Does the interpreter restate any point for you which is not understood by you during class?

Table 17

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	7	17.5	17.5
To some extent	2	5.0	22.5
Yes	31	77.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (77.5%) responded as yes, 17.5% as no, and 5% to some extent in response to the above-asked question.

Item 17. Does the interpreter teach basic signs to hearing peers for better peer-to-peer interaction?

Table 18

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	8	20.0	20.0
To some extent	4	10.0	30.0
Yes	28	70.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (70%) responded as yes, 20% as no, and 10% to some extent in response to the above-asked question.

Item 18. Is an interpreter available to help you with your academic concerns other than class?

Table 19

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	7	17.5	17.5
To some extent	2	5.0	22.5
Yes	31	77.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (77.5%) responded as yes, 17.5% as no, and 5% to some extent in response to the above-asked question.

Item 19. Is the interpreter available for activities other than class, such as seminars and field visits?

Table 20

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	6	15.0	15.0
To some extent	1	2.5	17.5
Yes	33	82.5	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (82.5%) responded as yes, 15% as no, and 2.5% to some extent in response to the above-asked question.

Item 20. Do you feel improvement in your educational skills with the help of an interpreter facility?

Table 21

Answers to the above Statement by Frequency

Responses	Frequency	%	Cumulative %
No	2	5.0	5.0
To some extent	4	10.0	15.0
Yes	34	85.0	100.0
Total	40	100.0	

In response to the above-asked question, the majority of respondents (85%) responded as yes, 10% to some extent, and 5% as no in response to the above-asked question.

Discussion & Conclusion

Researchers conducted this study to investigate sign language interpretation at higher education levels for students with hearing impairments. This study intended to examine the current state of sign language interpretation and feedback from students with hearing impairments, as well as the problems encountered by both students and their interpreters. This was a descriptive research study and a total of 40 students were included in the study. The instrument of the study was based on questionnaires that were used for collecting from different institutes. The major findings of the study can be summarised as:

1. The majority (80%) of respondents were male.
2. More than half of respondents (62.5%) were 20 to 25 years of age.
3. More than half of the respondents (62.5%) had MA Special Education qualifications.
4. The majority of respondents (65%) were from UMT.
5. Some of the respondents (37.5%) responded as not teaching basic signs to be used in lectures before the class.
6. More than half of respondents (62.5%) responded as no about the interpreter's discussion of signs related to terminologies of the upcoming lecture.
7. The majority of respondents (87.5%) responded yes when asked about to use of AV aids for a better understanding of the concept to be taught.
8. More than half of respondents (62.5%) responded as yes about managing the interpreter's signs and teacher's AV aids at the same time.
9. More than half of respondents (55%) responded as not when asked about the provision of an adapted curriculum according to their special needs.
10. The majority of respondents (75%) responded yes about the pace of Interpretation according to their understanding level.
11. The majority of respondents (97.5%) responded yes; they were satisfied with the seating arrangement in class.
12. More than half of the respondents (55%) responded yes, and the interpreter explained each point of the lecture.
13. The majority of respondents (80%) responded stated that yes, the interpreter restated questions during the exam.
14. The majority of respondents (77.5%) responded as yes about the opportunities given by interpreters for active participation in class.
15. The majority of respondents (77.5%) responded as yes that the interpreter's sign matches their signs.
16. More than half of respondents (62.5%) responded as yes that interpreter

pointed out the important words on the board.

17. The majority of respondents (80%) responded as yes that the teacher considers them a part of the class.
18. The majority of respondents (77.5%) responded as yes that the interpreter gives them feedback on educational performance.
19. The majority of respondents (70%) responded as yes that their interpreter is an expert in PSL.
20. The majority of respondents (70%) responded as yes about restating any point for them by the interpreter, which is not understandable during class.
21. Most respondents (77.5%) indicated that the interpreter teaches basic signs to peers in order for them to communicate more effectively with one another.
22. As for the availability of an interpreter to assist with academic concerns other than class, the majority (82.5%) responded positively.
23. The majority of respondents (85%) responded as yes about the availability of interpreters for activities other than class, such as seminars and field visits.
24. Over 85% of respondents indicated that using an interpretation service improved their educational skills.

The research concludes that most of the students had a consensus that the use of AV aids is beneficial for a better understanding of the concepts; the use of the teacher's AV aids and interpreter's signs at the same time will help to enhance the understanding. They were satisfied with the pace of the Interpretation, seating arrangement in class, explanations of key points of the lecture by the interpreter, opportunities given by the interpreter for active participation in class, and Interpretation of important words written on the board by an interpreter. They also had a consensus about the feedback given by interpreters on educational performance and restatement of

any point for them by the interpreter, which is not understandable during class.

They argued that the availability of interpreters other than class, such as seminars and field visits, is helpful for them in their academic concerns along with the improvement in their educational skills with the help of an interpreter facility. No about the teaching of basic signs to be used in a lecture before the class. The respondents sowed their reservations about the interpreter's discussion of signs related to terminologies of the upcoming lecture, along with the provision of an adapted curriculum according to your special needs.

Recommendations

On the basis of the analysis of the data and findings, the researcher suggested the following recommendations for sign language interpretation for students with hearing impairment. Having incorporated these recommendations along with other measures will help to develop an inclusive practice for students with hearing impairment (Amjad & Muhammad, [2019](#); Iqbal & Muhammad, [2020](#); Tahira, Muhammad, & Masood, [2020](#)).

1. Measures should be taken for improvement regarding sign language interpretation for students with hearing impairment in the form of books of signs related to higher education terminology.
2. Interpreters should be made signs for different terminologies which are used in special education with the help of American Sign Language.
3. A standardized sign language interpretation curriculum should be introduced at higher educational levels for sign language interpreters.
4. There should be certain mechanisms to check the performance of sign language interpreters.
5. Measures should be taken to increase the number of sign language interpreters at higher education levels.

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