Bilingual Literacy Among Deaf and Hard-of-Hearing Students: A Literature Review in the USA, Canada, and Colombia

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Abstract

This paper presents a review of the literature on bilingual literacy in deaf and hearing-impaired students in Latin America, the United States, and Canada. The documents selected for this study included undergraduate and graduate thesis projects, governmental documents, and published academic articles. The review indicates that when deaf and hard-of-hearing students learn a second language, it contributes to their professional, academic, and personal growth, enabling them to interact more effectively with people from diverse social and cultural backgrounds. However, the literature also highlights that deaf students face difficulties when entering the educational system, as there are not enough certified bilingual teachers in these countries to instruct this population in sign language. Additionally, the findings suggest that the role of parents is crucial in supporting the learning process of deaf students; thus, a close relationship between schools and families is essential to better assist students with hearing disabilities.

Keywords: Bilingual Deaf Education, bilingual literacy, hearing disabilities, literacy development, Sign language

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Literacidad bilingüe entre estudiantes sordos y con dificultades auditivas: una revisión de literatura en EE. UU., Canadá y Colombia

Resumen

Este documento presenta una revisión de la literatura sobre la literacidad bilingüe en estudiantes sordos y con discapacidad auditiva en América Latina, EE. UU. y Canadá. Los documentos seleccionados para este estudio incluyeron proyectos de tesis de pregrado y posgrado, documentos gubernamentales y artículos académicos publicados. La revisión encontró que aprender un segundo idioma contribuye al crecimiento profesional, académico y personal de los estudiantes sordos y con dificultades auditivas, lo que les permite interactuar de manera más efectiva con personas de diversos contextos sociales y culturales. Sin embargo, esta revisión también revela que los estudiantes sordos enfrentan dificultades al ingresar al sistema educativo, ya que no hay suficientes docentes bilingües certificados en estos países para instruir a esta población en lengua de señas. Además, los hallazgos sugieren que el papel de los padres es crucial para apoyar el proceso de aprendizaje de los estudiantes sordos; por lo tanto, una relación cercana entre las escuelas y las familias es esencial para ayudar mejor a los estudiantes con discapacidades auditivas.

Palabras clave: educación bilingüe para sordos, literacidad bilingüe, discapacidad auditiva, desarrollo de la literacidad, lengua de señas

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Introduction

As the world becomes increasingly interconnected, the ability to comprehend and communicate in different languages is vital in one's personal life, academic, and professional scenarios. For deaf and hearing-impaired students, bilingual literacy, which is understood as being able to read and write in Sign language and spoken/written language in additional languages, becomes essential for their integration into academic and social environments, ultimately contributing to a better quality of life. In Latin America and North America, where diverse linguistic and cultural landscapes prevail, fostering bilingual literacy among these students is particularly important (Duque-Salazar et al., 2024). However, achieving this goal presents several challenges. Within this context, inclusive education has become a central topic in educational discourse in recent years (Pérez Castro, 2022); thus, there is an interest in studying bilingual literacy practices in deaf and hearing-impaired students. However, there are some difficulties that they must overcome (Molina, 2020). This author states that in a language class this situation is even worse because teachers feel that they have the double responsibility of teaching not only sign language but also other languages. Evans (2004) mentions that "theory of second-language learning articulates how learners draw on one language to acquire another '' (p. 17). McQuarrie and Parilla (2014) argue that effective bilingual practices among deaf and SHD (students with hearing disabilities) learners require both literacy and linguistic development across spoken, signed, and written languages. Similarly, Enns (2006) points out that in bilingual deaf students, "literacy is essential for success and an enhanced quality of life in our own society" (p. 7); nevertheless, most deaf students lack literacy skills, preventing them from attending school. (Enns & McQuarrie, 2021).

In the case of Colombia, according to the National Administrative Department of Statistics (DANE, 2005), there are 455,718 individuals who are deaf or have a degree of hearing disability registered (DANE, 2005). Of these, 11% are of school age, meaning they are between five and sixteen years old (INSOR[4], 2020). Therefore, Usma Wilches (2009) underscores the necessity of implementing linguistic policies, including bilingual ones, and see how schools transform these policies to create scenarios of inclusion; that includes deaf and SHD.

In order to provide a bilingual education model for deaf and hard-of-hearing (DHH) students, several pedagogical principles have emerged, one of which is bilingual literacy. Although integrating literacy into the process of second language acquisition in deaf education is complex—primarily due to a lack of instructional strategies and empirical research (Sousa, 2014; Macías, 2018)—many scholars recognize its educational relevance (Tomlinson, 2008; León Corredor & Calderon, 2010; Lissi et al., 2011; Swanwick, 2016; Scott, 2018).

Recently, research in linguistics, psycholinguistics, and sociology has promoted a sociological conception based on the capacities of deaf individuals and SHD, introducing new pedagogical approaches that incorporate the use of Sign Language in the education of deaf and SHD children (Sánchez, 2009). This is because Sign Language opens the doors of linguistic communication for the deaf person and writing provides another way of communication (Hiddinga & Crasborn, 2011; Domínguez, 2009).

Despite the recognized benefits of bilingual education, many deaf and hearing-impaired learners face significant barriers that hinder their literacy development. These challenges include a lack of trained bilingual educators, limited access to resources, and societal misconceptions about the capabilities of deaf individuals. Research indicates that when provided with effective bilingual instruction, these students can achieve greater academic outcomes and social integration (Gonzalez-Reyes et al., 2021).

According to the National Institute for the Deaf (INSOR, 2009), the educational policy established by Law 982 of 2005 proposes a Unique Regulatory Information System for deaf students. This policy outlines actions to be carried out within a bilingual, bicultural framework for the deaf and SHD, with the intention of ensuring that students acquire, update, and enrich their proficiency in Colombian sign language, Spanish, and additional languages like English. This goal must be an ongoing purpose throughout all educational processes, and the necessary conditions must be fostered in every school environment—encompassing administrative, academic, written language, collaboration with parents, and shared experiences that contribute to this acquisition (Musyoka, 2021).

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4 INSOR: Instituto Nacional para Sordos by its acronym in Spanish

By embracing these objectives, we can promote equitable opportunities for all learners, ensuring that deaf and hearing-impaired students are empowered to thrive in a multilingual world. With this information in mind, the purpose of this paper is to review literature on bilingual deaf education and literacy in the USA, Canada, and Latin America. Therefore, this article aims at gaining insights into the current landscape of bilingual literacy practices for deaf individuals and students with hearing disabilities (SHD), focusing on sign language, Spanish, and English across the aforementioned countries. To achieve this, we examined 52 research documents, delving into their contents to uncover prevailing trends, identify existing gaps, and understand ongoing efforts in this topic. This exploration offered a comprehensive understanding of the current situation and laid the foundation for informed analysis and evaluation. Accordingly, this article begins with an explanation of the methods used to select and analyze the reviewed documents, followed by the results and conclusions drawn from the findings.

Method

The present study is a literature review of information framed under a qualitative research paradigm, which follows the methodological route proposed by Diodato (2012). This methodological route includes the following steps: setting up the premises, identifying the concepts, searching for and gathering the documents from the databases and journals, criteria for selecting the documents, and evaluating the results and analysis.

For setting up the premises, we considered the use of English and Spanish as the main languages to guide our search. The document accepted in this work were published articles, degree papers, graduate and undergraduate thesis, books, government documents and policies from the years 2003-2023. We included this time frame because we wanted to analyze the research tendencies during these ten years. *Dianet, JSTOR, DSpace UTP, SciELO Latin America*, *Redalyc, ResearchGate*, and *Taylor & Francis*, as well as journals such as *Profile, HOW Journal, Colombian Applied Linguistics Journal, Oxford Academic*, and *Íkala*. Additionally, we established key concepts to guide our search: *literacy in deaf education, inclusive education for deaf people, second language learning for the deaf*, and *bilingual education for the deaf*.

To organize the information, we followed the ideas of García Peñalvo (2017) in which the author explains that in the review stage, it is pivotal to design an established criteria for choosing relevant literature, assessing quality, and exploring research (See table 1). In the reporting stage, we organized and presented the data from the selected studies in a systematic manner as it is stated by Siddaway *et al*. (2019).

Table 1. *Criteria for filtering the documents*

Document's title: _____ Author's name:_____ Type of document: _____

Dimensions	Yes	No
Primary and secondary research.		
Government documents.		
Addresses at least 2 concepts of the ones reviewed in this review		
Research with deaf people or SHD as participants.		
Documents that present specific results on second language learning for deaf and SHD.		
Research or documents developed in Canada, The USA, and Latin America		
Research or documents published during 2003-2023		

Source: Own design

Finally, the results obtained in the search were evaluated in terms of their relevance and compatibility with this study. The documents that met most of the criteria established were gathered and analyzed (Siddaway *et al*., 2019). After analyzing the results found in the search, a corpus of 52 research articles that were related to Bilingual deaf Education and Bilingual literacies for deaf students was compiled.

Results

During the exploration of the databases and webpages, the concept of *literacy in deaf education* was found in 20 articles on *Dialnet*, 459 on *JSTOR*, 757 on *SciELO*, and 427 on *DSpace UTP*. After narrowing the search to the United States, Canada, and Latin America, the results yielded 8 documents on *Dialnet*, 3 books on *Oxford Academic*, 2 books on *ResearchGate*, 15 on *JSTOR*, 6 on *SciELO*, 1 on *Redalyc*, 1 on *Taylor & Francis*, and 3 on *DSpace UTP*. Regarding governmental documents, 6 were identified: 3 published by the Colombian Ministry of Education, 2 by INSOR, and 1 by UNESCO. Additionally, 4 books and 3 webpages were included in the findings.

From this search, it is possible to observe that even though bilingual education for deaf students has been studied in Latin America in terms of sign language and Spanish, while studies in relation to an additional language like English are still emerging. The corpus shows that 21 published articles in Latin America within the ten years in our area of interest are related the teaching and learning of sign language and Spanish, 8 documents published in Latin America are related to the teaching of sign language and an additional language: Spanish or English, 5 out of the 6 governmental documents are about the teaching of Colombian sign language and Spanish, 3 thesis are about Colombian Sign Language and the teaching of English, 6 books and 7 articles about American Sign Language and English, and 3 webpages are general guidelines to work bilingually with deaf students. Table 2 displays the results discriminated by country.

Table 2. *Number of documents discriminated by country.*

Number of documents found	Type of document	Country
3	Thesis Projects	Colombia
7	Book	The USA
1	Book	Canada
1	Book	Chile
1	Book	Mexico
5	Governmental document	Colombia
1	Governmental document	The USA
2	Webpage	Colombia
1	Webpage	The USA
3	Article	Brazil
11	Article	Colombia
7	Article	The USA
5	Article	Chile
2	Article	Canada
2	Article	Mexico

Source: own design

After the compilation of sources, six major themes were identified: literacy development process for deaf and SHD, bilingual deaf education and literacy, the role of sign language in bilingual deaf education, sociocultural implications of learning a second language for deaf and SHD, constraints in the educational system for the development of literacy in deaf and SHD, and what the educational system offers to deaf and SHD.

Literacy development process for deaf and SHD

One prominent topic was literacy development for deaf and SHD. According to the American University School of Education (2020), unlike the literacy process for hearing people, which is linked to sounds, the assumption of

the literacy process for deaf and SHD integrates the learning of a written language, Spanish in the Colombian context, as an additional language. Holzstein (2015) and Gonzalez-Reyes *et al*., (2021) mention that this implies knowing the letters, discovering how this language is organized, and learning how words are formed, highlighting the discrepancy between both processes. Booth (2019) argues that fingerspelling is a method that facilitates the literacy process among this population: "Children who use Sign language and fingerspelling develop written word forms. Fingerspelling is a method to represent the letters of the alphabet with the hands" (par. 8). In the same line of thoughts, Valencia-Mendez (2022) states that the literacy development process of deaf students involves a bicultural bilingual writing process; this cannot be measured with the same parameters used to assess the writing process of the hearing community.

In similar terms, the research of Corina *et al*. (2014) coined the concept of "visual phonological awareness" (p. 531). For the authors, all deaf children, from an early age, must be exposed to an enriched linguistic environment. Thus, Molina (2020) provides some recommendations for teaching languages to deaf students. One recommendation is related to training teachers in the development of literacy processes; particularly for teaching written Spanish and even a third language like English. Molina also mentions that it is paramount to include visual aids and playful activities for the teaching of languages to deaf and SHD; these enable them to easily progress in their literacy development. Furthermore, Molina's study concludes that the use of Colombian Sign Language and parents' guidance serve as a support to deaf and SHD's Spanish and English literacy process.

Herrera and Calderón (2019) also agreed upon the importance of different teaching practices to develop Spanish literacy among deaf and SHD populations. The findings demonstrate that the writing performance in the acquisition of a second language, in this case Spanish, is similar in hearing and deaf students in terms of common mistakes using prepositions and verb inflections. Nevertheless, the authors agreed that it is necessary to develop different strategies in the teaching of written Spanish to deaf students since sign language has its own syntactic, morphological, and grammatical features, without a literal transcription into a second language.

Additionally, Mayer (2009) also focuses on the differences between hearing and deaf students when they learn a second language through literacy and the constraints that the deaf and SHD must deal with in this process. The author concluded that the fundamental and critical distinction between hearing and deaf second language (L2) literacy process relies on the differing levels of L2 conventional proficiency that have been acquired before they are required to use the L2 in more cognitively and linguistically demanding situations.

Bilingual deaf education and literacy

To understand the role of literacy in bilingual deaf education, it is necessary to know how literacy is involved in the process of learning an additional language. According to Navarro (2004), the integration of literacy helps language learners to improve their second language skills in terms of reading and writing since the more a student reads in a second language, the greater his/her ability to write in that language will be. In terms of bilingual deaf education, Salazar-Mateus (2018) agrees that the main tool to be used, by deaf and SHD students, in the learning process of an additional language should not be a spoken language; instead a written language rooted in their cultural background would be more beneficial. Lissi *et al*. (2012), in turn, present a similar perspective; their research underlines the role of literacy in bilingual deaf education. For the authors, the implementation of bilingual education contributes to the full development of deaf children and young people, as it enhances the acquisition of sign language as a first language, allowing its use to facilitate the teaching-learning process of a second language through the use of literacy.

Different from Lissi *et al*. perspective, Balieiro *et al*. (2014) emphasize the relevance of sign language in the development of bilingual literacy among deaf students. The authors explain that the use of sign language and literacy in the learning of a second language allows deaf students to create a dialogue between two languages/cultures in which they take part. Similarly, Hael (2018) agrees on the importance of sign language in terms of the understanding of relevant features of any language when it is learned, and that constitutes a paramount aspect in the communication of deaf and SHD students. In line with this, Mora (2022) emphasizes the importance of equity for future language practices and future educators to reach a more inclusive bilingual education in Colombia, one that meaningfully includes deaf communities.

In the context of bilingual education bilingual education for deaf and SHD students in the USA, the work of Easterbrooks and Dostal (2020) underscores the need to consider linguistic, neurological, and social processes when addressing the unique needs of deaf and SHD in the USA. The authors advocate for the concept of *malleability* in literacy instruction —defined as the adaptability and responsiveness of teaching methods, materials, and strategies to the diverse needs of deaf and hard-of-hearing (DHH) students. This approach includes instructional strategies, curriculum materials, assessment, collaboration with families, technology integration, peer interaction, and professional development.

Furthermore, the works of Marschark *et al*. (2014) and Knoors *et al*. (2019) highlight the crucial role of bilingual deaf education in fostering the educational, professional, and social skills of deaf and SHD students. Both studies discuss bimodal bilingual education for deaf students and bilingual deaf education as innovative and necessary approaches that incorporate sign language and spoken language, providing a comprehensive framework for language development and communication. Marschark *et al*. (2014) explain that these models recognize the unique needs of deaf learners by allowing them to access information and express themselves through multiple modalities and linguistic resources, fostering greater linguistic flexibility. According to Knoors *et al*. (2019), in a bimodal bilingual setting, educators utilize sign language as the primary language of instruction while simultaneously integrating spoken language, often through strategies such as simultaneous communication or the use of visual aids. The inclusion of bimodal and bilingual deaf education facilitates language development in both modalities and supports cognitive development and academic achievement promoting inclusivity, as it prepares deaf students to engage effectively in deaf and hearing communities while empowering them to navigate various social contexts and enhance their overall educational experience.

The Role of Sign Language in Bilingual Deaf Education

Although the acquisition of a second language among deaf learners could be perceived differently than among hearing population, the terms "bilingualism" and "bilingual education" play an important role in deaf education theories and practices. According to Berent *et al*. (2007) for deaf people, bilingualism implies the use of sign language and the knowledge of the written language used by most of the people around them. This second language is learned in a written or spoken form, depending on the level of their deafness. Consequently, bilingual deaf education implies the teaching of a second language, which is usually the first language of the hearing community around them (Sousa (2014)).

Sousa (2014) agrees on the importance of sign language in teaching deaf students an additional language. Similarly, through the analysis of different teaching practices of English for the deaf by a teacher-researcher in specific classroom contexts, we conclude that sign language plays a pivotal role in educational processes conducted with deaf population, as it is becomes the main mediator between teaching and learning. Furthermore, the author concludes that the articulation between the bilingual approach to deaf education and literacy contributes significantly to the learning of written English by deaf people. Moreover, according to Perez-Toledo *et al*. (2020), the use of sign language in bilingual deaf education practices allows students to create a dialogue between two languages/cultures that are present in all spheres of human activity in which they take part.

Additionally, for Hael (2018), implementing sign language in bilingual deaf education allows for an understanding of relevant features of any language when it is learned. After exploring different theories about the reading processes in deaf people, their constraints, advances, and educational practices, the author concluded that sign language should be the vehicle through which the L2 is taught, since it tends to facilitate the understanding of vocabulary, the explanation of concepts or the comparison between grammatical structures of both languages. Thus, sign language not only facilitates deaf students' learning process, but also allows them to create a dialogue with the hearing community and their culture, which expands their opportunities for personal and academic growth. Finally, the study of González-Reyes *et al*., (2021) concludes that the use of sign language is fundamental in the process of learning a new language, particularly, the English language. In other words, sign language is essential for the learning process of Spanish, second language, and English as the third language.

Sociocultural Implications of Learning a Second Language for deaf and SHD.

Another relevant theme identified in the review here presented relates to the sociocultural implications in the learning of a second language. According to UNESCO (2017), there is a continuum process in language learning that enables individuals "to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society" (UNESCO, 2017, para. 1).

Fernandes and Moreira (2017) argue some sociocultural aspects of deaf communities. Their study analyzed how deaf and SHD perceive the world through a visual-gestural medium and how this influences their social conditions. Deaf communities are minority heterogeneous groups in which they advocate their beliefs, customs, opinions, and their language.

Being bilingual is a socio-communicative construction that allocates a set of conditions and strategies that provide different ways of communicating with the world (Salazar-Mateus, 2018). It is here where literacy takes advantage of deaf communities. In fact, some of the documents reviewed from the databases and journals present what literacy implies for deaf communities in their socio-cultural dimension. For instance, Balieiro *et al*. (2014) explain that deaf communities take part in the different spheres of human activity, in linguistic social practices in two languages, without reducing it to a written ability but being competent to participate in a form of discussion of the literate culture. However, the participation of deaf communities in the socio-cultural and political sphere is still not significant. This participation is only possible if verbal interactions are in sign language, helping deaf people to better integrate themselves in the social context.

The study conducted by Herrera and Calderon (2019) describes similar ideas. In their research, the authors delve into how pedagogical practices are changing, as educational responses emerge to embrace the cultural and linguistic diversity within deaf individuals, whose first language is the Chilean Sign Language. It is crucial to highlight that each local sign language is embedded with unique cultural aspects that distinguish it from others. In this sense, the teaching of Spanish from this bilingual approach seeks to provide social responses to the learning needs of the deaf as bilingual students, through educational proposals that consider the individual characteristics and social practices of the population. Their conclusions underscore that interculturality tries to break with the hegemonic history of a dominant culture and other subordinate ones, reinforcing traditionally excluded identities to build a coexistence of respect and legitimacy among all groups in society.

Constraints in the Educational System for the Development of Literacy in Deaf and SHD.

Through this literature review, it was found that deaf students and those with specific hearing disabilities (SHD) face significant challenges when accessing educational opportunities. For instance, the study by Herrera Fernández (2022) presents the experiences of a collaborative effort involving both deaf and hearing individuals in Chile who are actively working to ensure the linguistic rights of deaf people in all areas of life. This book discusses the importance of including sign language in education to promote interculturalism and bilingualism. It underscores that bilingual education programs should be established to facilitate proficiency in sign language and Spanish, allowing students to navigate different cultural contexts effectively. However, deaf students and SHD often feel isolated in the educational settings, as the Chilean educational system has been primarily designed for the hearing community and many teachers lack the necessary training to effectively support SHD students. Herrera Fernández (2022) further highlights the importance of connecting the deaf and hearing communities to support one another.

The author presents some strategies to address the challenges posed by the Chilean educational system. She states that incorporating culturally relevant materials reflecting the experiences and contributions of deaf communities enhances students' understanding and appreciation of their own culture. Collaboration with deaf community members such as inviting guest speakers or organizing cultural events fosters a sense of belonging and cultural pride. Additionally, engaging families in the educational process and providing educators with professional development on bilingual teaching strategies (visual learning strategies) can create a supportive environment that encourages meaningful interactions among deaf and hearing peers.

According to Hurtado (2003), research has focused on the changes in the educational system to guarantee deaf students and SHD their achievement in all learning levels. However, these studies have emerged with more questions than answers. The author states that deaf education lacks awareness regarding the cultural identity of deaf people, the linguistic status of sign language within their sociolinguistic contexts, the handling that should be given to bilingual deaf education, and the immersion of deaf people in the Colombian national education system.

In another study, Castillo and Florez-Martelo (2020) explore the gaps in terms of bilingual education for deaf and SHD in Colombia and conclude that there are several challenges in the Colombian educational system when addressing the needs of bilingual literacy within deaf education. Firstly, students tend to feel isolated due to misunderstandings or prejudices because of the lack of knowledge and understanding by teachers and peers about their condition, leading them to feel frustrated and excluded from the educational process. Secondly, students with hearing loss do not need to be the ones who always adapt to the world; the world also needs to adapt to them. They need the support of the hearing community, and it is essential to facilitate their communication through multiple strategies. Colombian education, in this regard, must become more responsive to the needs of students with hearing disabilities by implementing appropriate adaptations that ensure an equitable and successful learning process. Therefore, Colombian policies need to guarantee deaf students' efficient bilingual education, with trained teachers, updated practices, and suitable environments for their successful learning process.

Sanabria (2019) identifies several major constraints in literacy development for deaf and SHD. He argues that language education in Colombia continues the same paradigm using the usual method, which is based on the hearing sense. Moreover, he underlines an obstacle in communicating with this community despite the existence of a fingerspelling alphabet that enables rudimentary communication, which is that communication is impossible if the deaf person does not have instruction on literacy. Sanabria concludes that deaf and SHD are immersed in a society primarily designed for hearing people, and bilingual education continues to cater to hearing norms. In response to these concerns, Guerrero-Nieto and Quintero-Polo (2021) suggest the development of more critical research on Bilingual Education Policies, which serve as a way of improving the bilingual community, which of course involve the deaf community.

In a regional context, the study of Salazar Durango (2018) presents some strategies for the inclusion of deaf and SHD into the higher education across Latin America. The study advocates for a paradigm shift—from viewing deaf individuals solely as disabled to recognizing their hidden potential is essential in appreciating the rich linguistic, cultural, and personal identities, that emerges from their unique language, which is often non-written but deeply expressive. Salazar Durango's study proposed several strategies for the inclusion of deaf students in higher education, emphasizing the need for shaped access to educational opportunities that acknowledge their linguistic competencies through assessments in their native sign language. Additionally, the presence of qualified sign language interpreters is crucial. Bilingualism and biculturalism should be embraced as essential frameworks to enhance communication skills and facilitate interaction between deaf and hearing communities. Furthermore, necessary curricular adaptations can help equalize opportunities and foster supportive networks to gather experiences that contribute to continuous improvement.

While not focused exclusively on deaf or SHD students, the work of Pérez Castro (2022) in Mexico offers valuable insights into broader issues of disability and educational inclusion. Drawing on multiple contributors, the author discusses how institutions such as those developed by ANUIES (Asociación Nacional de Universidades e Instituciones de Educación Superior - National Association of Universities and Institutions of Higher Education) have worked to promote inclusive education in higher education.

Pérez Castro (2022) compiles the work of various authors and discusses the initiatives made by Mexican higher educational institutions to improve access to education for these students. The author asserts that the social model for inclusive education aims to include students in regular classes to foster inclusivity. For instance, she notes strategies such as integrating students with disabilities into regular classrooms and placing other students with disabilities in "special education classes," as well as accommodating those who cannot be integrated into either setting.

The book concludes that none of the educational models have been fully abandoned; instead, elements of each persist in both theory and practice. As such, educational inclusion a dynamic field, constantly evolving through epistemological and empirical shifts. A central conclusion is that much work remains to ensure that all people with disabilities have the opportunity to receive a quality education.

What the educational system offers to deaf and SHD students

In Colombia, the National Institute for the Deaf (INSOR) continually updates its educational policies to address the linguistic, social, and academic particularities of the deaf community in Colombia. Thus, INSOR (2020) recognizes the initial stage of children as one of the central elements for education, and they developed a methodology with the idea of incorporating it as a public policy for the country from early childhood to adulthood. The model places families and deaf children at the center, supporting early first language acquisition and strengthen their social environment through family involvement. (Avila, 2010).

INSOR aims to dismantle the long-standing paradigm and belief that sign language, and a spoken language are mutually exclusive, a notion that historically compelled parents to choose between the two. Hence, the bilingual-bicultural model seeks to recognize the linguistic and cognitive capabilities of deaf students, which allows them to develop both languages. The shift of paradigm continues to be developed by INSOR, and it is supported by many other studies from other countries and the deaf community of Colombia. Hence, It is crucial to develop Spanish skills in order to work with the bilingual-bicultural model as both languages: Spanish and sign language, enable students to have contact with multiple subcultures present in the various social groups, and this model encourages them to learn other languages such as English.

Some of the conditions proposed by the INSOR to achieve this goal are:

- Creation of appropriate educational linguistic conditions to develop the first language.
- Opportunities to learn Spanish in its written form as a second language.
- Constant search for training and pedagogical processes that promote the construction of knowledge.
- Guarantee for access, permanence, and success towards higher levels of education.
- To realize these objectives, INSOR outlines the following key components:

  - **Parallel classrooms:** This is an exclusive classroom for deaf students for each of the grades. In addition to this, in each of the classrooms, there are their respective teachers, either deaf or hearing, as well as support teachers if they are needed. This classroom has different linguistic and curricular challenges since those operate in a hearing institution and these serve as scenarios that promote the acquisition and learning of sign language in a natural and direct way.
  - **Bilingual teachers:** Educators in these roles must demonstrate full proficiency of sign language and other languages. He or she is responsible for the design, implementation and evaluation of bilingual pedagogical processes for deaf students according to their age.
  - **Teachers of Spanish as a Second Language:** These professionals—either deaf or hearing—are trained in language education, with expertise in Spanish grammar and pragmatics. They also knows bilingual-bicultural education for the deaf and who in turn has a good level of proficiency in sign language.

Conclusions

The purpose of this revision of literature was to examine the panorama of bilingual literacy development in deaf and SHD in the USA, Canada, and Latin America. Data from 52 research sources—including academic studies, governmental reports, and institutional websites—suggest that bilingual literacy is a recognized aspect of the deaf community in these regions. The studies and governmental documents consistently highlight the importance of using sign language. However, there are notable differences between the strategies and teaching methodologies employed in Latin America compared to those in the USA and Canada.

For instance, among the nineteen documents reviewed from the USA and Canada, seven (Evans, 2004; Enns, 2006; Enns & McQuarrie, 2021; Cheung *et al*., 2013; Corina *et al*., 2014; Mayer, 2009; McQuarrie & Parrila, 2014) focus on teaching phonological, spelling, and orthographic elements aligned with the hearing community, while only three books (Marschark *et al*., 2014; Knoors *et al*., 2019; Easterbrooks & Dostal, 2021) address the bicultural and social contexts of deaf individuals in the process of learning an additional language. The remaining nine documents and websites offer conceptual discussions of the literacy development process for deaf individuals and SHD, along with selected instructional strategies. Conversely, the 33 Latin American research, websites, and governmental documents reviewed emphasize social factors, including the social context of deaf individuals and SHD, as well as bilingual strategies that positively contribute to their literacy development in sign language and additional languages, such as Spanish and English.

Based on the findings discussed above, it is possible to conclude that bilingual literacy development for the deaf community is recognized across all three regions, indicating a growing awareness of the need for inclusive educational practices. However, the studies and documents reviewed in this literature review suggest a pressing need for the inclusion of bicultural and bilingual deaf education, as well as consideration of social contexts in the USA, Canada, and Latin America, which highlights the unique experiences of deaf and SHD students in these regions.

Additionally, the educational strategies and methodologies employed in Latin America differ significantly from those in the USA and Canada. While research on the latter primarily emphasizes phonological, spelling, and orthographic skills aligned with hearing community standards, Latin American studies focus more on the social contexts and bilingual strategies that enhance literacy in sign language and additional languages. Therefore, this revision of literature underscores the importance of integrating social factors and the lived experiences of deaf individuals into literacy education to foster a more inclusive and effective learning environment.

Furthermore, the result of the search demonstrates that the use of a sharing code allows deaf to communicate with their hearing peers, which determines that they will develop a high level of autonomy during their interactions and another means of communication as Rusell (2018) considers. The author states that the learning of an additional language by deaf and SHD students has a wide impact in their lives since it establishes authentic communicative interactions and carries out the construction of knowledge with hearing people, overcoming communication barriers with their family, academic, and social fields. Likewise, we recognize that they can establish effective communication with hearing people with some particularities; nevertheless, as exposed by Lissi *et al*. (2012), what really allows deaf people active participation and accessibility in society is the learning of an additional language or the development of literacy in the language of the community around them.

Another conclusion drawn from this research is that in Colombia and Latin America, it is necessary to continue developing studies about the teaching of sign language and English as an additional language for the deaf community. Only four documents out of 52 documents reviewed in this search addressed the teaching of English for deaf students, something that shows the urgent need for further studies in the ELT field. The studies of Cardona (2011); Baliero (2014); Sanabria (2019) and González-Reyes *et al*. (2021) underscore that the methodologies used and the training for teachers in public schools do not suffice the needs of students in bilingual deaf education and that there is lack of research that describes how deaf students learn an additional language: English in this case. No matter how interested the deaf community is in learning an additional language like English, there are not enough teachers prepared for supporting students' literacy development. However, there is hope in all this process, some universities in Colombia are training future educators in Colombian Sign Language.

Finally, this study contributes to the current research about the teaching of additional languages to deaf people through literacy. It provides a general idea on how bilingual literacy is developed, and its importance for inclusive education in bilingual environments. Additionally, this paper sheds light on the initiatives that have been implemented with deaf students and opens the doors for further research in bilingual literacy with deaf students in the USA, Canada, and Latin America—recognizing them as a community with their own culture and identity.

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