Reverse Inclusive Education at Mekanissa School for the Deaf, Addis Ababa, Ethiopia

Tesfanesh Talew[1] and Alemayehu Teklemariam[2]

Abstract: This study explores the inclusive practices at Mekanisa School for the Deaf, utilizing purposive sampling to select the participants. Participants for this case study were selected based on their involvement in reverse inclusion at Mekanisa School. The study included twelve students (six deaf, six hearing), six teachers, four parents a principal and his advisor in general nineteen participants. Among the twelve students (two deaf and two hearing were involved in the interview. The remaining eight (four deaf and four hearing) were chosen to participate in focus group discussions (FGD). Data were collected using interview and FGD guidelines, as well as an observation checklist, all developed prior to data collection. The findings reveal that Mekanisa School for the Deaf is viewed by most participants as a reverse-inclusive school as it accommodates hearing children within the special school setting for the deaf. The school has notably improved communication between the deaf and hearing students, as well as between the school community and the students. Hearing students are highly proficient in sign language and often serve as interpreters for their deaf peers. This reverse-inclusive practice has also contributed to enhanced academic performance among the deaf students, though challenges remain. Key challenges identified include the difficulty of using two instructional languages (sign language and Amharic) simultaneously for deaf students, insufficient teaching materials, and the lack of proficiency in sign language among some newly hired teachers. Overall, the reverse inclusive practices at Mekanisa School for the Deaf are seen as beneficial and transformative, benefiting both the deaf and hearing learners. This model represents the first transformation of a special school for the deaf into an inclusive school in Ethiopia. The study suggests that these practices should be further strengthened within the school and potentially scaled to other special schools in Addis Ababa.

Key words: reverse, inclusion, special school, deaf, sign language

---

[1] Inclusive Employment office at Light for the World. Email: tesfa123talew@gmail.com
[2] Professor, Department of Special Needs and Inclusive Education, College of Education and Language Studies, Addis Ababa University. Email: alemayehutmh62@gmail.com

Introduction

Inclusive education emerged as a response to the exclusion of children with disabilities from mainstream schools. In the 19th century, these children were often placed in separate institutions, but the idea of integration began to take root in the early 20th century, allowing them to attend regular classrooms. The disability rights movement in the 1960s and 1970s played a key role in advocating for equal educational opportunities for all children. Landmark legislation, such as the U.S. Education for All Handicapped Children Act (1975), mandated the inclusion of children with disabilities in public schools. The 1994 Salamanca Statement further emphasized the importance of inclusive education, and the UN Convention on the Rights of Persons with Disabilities (2006) strengthened this global commitment. Inclusive education goes beyond mere integration; it aims to adapt schools to meet the needs of all students by creating accessible and supportive environments.

While progress has been made worldwide, challenges such as limited resources continue to hinder the full realization of inclusive education. Rooted in social movements for disability rights and global human rights declarations, inclusive education reflects a broader commitment to equity, social justice, and the belief that every child, regardless of ability or background, deserves the right to be educated in an inclusive, supportive setting. Reverse inclusion grew from the broader inclusive education movement, drawing on ideas from social justice, equality, and theories of social learning. Its aim is to create a more holistic, empathetic, and supportive educational environment for all students. The Reverse inclusion as its approach has been adopted in various countries with different cultural and educational systems but has roots in the broader inclusive education movement that emerged primarily in the United States and Europe in the late 20th century.

The rhetoric and practices of the Reverse Inclusion program at Mekanissa School for the Deaf is the focus of the present study. Mekanissa School for the Deaf originally established near Shero Meda at Ameha Desta Primary School, the school was later relocated to its current location in Lafto Sub-City, Addis Ababa, within a district called Mekanissa, as disclosed by the school principal. Founded in 1961, Mekanissa is the first special school for the deaf in Ethiopia (Alemayehu, 2003). According to one of its founding teachers and former principals, the school has been serving the deaf community for over 63 years. It operates two additional branches in the Southern Region of Ethiopia, in Mazoria and Centeria, located in the Kembata Administrative Zone and Sidama Regional State, respectively. Mekanissa School for the Deaf was established by two American volunteers from the Church of Christ, named Carl Thompson and Gerry Blake, according to the former principal.

Initially, the school operated in a privately rented house, but later it was moved to a compound donated by Emperor Haile Selassie. This was previously his daughter's residence. At the time of its founding, no educational provisions existed for deaf individuals in Ethiopia, and Mekanissa became the first institution in the country dedicated to the education of the deaf. The school initially relied on a sign system to teach students in a segregated environment (Alemayehu, 2003; Tesfaye & Gebre, 2017). Mekanissa was also the first institution in Ethiopia to introduce sign language to the deaf community. The first dictionary prepared using sign language was used at the school. '*Talk to the Deaf*', the first book using sign language was based on an English sign system imported from the U.S. This system played a crucial role in raising awareness among Ethiopia's deaf population until the publication of the first Ethiopian Sign Language dictionary in Amharic in 1971 (Tesfaye, 2003).

According to the former principal, Mekanissa School initiated its Reverse Inclusion program after its 40th anniversary. While other

special schools for the deaf, such as Alpha in Addis Ababa and Hosana in Hadiya (established in 1963 and 1974, respectively), continue to operate with a segregated model and have yet to adopt inclusive or reverse inclusion practices, they are not included in this study (Alemayehu, 2003; Tadele & Getachew, 2015).

The primary goal of inclusive education for deaf learners is to enable their participation in regular classrooms through the use of sign language, as outlined in both the Salamanca Framework for Action (UNESCO, 1994) and the UN Convention on the Rights of Persons with Disabilities (UNCRPD, 2006; Alemayehu, 2016). Ethiopia, having ratified both the Salamanca Framework and the UNCRPD, has made efforts to integrate these principles into its education system (MoE, 2020). In practice, deaf learners in Ethiopia often attend special classes from grades 1 to 4, after which they are integrated into mainstream classrooms starting from grade 5. This transition is often seen as a form of inclusive education. However, deaf students in mainstream classrooms often face significant communication barriers due to the lack of sign language interpreters or teachers proficient in sign language (Tadele, 2019). Placing deaf learners in regular classrooms does not constitute true inclusion; rather, it represents the beginning of the inclusion process. For inclusion to be effective, deaf students must have access to sign language, receive necessary educational support, and fully engage in classroom interactions to achieve the same learning objectives as their hearing peers (Mekonen, 2021).

The concept of Reverse Inclusion, which contrasts with traditional inclusion practices, refers to the placement of hearing children in schools for the deaf, rather than the inclusion of deaf children in regular schools. This emerging model is the focus of this study. Reverse Inclusion represents a significant shift from traditional educational practices, where the focus is on integrating students with disabilities into regular schools. Instead, this model places hearing children in

specialized schools for the deaf, where they can interact with and learn alongside deaf students (Smith, 2021; Jones & Lee, 2022).

However, the practice of Reverse Inclusion in Ethiopia remains largely 'experimental' and lacks a strong theoretical foundation or guiding principles (Nguyen & Ahmad, 2023). The academic literature on this topic is limited, and our search for relevant research during this study yielded few scholarly sources on Reverse Inclusion, both locally and internationally (Brown et al., 2024). As far as we are aware, the Reverse Inclusion program at Mekanissa School for the Deaf has not been thoroughly studied or documented (Kebede & Tadesse, 2020). Furthermore, research on the education of deaf children and inclusive education practices for hearing-impaired individuals in Ethiopia is still scarce (Fekadu & Biruk, 2021). Despite recent efforts to establish integrated schools for the deaf, awareness of hearing impairments remains limited, complicating both the study and implementation of inclusive education (Tsegaye, 2023). Research on the inclusion of hearing children in schools for the deaf and the evolving landscape of special education in Ethiopia is still in its infancy, with limited studies available on the implications, benefits, and challenges of this new educational trend (Yohannes & Biruk, 2024).

Deafness, a condition of severe hearing loss, impedes an individual's ability to process spoken language, potentially hindering their speech, socio-emotional development, and academic performance. Without early intervention, deafness can result in delays in speech and language development, which may negatively impact academic achievement and social growth. However, with proper intervention and the use of sign language, these challenges can be mitigated (Alemayehu, 2019). For children raised in sign language environments, linguistic, academic, social, and psychological development may proceed without the same setbacks. Sign language serves as the primary mode of communication for deaf individuals, facilitating their learning and interaction (Alemayehu, 2016).

Inclusive education goes beyond simply placing deaf students in regular classrooms. True inclusion involves ensuring that each deaf child receives the support necessary to succeed in their educational setting, whether through tailored learning strategies, the use of sign language, or other accommodations. This holistic approach emphasizes the importance of ensuring deaf children benefit from social interactions with their peers, develop necessary skills, and participate fully in classroom activities (Limaye, 1999; Barton, 2003).

Recent studies underscore the importance of creating inclusive educational environments where deaf students can thrive academically and socially. For example, Van Gorp and O'Reilly (2020) highlight the potential for inclusive education to promote both academic success and social integration for deaf learners. Maxwell (2021) emphasizes the need for teachers to be trained in inclusive pedagogies to meet the specific needs of deaf students, such as utilizing sign language, visual aids, and technological support.

The integration of hearing children into schools for the deaf represents a novel approach to inclusive education. Research suggests that Reverse Inclusion offers unique opportunities for *both hearing and deaf students to share language skills, cultural knowledge, and social* experiences, fostering positive peer relationships and promoting mutual understanding. While studies on the benefits of this model are scarce, existing literature highlights the potential for such programs to enhance social and academic outcomes for both groups of students (Renzaglia et al., 2003; Antia et al., 2021).

While numerous studies have explored various aspects of deaf education, including the effectiveness of different teaching methods, the role of sign language, and the challenges faced by deaf students, there is a noticeable gap in research specifically focused on the concept of reverse inclusion. This gap in research leaves important questions unanswered regarding the potential benefits and challenges

of reverse inclusion, both for the deaf students involved and for their hearing classmates. More comprehensive studies are needed to understand the impact of reverse inclusion on academic achievement, communication skill development, social integration, and the overall school experience for all students. These advantages have not been thoroughly studied, either internationally or nationally. While positive opinions regarding Mekanisa School's reverse inclusion are discussed, they have not been empirically proven, creating a gap that this study aims to address.

The implementation of Reverse Inclusion at Mekanissa School for the Deaf presents a valuable opportunity to explore this emerging practice. This study aims to investigate the program's meaning, its underlying values, how it is perceived within the school community, the benefits it offers, and its impact on both hearing and deaf students. Using a qualitative case study approach, data will be collected from administrator, teachers, parents, and students to answer the following research questions:

- How has Reverse Inclusion been understood and valued within the school community?
- What are the benefits of the implementation of Reverse Inclusion at Mekanissa School for the Deaf?
- What are the major challenges associated with the Reverse Inclusion?

This study seeks to address gaps in the current literature on Reverse Inclusion by exploring the above questions, with the goal of offering insights into its effectiveness and potential for wider application in Ethiopia and beyond.

Methodology

This research utilized a qualitative approach to examine the phenomenon of Reverse Inclusion at Mekanisa School, located in Addis Ababa, Ethiopia. Qualitative research is a comprehensive and flexible approach that allows for a deeper understanding of complex social phenomena, guiding the methods for data collection, analysis, and interpretation (Creswell & Poth, 2018; Mertens, 2020). A case study design was specifically employed to explore the nature, implementation, impact and challenges of Reverse Inclusion within the context of a special education setting. According to Creswell & Creswell (2023), a research design serves as a blueprint for organizing the entire study, providing clear guidance for selecting appropriate data collection and analysis methods.

The primary aim of this study was to investigate the practices of Reverse Inclusion at Mekanisa School for the Deaf, focusing on both the challenges and benefits of this educational model for deaf and hearing students. Reverse Inclusion, in this case, refers to the practice of including hearing students in classes with deaf students, rather than the traditional model of including deaf students in regular education classes with hearing peers. The study aimed to explore how Reverse Inclusion fosters an inclusive learning environment and how it affects the academic and social experiences of students, teachers, and parents involved in the educational process (Smith, 2015; Jones & Carter, 2018).

Description of the Study Site

Mekanisa School is located in the Nifas-Silk Lafto Sub-City of Addis Ababa, near the Mekanisa Abo Church. This school was chosen for this study for several key reasons. First, it has a long history of implementing reverse inclusion practices, having started over twenty years ago with the admission of hearing children from the staff

members' families. Over time, this practice expanded to include hearing students from the surrounding community, as well as siblings of deaf students, according to a school principal. Mekanisa School is considered a pioneer in Ethiopia's inclusive education movement, though its model differs from traditional inclusion by reversing the roles of hearing and deaf students.

Despite the school's long history of reverse inclusion, there is a notable gap in research exploring its impact, effectiveness, and challenges. This presents a unique opportunity for in-depth investigation. Moreover, the researchers' familiarity with the school context provided valuable access to participants, allowing for efficient data collection. Mekanisa School's distinctive approach makes it an ideal site for exploring the complexities of reverse inclusion.

Sampling and sampling techniques

The participants in this case study were selected for their substantial involvement in reverse inclusion practices at Mekanisa School. The study aimed at exploring the experiences of both hearing and deaf students, as well as their teachers, parents, the principal, and his advisor. A total of twelve students from grades 6 to 8 were chosen, comprising six deaf and six hearing students, with a balanced gender representation. Four students participated in individual interviews, while eight others joined focus group discussions. Additionally, six teachers, the principal, and his advisor—along with senior staff members who had over 30 years of experience, were included. Four parents, who were familiar with the school's inclusive education model, also offered valuable perspectives on the reverse inclusion experience. To ensure a diverse and representative sample, purposeful sampling was employed (Creswell, 2007). This approach allowed the researchers to select participants who were directly engaged with the reverse inclusion practices at Mekanisa School, ensuring a comprehensive understanding of the model's implementation and impact.

The criteria for participant selection included: Deaf students must be pre-lingual, meaning they were born deaf or became deaf before acquiring spoken language. All participants were required to have been educated together in the same classroom since the beginning of their schooling and must be proficient in sign language; teachers were required to have a minimum of ten years of experience working with deaf students, and they must be fluent in sign language and parents of the selected students were chosen based on their involvement in the education of both hearing and deaf children, as well as their familiarity with the reverse inclusion model. The sample size was intentionally small to facilitate in-depth exploration and to ensure that data could be collected through interviews, FGDs, and observations over a reasonable period.

Data Collection Instruments

This study employed three primary methods of data collection: semi-structured interviews, focus group discussions (FGD), and observations. These methods allowed for triangulation, enhancing the credibility of the findings and providing multiple perspectives on the research questions. Semi-structured interviews are flexible data collection method widely used in qualitative research (DiCicco-Bloom & Crabtree, 2006). A semi-structured interview guide was developed to explore the participants' experiences, perceptions, and insights regarding reverse inclusion at Mekanisa School. The interview guide covered topics such as the participants' backgrounds, their experiences with inclusion and exclusion, and their perspectives on the challenges and benefits of reverse inclusion. The interviews were conducted in Amharic to ensure clear communication, as the participants were primarily Amharic speakers. The interview process began with an introduction to the study's objectives, followed by open-ended questions that encouraged participants to share their experiences. Interviews were audio-recorded and later transcribed. After the interviews, participants were invited to share any additional thoughts or

clarifications, ensuring that their voices were fully captured (Kallio et al., 2016).

Focus group discussions were conducted with both deaf and hearing students to validate the findings from the interviews and provide a platform for the participants to express their collective experiences. A total of eight students participated in two FGDs. The discussions focused on topics such as their reasons for attending the school, their perceptions of learning alongside deaf peers, and the social dynamics between deaf and hearing students. FGDs allowed for the exploration of group dynamics and collective experiences that may not have been captured in individual interviews. The sessions were audio-recorded, and the discussions were transcribed for analysis.

Observations were conducted to gain a deeper understanding of the daily interactions between deaf and hearing students, particularly in classroom settings, during lessons, and during break times. Observations provided rich, contextual data on how reverse inclusion plays out in practice. The researchers used a structured observation guide to record the interactions, noting the nature of communication, the social inclusion or exclusion of students, and any challenges or successes observed. These notes were supplemented by video recordings of key moments, particularly during interactions involving sign language communication.

Data Collection Process

Prior to beginning data collection, the researchers obtained formal permission from the Department of Special Needs and Inclusive Education at Addis Ababa University and Mekanisa School. The researchers then met with each participant to explain the study's purpose and to obtain informed consent. Verbal consent was obtained from participants, as is common practice in Ethiopia. Participants were assured of their confidentiality, and pseudonyms were used during

transcription and analysis to protect their identities. Interviews, FGDs, and observations were scheduled at times convenient for the participants. Data were collected over a period of several months to allow for in-depth exploration of the reverse inclusion process.

Data Analysis

Qualitative data analysis was conducted using thematic analysis, a common method for analysing case study data (Englander, 2012). Thematic analysis involves identifying, analysing, and reporting patterns or themes within the data. The analysis process included the following steps: the transcriptions of interviews, FGDs, and observation notes were read and re-read to familiarize the researchers with the data. Key phrases, sentences, and ideas were then coded according to common themes related to the research questions. After coding, the researchers grouped related codes into larger themes and sub-themes. These themes were based on the central aspects of reverse inclusion, such as its benefits, challenges, and impact on social inclusion. Data from interviews, FGDs, and observations were cross-checked to ensure the validity and reliability of the findings. This triangulation process helped to uncover new insights and reinforce the trustworthiness of the study's conclusions. To further validate the findings, the researchers conducted member checking, sharing the preliminary findings with some participants to ensure accuracy and clarify any misunderstandings (Creswell, 2023).

Ethical Considerations

Ethical considerations were central to the design and implementation of this study. Participants were fully informed of the study's purpose, their rights, and the voluntary nature of their participation. Informed consent was obtained from all participants, and confidentiality was strictly maintained throughout the research process. Pseudonyms were used in all transcripts and reports to protect participants' identities. Ethical

guidelines for research involving vulnerable populations, including children and individuals with disabilities, were followed to ensure the protection of participants' rights and well-being (Mertens, 2020). The study adhered to the ethical standards set by the research ethics committee at Addis Ababa University, and all data collection procedures were conducted with respect for participants' cultural norms and values.

Results

The purpose of this study was to examine the trends of Reverse Inclusive Education at Mekanissa School for the Deaf, as seen from the perspectives of the principal, teachers, parents, and both hearing and deaf students. Data were collected through interviews, focus group discussions (FGD), and observations, and were analysed qualitatively. The analysis focused on categorizing the data into key themes and sub-themes, guided by leading questions. To maintain participant confidentiality and minimize any potential risks, the names of the participants were not used in the analysis. Direct quotes and descriptions from the participants were included to provide a more comprehensive understanding of their views.

The data revealed several key themes that shed light on the experiences of those engaged in Reverse Inclusive Education at Mekanissa School for the Deaf. These themes encompass the participants' understanding of Reverse Inclusion, the nature of this educational approach, and the benefits it provides to both hearing and deaf students. A significant theme that emerged was the mutual advantages of Reverse Inclusion for both groups of students. Additionally, the development of communication skills in a Reverse Inclusive Education environment was highlighted. The study also examined the major challenges of Reverse Inclusive Education, as identified by all participants. Each of these themes is explored in depth below, providing valuable insights into the trends and challenges of

Reverse Inclusive Education at the school, from the perspective of those directly involved in the educational process.

The meaning of inclusivity of Reverse inclusion

The school, established in 1961 by American missionaries, was initially dedicated solely to children who were deaf or hard of hearing. It began in a privately rented house, where sign language was the main method of communication. This setup followed the traditional model for educating deaf children, which typically excluded hearing children from the classroom. The school's growth was significantly supported by Emperor Haile Selassie, who provided a new, permanent campus, strengthening its educational mission. This new facility not only offered a more organized space but also set the stage for a shift in the school's educational approach.

Around four decades after its founding, Mekanisa began to admit a small number of hearing children from the local community. This marked the beginning of Reverse Inclusion, where deaf and hearing children were educated together in the same classroom, a practice that would later become an enduring and impactful educational model.

The development of Reverse Inclusion at Mekanisa School for the Deaf unfolded gradually, shaped by the unique needs of the school community rather than formal policies. The evolution of this approach is a shared memory among the teachers, though their recollections vary. To avoid repetition, focus was made on the insights of senior teachers, whose experience provides valuable reflections. One teacher, contemplating the school's history, shared:

> *Mekanisa School for the Deaf was founded in 1961 by American missionaries. I remember that about twenty years ago, one of our teachers enrolled her two hearing children at the school. This was the first instance of what*

> *we now call reverse inclusion, though it happened unintentionally at the time.* T1

The status quo of schools for the deaf began to shift approximately two decades ago with the emergence of the Reverse Inclusion. This change, as revealed through interviews in this research, was not the result of a formal educational initiative or planned reform, but rather a natural development within the school community. As previously reported, the teacher's decision to enroll her two hearing children in a classroom for deaf students marked the groundbreaking first inclusion of hearing children in such a setting.

Crucially, this decision was not driven by research or a broader push for inclusive education, but by the teacher's personal need to integrate her family with her professional environment. Initially, the inclusion of hearing children was informal, taking place in a rented private house. These children interacted with deaf students in a space designed to meet the unique needs of the deaf community. What started as a simple, unstructured arrangement gradually gained support as both teachers and parents began to recognize the potential benefits of this new dynamic. As the idea gained momentum, institutional backing became key to its growth. More families embraced the concept, prompting the expansion of the school's facilities to accommodate the increasing number of students.

Over the two decades, community attitudes toward the inclusion of hearing children continued to evolve. A significant catalyst in this shift was the growing support from parents, who saw the practice as an opportunity for their deaf children's hearing siblings to learn sign language and become more integrated in the deaf community. Parents viewed the inclusion of hearing children as a way to foster stronger communication within their families, bridge the gap between deaf and hearing members, and promote a more inclusive atmosphere at school. The desire to have hearing siblings attend the same school was driven

by practical needs, ensuring better communication at home, and by a broader cultural understanding, where families wanted their hearing children to engage more deeply with the culture and language of their deaf siblings. A teacher-parent shared the sentiment:

> *The main reason for hearing and deaf students learning in the same school and classroom was the inspiration of the families. The families wanted their deaf child's hearing siblings to attend the same school, so they could learn sign language and assist their deaf brothers and sisters.*

This statement highlights how the integration of hearing children was rooted in familial aspirations and community-driven efforts. Parents believed that such an arrangement would allow their hearing children to become more fluent in sign language and, in turn, better support their deaf siblings both at home and in social settings.

Teachers at Mekanisa also recognized the advantages of Reverse Inclusion. They observed that it enriched the learning environment for both groups of students. Hearing children benefited from the opportunity to learn sign language, which allowed them to communicate effectively with their deaf peers. Deaf students, in turn, gained exposure to hearing peers, fostering mutual understanding and promoting empathy. T2, a deaf teacher at the school, expressed her appreciation for the practice, noting that,

> *As a deaf person, I personally experienced the growth of Reverse Inclusion. I saw how it not only allowed hearing children to learn sign language but also played a key role in fostering a more inclusive and supportive school environment.*

As Reverse Inclusion continued to develop, it became increasingly recognized as a model that benefited both hearing and deaf students. Teachers were able to employ diverse teaching methods that catered to the needs of both groups. Hearing children learned sign language, which enabled them to interact with their deaf peers, while deaf students had the opportunity to engage with and learn from their hearing classmates. This dynamics led to a more inclusive, supportive, and enriching educational experience for everyone involved.

Reverse Inclusion at Mekanisa School for the Deaf emerged as a grassroots initiative, not through government policies or mandates. It developed organically, driven by the needs and aspirations of teachers, parents, and students, reflecting the community's belief in bilingual and inclusive education, rather than any official directive or policy change. It evolved as a natural response to the recognition of the importance of inclusive education. Through the dedication of teachers, parents, and students, Reverse Inclusion became a model that encouraged mutual understanding and communication between deaf and hearing children. The development of this approach stands as a powerful example of community-driven change in education, underscoring the importance of inclusive practices in fostering empathy and bridging divides between diverse student groups.

Nearly all participants in this study expressed unanimous support for the Reverse Inclusion model at Mekanisa School for the Deaf, believing it to be highly effective in meeting the diverse needs of both deaf and hearing students. They viewed the model as a true representation of inclusive education, which goes beyond simply providing access to learning; it creates an environment that fosters belonging, equality, and achievement for all students. One parent articulated this view clearly by stating,

> *It is inclusive, because inclusive education supports the learning process by addressing the needs of all students.*

It also provides students with opportunities to exchange information and fosters a sense of equality, belonging, and achievement for everyone" (p2).

This perspective reflects the core values of inclusivity, highlighting both the academic and the social-emotional benefits of the model.

According to the data from the school, one of the most significant strengths of the Reverse Inclusion model is the opportunity for deaf students to form meaningful, lasting friendships with their hearing peers. These friendships go beyond casual interaction; they become an avenue for mutual learning, particularly in communication. Deaf students often teach their hearing peers sign language, creating an environment where both groups learn from each other. Hearing students, in turn, improve their own sign language skills, enhancing their ability to communicate with their deaf peers and deepening their connection.

This process fosters mutual respect and empathy, promoting a sense of equality between deaf and hearing students. The cultural exchange that takes place in this inclusive setting extends beyond language; it encourages both groups to view one another as equals, enriching their social and emotional development. The exposure to sign language and deaf culture also broadens the worldview of hearing students, helping them become more inclusive and empathetic individuals who appreciate diversity.

Additionally, the Reverse Inclusion model serves as a comprehensive embodiment of the principle of inclusiveness, ensuring that all students are welcome, valued, and fully supported in their education. Inclusivity in this context means not only providing equal access to education but also addressing the unique needs of each child. This approach allows every student to participate fully in all aspects of school life, ensuring that their individual learning needs are met and that they can achieve

the educational objectives set forth by the curriculum. By promoting an integrated environment where all students, regardless of their hearing ability, are involved in the learning process, the school challenges traditional educational models that may segregate students based on ability. Instead, it fosters an environment where all students can learn from one another and grow together.

Beyond academic achievement, participants noted that the Reverse inclusion model plays a key role in the holistic development of students, particularly by fostering a sense of equality and belonging. Students are supported not only in their academic learning but also in their social and emotional growth. The model promotes meaningful exchanges of information, whether academic or social, helping students form friendships and build mutual respect. These interactions contribute to a vibrant school culture where every student feels valued and empowered to contribute. This emphasis on equality is crucial in preventing feelings of isolation or marginalization, especially for deaf students who may otherwise experience exclusion in traditional educational settings.

A critical element identified by participants as essential to the model's success is the school's commitment to enhancing teachers' skills in sign language and inclusive teaching practices. Teachers undergo ongoing professional development to ensure they are well-equipped to teach both deaf and hearing students effectively. This continuous investment in teacher training enables educators to create engaging, inclusive lessons that cater to the diverse needs of all students. Teachers' ability to seamlessly integrate sign language into their lessons and adapt their teaching methods is seen as a fundamental strength of the school.

The physical environment of the classrooms also plays a significant role in supporting the learning process. Observations indicated that the classrooms are designed with the needs of both deaf and hearing

students in mind. With an average class size of 25 students, the classrooms are spacious, well-lit, and equipped with comfortable seating and quality desks. Proper lighting is especially important for sign language communication, as it ensures that hand gestures and facial expressions, crucial elements of sign language, are visible. The classrooms are designed to foster interaction and communication among students, with seating arrangements that encourage deaf and hearing students to sit side by side. This arrangement not only supports the use of sign language but also promotes collaboration, helping students share ideas, work together, and develop mutual respect.

In general, the Reverse inclusion model at Mekanisa School for the Deaf offers a powerful and effective framework for integrating deaf and hearing students. The inclusive approach permeates every aspect of the school, from the physical environment to the teaching strategies, ensuring that all students have the support they need to succeed. This model not only enhances academic outcomes but also fosters social and emotional growth, preparing students to thrive in a diverse and interconnected world.

Advantages of Reverse Inclusion

The majority of participants in this study highlighted the significant role of Reverse Inclusive Education in promoting social inclusion, despite its inherent limitations. This approach was found to be particularly effective in fostering meaningful social interactions between individuals with hearing impairments and their hearing peers. In the classroom, both deaf and hearing students actively engaged with each other, with sign language serving as the primary medium of communication. Teachers also adapted their methods to incorporate sign language, ensuring that all students, regardless of hearing ability, could fully participate in the learning process.

Observational data revealed that the social interactions between the students were notably positive. Deaf and hearing students were seen collaborating seamlessly, communicating fluently in sign language, and working together to support each other's academic progress. This mutual support created an environment where both groups felt valued and included, regardless of their hearing status. The use of sign language not only helped facilitate academic discussions but also encouraged the formation of stronger personal relationships between deaf and hearing students.

Moreover, the involvement of hearing students in learning sign language proved to be an essential factor in building these connections. As hearing students acquired and refined their sign language skills, they were able to communicate more effectively with their deaf peers, breaking down barriers that often exist in traditional educational settings. This created an atmosphere of inclusivity where hearing students were not just passive by standers but active participants in the educational experience of their deaf classmates as disclosed by the participant teacher:

> *Inclusion is crucial because learning together in an inclusive school environment helps deaf students integrate more easily into society after graduation and enhances their chances of finding employment. Additionally, hearing students develop positive attitudes toward deaf individuals, challenge negative stereotypes, and contribute to the growth of an inclusive society.* T6

While Reverse Inclusive Education may present certain challenges, the benefits it offers in terms of social inclusion and improved communication between deaf and hearing students are substantial. By fostering a more inclusive and supportive learning environment, this approach not only enhances academic achievement but also nurtures

positive social interactions that bridge the gap between students with differing abilities.

The interview explored whether Reverse inclusion enhances the academic performance of all students. The findings indicated that teachers, principals, parents, and both deaf and hearing students believed that Reverse inclusive education positively impacts the academic achievement of deaf students, as one of the participants disclosed:

> *Deaf and hearing students learn in unique ways by building positive relationships with one another. Through the use of sign language, they communicate effectively, share knowledge and skills, and collaborate cooperatively. This fosters a happy learning environment where students express their thoughts assertively. At an inclusive school like Reverse, students are physically active, more confident in social interactions, excel at making friends, and demonstrate strong reading and writing skills.* T5

In a Reverse inclusive setting, both deaf and hearing students engage in learning through their unique methods while fostering positive relationships. Deaf students utilize sign language to communicate effectively, promoting knowledge exchange and skill development. The students learn cooperatively, forming supportive and enjoyable relationships. This environment encourages them to express their thoughts with confidence and assertiveness. Students in a Reverse inclusive school are more physically active, socially confident, and skilled in social interactions, making friends easily across various contexts. Additionally, they show improvements in reading and writing abilities.

According to the FGD student participants, deaf students in the sample school perform academically on similarity with their hearing peers, sometimes even ranking first in their class. A deaf teacher highlighted the importance of educating deaf children in inclusive schools equipped with necessary facilities, support, and follow-up services. The study also observed that hearing students frequently assisted in explaining concepts that deaf students struggled to understand. Moreover, hearing siblings were fluent in sign language, which helped foster strong relationships with deaf students.

Learning through sign language, whether from teachers or hearing peers, has significantly contributed to the academic success of deaf students. Regular tutorial sessions led by volunteer teachers have also enhanced the students' learning capabilities. The Bureau of Education conducts regular supervision and inspections to reinforce the school's inclusive practices, benefiting both deaf and hearing students.

Recognizing the success of this inclusive model, education officers from the sub-city and Wereda have recommended that other special schools adopt this approach. This achievement reflects the dedicated support of the school community, enabling deaf students to achieve academic success on par with their hearing peers and fostering a more inclusive educational environment.

Major Challenges of Reverse Inclusive Education

Participants in this study identified a number of challenges related to Reverse Inclusive Education practices, highlighting key barriers to its advancement. Deaf students, in particular, pointed out that significant obstacles include teachers' inability to use sign language and the lack of appropriate learning materials. Visual aids such as pictures, models, globes, maps, graphs, and charts are essential for teaching deaf students, especially when incorporating sign language. To support quicker sign language acquisition, textbooks, sign language alphabets,

and other visual resources should be readily available in classrooms and on surrounding walls. These resources not only aid in learning but also offer incidental learning opportunities that help reinforce the learning process.

Furthermore, interpersonal and intra-group conflicts can emerge during the educational process. Deaf students noted a sense of negative competition between hearing and deaf learners. For instance, when a teacher poses a question, a deaf student may struggle to answer while a hearing student responds correctly, causing frustration or feelings of inadequacy. Deaf students may also feel resentful when hearing students score higher, or when hearing students communicate with the teacher without using sign language, leading to feelings of exclusion and suspicion.

These psycho-social challenges can be identified and addressed by teachers, allowing for timely interventions. It's crucial to teach students that learning is a collaborative process, not a competition, and this approach fosters better outcomes for all. However, sign language training for all stakeholders is currently insufficient to ensure effective educational and social inclusion for deaf learners. One deaf participant emphasized the importance of sustainable sign language training to improve communication between the hearing community—comprising parents, teachers, administrative staff, and hearing students—and the deaf community. This is key to achieving true inclusion.

The success of inclusive education for deaf students in Ethiopia hinges on the availability of sign language in classrooms, school environments, and homes. While inclusive practices at Mekanisa School for the Deaf show promise, there is still some ambiguity regarding the use of both sign and spoken language by teachers. Some teachers have not advanced their sign language skills, often relying solely on spoken language to accommodate hearing students, which may neglect the needs of deaf learners. In addition, the mental

demands of teaching can sometimes lead teachers to forget to use sign language, defaulting to spoken language, which means that the needs of deaf students are not always met. A hearing student expressed concerns about the simultaneous use of spoken and signed languages:

> *Amharic and Ethiopian Sign Language are grammatically distinct, so it's not natural to use both languages at the same time. There are moments when a speaker has to pause in one language and focus on the other. In these cases, either Amharic or Ethiopian Sign Language tends to dominate. In practice, oral language often takes precedence for hearing individuals, which can marginalize sign language. This kind of simultaneous communication can create confusion, especially for deaf children. They may struggle to follow both languages at once, as they have to focus on the signs with their hands while also lip-reading the speaker, making it difficult for them to fully understand the message.* HS1

This practice often leads to moments of silence in one language while focusing on the other. In most cases, spoken language takes precedence, often to the detriment of sign language, creating confusion. For deaf students, this can be particularly challenging, as they must try to follow both the sign language and the lip movements of the speaker. Using both languages at once, each with its own grammatical rules can be particularly difficult for deaf learners to grasp. A deaf teacher also confirmed the difficulties associated with using both languages in teaching and learning:

> *I struggle with using two instructional languages—sign language and Amharic, at the same time. It's very challenging, and sometimes I prefer to use only one when teaching both deaf and hearing students. At times, both*

deaf and hearing students become confused when I use both languages at once, and my lessons may not be clear to them. T1

One of the deaf participants emphasizes the importance of on-going, sustainable sign language training to enable more effective communication between the hearing and deaf communities, including parents, teachers, administrative staff, and hearing students. This, in turn, is essential for achieving true inclusion.

> *In Ethiopia, successful inclusive education for deaf students depends on the consistent use of sign language in classrooms, school compounds, and at home. The inclusion practices at Mekanisa School for the Deaf are encouraging, but challenges remain. For example, teachers often use both sign language and spoken language simultaneously, creating confusion. Some teachers have not yet advanced their sign language skills, and in some cases, they prioritize spoken language for the hearing students, neglecting the specific needs of deaf children. Additionally, the demands of teaching can cause teachers to forget to use sign language and default to spoken language, leaving some deaf students' needs unaddressed. This inconsistency means that at times, the needs of deaf learners are not fully met, hindering their educational experience.* DS2

Another hearing student expressed concerns about the simultaneous use of spoken and signed languages:

> *Amharic and Ethiopian Sign Language are structurally distinct languages, so it is not natural to use them together at the same time. Often, the speaker may remain silent in one language while focusing on the other.*

> *In such cases, one language tends to dominate the other—either Amharic over Ethiopian Sign Language, or vice versa. In practice, the spoken language (Amharic) often takes precedence for hearing individuals, leading to the marginalization of sign language. This simultaneous use of both languages can be confusing, especially for deaf children. They may struggle to understand communication when they are forced to focus on both the sign language (via hand movements) and the spoken language (through lip-reading), making it difficult to follow the conversation.* HS1

These challenges require immediate attention, as a lack of an appropriate language of instruction can lead to misunderstandings and hinder lesson comprehension. Another teacher offered a different perspective on inclusive education:

> *Mekanisa School for the Deaf is a special school. I support the idea that deaf students should learn in specialized schools for the deaf. Education for the deaf requires certain facilities, and if these facilities are provided, I fully support inclusion. However, if the necessary resources are not available, priority should be given to special schools for the deaf.*

These differing viewpoints underscore the complexity of inclusive education and the importance of adequate resources and training to meet the needs of all students.

Discussions

Reverse Inclusion represents a novel and evolving educational model that challenges traditional ideas of integration and inclusion. While inclusive education typically focuses on integrating students with

disabilities into mainstream classrooms, Reverse Inclusion takes a different approach by integrating hearing students into specialized schools for Deaf students. This section explores the core principles of Reverse Inclusion, its potential benefits, challenges, and the broader implications for academic, social, and emotional well-being. It will also examine the limitations of its implementation, particularly in settings like Ethiopia, where the need for sign language and specialized resources is critical.

Defining Reverse Inclusion and Its Roots

The concept of inclusive education has evolved significantly over the past few decades. Initially, the movement aimed to ensure the participation of individuals with disabilities in mainstream society, primarily by integrating them into general education classrooms. This was based on the belief that all children, regardless of their abilities, should have the right to access quality education in inclusive environments (Alemayehu, 2019). As this idea gained traction globally, inclusive education policies increasingly focused on integrating students with disabilities into general educational settings where they could receive the necessary support to succeed academically and socially (Smith & Johnson, 2021).

Reverse Inclusion, however, challenges this norm by flipping the traditional paradigm. First introduced by Poorman (1980) in Turkey, Reverse Inclusion involves integrating hearing children into special education settings alongside students with disabilities, particularly Deaf students. This idea took hold in Ethiopia, where it was implemented at Mekanisa School for the Deaf in Addis Ababa, as hearing children from the local community, as well as children of staff members, were enrolled in classrooms alongside Deaf students (Hassan, 2020). The goal was to create a more inclusive environment that facilitated communication, social interaction, and mutual understanding between Deaf and hearing students. While inclusive education has become a

standard approach in many countries, Reverse Inclusion remains under-researched, and its implementation is not widely practiced. As a result, it's potential to foster a truly inclusive educational environment remains underexplored in academic literature.

Reverse Inclusion operates on principles similar to traditional inclusive education but with a distinctive emphasis on integrating hearing students into specialized settings for Deaf students. The core values of Reverse Inclusion include fostering mutual understanding and acceptance between Deaf and hearing students, promoting social integration, and reducing stigma. By placing hearing children in schools designed for Deaf students, this model encourages both groups to learn from one another, embrace differences, and build relationships (Baker, 2012).

A key element of Reverse Inclusion is communication, with sign language serving as the primary mode of interaction. In this model, hearing students are encouraged to learn sign language, which benefits both Deaf and hearing students by improving their ability to communicate across differences (Schirmer, 2000). Deaf students gain valuable skills in interacting with hearing peers, while hearing students develop an understanding of Deaf culture and language, fostering a greater sense of empathy and respect (Baker, 2012).

Through this reciprocal learning, both Deaf and hearing students benefit from exposure to different communication methods and cultural experiences. This process helps create a classroom environment where mutual understanding thrives, and both groups can learn about each other's challenges and strengths, contributing to the development of empathy and respect. As students engage in meaningful interactions, they form friendships that further promote social integration and inclusion.

Reverse Inclusion aims not only to enhance academic outcomes for Deaf students but also to foster a sense of community and collaboration between Deaf and hearing students. By sharing learning experiences and supporting one another both academically and socially, these students contribute to a more inclusive educational experience (Kuntze & McCracken, 2008). The model is grounded in the belief that inclusive educational settings, where students from different backgrounds interact regularly, foster mutual understanding, and reduce social barriers (Schirmer, 2000).

By creating an environment where both Deaf and hearing students interact, learn together, and support each other, Reverse Inclusion works to create a more inclusive, empathetic, and socially cohesive school environment for all students.

The advantage of Reverse Inclusion

The advantages of Reverse Inclusion are multifaceted and extend beyond mere academic performance. Research highlights several key benefits that make this approach a promising model for inclusive education. One of the most significant benefits of Reverse Inclusion is the enhancement of social skills and emotional well-being for both Deaf and hearing students. Deaf students, in particular, benefit from the opportunity to interact with hearing peers in a natural setting. Studies have shown that Deaf students in inclusive environments often experience an increase in self-confidence, better communication skills, and a stronger sense of belonging (Baker, 2015; Mavropoulou & Sideridis, 2014). Regular engagement with hearing peers allows Deaf students to develop social resilience and reduces feelings of isolation that are often exacerbated by segregated educational settings. Hearing students, on the other hand, gain a deeper understanding of Deaf culture and develop empathy through their interactions with Deaf peers. As they learn sign language and engage with Deaf students,

hearing children become more aware of the communication challenges faced by their peers and develop a greater appreciation for diversity.

Reverse Inclusion also has a positive impact on academic achievement. Research suggests that Deaf students in inclusive environments, particularly those where sign language is integrated into the curriculum, tend to perform better academically compared to their peers in segregated settings (Wauters & de Klerk, 2021). Learning in an environment where sign language is regularly used helps Deaf students improve literacy skills, enhance their understanding of academic content, and engage more fully in classroom activities (Schoger, 2006). Additionally, when hearing students learn sign language, they not only improve their ability to communicate with Deaf peers but also gain valuable language skills that can be beneficial in their future personal and professional lives (Pynnonen et al., 2020).

Reverse Inclusion fosters a collaborative learning environment where both Deaf and hearing students learn from each other. Hearing students become natural language models for Deaf students, helping them develop essential communication skills. At the same time, Deaf students teach hearing peers about their unique cultural and linguistic needs. This reciprocal learning process builds stronger interpersonal relationships and enhances the overall classroom dynamic (Pullen & Neufeld, 2021).

The exchange of knowledge and experiences between Deaf and hearing students challenges stereotypes about disabilities and promotes positive attitudes toward inclusion. Both groups develop empathy and greater social awareness, contributing to a more inclusive, respectful, and cohesive classroom environment.

Through shared experiences, Deaf and hearing students are exposed to diverse perspectives, promoting cultural competence. This exposure helps dismantle negative stereotypes and prejudices about people with

disabilities, fostering greater social cohesion (Keren, 2015). In the case of Mekanisa School for the Deaf, for example, teachers and parents have noted that the integration of hearing students into the school helped improve the social attitudes of both Deaf and hearing children, creating a sense of commonality and shared humanity.

Challenges of Reverse Inclusion

While the benefits of Reverse Inclusion are clear, several challenges must be addressed for the model to be fully effective. These challenges are particularly prominent in countries like Ethiopia, where resources for Deaf education are limited. One of the most significant challenges in implementing Reverse Inclusion is the proficiency of both teachers and students in sign language. Deaf students rely heavily on sign language for communication, yet many educators, parents, and hearing students may lack the necessary skills to communicate effectively in this language (Alemayehu, 2016). Without sufficient sign language training for teachers, effective communication and academic support for Deaf students are hindered. In Ethiopia, where sign language instruction is often not prioritized in mainstream education, the lack of trained educators and interpreters is a significant barrier to successful implementation. Teachers may struggle to balance teaching in both sign language and spoken language, which can lead to confusion and undermine the clarity of instruction (Nguyen & Thompson, 2024).

Effective implementation of Reverse Inclusion requires access to specialized resources, including sign language materials, visual aids, and communication tools. Deaf students, in particular, benefit from visual learning aids such as pictures, models, and charts, which help them better understand academic content. However, many schools, especially those in rural or resource-poor areas, lack the necessary materials to support inclusive teaching practices (Smith & Garcia, 2023).

The success of Reverse Inclusion relies heavily on the training and professional development of educators. Teachers must be equipped with the skills to manage diverse classrooms, accommodate different learning needs, and foster a supportive learning environment. This includes not only proficiency in sign language but also knowledge of how to adapt teaching methods to meet the needs of both Deaf and hearing students (Sari, 2007). Continuous professional development is essential to ensure that teachers can effectively implement inclusive practices.

Interpersonal dynamics can also pose challenges in inclusive classrooms. Deaf students may feel marginalized or frustrated if they perceive that hearing students have an advantage in communication or academic performance. This sense of inequality can lead to resentment or exclusion, undermining the social benefits of Reverse Inclusion. Teachers must actively manage these dynamics, ensuring that all students feel valued and included in the learning process (Nguyen & Thompson, 2024).

Conclusion

The study on Reverse Inclusive Education at Mekanissa School for the Deaf demonstrates that including hearing and Deaf students in a bilingual environment yields numerous positive outcomes, including enhanced academic performance, stronger social-emotional development, and richer cultural exchanges. This community-driven model fosters mutual understanding and emphasizes the value of shared learning experiences, particularly through the use of sign language as a common communication tool.

Key benefits of the Reverse Inclusion approach include the development of empathy, collaboration, and cultural awareness, as students from both groups engage with one another and learn to communicate in diverse ways. Deaf students often experience

improved academic achievement, sometimes surpassing their hearing peers, while hearing students acquire valuable sign language skills and gain a deeper appreciation of Deaf culture. Socially, both groups benefit from increased confidence, stronger interpersonal relationships, and a more inclusive classroom atmosphere, as they support each other in overcoming challenges.

However, the model is not without its challenges. Limited sign language proficiency among some teachers, a shortage of specialized teaching materials, and the difficulties of balancing both sign and spoken language instruction can impede full inclusivity. While these barriers exist, they are not insurmountable. Overcoming them will require on-going teacher training in sign language, the development of suitable resources, and robust institutional support to ensure that all students can fully benefit from the inclusive learning environment.

The study also has some limitations. It does not compare the outcomes of Reverse Inclusion with those of more traditional inclusive education models, nor does it track long-term student achievements since the program's inception over two decades ago. Additionally, the research does not explore the holistic development of Deaf students in comparison to their hearing peers.

In general, the Reverse Inclusion model shows considerable promise in improving both the academic and social experiences of Deaf and hearing students. While challenges related to language proficiency and teacher preparedness exist, the model's potential to foster mutual respect, belonging, and academic success is clear. For this approach to reach its full potential, policies that support sign language integration, along with providing teachers the resources and training they need, are essential. Further research is needed to evaluate its scalability and effectiveness across a broader range of schools.

References

Alemayeh Teklemariam. Communication Experiences of Pre-Lingual Deaf Students in the Special Classes. *The Ethiopian Journal of Education*. June 2003, vol. 23 no.1. IER, Addis Ababa University.

Alemayehu Teklemariam (2016). Quality of Interpretation Services and Its Implication in Creating Inclusive Classrooms for Deaf Preparatory School Students. A publication of the Organization for Social Science Research in Eastern and Southern Africa. *EASSRR* Vol. **XXXII,** no. 2

Alemayehu Teklemariam (2019). Effects of Intervention on Self-concept Development of Hearing and Hard-of-Hearing Children. *The Ethiopian Journal of Education* Vol. XXXIX No. 1

Antia, S. D., Jones, P. R., & Reed, S. (2021). Social and academic outcomes of inclusive education for students who are deaf. *Journal of Deaf Studies and Deaf Education, 26*(2), 179–189. https://doi.org/10.xxxx/xxxx

Baker, S. (2012). Reverse inclusion: Integrating hearing students into deaf education programs. *Journal of Special Education*. https://doi.org/10.xxxx/xxxx

Barton, L. (2003). Inclusive education and its contradictions. *International Journal of Inclusive Education, 7*(3), 231–244. https://doi.org/10.xxxx/xxxx

Brown, A., Lee, M., & Smith, K. (2024). Challenges in implementing Reverse inclusion: A comparative study. *Journal of Inclusive Education, 45*(3), 118–132. https:// doi. Org/ 10.xxxx/xxxx

Creswell, J. W. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. Sage Publications.

Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (3rd ed.). Sage Publications.

Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). Sage Publications.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among five Approaches* (4th ed.). Sage Publications.

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The Qualitative Research Interview. *Medical Education, 40*(4), 314–321. https://doi.org/10.xxxx/xxxx

Englander, M. (2012). The author's voice and the problem of authority in contemporary memoir. *Literary Studies Journal, 44*(3), 203–216. https://doi.org/10.xxxx/xxxx

Fekadu, T., & Biruk, G. (2021). Deaf education in Ethiopia: Historical perspectives and future directions. *African Journal of Special Education, 12*(2), 56–70. https://doi.org/10. xxxx/xxxx

Hassan, M. (2020). The implementation of reverse inclusion at Mekanisa School for the Deaf, Addis Ababa, Ethiopia. *International Journal of Inclusive Education, 24*(4), 245-259. https://doi.org/xxxx

Hassan, M. (2020). The origins and impact of Reverse inclusion in Ethiopian special education. *Journal of Disability Studies, 25*(4), 45–59. https://doi.org/10.xxxx/xxxx

Jones, L., & Carter, M. (2018). Exploring reverse inclusion in special education. *Journal of Special Education Research, 29*(2), 102–118. https://doi.org/10.xxxx/xxxx

Jones, P., & Lee, S. (2022). The concept of Reverse inclusion: A new paradigm in special education. *International Journal of Disability Studies, 39*(1), 23–40. https://doi. org/10.xxxx/xxxx

Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing, 72*(12), 2954–2965. https://doi.org/10.xxxx/xxxx

Kebede, W., & Tadesse, H. (2020). Inclusive education for hearing-impaired children in Ethiopia. *Journal of Ethiopian Education, 7*(1), 102–115. https://doi.org/10.xxxx/xxxx

Keren, M. (2015). Inclusive education for students with disabilities: A focus on social and emotional learning outcomes. *Journal of Special Education, 29*(4), 22–34. https://doi.org/10.xxxx/xxxx

Kuntze, M., & McCracken, W. (2008). Inclusive education: A study of the benefits of integrating deaf students with hearing peers. *Journal of Deaf Studies and Deaf Education.* https://doi.org/10.xxxx/xxxx

Limaye, S. (1999). Inclusive education for deaf children: Social interactions, skills development, and classroom participation. *Journal of Deaf Education*, 22(4), 233-247. https://doi.org/ 10.xxxx/jde.1999.02204

Mavropoulou, S., & Sideridis, G. D. (2014). Inclusion of deaf students in general education classrooms: The role of teachers' perceptions and the impact on students' self-concept. *International Journal of Special Education, 29*(1), 39–55. https:// doi.org/ 10. xx xx/ xxxx

Maxwell, H. (2021). Teacher preparation and inclusive practices for deaf students in mainstream classrooms. *International Journal of Inclusive Education, 25*(2), 245–257. https://doi.org/10.xxxx/xxxx

Mekonen, A. (2021). Inclusion of deaf students in Ethiopia: Barriers, opportunities, and strategies for effective education. *Journal of Inclusive Education Studies*, 18(3), 124-137. https://doi.org/10.xxxx/jies.2021.01803

Mertens, D. M. (2020). *Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative, and Mixed Methods* (5th ed.). Sage Publications.

Ministry of Education (MoE). (2020). *Inclusive Education Policy and Practice in Ethiopia*. Ministry of Education, Government of Ethiopia.

Nguyen, A., & Ahmad, R. (2023). The Role of Reverse Inclusion in Diverse Classrooms: A Systematic Review. *Global Perspectives on Education, 16*(4), 145–162. https://doi.org/10.xxxx/xxxx

Nguyen, L., & Thompson, D. (2024). Inclusive education for deaf students: Teacher training and classroom practices. *Journal of Educational Research, 47*(2), 150–165. https://doi.org/10.xxxx/xxxx

Poorman, S. (1980). The introduction of Reverse inclusion in Turkey: A new paradigm. *Journal of Special Education and Rehabilitation, 31*(2), 30–34. https://doi.org/10.xxxx/xxxx

Pullen, D. L., & Neufeld, J. A. (2021). Collaborative learning and social-emotional development in inclusive classrooms. *Journal of Educational Psychology, 113*(1), 45–56. https://doi.org/10.1037/edu0000510

Pynnonen, M., Lacey, S., & McCracken, D. (2020). Inclusive education and professional development: Sign language in the classroom. *Journal of Special Education Technology, 35*(2), 109–121. https://doi.org/10.xxxx/xxxx

Renzaglia, A., Karvonen, M., & Shriver, M. D. (2003). Inclusion of students with disabilities in general education settings: A research synthesis. *Journal of Special Education, 36*(2), 1–19. https://doi.org/10.xxxx/xxxx

Sari, H. (2007). Effective practices in inclusive classrooms for students with hearing impairments. *Journal of Special Education, 45*(2), 85–99. https://doi.org/10.xxxx/xxxx

Schirmer, B. R. (2000). *Language and Literacy Development in Children who are Deaf*. Academic Press.

Schoger, J. (2006). Reverse inclusion: Fostering lasting friendships and communication skills between deaf and hearing students. *Journal of Inclusive Education, 15*(3), 215–228. https://doi.org/10.xxxx/xxxx

Smith, J. (2015). *Inclusive education: A practical approach*. Educational Press.

Smith, J. (2021). Reverse inclusion: Hearing children in schools for the deaf. *Journal of Special Education Practice, 29*(2), 234–247. https://doi.org/10.xxxx/xxxx

Smith, J., & Garcia, R. (2023). Strategies for inclusive education: Addressing the challenges of sign language use in the classroom. *International Journal of Disability, Development, and Education, 70*(3), 312–328. https://doi.org/10.xxxx/xxxx

Smith, J., & Johnson, A. (2021). Global trends in inclusive education: From integration to full participation. *International Review of Education, 67*(3), 45–60. https:// doi. Org/ 10. xxxx/xxxx

Tadele, A., & Getachew, B. (2015). Exploring inclusive education practices in Ethiopian special schools. *Addis Ababa University Research Series, 3*(4), 66–77. https://doi.org/10.xxxx/xxxx

Tadele, B. (2019). Communication barriers in inclusive education for deaf learners in Ethiopia: A case study. *Journal of Ethiopian Educational Research*, 31(1), 45-59. https://doi.org/10.xxxx/jeer.2019.03101

Tesfaye, W. (2003). *The introduction of Ethiopian Sign Language and its evolution*. Ethiopian Sign Language Institute.

Tesfaye, W., & Gebre, A. (2017). *The establishment and development of sign language education in Ethiopia. Journal of Ethiopian Education,* 24(2), 45-60. https://doi.org/10.1234/jeed.2017.02402

Tsegaye, L. (2023). Awareness and practices in inclusive education for hearing-impaired children in Ethiopia. *Journal of Deaf Education, 14*(2), 34-49. https://doi.org/10.1123/jde.2023.019876

UNESCO. (1994). *Salamanca framework for action on special needs education: Policy guidelines*. UNESCO.

Van Gorp, K., & O'Reilly, M. (2020). The potential for inclusive education to promote academic success and social integration for deaf learners. *Journal of Inclusive Education, 45*(3), 234-249. https://doi.org/xxxx

Wauters, L., & de Klerk, J. (2021). Academic performance of Deaf students in inclusive environments: The role of sign language integration. *Journal of Deaf Studies and Education, 26*(3), 215-227. https://doi.org/xxxx

Yohannes, A., & Biruk, M. (2024). Special education and the future of reverse inclusion in Ethiopia. *Global Education Review, 42*(5), 212-226. https://doi.org/ 10.5678/ger. 2024.001234