

CONTRIBUTION OF VISUAL SUPPORT STRATEGIES TO ENHANCE THE EXPRESSIVE LANGUAGE SKILLS OF STUDENTS WITH HEARING IMPAIRMENT

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Abstract

Students with Hearing Impairment predominantly rely on their visual senses to comprehend and interact with their surroundings. To investigate the contribution of visual support strategies to enhance the Expressive Language Skills of students with Hearing Impairment, the study utilized a mixed method research design targeting 73 students, 42 teachers, 7 heads of institutions, and 5 Educational Assessment and Resource Centre (EARC) officers. The study was guided by Social Learning Theory by Albert Bandura. Questionnaires, interview guides, and observation checklists were used to collect data. Face and content validation were conducted, and the reliability of instruments was assessed using Cronbach's Alpha (.8493). Quantitative data were analyzed using descriptive statistics (means, frequencies, and standard deviations); inferential analysis was done through Pearson correlation. Qualitative data underwent thematic analysis and triangulation. Study findings indicated a statistically significant positive correlation between visual support strategies and expressive language skills development ($r = .528$; $p = .012$), demonstrating that visual support strategies enhance expression in students with Hearing Impairment. The study concluded that the expressive language skills development for students with hearing impairment would be limited without consistent integration of visual support strategies and continuous professional development of educators. It recommends that the Ministry of Education, through the Kenyan Institute of Curriculum Development (KICD), prioritize scaling up visual support strategies in the curriculum for students with Hearing Impairment to benefit.

Keywords: *visual support, expressive language, hearing impairment (HI), adaptive pedagogy, inclusive education, social learning theory*

Introduction

Students with hearing impairment (HI) often face significant challenges in developing expressive language skills due to limited access to auditory input. This limitation hinders their ability to articulate thoughts, emotions, and academic concepts, thereby affecting classroom participation, social interaction, and overall learning outcomes. In Kenya, the education sector continues to grapple with addressing the specific needs of learners with HI, who rely predominantly on visual cues for

communication and comprehension. Expressive language is the ability to convey ideas, emotions, and information. It is frequently delayed or impaired in this population, highlighting the urgent need for effective, visually grounded teaching and learning strategies.

Visual support strategies provide alternative modes of communication through the use of symbols, gestures, photographs, real objects, and pictorials. These tools enhance comprehension, sustain attention, and promote meaningful interaction

(Adeola & Mwangi, 2021). Hesham and Mohamed (2022) emphasize that pictorials aid in comprehension, reading, and motivation while clarifying written content. Thus, visual supports are not merely supplemental; they function as primary channels of communication that improve curriculum access, facilitate idea exchange, and strengthen learners' connection to their environment.

Research further underscores the visual learning orientation of students with HI. Birinci and Saricoban (2023) recommend instructional materials that align with their visual preferences, noting that cartooning and structured drawings make learning more engaging and improve comprehension (Duran, Temel, & Köse, 2021). Empirical studies consistently show that visual learning media enhance expressive language, memory retention, and learner motivation. For instance, a study in Turkey involving 80 students with HI revealed that visual materials were more effective than sign language alone in vocabulary development (Birinci & Saricoban, 2023). However, many of these studies have focused narrowly on vocabulary acquisition rather than broader expressive language skills.

The Picture Exchange Communication System (PECS), a structured visual strategy facilitating communication through picture-based exchanges, remains underexplored, particularly within African contexts. Luchivya, Omolo, and Onditi (2022) observe that learners with HI in Kenya face persistent communication barriers both in school and within their families, many of whom lack training in Kenyan Sign Language. Similarly, Mange, Macmbinji, and Mjomba (2023) found that although Kenyan educators employ visual cues to assist learners with HI and autism, implementation is inconsistent due to limited resources and

inadequate teacher training. In contrast, countries such as Spain have successfully integrated visual supports into both social and academic contexts, enhancing expressive and receptive communication (Giezen & Baker, 2021). These disparities highlight the need for localized research to identify effective, contextually relevant strategies in resource-constrained regions such as Migori County, Kenya.

Building on this gap, the present study investigates how structured visual support strategies, particularly those informed by the PECS framework, influence the development of expressive language skills among learners with HI in Migori County. It seeks to provide empirical evidence on the contribution of visual tools to expressive language, communication, and motivation, thereby informing teaching practices, curriculum design, and inclusive education policy in Kenya.

This study is further grounded in Bandura's Social Learning Theory, which emphasizes learning through observation, imitation, and modelling. For learners with HI, who depend primarily on visual input, observing peers and visual cues supports language acquisition. Visual aids such as pictorials, videos, and graphic illustrations act as stimuli that facilitate modelling and expression (Morin, 2023). Structured visual supports thus offer inclusive, interactive, and evidence-based approaches that empower learners with HI to communicate more effectively, bridging the gap left by traditional auditory or sign-based methods.

Research Methodology

The study adopted a descriptive survey design, suitable for capturing and describing the characteristics, behaviors, and perceptions of a specific population without manipulating variables (Derry-Vick, 2024). The design facilitated the

collection of quantitative and qualitative data, enabling a comprehensive understanding of how Visual support strategies contribute to the advancement of expressive language skills of students with hearing impairment.

The study targeted a population of 131 individuals, 73 students with hearing impairment at the Grade 6 level, 46 special needs education teachers, 7 heads of institutions, and 5 Education Assessment and Resource Centre (EARC) officers. The Grade 6 cohort was purposively selected because this stage is critical in language and cognitive development, where expressive language proficiency is essential for academic and social functioning (Fernández-Gavira, Ruiz, & Pérez-Pueyo, 2021). Given the relatively small and specialized population of learners with hearing impairment in Migori County, affected by factors such as low enrolment, resource limitations, and geographical distribution, purposive sampling was considered both appropriate and adequate for ensuring meaningful representation of key stakeholders (Nyimbili & Nyimbili, 2024). It ensured that only participants directly involved in the use, implementation, and evaluation of visual support strategies were included. It allowed the researcher to capture in-depth, context-specific insights from individuals with relevant experiences. The results were therefore best interpreted as indicative rather than definitive, offering a detailed understanding of practices within Migori County than broad generalizations to other contexts. The sample size was therefore determined based on accessibility, population homogeneity, and the need to capture multiple perspectives from educators, administrators, and learners directly involved in visual support practices.

To collect relevant data, the study employed structured questionnaires, interview guides, and

observation checklists as research instruments. The questionnaires, administered to both teachers and students, consisted primarily of closed-ended items focused on the use of pictorials, video clips, and facial expressions. The structured format enabled the collection of quantitative data suitable for statistical analysis of trends and frequencies. The interview guide, used with heads of institutions and EARC officers, contained both structured and open-ended questions, allowing respondents to elaborate on their experiences and perceptions regarding the implementation and outcomes of visual strategies. This approach provided deeper insights into contextual factors not captured by the questionnaires (Barrett & Twycross, 2018). Additionally, an observation checklist was used during classroom sessions to document learners' expressive language behaviors, such as symbol selection, use of visuals, initiation of communication, and response to prompts, under natural learning conditions.

To ensure validity, experts from the Department of Educational Psychology and Science at Rongo University reviewed all instruments for content and face validity, ensuring consistency with the study objectives. Following Hartley (2019), internal consistency reliability was established through a pilot test involving a comparable group of respondents. The Spearman's Rank Order Correlation yielded a reliability coefficient of .849, indicating high internal reliability of the instruments.

Questionnaires were administered in a controlled environment, allowing participants sufficient time to respond independently. Semi-structured interviews with head teachers and EARC officers were conducted in neutral, distraction-free settings to encourage openness. Each interview lasted approximately 20–30 minutes. These participants

were included because of their strategic roles in implementing communication programs and their practical knowledge of inclusive education policies (McCay & White, 2019; Mbindyo & Kamau, 2020). Classroom observations were conducted during regular lessons to capture authentic interactions and learner behavior, with minimal researcher interference to maintain natural classroom dynamics.

Quantitative data obtained from questionnaires and checklists were systematically coded and analyzed using both descriptive statistics (frequencies and means) and inferential statistics, through the Statistical Package for the Social Sciences (SPSS). Qualitative data from interviews were analyzed thematically. Emerging patterns were identified, categorized based on recurring patterns relating to the effectiveness of visual strategies, teacher support, and learner motivation. Emerging themes were triangulated with quantitative data to validate the findings and ensure coherence of interpretations.

Ethical and procedural standards were strictly adhered to throughout the study, including securing approvals from educational authorities, obtaining informed consent, safeguarding confidentiality, and ensuring participant anonymity, respect, dignity and confidentiality. Participants were informed about their right to withdraw from the study and were assured that all information provided would be used solely for

academic purposes. Careful planning and scheduling of interviews was done, ensuring that necessary resources were available to facilitate proper and reliable data collection. Relevant permissions and informed consent were obtained prior to data collection. There was an assurance of participants' privacy, voluntary participation and the right to withdraw at any stage.

Careful planning and scheduling of interviews were done to minimize disruption to normal school routines. Data collection instruments were reviewed and approved by experts to ensure ethical soundness and research integrity. Despite yielding valuable insights, the study had several limitations including confinement to a limited geographical area (Migori County), relying on self-reported data from teachers and observations conducted within a specific timeframe which may have introduced response bias or observer bias, not including longitudinal tracking to assess the long-term impact of visual support strategies on expressive language development and the scope of digital tools used in classrooms which may have influenced the range of visual strategies observed.

Results and Discussions

The respondents were asked to provide their views on various aspects of visual support strategies by indicating their level of agreement with each statement, using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The results are summarized in Table 1

Table 1*Contribution of Visual support strategies on the Expressive Language Skills*

Contribution of Visual support strategies	R	RATINGS					M	SD
		1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)		
Pictorials used by teachers enhance expressive language skills	F	0	0	4	19	14	4.27	.652
	%	0.0	0.0	10.8	51.4	37.8		
Pictorials used by teachers enhance expressive language skills	F	0	0	0	11	26	4.70	.463
	%	0.0	0.0	0.0	29.7	70.3		
Appropriate facial expressions reflect competent communication	F	0	0	2	20	15	4.35	.588

As shown in Table 1, 89.2% of respondents agreed or strongly agreed that the use of pictorials during instruction enhances expressive language skills ($M = 4.27$, $SD = .652$). Similarly, all respondents (100%) agreed that video clips in the classroom help students with hearing impairment (HI) explore new ways of self-expression ($M = 4.70$, $SD = .463$). Most respondents (94.6%) also indicated that appropriate facial expressions contribute significantly to competent expressive communication ($M = 4.35$, $SD = .588$).

Interview data from Heads of Institutions (HOIs) and Educational Assessment and Resource Centre (EARC) officers supported these quantitative findings.

Sign language is widely recognized as the most natural and appropriate mode of communication and instruction for individuals who are deaf or hard of hearing as well as for students with hearing impairment. As teachers, we understand that these students not only express themselves well through sign language; they also improve their Expressive Language Skills when taught through pictorials. Thus, they understand and follow word spelling and meaning. [HOI, 3]

According to HOI 3, students with Hearing Impairment learn better when taught sign language, in a natural learning environment. This

was supported by Adeola and Mwangi (2021), who argued that textual visual aids enhance literacy and vocabulary acquisition by anchoring abstract concepts in visual form. Teachers reported that pictorials allow students to access meaning more readily and use the vocabulary in expressive contexts. In order to communicate effectively in writing with a learner with hearing impairment, it is important to use clear and concise writing and to avoid complex sentences or unnecessary jargon.

To shed further light on this issue, the EARC 2 formulated the following recommendations:

Sometimes, students with Hearing Impairment experience challenges encountering new words and vocabularies. Teachers, therefore, should provide pictorials related to the words to allow the learning of the words and help with the use of speech reading. Teachers can also use picture cues or signs to pin or write the new words in class, serving as a reminder of their definitions and context. These vocabularies enable students to express themselves freely, enhancing their Expressive Language Skills. [EARC, 2]

To ensure effective language development among students with hearing impairment (HI), classrooms should consistently introduce and reinforce a list of new words before, during, and after lessons, as recommended by EARC 2. This structured

approach helps learners build vocabulary and enhances comprehension. Thompson et al. (2022) affirm that visual media significantly contribute to the learning process by facilitating understanding, reinforcing memory, and sustaining students' interest in content. Birinci and Saricoban (2023) further concluded that incorporating visual materials, including written word lists, was more effective in enhancing language acquisition than relying solely on sign language without any visual reinforcement. Such strategies not only support vocabulary development but also promote active engagement and retention of information. Aligned with Bandura's Social Learning Theory, which emphasizes learning through observation and imitation, the use of written and visual materials supports the development of both language and communication skills, making it a valuable method for learners with HI.

In addition, 70.3 percent of respondents agreed that using video clips in the classroom enhances learning as well as help students with HI discover new ways to express themselves as shown in Table 1. The respondents strongly agreed that the use of video clips in the classroom during learning supports students with hearing impairment to develop various modes of self-expression having a mean rating of 4.70 and a standard deviation of .463.

To aid in the development of sign language, teachers should provide video recordings of effective sign language lessons, integrate sign language with visual aids during lessons, enable students with hearing impairment to regularly share and exchange with other students, instruct parents, close friends, and the community in sign language, and arrange more social activity days. [HOI, 1]

The perspectives presented in HOI 1 validate the effective use of other teaching and learning resources to supplement sign language instruction. Exposing students to other resources, such as video clips, accelerates their development of sign skills. Luchivya, Omolo, and Onditi (2022) supported the sentiment that students with Hearing Impairment face major obstacles in various areas such as education, health, culture, and social interactions. Students without hearing aids must learn to communicate through sign language. People who are close to students with hearing impairment face similar challenges when learning KSL because they find it difficult, expensive to learn and institutions where parents can learn are scarce.

Teachers use closed captioning videos in the classroom, providing a summary of the content and strands to cover in the video lessons. Videos are important and play a very important role before or after the lesson, allowing the students to pre-view and or re-view the content. However, findings by Kim, et. al., (2023) highlighted the importance of developing digital video applications for students with Hearing Impairment that prioritize speed, materials and image objects, font size and colour for text narration, and align with the content of learning materials to enhance students' understanding of both theory and practice. However, no response disagreed that the use of video clips in the classroom during learning supports students with Hearing Impairment to learn different ways of expression and communication. With the added benefit of being able to repeat or replay the content as many times as necessary until they master it, video clips can enable students with HI access content through a sign language interpreter.

EARC 1 shared the following observations:

Regardless of the students' language modality (spoken or signed), there is a need to have early access to and exposure to language in order to effectively develop and improve the Expressive Language Skills of these students. Developing appropriate and beneficial language and communication skills for students with HI is a significant concern. [EARC, 1]

Sign language interpreters, who often serve as the primary teachers for students with hearing impairment (HI), play a critical role as language models for these learners. Their proficiency in sign language directly influences how effectively students acquire and develop expressive language skills. When a teacher lacks adequate training or struggles to interpret educational content accurately, it sets a poor example for students, potentially leading to misunderstandings and miscommunication. A substandard interpreter not only hinders academic progress but also limits language development, thereby creating both academic and linguistic barriers for learners with HI. These challenges are not limited to the classroom. At home, particularly in rural settings where access to services is limited, parents often lack the necessary training or support to effectively communicate with their children who are deaf or hard of hearing. According to Mutuku and Mwangi (2022), for students with HI to succeed, it is essential that stakeholders, especially government and schools to invest in adequate resources,

teacher training, and funding to support inclusive and effective communication strategies.

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Table 2 presents findings from classroom observations, which corroborated the survey data indicating level of agreement, using a Likert scale ranging from 1 (Never), 2 (Seldom), 3 (Often), 4 (Sometimes) to 5 (Always).

Table 2*Observation checklist on Visual support strategies*

Visual support item	R	RATINGS					M	SD
		N (1)	S (2)	O (3)	ST (4)	A (5)		
Pictorials	F	0	1	0	0	4	4.40	1.342
	%	0.0	20.0	0.00	0.00	80.0		
Video clips	F	0	0	2	1	2	4.00	1.00
	%	0.0	0.0	40.0	20.0	40.0		
Facial Expression/ gesturing	F	0	0	0	1	4	4.80	.447
	%	0.0	0.0	0.0	20.0	80.0		

Among the various visual support strategies assessed in the study, video clips were consistently identified as the most impactful. All respondents (100%) strongly agreed that incorporating video content into teaching significantly helps students with hearing impairment discover new and alternative modes of expression ($M = 4.70$, $SD = .463$). This overwhelming consensus underscores the effectiveness of video-based learning in enhancing expressive language skills and facilitating deeper communication. Videos offer dynamic, multisensory input that can be paused, replayed, and adjusted to suit individual learning needs, making them an invaluable tool in special needs education.

Kim, et. al., (2023) affirmed that digital video applications featuring tailored elements such as captioning, narration speed control, and high-definition visuals improve both comprehension and memory retention among learners with hearing impairments. Similarly, Duran, Temel, and Köse (2021) emphasized that video-based instruction allows for repeated exposure to content, enabling students to reinforce what they have learned and build confidence in using language expressively.

Qualitative insights from Heads of Institutions (HOIs) and Educational Assessment and Resource Centre (EARC) officers further supported these quantitative findings. These stakeholders highlighted that integrating sign language with

visual aids including videos, still images, pictorials, and facial expressions created more engaging, immersive, and inclusive classroom environments. Such multimodal strategies were found to support not only comprehension and retention but also emotional expression and social interaction among students with hearing impairment.

Mutuku and Mwangi (2022) emphasized the importance of early exposure to multimodal language resources, particularly visual strategies, for learners in rural or underserved regions where professional support and instructional materials are often limited. Collectively, these findings underscore the importance of combining visual and linguistic tools to meet both the cognitive and communicative needs of learners with hearing impairments, ultimately promoting improved academic and social outcomes.

Observation data supported the survey responses, indicating frequent use of facial expressions (80%, $M = 4.80$), pictorials (80%, $M = 4.40$), and video clips (40%, $M = 4.00$). These findings underscore the value of multimodal visual strategies in supporting expressive language development. In alignment with social learning theory, showing that students acquire language when they observe, imitate, and interact with others (Thompson et al., 2022) the findings affirm that visual strategies are not supplementary but central to effective

communication instruction for students with hearing impairment.

The study also tested the relationship between visual support strategies and expressive language skills. The results are summarized in Table 3.

Table 3

Correlation between Visual Support Strategies and Expressive Language Skills

Variables	Statistical Test	Correlation (r)	α (2-tailed)	p-value
Visual Support Strategies → Expressive Language Skills	Pearson Correlation	.528	.05	.012

The findings presented in Table 3 illustrate the overall impact of visual support strategies on the expressive language skills of students with hearing impairment. Prior to analysis, assumptions of normality, linearity, and homoscedasticity were checked and found satisfactory for Pearson correlation. Results showed a moderate positive correlation ($r = .528$, $p = .012$) between the use of visual support strategies and expressive language development, indicating that the relationship is statistically significant ($p < .05$). This implies that increased and consistent use of visual supports corresponds to measurable improvements in expressive language skills among students with hearing impairment.

These findings align with the observations made by Thompson et al. (2022), who emphasized that visual media and supports are vital in the learning process as they enhance comprehension, reinforce memory, and arouse learners' interest. In classrooms, especially for learners with hearing impairment, teachers rely heavily on visual aids to support communication and understanding. They use visual cues to attract learners' attention and increase focus on instructional content. Additionally, they design and follow visual schedules that help learners anticipate classroom activities and prepare accordingly, which enhances their expressive language abilities (Mange, Macmbinji, & Mjomba, 2023).

Visual support strategies such as pictorials, diagrams, videos, real objects, and written texts act as bridges to communication for learners who do not fully rely on auditory cues. These tools help overcome barriers that impede students with hearing impairment from acquiring and using expressive language effectively. For example, pictorials enhance the clarity of written words, making abstract or complex information more understandable. By representing content visually, they help learners grasp the meaning of new vocabulary and improve their overall reading comprehension. Hesham and Mohamed (2022) emphasize that pictorials not only clarify information but also support learners in organizing thoughts, expressing emotions, and sharing ideas in ways that written text or speech alone may not allow.

Research by Birinci and Saricoban (2023) reinforces the idea that students with hearing impairment are predominantly visual learners. As such, learning materials that align with their visual strengths are highly effective in facilitating comprehension, memory retention, and language development. Structured visual support systems, such as visual schedules or storyboards, enhance students' ability to navigate academic tasks and articulate their thoughts clearly. Adeola and Mwangi (2021) elaborate on this by identifying common and effective visual aids, including sign language, photographs, icons, digital videos, and logos. These

aids foster an environment of inclusive learning, where students with hearing impairment can access curriculum content on equal footing with their peers.

In classrooms, visual support strategies are indispensable tools for scaffolding communication, especially where auditory cues are ineffective or absent. Written texts, when accompanied by images, can significantly improve comprehension and engagement. This multimodal approach allows students with hearing impairment to associate words with visual representations, enhancing their vocabulary acquisition and language use. According to Giezen and Baker (2021), incorporating pictorial aids into instruction enhances both language comprehension and social interaction among learners with diverse needs, including those with hearing impairment. However, it is important to note that their study focused more on mixed-ability learners and emphasized social skills rather than direct development of expressive language.

Students with hearing impairment often rely on visual attention mechanisms to process information. These strategies not only aid in focusing attention but also assist learners in forming associations between visual stimuli and linguistic expressions. Since sign language, while widely used, has limitations especially in conveying abstract or technical content, complementary strategies such as pictorials, video clips, and symbolic representations are essential (Hesham & Mohamed, 2022). These tools fill critical gaps in language comprehension and expression, particularly in educational settings where resources for teaching sign language effectively may be limited.

The necessity for visual strategies becomes even more pronounced in rural and under-resourced contexts, where specialized services for learners

with hearing impairment are often unavailable or inadequate. In such settings, reliance on easily accessible visual aids such as printed images, labelled objects, or simple video content can dramatically improve the quality of instruction and student outcomes. The integration of visual supports with classroom instruction is not only practical but also cost-effective, making it a scalable intervention for inclusive education.

The results of this study therefore provide empirical evidence that strongly supports the integration of visual support strategies in special needs education for learners with hearing impairment. When used systematically and intentionally, these strategies significantly enhance expressive language skills, promoting better classroom participation, academic achievement, and social interaction. Moreover, it emphasizes the need for policy interventions and teacher training to ensure these strategies are widely adopted and implemented effectively in diverse learning environments.

The data affirm the critical role of visual support strategies in fostering expressive language development among students with hearing impairment. From enhancing comprehension and memory to increasing student motivation and engagement, visual aids bridge communication gaps that would otherwise hinder the academic and social development of these learners. The findings call for broader implementation of visual support in instructional design and curriculum development to ensure inclusive and equitable education for all students.

Discussion

The findings demonstrate that visual support strategies, including pictorials, video clips, and facial expressions, play a critical role in facilitating expressive language development among students with hearing impairment. The strong agreement

among respondents and the statistically significant correlation affirm that visual supports improve comprehension, vocabulary growth, and communicative confidence.

The results are consistent with Adeola and Mwangi (2021), who noted that textual and pictorial visual aids enhance literacy and vocabulary acquisition by anchoring abstract concepts in visual form. Similarly, Thompson et al. (2022) found that visual media facilitate understanding, strengthen memory, and maintain learner engagement.

Qualitative insights further supported these quantitative results. Heads of Institutions (HOIs) and Educational Assessment and Resource Centre (EARC) officers emphasized that the integration of sign language with visual aids creates engaging and inclusive classroom environments. For instance, EARC 2 recommended the consistent introduction and reinforcement of vocabulary using pictorials and written cues, which enhance comprehension and expressive language use. This aligns with Bandura's Social Learning Theory, which underscores learning through observation and imitation as key mechanisms in language acquisition.

Among the various visual strategies assessed, video clips emerged as the most influential. Their flexibility, allowing replay, captioning, and slow-motion viewing, supports individualized learning. Kim et al. (2023) and Duran, Temel, and Köse (2021) similarly reported that video-based instruction enhances comprehension and retention for learners with hearing impairments by providing multisensory engagement.

However, as EARC 1 observed, the success of such interventions depends heavily on well-trained sign language interpreters and teachers who serve as language models. Mutuku and Mwangi (2022) echoed this by highlighting the need for adequate

training, resources, and institutional support to strengthen inclusive communication practices in both schools and communities.

The findings also support those of Birinci and Saricoban (2023), who concluded that learners with hearing impairment benefit most from multimodal visual approaches due to their visual learning strengths. In line with Giezen and Baker (2021), the study demonstrates that visual cues and pictorial aids significantly improve comprehension and social interaction, even though their research emphasized social rather than linguistic outcomes. This study provides empirical evidence that visual support strategies are not supplementary but essential tools for promoting expressive language skills among students with hearing impairment. They bridge communication gaps, enhance engagement, and promote academic and social success.

Conclusion and Recommendation

Quantitative findings revealed that visual support contributed ($M = 4.70$; $SD = .463$) to the expressive language skills of students with hearing impairment. From qualitative findings, understanding, following word spelling and meaning, consultation and sharing with peers, as well as elaborating definitions and context, are some of the themes that emerged from the contribution of visual support on the expressive language skills of students with hearing impairment.

This study's findings emphasize the importance of visual support strategies in facilitating effective learning and communication, hence enhancing the expressive language skills of students with hearing impairment. Quantitative data revealed high levels of agreement among respondents that written words, video clips, and facial expressions contribute positively to students' expressive

capabilities. It was noted that video clips were most strongly endorsed, followed by pictorials and facial expressions. Qualitative insights from teachers and educational officers reinforced these findings, highlighting that visual strategies not only support language acquisition but also foster learner engagement, comprehension, and retention. Observational data further validated the regular use and effectiveness of these strategies in classroom settings.

Therefore, integrating diverse visual supports into instructional design is essential to promote inclusive, effective learning for students with hearing impairment. Teachers should encourage the organization of classroom activities with visual support strategies to help students and their communicative partners enhance interaction and learning. The government, through the Ministry of Education, should upscale teacher training in visual pedagogy, develop culturally relevant visual aids, prioritize funding for digital and printed visual materials, and expand local research to cover broader language aspects in classrooms.

Data availability statement

The datasets generated and analyzed during the study are not publicly available due to confidentiality agreements with participants and institutions but are available from the corresponding author on reasonable request for academic or research purposes.

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Methodology, Data Curation, Investigation, Formal Analysis, Writing – Original Draft.

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Declaration of generative AI and AI-assisted technologies

During the preparation of this manuscript, the authors used AI technologies to support language clarity and grammatical accuracy. All content was subsequently reviewed and refined by the authors, who take full responsibility for the integrity and originality of the final submission.

Declaration of conflict of interest

There is no conflict of interest regarding the publication of this paper.

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