



## Optimizing language literacy in students with visual impairment through storytelling training

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### Abstract

**Background:** The low level of literacy, especially among students with visual impairment in Indonesia, is a serious problem that requires special attention. In fact, literacy is a fundamental skill that is essential for every individual, from birth, to participate fully in society. One of the special schools that implements literacy activities to encourage language literacy skills among its students is SLB Negeri A Pajajaran in Bandung, which provides extracurricular activities in the form of storytelling training.

**Purpose:** This study aimed to analyze the application of storytelling training in optimizing the language literacy skills of visually impaired children at SLBN A Pajajaran

**Methods:** This research uses a qualitative method with case study approach. Data were obtained through observation, interviews, literature review, and documentation. Data were analyzed using Bandura's social learning theory and Vygotsky's cognitive development theory.

**Results:** The storytelling training extracurricular at SLBN A Pajajaran in elementary school level is conducted by having students listen to an audio recording to memorize, practice, and then receive evaluation from the supervising teacher.

**Conclusions:** This activity not only hones students' literacy skills, such as listening, speaking, reading, writing, expressing opinions, and training them to think structurally in the class, but also has a long-term impact in the future such as social self confidence. Future research could conduct studies with the same topic and research subject, but with a greater focus on the effectiveness using a braille book versus an audiobook.

### Keywords:

Language literacy

Language skills

Storytelling

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Students with visual impairment

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## INTRODUCTION

Literacy is a fundamental skill that is essential for every individual from birth, in order to participate fully in society (ASHA, 2025). Unfortunately, people with visual, hearing, or cognitive impairments often face significant barriers because their needs are not adequately addressed by the media (Saepudin et al., 2025). Therefore, learning processes must be adapted to their abilities while still focusing on the development of literacy skills (Fernández-Villardón et al., 2021). One formal institution that plays an important role in accommodating the individual needs of students with disabilities, particularly students with visual impairment, is the Special School A (Sekolah Luar Biasa Negeri A - SLBA).

SLBN A Pajajaran is a special school for students with visual impairment located in Bandung. The school actively promotes literacy through a range of programs designed to support students' language literacy skills. One of its main activities is extracurricular storytelling training for elementary and middle school students. This program not only helps students build their literacy and communication skills but also prepares them to take part in cultural arts competitions, such as the *Creative and Appreciation Event for Students with Special Needs*. The impact of this training can be seen in students' achievements, for example, in 2021, SLBN A Pajajaran won third place in the national storytelling competition at the event.

From an information perspective, storytelling can also function as a mechanism for storing and retrieving knowledge within oral traditions, where narrative

serve as structured units of memory. This is especially relevant for individuals with visual impairment, who depend primarily on auditory channels to access, process, and reproduce information.

Students with visual impairment have different levels of need, generally categorized as mild, moderate, and severe (totally blind) (Sabila et al., 2024). In some cases, visual impairment is accompanied by other disabilities, such as hearing, developmental, mobility, intellectual, or cognitive challenges. This condition is known as Multiple Disabilities with Visual Impairment (MDVI).

Literacy itself is not just about reading and writing. It involves the ability to understand, interpret, create, and communicate information in a rapidly changing world. These skills develop through continuous learning and through everyday practices of reading, writing, and using numbers (UNESCO, 2025). In this sense, literacy can be seen as a fundamental ability that supports both individual growth and participation in society (Surbakti & Sayekti, 2025). No matter the field or source of information, these skills work together, as all information is ultimately understood and expressed through language (Herawati, 2020).

There are six skills in language literacy: (1) reading and writing skills; (2) the ability to integrate listening, speaking, reading, writing, and thinking; (3) the ability to formulate and express new ideas; (4) mastery of language as a support for success in academic or social environments; (5) the ability to perform reading and writing tasks that are always necessary; and (6) the ability of an academic to understand

discourse professionally (Herawati, 2020).

These six skills form the basis of this study, which focuses on students with visual impairment who participate in extracurricular storytelling training. In simpler terms, language literacy can be understood as a person's ability to think, learn, understand, and use knowledge through the four main language skills: listening, speaking, reading, and writing (Herawati, 2020).

While literacy activities in schools are often been limited to practices such as 15 minutes of reading before class begins, several studies have shown that storytelling can be an effective method for enhancing the abilities of students with visual impairment, particularly at the elementary level (Guedich et al., 2022). Despite this, there is still a gap in the research. Previous studies tend to position students with visual impairment mainly as listeners, rather than as active participants in storytelling. At the same time, students with visual impairment need opportunities to take part in storytelling and narration activities, as these not only engage listening and attention skills, but also help them use their bodies more expressively, such as through hand movements and facial expressions (Somma, et al., 2021)

This study seeks to address that gap by exploring the experiences of students with visual impairment who take on a more active role as storytellers, using Albert Bandura's Social Learning Theory and Lev Vygotsky's Cognitive Development Theory to examine both imitation processes and guided learning. It aims to examine how they develop language literacy skills through storytelling training.

The focus is limited to elementary level students who engage in extracurricular storytelling activities using audio based listening methods. Future research could expand this topic by examining storytelling training using a braille book versus an audiobook. Ultimately, this study is expected to contribute both theoretically and practically to the development of literacy activity models for students with visual impairment.

## RESEARCH METHODS

This study employed a qualitative research method using a case study approach, as outlined by John W. Cresswell. Qualitative research is commonly used to explore social or human issues by examining and understanding meaning through an inductive approach, with a focus on individual experiences and the complexity of real life situations (Cresswell, 2016).

The researcher chose a qualitative method to better understand how individuals with visual impairment develop literacy skills, particularly reading and writing, through participation in a storytelling training extracurricular program at SLBN A Pajajaran. A case study approach was selected because the focus of this research, namely the literacy activity conducted at the school, is bounded by both time and place.

It is time-bound as the activity is held only on Wednesday, and place-bound because it represents a literacy initiative specifically developed by SLBN A Pajajaran to support students' talents and interests, which are later showcased in competitions.

Based on these considerations, the researcher determined that a qualitative method and case study approach is the most appropriate for this study.

Data were collected through observations, interviews, and literature review. A case study is focuses on a specific case within a particular context, whether it involves an individual, a cultural group, or a lived experience (Kusmarni, 2010). This approach was chosen because it allows for an in depth exploration of how literacy activities are implemented for students with visual impairment at SLBN A Pajajaran.

The participants in this study were selected using purposive sampling, a technique in which informants are chosen based on specific criteria relevant to the research objectives (Kumara, 2018). In this case, the selected informants were individuals directly involved in literacy activities, particularly storytelling training at SLBN A Pajajaran in Bandung, as presented in Table 1.

The research was conducted at SLBN A Pajajaran, Bandung, Indonesia, over a six month period from April to September 2025. Data collection through observations and interview took place in April, July, and August, while data analysis and report writing were carried out throughout the research period.

In qualitative research, theory is used not to be tested, but to guide the researcher in understanding and interpreting the issue under study. Accordingly, this study draws on Bandura's social learning theory and Vygotsky's theory of cognitive development as analytical frameworks.

Cognitive development refers to the process through which individuals acquire and develop knowledge thinking abilities (Whitaker, 2021). It includes various cognitive functions such as memory, reasoning, problem solving, language, perception, and spatial processing (Richland & Begolli, 2016).

The use of these two theoretical

**Table 1. Informants in this research**

Informant's initials name	Role in research
H (informant 1)	Teacher-trainer from the school for storytelling training extracurricular activities.
S (informant 2)	Teacher-trainer from the school for storytelling training extracurricular activities.
R (informant 3)	Third grade elementary school, student with visual impairment (totally blind), participating in storytelling training activities.
C (informant 4)	Sixth grade elementary school, student with visual impairment and accompanied by other disabilities (Multiple Disabilities with Visual Impairment - MDVI), participating in storytelling training activities.
G (informant 5)	The person considered experts by researcher to validate research data (An Indonesian storyteller who often interacts with children and has trained blind students in storytelling).

Source: Research findings, 2025

perspectives is supported by Lare & Silvestri (2023), who argue that literacy is a complex process involving multiple interconnected aspects. Literacy is not limited to reading, writing, and communication but also includes multimodal understanding, such as interpreting spoken language, body language, facial expressions, gestures, and even touch. These processes are shaped by an individual’s background, experiences, and identity. Therefore, examining literacy through multiple theoretical lenses is important to better address students’ needs, build on their prior knowledge, and support effective literacy practices in educational settings.

Individuals learn by observing others and storing that information in memory through symbolic coding, which can take the form of visual images or verbal representations (Bandura, 1971). However, for students with visual impairment, this process relies primarily on verbal or auditory input, as visual references are not accessible. In the context of storytelling training, students observe and imitate the model mainly through listening, particularly by focusing on the storyteller’s voice. As for gestures and physical expression, students require guidance from teachers, who provide direct support and feedback

during the learning process (presented in Table 2).

To deepen the understanding of this learning process, this study incorporates Vygotsky’s cognitive development theory, specifically the Zone of Proximal Development (ZPD). ZPD is

*“the distance between actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers”* Vygotsky (1978).

The concept of ZPD is used in this study to examine students’ language literacy development through three key questions: (1) what students can do independently during storytelling training; (2) what they can achieve with the support of teachers; and (3) what remains beyond their current abilities. Through this framework, the study explores how students are able to imitate the storyteller’s voice independently through listening, while still relying on teacher guidance to develop gestures and expressive skills. This distinction helps identify the areas where students are already capable, where they need support, and where further development is required.

**Table 2. Relationship Between Two Theories**

Theory	Focus	Linkage
Albert Bandura – Social Learning Theory (1971)	Observational learning through imitation.	Explains the imitation process, but limited in addressing learners’ need for feedback.
Lev Vygotsky – Cognitive Development Theory (1978)	Learning through social support (Zone of Proximal Development)	Complements Bandura by explaining the role of guidance in assisted performance.

Source: Research findings, 2025

## RESULTS AND DISCUSSION

Storytelling training at SLBN A Pajajaran is one of the extracurricular activities closely related to literacy development. The program is divided into two groups: elementary school students, who attend sessions every Wednesday from 10 a.m to 11 a.m, and junior high school students, who participate from 1 p.m to 2 p.m. Both groups are guided by the same teachers, H and S (Informants 1 and 2).

In the elementary group, the activity is attended by two students: R (Informant 3), a third grade student with total blindness, and C (Informant 4), a sixth grade student with Multiple Disabilities with Visual Impairment (MDVI), a condition in which visual impairment is accompanied by other disabilities.

Initially, this extracurricular activity was designed to support students' personal development. Over time, however, it has also evolved to prepare students for participation in storytelling competitions.

“Actually, the main goal of extracurricular activities is for personal development. Whether or not there is a storytelling competition, we design these activities with a clear purpose. One of them is storytelling. In addition to developing students' potential, we also aim to prepare them for competitions. We also frequently receive visitors, such as university students and school groups, who come to learn how visually impaired children study. During these visits, we often showcase students' abilities through activities like singing, storytelling, and MTQ (Informant 2, interview, 2025)

For elementary students, storytelling training is conducted primarily through listening to audio based stories. Teachers

play stories from YouTube through Bluetooth connected speakers (as presented in Figure 1). While a variety of stories are used, on that is frequently practiced, especially in preparation for competitions is “Si Kancil Mencuri Mentimun” (The Mouse Deer Steals Cucumber). The storytelling model used in this training is typically a senior student who has previously participated in storytelling competitions, including the Creative and Appreciations Event for Students with Special Needs. This approach is intended to build students' motivation by providing relatable role models.

From the perspective of Bandura's learning theory (1971), this approach is effective because learners tend to pay closer attention to models they perceive as similar to themselves. In this case, the models share similar conditions with the students, as they also have visual impairments. Based on the researcher's observations, the process of observing and imitating behavior in students with visual impairment is not visual, but auditory. Students primarily learn by listening to the storyteller's voice, which becomes the main of imitation.

Bandura's theory is reflected in the researcher's interview with Informant 5 (G), a storyteller who has experience training students with visual impairment. Based on his experience, children with visual impairment sometimes can feel hesitant or insecure, especially when they are treated differently from others. However, when they encounter role models who share similar conditions, they tend to feel more accepted and confident. In this context, having a storyteller with visual impairment as a model helps students feel that they are not alone, which increases their motivation



**Figure 1. Students listen to storytelling played through speakers**

Source: Research findings, 2025

to learn.

During the listening process, the researcher observed that both students often moved their hands, either touching the table, tapping surfaces, or playing with the chairs. At first glance, this behavior might appear as a lack of attention. However the response of students with visual impairment can differ significantly from those of sighted children. Brown (1972) in *“Storytelling and the Blind Child”* describes similar situations in which children with visual impairment did not always face the storyteller or appeared distracted, yet later showed strong engagement by asking questions. This suggests that such behaviors do not necessarily indicate a lack of interest.

Instead, these actions can be

understood as a form of non verbal communication. Behaviors such as tapping or shifting attention may signal boredom or decreasing engagement, rather than simply being a disciplinary issue. As Informant 5 explained, all children generally enjoy stories, however, when they begin to lose focus, it often indicates that the story or method is no longer engaging enough. For students with visual impairment, this may occur when stories rely too heavily on visual elements that cannot be accessed through auditory imagination. This highlights the importance of adapting storytelling methods in real time, including maintaining interaction through verbal cues or physical guidance.

After listening to story, students are asked to practice retelling it. They stand in

front of the class and perform the story, after which the teachers provide feedback on pronunciation, intonation, concentration, and character voice imitation. In Bandura's framework, this stage is known as **rehearsal**, where learners reproduce behaviors they have previously observed, in this case, through listening.

Bandura (1971) describes the learning process can be understood through four subprocesses. The first is **attention**, which refers to the learner's interest in the model. In this study, the students were naturally drawn to the model because they shared similar conditions (visual impairment), making the model more relatable. This similarity helped students focus on and remember the storyteller's voice. However, repeated exposure to the same model or story could also lead to boredom.

The second subprocess is **retention**, which involves storing the observed behavior in memory. For students with visual impairment, this process is primarily auditory rather than visual. They encode the model's performance through sound, particularly voice and narration. Repetition through storytelling practice plays an important role is strengthening this memory.

The third subprocess is **motoric reproduction processes**, which is the learners attempt to imitate the observed behavior. In storytelling, this includes not only voice but also gestures and expressions. Since students cannot see the model's gestures, they require guidance from teachers, who support them through physical direction and feedback. This aspect of learning will be further explained through Vygotsky's theory.

The final subprocess is **reinforcement and motivational processes**, which depends on the responses learners receive. Positive feedback encourages students to continue practicing, while negative responses may reduce their motivation. In this study, despite occasional boredom, students remained willing to participate in storytelling activities, indicating that the teachers' feedback played an important role in maintaining their engagement.

To support the development of gestures, teachers provide direct guidance by physically assisting students. For example, by holding their hands and guiding their movements (as presented in **Figure 2**). As the competition approaches, external mentors may also be involved to help refine students' performance. This hands on guidance enables students to better understand and imagine gestures that they cannot access visually, while also reflecting a form of guided support within Lev Vygotsky's framework.

During storytelling practice, teachers often encourage students to follow the original narrative. However, there are moments when students improvise. For example, Informant 3 was able to continue the story despite forgetting certain parts, demonstrating an understanding of the storyline. While teachers encouraged adherence to the original script, this improvisation indicates that students are not merely memorizing, but also processing meaning.

This aligns with Informant 5's perspective that storytelling should focus on understanding rather than memorization. Relying too heavily on memorization can create difficulties when students forget



**Figure 2. Teacher trains gestures by giving directions while holding the student's hands**

Source: Research findings, 2025

specific words, potentially leading to confusion or anxiety during performance. In contrast, understanding the storyline allows students to retell it more flexibly and confidently.

This process can be further explained using Vygotsky's concept of the the Zone of Proximal Development (ZPD) which there are three zones of cognitive development in children. The first level is *students' current understanding*, refers to what students can do independently. In this study, students were able to understand and retell the story in their own words, showing their current level of ability.

This was proven when Informant 3 was asked to practice storytelling. Informant 3 was able to improvise the story by stringing together sentences without losing

the essence of the story, then Informant 4 corrected Informant 3's sentences. Although the teachers encouraged the students to follow the narrative of the story they had listened to, the students can told the story using their own language style, which means that both students understood the story they had listened to.

From Lev Vygotsky's perspective, this teaching approach can be seen as an initial form of scaffolding to build students' confidence within the context of a competition. However, if it is used continuously, this approach risks confining students to a lower level of the Zone of Proximal Development (ZPD) and limit their ability to progress toward higher cognitive skills, particularly in creating narratives independently.

The second level is the *Zone of Proximal Development* (ZPD) itself, which includes tasks that students can complete with guidance. In this case, students required assistance from teachers, particularly in developing gestures and expressive elements during storytelling.

The third level is *beyond reach*, refers to abilities that are still beyond the students' current reach, even with support. In this study, this includes the ability to fully engage the audience emotionally through storytelling. These findings suggest that storytelling training is not only a process of imitation but also a socially mediated learning activity.

Within this framework, the development of language skills, as outlined by Herawati (2020), can be understood more comprehensively. There are six key skills in language literacy: (1) reading and writing skills; (2) the ability to integrate listening, speaking, reading, writing, and thinking; (3) the ability to formulate and express new ideas; (4) mastery of language to support success in academic and social environments; (5) the ability to perform essential reading and writing tasks; and (6) the ability to understand discourse in a professional or academic context. In this section, each of these skills is discussed based on the research findings.

The first is **reading and writing skills**. According to Informants 1 and 2 as teachers in storytelling training, because storytelling training for elementary students is primarily conducted through audio, students' reading skills are not directly developed through this activity. However, Informant 5 offered a different perspective. He explained that even though

the method is audio based, storytelling training remains closely connected to reading and writing development.

When children enjoy a story, they naturally become curious about its source. Even if they are not yet able to read, they begin to recognize that stories come from books and develop an interest in accessing them in the future. For students with visual impairment, this means using Braille books instead of printed text.

In addition, Informant 5 emphasized that storytelling also support writing skills. Through repeated exposure to stories, students become familiar with narrative structures and learn how learn how story can organized sequentially. This aligns with broader literacy standards, which suggest that orally delivered stories can help students understand sentence patterns and support the development of narrative and argumentative writing (National Governors Association Center for Best Practices, 2010). This shows that even without direct reading practice, storytelling contributes to literacy development at a conceptual level.

The second skill is **the integration of listening, speaking, reading, writing, and thinking**. Informants 1 and 2 explained that storytelling training encourages students to focus on listening and to practice speaking clearly. These skills not only support the activity itself but also contribute to classroom learning and have long term benefits.

“Yes, of course it is related. Because in the learning process, there is a process of listening, speaking, and understanding. If students can listen better, they can understand lessons better. When they need to take a speaking test, they will also speak more clearly. Even in writing, if they encounter unfamiliar

words but have heard them in stories, they can still respond.” (Informant 2, interview, 2025)

This finding is supported by Sartika & Andajani (2018) who found a significant relationship between audio storytelling methods and the listening skills of students with visual impairment. Listening ability is, in fact, one of their strengths. Research by Sabourin et al. (2022) also shows that individuals who have been visually impaired since birth often demonstrate enhanced auditory abilities compared to sighted individuals. Given that auditory ability is often a strength in these students, storytelling becomes a particularly effective method for developing integrated language skills.

The long-term impact of storytelling training is also evident in Informant 5’s experience. He observed that some students develop an interest in becoming writers, either by writing in Braille or by recording their stories and having them transcribed into written form.

The third skill is **the ability to formulate and express new ideas**. When Informants 3 and 4 feel bored, the teachers often introduce role play activities in which students create their own stories. Through this process, students are encouraged to improvise characters, settings, and storylines. Informant 5 noted that this type of activity helps students become more confident in expressing their ideas. At the same time, they learn to listen to others, respect different opinions, and engage in collaborative storytelling.

Importantly, even without visual experience, students with visual impairment

still able to develop imagination through verbal and sensory representations (Cattaneo et al., 2008). This shows that creativity is not limited by visual input.

The fourth skill is **mastery of language to support success in academic and social environments**. This skill is reflected in both classroom performance and broader learning contexts. Teachers observed that storytelling training has a positive impact on students’ listening, speaking, writing, and comprehension skills, particularly in language related subjects.

“There is a connection between storytelling training and their academic performance, especially in language subjects such as Bahasa Indonesia and Basa Sunda.” (Informant 2, interview, 2025)

However, Informant 5 argued that the benefits extend beyond language learning. Storytelling can also support understanding in subjects such as mathematics. Because students with visual impairment rely less on visual input, abstract concepts can be made more meaningful through storytelling combined with tactile experiences.

For example, a student may memorize that one plus one equals two, but not fully understand the concept. When counting is combined with touching object and supported by storytelling, the concept becomes more concrete. This aligns with findings from Tipi et al. (2023), which show that students with visual impairment learn more effectively when tactile interaction is integrated into the learning process.

This perspective is further supported by Somma, Fuccio, et al. (2021) who highlight that storytelling activities can enhance

motoric skills, attention, and listening. In addition, storytelling contributes to the development of linguistic, cognitive, emotional, and social abilities. Similarly, Guedich et al. (2022) found that storytelling helps students understand narrative structures, which in turn supports comprehension of more complex academic concepts.

The fifth skill is **the ability to perform essential reading and writing tasks**. In this study, students showed different levels of development. Informant 3 was able to read and write Braille fluently and had demonstrated strong vocabulary skills from an early grade, partly due to support at home. In contrast, Informant 4 was able to write letters but had not yet developed full reading proficiency. However, as Informant 5 explained, even students are still learning Braille can express their ideas by recording stories orally which can later be transcribed into written form. This shows that storytelling provides flexible pathways for literacy development.

The final skill is the **ability to understand discourse in a professional or academic context**. This skill is reflected not only in students but also in teachers' practices. Interestingly, the teachers themselves acknowledged that they did not have formal training in storytelling and developed their methods independently. This indicates that storytelling training is still evolving and lacks standardized guidelines, particularly for students with visual impairment.

"Actually, we don't really know the formal way to teach storytelling. We are self-taught. Even so, Alhamdulillah, we have produced champions." (Informant 1, interview, 2025).

"We became extracurricular mentor not because we were experts, but because we were assigned. So we kept learning through experience and trying different methods. It's really learning by doing." (Informant 2, interview, 2025).

As a storyteller, Informant 5 noted that there is no specific formal institution dedicated to academic storytelling training. As a result, teachers often rely on self-learning or informal training opportunities. However, teaching storytelling students with visual impairment requires a specific understanding of how these students perceive the world. Stories need to be adapted to emphasize non visual senses such as sound, touch, and smell. For example, a sentence like "*from a distance, you can see red rose petals*" may not be meaningful for students with visual impairment, whereas "*from a distance, you can smell the fragrance of roses spreading through the forest*" is more accessible and relatable for them.

Overall, the integration of observational learning, guided interaction, and literacy development shows that storytelling training is a dynamic and adaptive process. Storytelling training also contributes to students' confidence and expressive abilities. Teachers observed that students became more confident when performing and improved their use intonation to express emotions such as sadness or anger. This suggests that storytelling not only supports the development of language skills but also reflects how learning can be restructured to align with the sensory and cognitive characteristic of students with visual impairment.

## CONCLUSION

The storytelling training extracurricular program at SLBN S Pajajaran, particularly at the elementary school level, is conducted through audio based activities in which students listen to recorded stories, practice retelling them, and receive feedback from the supervising teachers. This process not only develops students' literacy skills, such as listening, speaking, reading, writing, expressing ideas, and organizing their thoughts, but also contribute to their long-term development such as social self confidence. Further research could explore the same topic with a more specific focus on comparing the effectiveness of Braille books and audiobooks in storytelling training. Such studies would help determine which method is more effective for students with visual impairment, particularly in supporting their ability to construct and organize sentences during storytelling.

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### Author Contributions

Conceptualization, A.P.T.; methodology, A.P.T.; formal analysis, A.P.T.; investigation, A.P.T.; resources, A.P.T.; data curation, A.P.T.; writing—original draft preparation, A.P.T.; writing—review and editing, E.L.; visualization, A.P.T.; supervision, E.L.; project administration, A.P.T. All authors have read and agreed to the published version of the manuscript.

### AI Declaration

The authors declare that artificial intelligence (AI) tools, specifically ChatGPT, Grammarly, and DeepL,

were used solely to assist with language editing, translation, grammar correction, and manuscript clarity. These tools were not involved in the study design, data collection, analysis, interpretation, or generation of scientific conclusions. All AI-assisted content was carefully reviewed and validated by the authors, who take full responsibility for the integrity and accuracy of the work.

### Data Availability Statement

All data used in this article were obtained from the author's undergraduate thesis, including interview transcripts, visual materials, and supporting research documents. The data are not publicly available due to privacy and ethical restrictions on the anonymity of research informants and community members, but may be accessed upon reasonable request via the repository.

### Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study, the collection, analysis, or interpretation of data, the writing of the manuscript, or the decision to publish the results.

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