

# Teachers' Sign Language Proficiency and Communication with Students with Hearing Impairment

Nur Faizatun Nadhirah Sedi<sup>1\*</sup>, Khairul Farhah Khairuddin<sup>1</sup>

<sup>1</sup> Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia.

\*Corresponding Author: [p145027@siswa.ukm.edu.my](mailto:p145027@siswa.ukm.edu.my)

Received: 3 January 2026 | Accepted: 1 April 2026 | Published: 15 April 2026

DOI: <https://doi.org/10.55057/ijares.2026.8.3.38>

---

**Abstract:** *Sign language serves as the primary mode of communication for students with hearing impairment, particularly within special education settings. Teachers' proficiency in sign language is therefore crucial to ensuring effective instruction, meaningful interaction, and positive learning outcomes. However, variations in sign language mastery among special education teachers may lead to communication barriers that negatively affect students' comprehension, engagement, and motivation. This article aims to examine the level of sign language proficiency among special education teachers and its implications for communication with students with hearing impairment. Drawing upon existing literature and theoretical perspectives, this paper discusses key constructs related to teachers' sign language knowledge and skills, classroom communication processes, and supporting factors that influence effective interaction. The review highlights that teachers with higher levels of sign language proficiency demonstrate clearer instructional delivery, stronger two-way interaction, and improved student participation. Furthermore, environmental, institutional, and emotional support factors are found to play a moderating role in strengthening communication effectiveness. The findings underscore the importance of systematic professional training, administrative support, and conducive learning environments to enhance teachers' sign language competence. This article contributes to the growing body of literature on special education by emphasizing the central role of teacher communication competence in promoting inclusive and high-quality education for students with hearing impairment.*

**Keywords:** sign language proficiency, special education teachers, hearing impairment, classroom communication, inclusive education

---

## 1. Introduction

### 1.1 Background of the Study

Sign language is widely recognised as the primary mode of communication for students with hearing impairment, particularly in special education contexts where access to spoken language is limited (Marschark & Hauser, 2019; Knoors & Marschark, 2014). Effective teaching and learning for these students depend heavily on teachers' ability to use sign language accurately, fluently, and meaningfully during classroom instruction (Wilbur, 2020).

Teachers who possess strong sign language proficiency are better able to convey instructional content clearly, manage classroom interactions, and respond appropriately to students' learning needs (Antia et al., 2020). Conversely, limited proficiency may hinder two-way

communication, resulting in misunderstandings, reduced student engagement, and lower academic participation (Kuntze et al., 2018).

In Malaysia, special education for students with hearing impairment requires teachers not only to demonstrate pedagogical competence but also to possess specialised communication skills through sign language. However, the level of sign language proficiency among special education teachers varies considerably, depending on professional training, teaching experience, and exposure to the Deaf community (Spencer & Marschark, 2021). Such variation may create communication gaps that affect instructional quality and learning outcomes.

In line with the Malaysian Education Development Plan and global commitments to inclusive education, improving teachers' communication competence is essential to ensuring equitable and high-quality education for students with hearing impairment (UNESCO, 2020).

### **1.2 Problem Statement**

Despite the recognition of sign language as the primary communication medium for students with hearing impairment, insufficient mastery of sign language among some special education teachers remains a significant challenge (Kuntze et al., 2018). In certain classrooms, teachers rely on alternative communication methods such as spoken language, gestures, or limited visual aids, which may not fully meet students' linguistic and cognitive needs (Smith & Ramsey, 2019).

Inadequate sign language proficiency can lead to communication breakdowns, misinterpretation of instructional messages, and reduced clarity of feedback (Wilbur, 2020). As a result, students with hearing impairment may struggle to understand lesson content and classroom instructions, which can negatively affect motivation, participation, and emotional well-being (Antia et al., 2020; Lederberg et al., 2019).

Although previous studies have examined academic and social outcomes for students with hearing impairment, research that explicitly investigates the relationship between teachers' sign language proficiency and classroom communication remains limited, particularly within the Malaysian context (Marschark & Spencer, 2016). This gap highlights the need for focused investigation into communication processes in special education classrooms.

### **1.3 Research Questions and Hypotheses**

Given the documented importance of teacher communication competence, this study addresses the following research questions:

1. What is the level of sign language proficiency among special education teachers?
2. What is the level of communication between special education teachers and students with hearing impairment?
3. Is there a significant relationship between teachers' sign language proficiency and classroom communication?

Previous empirical studies suggest that teachers' communication competence is strongly associated with instructional interaction and student engagement (Wilbur, 2020; Spencer & Marschark, 2021). Accordingly, the following hypotheses are proposed:

- $H_0$ : There is no significant relationship between special education teachers' sign language proficiency and communication with students with hearing impairment.

- H<sub>1</sub>: There is a significant relationship between special education teachers' sign language proficiency and communication with students with hearing impairment.

#### 1.4 Objectives of the Study

The objectives of this study are aligned with existing literature emphasising the role of teacher communication in deaf education (Marschark & Hauser, 2019). Specifically, this study aims to:

1. Identify the level of sign language proficiency among special education teachers.
2. Determine the level of communication between teachers and students with hearing impairment (Antia et al., 2020).
3. Analyse the relationship between teachers' sign language proficiency and classroom communication (Wilbur, 2020).

#### 1.5 Significance of the Study

The findings of this study are expected to contribute to improved teaching practices by highlighting the importance of continuous professional development in sign language for special education teachers (Humphries et al., 2018). For school administrators and policymakers, the results may inform the design of targeted training programmes and institutional support mechanisms (Smith & Ramsey, 2019; UNESCO, 2020).

From an academic perspective, this study adds to the growing body of literature on deaf education by providing empirical support for the central role of teacher communication competence in fostering inclusive learning environments (Knoors & Marschark, 2014).

#### 1.6 Scope and Limitations

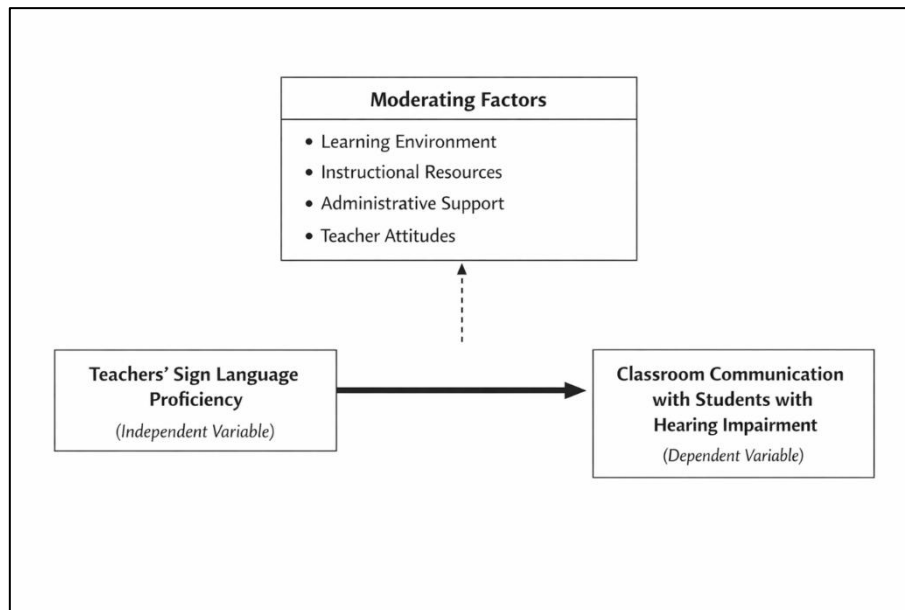
This study focuses on special education teachers who teach students with hearing impairment in selected schools. As such, the findings may not be generalisable to all educational contexts (Marschark & Spencer, 2016). In addition, reliance on self-reported data may introduce subjective bias, although such methods are commonly used in educational research to capture teachers' perceptions (Spencer & Marschark, 2021).

#### 1.7 Operational Definitions

In this study, *sign language* refers to a visual communication system that utilises hand movements, facial expressions, and body language to convey meaning (Wilbur, 2020). *Sign language proficiency* denotes teachers' competence in using sign language accurately, fluently, and effectively during instruction (Marschark & Hauser, 2019). *Communication* refers to the two-way exchange of information and meaning between teachers and students with hearing impairment in classroom settings (Antia et al., 2020).

#### 1.8 Conceptual Framework

The conceptual framework of this study is informed by previous research highlighting the interaction between teacher competence, communication processes, and contextual support (Humphries et al., 2018; Lederberg et al., 2019). Teachers' sign language proficiency is posited as the independent variable influencing classroom communication, while supporting factors such as learning environment, instructional resources, administrative support, and teacher attitudes are expected to moderate this relationship.



**Figure 1: Conceptual framework illustrating the relationship between teachers' sign language proficiency and classroom communication with students with hearing impairment, moderated by contextual supporting factors.**

## 2. Literature Review

### 2.1 Overview

The literature consistently demonstrates that effective communication is fundamental to successful teaching and learning for students with hearing impairment (Marschark & Hauser, 2019). Teachers' sign language proficiency has been identified as a key determinant of instructional clarity, student engagement, and classroom interaction (Antia et al., 2020).

#### 2.1.1 Literature Review Method

This study employed a structured narrative literature review approach to synthesise existing research on teachers' sign language proficiency and classroom communication with students with hearing impairment. Relevant literature was identified through academic databases including Scopus, ERIC, and Google Scholar. Keywords used included *sign language proficiency*, *deaf education*, *classroom communication*, and *special education teachers*.

The review prioritised peer-reviewed journal articles, academic books, and international reports published primarily between 2010 and 2023. Studies were selected based on their relevance to teacher communication competence, sign language use in educational contexts, and interaction with students with hearing impairment. The literature was analysed thematically to identify recurring constructs and relationships, enabling the development of an integrated conceptual framework.

### 2.2 Teachers' Sign Language Proficiency (Construct A)

Sign language proficiency encompasses teachers' knowledge of vocabulary, grammatical structures, and the ability to use signs fluently and accurately in instructional contexts (Wilbur, 2020). Teachers with high levels of proficiency are more effective in conveying complex concepts and reducing communication ambiguity (Marschark & Hauser, 2019).

Studies have shown that insufficient sign language skills among teachers can negatively affect students’ comprehension and literacy development (Kuntze et al., 2018). Professional training and sustained engagement with the Deaf community are therefore essential for developing communicative competence (Humphries et al., 2018; Knoors & Marschark, 2014).

These findings collectively suggest that sign language proficiency should not be viewed merely as a technical skill, but as a pedagogical competence that directly shapes instructional accessibility.

### 2.3 Communication with Students with Hearing Impairment (Construct B)

Effective classroom communication involves clear message delivery, opportunities for two-way interaction, and responsive feedback (Spencer & Marschark, 2021). Antia et al. (2020) reported that students with hearing impairment demonstrate higher motivation and participation when communication is accessible and linguistically appropriate.

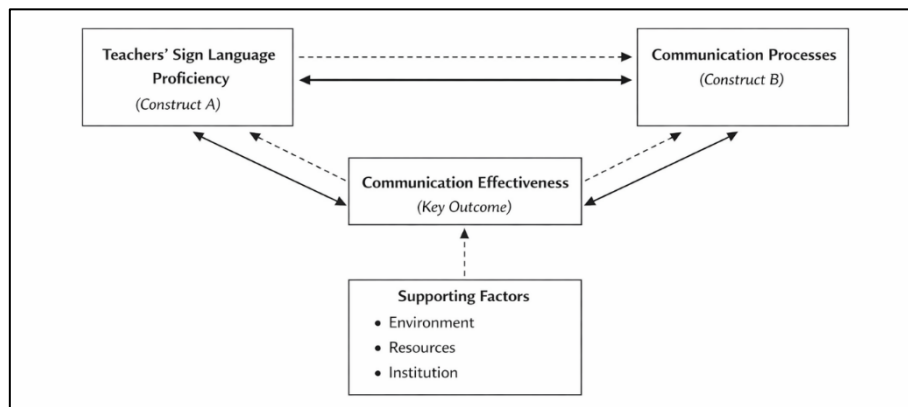
Active interaction through sign language supports not only academic learning but also social and emotional development (Lederberg et al., 2019). Conversely, communication barriers may lead to disengagement and feelings of isolation (Wilbur, 2020).

Furthermore, the development of sign language competence among teachers is often constrained by limited exposure to fluent signers, insufficient structured training, and heavy instructional workloads. These challenges indicate that improving communication in deaf education requires systemic institutional support rather than relying solely on individual teacher effort.

### 2.4 Supporting Factors in Special Education Communication (Construct C)

Supporting factors such as classroom layout, lighting, and visual accessibility play a critical role in facilitating sign language communication (Guardino & Antia, 2012). The use of visual teaching aids and multimedia resources has been shown to enhance students’ comprehension and engagement (Smith & Ramsey, 2019).

Institutional support, including administrative encouragement and access to professional development, further strengthens teachers’ communication competence (Humphries et al., 2018). Positive teacher attitudes and emotional responsiveness also contribute to effective communication practices.



**Figure 2: Integrated conceptual model demonstrating how teachers’ sign language proficiency (Construct A) interacts with classroom communication processes (Construct B), while being influenced by supporting contextual factors (Construct C), to determine overall communication effectiveness.**

## **2.5 Relationship between Sign Language Proficiency and Communication**

Empirical evidence consistently indicates a strong relationship between teachers' sign language proficiency and classroom communication quality (Wilbur, 2020). Teachers with higher proficiency levels facilitate clearer explanations, more frequent interaction, and more effective feedback (Marschark & Hauser, 2019).

Compared to international contexts where formal sign language certification and immersion opportunities are more widely available, the Malaysian context presents unique structural and training-related limitations. This disparity highlights the need for locally contextualised professional development frameworks that address both linguistic competence and classroom communication strategies.

## **2.6 Interaction between Sign Language Proficiency and Supporting Factors**

Teachers' sign language competence is enhanced when supported by continuous training and institutional commitment (Humphries et al., 2018). Supportive policies and professional learning opportunities enable teachers to refine their skills and adapt communication strategies effectively (UNESCO, 2020).

## **2.7 Supporting Factors and Communication Outcomes**

Environmental and technological supports have been shown to improve communication outcomes for students with hearing impairment (Lederberg et al., 2019). Classrooms that prioritise visual accessibility promote better understanding and participation (Smith & Ramsey, 2019).

## **2.8 Integrated Relationship among Constructs**

The interaction among sign language proficiency, communication processes, and supporting factors highlights the need for a holistic approach to special education (Marschark & Spencer, 2016). Effective communication emerges from the combined influence of teacher competence and contextual support (Spencer & Marschark, 2021).

## **2.9 Summary**

The reviewed literature confirms that teachers' sign language proficiency is a critical factor influencing communication effectiveness in special education classrooms. Supporting factors further moderate this relationship, underscoring the importance of comprehensive strategies to enhance communication and learning for students with hearing impairment (Antia et al., 2020; UNESCO, 2020).

## **3. Conclusion**

This study highlights the crucial role of sign language proficiency among special education teachers in facilitating effective communication with students with hearing impairment. In line with the first objective, the review of literature indicates that the level of sign language proficiency among teachers varies significantly, influenced by factors such as professional training, teaching experience, and exposure to the Deaf community. Teachers who demonstrate strong knowledge, fluency, and consistency in sign language use are better positioned to deliver clear instruction and support students' understanding.

Addressing the second objective, the findings from previous studies suggest that effective communication between teachers and students with hearing impairment is closely associated

with instructional clarity, two-way interaction, and active student engagement. When teachers communicate using accurate and fluent sign language, students are more likely to comprehend lesson content, respond appropriately, and participate meaningfully in classroom activities.

With regard to the third objective, the literature consistently shows a significant relationship between teachers' sign language proficiency and the quality of classroom communication. Higher levels of proficiency contribute to improved interaction, clearer feedback, and a more inclusive learning environment. Furthermore, supporting factors such as conducive classroom settings, appropriate teaching materials, administrative support, and positive teacher attitudes play an important moderating role in strengthening this relationship.

This article contributes theoretically by positioning teachers' sign language proficiency as a core dimension of pedagogical communication competence in deaf education. Unlike studies that focus primarily on student outcomes, this review integrates teacher linguistic skills, communication processes, and contextual supports into a unified conceptual understanding. Practically, the study provides a framework that can inform professional training programmes and policy initiatives aimed at strengthening inclusive instructional practices for students with hearing impairment.

Importantly, this article contextualises international findings within the Malaysian special education landscape, highlighting specific training gaps and systemic challenges faced by teachers of students with hearing impairment. This localised perspective extends global discussions by emphasising the need for context-sensitive strategies to enhance inclusive instructional practices.

### **Acknowledgements**

The author gratefully acknowledges all individuals and institutions who provided direct and indirect support in the completion of this study. Their valuable contributions, cooperation, and professional assistance are sincerely appreciated.

### **Conflict of Interest Statement**

The author declares that there are no conflicts of interest associated with the publication of this manuscript.

### **References**

- Antia, S. D., Jones, P. B., & Reed, S. (2020). Social and academic outcomes of students who are deaf and hard of hearing in inclusive settings. *Journal of Deaf Studies and Deaf Education*, 25(2), 123–137. <https://doi.org/10.1093/deafed/enz044>
- Humphries, T., Kushalnagar, P., Mathur, G., Napoli, D. J., Padden, C., & Smith, S. (2018). Language acquisition for deaf children: Reducing the harms of zero tolerance to the use of alternative approaches. *Human Development*, 61(5–6), 329–352. <https://doi.org/10.1159/000493556>
- Knors, H., & Marschark, M. (2014). *Teaching deaf learners: Psychological and developmental foundations*. Oxford University Press.
- Kuntze, M., Golos, D., & Enns, C. (2018). Rethinking literacy in deaf education. *American Annals of the Deaf*, 163(4), 443–455. <https://doi.org/10.1353/aad.2018.0038>

- Lederberg, A. R., Schick, B., & Spencer, P. E. (2019). Language and literacy development of deaf and hard-of-hearing children. In M. Marschark & P. E. Spencer (Eds.), *The Oxford handbook of deaf studies in language* (pp. 153–174). Oxford University Press.
- Marschark, M., & Hauser, P. C. (2019). *How deaf children learn: What parents and teachers need to know*. Oxford University Press.
- Marschark, M., Tang, G., & Knoors, H. (2014). Bilingualism and bilingual deaf education. *Oxford Handbook of Deaf Studies in Language*. Oxford University Press.
- Marschark, M., & Spencer, P. E. (Eds.). (2016). *The Oxford handbook of deaf studies in learning and cognition*. Oxford University Press.
- Spencer, P. E., & Marschark, M. (2021). *Evidence-based practice in educating deaf and hard-of-hearing students*. Oxford University Press.
- Smith, S., & Ramsey, C. (2019). Classroom communication and instructional practices in deaf education. *Journal of Special Education, 53*(1), 45–56. <https://doi.org/10.1177/0022466918779913>
- Wilbur, R. B. (2020). Sign language proficiency and classroom discourse: Implications for deaf education. *Journal of Deaf Studies and Deaf Education, 25*(4), 489–503. <https://doi.org/10.1093/deafed/ena026>
- Yoshinaga-Itano, C., & Downey, D. M. (2017). Early intervention for children with hearing loss: What, why, and when. *Pediatrics, 140*(2), e20163433. <https://doi.org/10.1542/peds.2016-3433>
- Guardino, C., & Antia, S. D. (2012). Modifying the classroom environment to increase engagement and reduce disruption with students who are deaf or hard of hearing. *Journal of Deaf Studies and Deaf Education, 17*(4), 518–533. <https://doi.org/10.1093/deafed/ens026>
- Powers, S. (2011). Learning from success: High-achieving deaf students. *Deafness & Education International, 13*(4), 167–185. <https://doi.org/10.1179/146431511X13286224194202>
- UNESCO. (2020). *Global education monitoring report: Inclusion and education – All means all*. UNESCO Publishing.