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Research Article

Investigating Teachers' Perceptions, Challenges, and Support Systems in Handling a Visually Impaired Student in a Teacher Education Institution

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ABSTRACT

Inclusive Education (IE) is a recognized right mandated by international and Philippine policies, requiring schools to accommodate learners with disabilities, including those with visual impairment (VI). Teachers play a vital role in implementing IE, yet their readiness, perceptions, and access to support systems shape the effectiveness of inclusive practices. This study aimed to investigate teachers' perceptions, challenges, and support systems in handling a student with VI in a Teacher Education Institution (TEI) in northern Philippines. A qualitative-descriptive case study design was employed, involving 12 purposively selected teachers who had taught the student with VI in at least one semester. Data were gathered through semi-structured interviews and focus group discussions and analyzed thematically using Braun and Clarke's (2012) framework. Ethical protocols such as informed consent and confidentiality were strictly observed.

Findings revealed that teachers strongly valued inclusive education and emphasized empathy, patience, adaptability, and learner-centered approaches in teaching students with VI. They adopted flexible strategies such as tactile resources, auditory cues, and differentiated instruction. However, challenges included limited training in Braille and inclusive pedagogy, lack of accessible resources, barriers in assessment, and difficulties in creating safe and inclusive classroom environments. Despite these, teachers received support through collegial collaboration, peer assistance, expert guidance from SPED teachers and ECSNED department staff, family involvement, access to assistive technologies, and institutional measures such as inclusive classroom setups and alternative assessments. In conclusion, teachers demonstrated commitment and creativity in promoting inclusion but faced systemic gaps in preparation and resources. Strengthening professional development, assistive technologies, and institutional support is essential to sustain meaningful inclusive education for students with visual impairment.

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Background

Inclusive Education (IE) is a fundamental right, grounded in international human rights laws and supported by frameworks such as the UN Convention on the Rights of Persons with Disabilities and Sustainable Development Goal 4 (UNESCO, 2017). In the Philippines, policies such as the 1987 Constitution, Republic Act 10533 (Enhanced Basic Education Act of 2013), Republic Act 11650 (Instituting a Policy of Inclusion and Services for Learners with Disabilities), and CHED Memorandum Order No. 023, series of 2000, mandate the inclusion of learners with disabilities, including those with visual impairment (LAWPHil, 2022; Albert, 2016).

One of the program offerings in Teacher Education Institutions (TEIs) is the Bachelor of Special Needs Education (BSNED), which specializes in Special Needs Education (SPED). It prepares teachers who will instruct and manage students with additional needs in inclusive and segregated educational settings as stipulated in CHED Memorandum Order (CMO) No. 77, s. 2017. In the TEI where this present study was conducted, BSNED is a program under the umbrella of the Early Childhood and Special Needs Education (ECSNED) department was established in 2018 along with the implementation of the 2017 Teacher Education Curriculum. was established in 2018 along with the implementation of the 2017 Teacher Education Curriculum.

Notably, the teachers are considered as the forefront of implementing IE. They act not only as facilitators but as advocates, curriculum adaptors, and environment shapers for students with diverse needs. Studies show that teachers' knowledge, perceptions, and attitudes influence the success of inclusive classrooms. Tenerife et al. (2024) found that teachers perceived themselves to be highly competent, while Manligoy (2017) emphasized the link between positive attitudes and well-being. However, Benemerito et al. (2024) highlighted barriers such as lack of training and financial resources.

Despite policy support, teaching students with visual impairment (VI) presents unique challenges. Koehler and Wild (2019) reported low participation of students with VI in science classes, while Miyauchi (2020) noted exclusion from physical education. De Verdier (2016) emphasized that learners with VI cannot learn by imitation and need early social competency training. Teachers also face difficulties with Braille instruction, accessible materials, and assistive technology (Mboshi, 2018; Ahmad, 2015).

Support systems are crucial. RA 11650 stresses institutional backing through flexible scheduling, facilities, and services. Studies cite the importance of peer collaboration, parental involvement, and expert consultation (Lebeco & Verano, 2023; Campado et al., 2023). Assistive technology, though valuable, remains underutilized due to training gaps and resource constraints (Quino-Justol, 2024). Teacher preparedness is enhanced by continuous professional development, administrative support, and inclusive policies (Vergara et al., 2025; Fitas, 2025).

Given these realities, exploring teachers' lived experiences in handling a student with VI is critical to understanding their perceptions, addressing challenges, and strengthening support systems to improve inclusive education outcomes.

Methodology

Research Design

This study utilized a qualitative case study approach to gain an in-depth understanding of teachers' perceptions, challenges, and support systems in handling students with visual impairment. The design was chosen to capture the rich and detailed descriptions of teachers' lived experiences of teachers within the specific context or case of a Teacher Education Institution in northern Philippines. Data were analyzed thematically using Braun and Clarke's (2012) model.

Locale of the Study

This study was conducted in a Teacher Education Institution (TEI) that implemented

inclusive education programs and catered to students with visual impairment. This TEI was considered an ideal setting or case because it offered specialized programs such as Special Needs Education (SNED) and employed faculty members who had direct experience teaching students with diverse learning needs, including those with visual impairment.

Population and Sampling Procedure

The participants were teachers who had direct experience in handling at least one student with visual impairment. They were selected through purposive sampling to ensure that only those with relevant knowledge and experience were included. The sample consisted of approximately eight to fifteen participants, depending on availability and willingness to participate. The inclusion criteria were as follows: (1) currently employed as faculty or classroom teachers, (2) had taught at least one student with visual impairment for at least one semester, and (3) were willing to share their experiences through interviews or focus group discussions.

Research Instruments

Data were collected using a researcher-made semi-structured interview guide developed based on related literature and the objectives of the study. The guide included open-ended questions designed to explore teachers' perceptions about inclusion, the challenges they encountered in instruction, classroom management, and student support, as well as the forms of assistance or support systems available to them. To ensure validity, the instrument underwent expert review and pilot testing to refine the clarity and appropriateness of the questions.

Data Gathering Procedure

Before data collection, the researcher secured approval from the appropriate authorities and obtained ethical clearance from the institution's review board. Permission to conduct the study was sought from school administrators, and informed consent was obtained from each participant. Data collection involved one-on-one interviews and, when feasible, focus group discussions to allow participants to share and validate each other's experiences. Interviews were conducted face-to-face or online, depending on the participants' preference and schedule. With their permission, interviews were audio-recorded, and field notes were taken to capture non-verbal cues and contextual information.

Data Analysis

The collected data were transcribed verbatim and analyzed using thematic analysis following Braun and Clarke's (2012) six-phase framework: familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. Patterns and significant statements were identified, grouped into categories, and synthesized into major themes reflecting teachers' perceptions, challenges, and support systems. Member-checking was conducted by sharing the results with participants to ensure the accuracy and credibility of the findings.

Ethical Considerations

The study observed the highest ethical standards. Participation was voluntary, and participants were informed about the purpose, scope, and benefits of the research. Written informed consent was obtained prior to data collection. Confidentiality was strictly maintained by using codes instead of real names, and all data were stored securely. Participants had the right to withdraw at any stage of the study without any consequence. Data were destroyed after the completion of the study to protect privacy.

Results and Discussions

This unit presents the data gathered through interviews conducted by the researcher. It provides a comprehensive analysis and interpretation of the informants' responses, focusing on their shared experiences in handling a student with VI.

Perceptions of Teachers about Teaching a Student with Visual Impairment

Table 1 in the succeeding page presents the perceptions of teachers regarding their experiences in teaching a student with VI.

Table 1. Perceptions of teachers about teaching a student with visual impairment.

Themes	Categories	Codes	Particulars
A. Core Philosophical Commitment			
1. Belief in the Value of Inclusive Education	Inclusive mindset	Inclusivity	*…(teacher) needs a lot of patience and courage and it requires a focus on inclusivity, empathy and adaptive pedagogy. (Teacher 1)* *…teaching a SPED class is very progressive and inclusive in the sense that it signifies "social reform". (Teacher 10)* *…involves understanding individual needs through various means*
		Deep understanding of inclusivity	*…commitment to adaptive methods and lifelong learning can significantly enhance students' academic and developmental outcomes. (Teacher 1)*
2. Perceived Importance of Emotional Sensitivity in Teaching	Emotional intelligence	Empathy	*…teaching students with special needs… requires a focus on inclusivity, empathy and adaptive pedagogy (Teacher 1)*
		Extra patience	*…it is all about being extra patient and thinking outside the box (Teacher 8).* *…had to be more patient with him (Teacher 5)*
		Making them feel safe and comfortable	*…fostering a safe and inclusive classroom (Teacher 1)* *…need to get to know them and make them feel safe and comfortable (Teacher 8)*
B. Pedagogical Imperatives			
3. View of Instruction as Needing Adaptability and Innovation	Instructional flexibility	Adaptable pedagogy	*…it is all about being extra patient and thinking outside the box (Teacher 8).*
		Thinking outside the box	*… commitment to adaptive methods and lifelong learning can significantly enhance students' academic and developmental outcomes. (Teacher 1)*
4. Recognition of Learner Diversity and the Need for Personalization	Learner-centered approach	Understanding unique learning style.	*…every learner is different, so you can't just teach them all the same way (Teacher 8)* *…rethink traditional teaching methods, focusing more on verbal explanations and tactile resources (Teacher 3)*

Themes	Categories	Codes	Particulars
		Creativity	*…the journey underscored the importance of patience, creativity and transformative power of inclusive education (Teacher 3)*
		Flexibility	*…you can't teach them all the same way (Teacher 8)* *…to continuously find ways to enhance accessibility and inclusivity (Teacher 3)*

The responses in Table 1 reflect their values, attitudes, and teaching philosophies in an inclusive classroom setting. The identified themes were consolidated into two higher-impact subsections: A. Core Philosophical Commitment that includes the themes on strong commitment to inclusive education and emotional responsiveness; and B. Pedagogical Imperatives that encompass the themes on adaptive instructional strategies and learner-centered pedagogy. Each theme is supported by specific categories and codes, with corresponding particulars that illustrate how teachers internalize and apply these perceptions in their teaching practices.

Core philosophical commitment

This category discusses the combined importance of teachers' moral duty and empathy in teaching a student with visual impairment. The identified themes encompassing this category are belief in the value of inclusive education and importance of emotional sensitivity

Belief in the value of inclusive education. The first theme tackles the teachers' belief in the value of inclusive education. Their arguments expressed a strong conviction that inclusive education is both a moral responsibility and a professional obligation. This belief was evident in their emphasis on fostering a welcoming environment where students with VI are not just present but fully included in the academic and social life of the classroom. Their responses highlighted an inclusive mindset and a deep understanding of inclusivity, viewing it not merely as compliance with policy but as a commitment to equity and human dignity. By actively promoting acceptance and removing learning barriers, these teachers demonstrated that their belief in inclusive education shapes their teaching philosophy and reinforces their role in ensuring all students, especially those with disabilities, are given the opportunity to succeed.

This theme implies that teachers who hold a strong belief in inclusive education are more likely to create equitable and empowering learning experiences for students with VI. Their commitment encourages a classroom culture of respect, empathy, and support, which is vital to the academic and social development of all learners. It also suggests that fostering such beliefs among all educators may be a key driver in sustaining and improving inclusive practices across schools.

These are evidently reflected in the following responses of the teachers:

> As an instructor without specialization in teaching students with special needs, I believe that it needs lot of patience and courage, and it requires a focus on inclusivity, empathy, and adaptable pedagogy. It involves understanding the individual needs through collaboration professionals that are more knowledgeable about teaching SPEd class, fostering a safe and inclusive classroom, and employing diverse teaching strategies like differentiated instruction. Patience, empathy, and continuous assessment are vital for sustaining student motivation and celebrating progress. Despite the complexities, I think that a commitment to adaptive methods and lifelong learning can significantly enhance students' academic and developmental outcomes.
>
> - *Teacher 1*

> Teaching students with special needs or a SPED class is very progressive and inclusive in the sense that it signifies "social reform". In my own point of view, though I do not hold a degree in Special Education, teaching in a state university with such students only proves that anybody is capable of education.
>
> - *Teacher 10*

This finding aligns with Demirdiş (2024) and Sasikala (2023), who emphasized that successful inclusive education depends significantly on teachers' attitudes and their willingness to modify teaching strategies to meet diverse needs. Furthermore, De Borba et al. (2024) and Joshi and Joseph (2022) argued that inclusive education is more effective when teachers embrace inclusive pedagogy, approaches that do not marginalize students but rather ensure all are fully engaged in learning. More recently, Debasu and Yitayew (2024) highlighted that inclusive environments promote better social, emotional, and academic outcomes when educators collaborate and reflect critically on their practices.

Implications of these findings suggest the need for continuous professional development in inclusive education to further equip teachers with skills and frameworks for inclusive pedagogy. Institutions must provide structural support—through resources, policy, and training—to uphold inclusive values in practice. Lastly, teacher preparation programs must embed inclusive education at their core, ensuring future educators are both philosophically and practically aligned with inclusive teaching principles. The ongoing commitment to inclusion contributes not only to individual student growth but to broader educational equity.

Perceived importance of emotional sensitivity in teaching. The second theme reveals how teachers are embracing emotional responsiveness in teaching student with VI. They consistently expressed the perception that emotional responsiveness is essential when teaching students with visual impairment. They highlighted the importance of empathy, recognizing it as a core emotional trait necessary for understanding and connecting with their students' unique experiences. Patience was frequently mentioned as a critical quality, allowing teachers to provide the time and support needed for these learners to thrive. Additionally, teachers emphasized creating a safe and nurturing environment where students feel comfortable and valued, which they believe is fundamental to fostering learning and personal growth.

This theme implies that emotional intelligence is a cornerstone of effective teaching for students with VI. When teachers are attuned to their students' emotional and social needs, they can better support engagement and motivation. It also suggests that professional development focused on enhancing teachers' emotional skills could improve their confidence and effectiveness in inclusive classrooms, ultimately benefiting student well-being and academic success.

These are evidently reflected in the following responses of the teachers:

> As an instructor without specialization in teaching students with special needs, I believe that it needs lot of patience and courage, and it requires a focus on inclusivity, empathy, and adaptable pedagogy. It involves understanding the individual needs through collaboration professionals that are more knowledgeable about teaching SPEd class, fostering a safe and inclusive classroom, and employing diverse teaching strategies like differentiated instruction. Patience, empathy, and continuous assessment are vital for sustaining student motivation and celebrating progress. Despite the complexities, I think that a commitment to adaptive methods and lifelong learning can significantly enhance students' academic and developmental outcomes.
>
> - *Teacher 1*

> It is all about being extra patient and thinking outside the box. Every learner is different, so you can't just teach them all the same way. You need to get to know each learner and make them feel safe and

> comfortable. Working with their classmates, teachers, and parents is a must – it's like a team effort to help these learners. And honestly, the best part is celebrating even the tiniest wins – it is a huge boost for everyone!
>
> - *Teacher 8*

Reading every item to him while administering the test to the whole class. Repeating when he could not understand the idea - Had to be more patient with him; it's good that the students behave well during summative and major exams.

> Waiting for him to write his answer on the answer sheet to constructed-response type of items after organizing his thoughts using the braille.
>
> - *Teacher 5*

These findings coincide with the study of Lyanda and Owidi (2025) and Pattiasina et al. (2024) found that teachers' emotional intelligence significantly enhances classroom climate and student-teacher relationships, which are particularly crucial for learners with special needs. Lyanda and Owidi (2025) further emphasized that empathy enables teachers to interpret students' emotional cues and adjust their responses accordingly, enhancing both student well-being and learning outcomes. A more recent study by Ampofo et al. (2025) showed that emotionally responsive teaching increases student motivation and reduces anxiety, especially in diverse and inclusive classrooms. The study of Sele and Mukundi (2023) highlighted the importance of emotional intelligence in pedagogy, highlighting how educators' self-awareness, empathy, and emotional regulation can create a supportive classroom environment.

Implications of this theme underscore the need for teacher training programs and professional development to include emotional intelligence and socio-emotional learning (SEL) frameworks. By equipping teachers with skills in empathy, active listening, and relationship-building, schools can cultivate more inclusive, emotionally safe learning environments. Administrators should also consider emotional responsiveness in evaluating teacher effectiveness and designing support systems, especially for those handling SPED classes. Ultimately, emotionally intelligent teaching enhances not only academic learning but also student dignity, confidence, and a sense of belonging.

Pedagogical Imperatives

This second category to describe teachers' perceptions in teaching a student with visual impairment discusses the need for flexible, learner-centered and innovative approaches. Under this category are the identified themes that include the view of instruction as needing adaptability and innovation and recognition of learner diversity and need for personalization.

View of instruction as needing adaptability and innovation. The third theme reflects teachers' perception that effective instruction for students with visual impairment requires a high degree of adaptability and innovation. Teachers emphasized the need to break away from rigid, traditional methods and instead adopt flexible, creative strategies tailored to the unique needs of visually impaired learners. Their responses demonstrated a strong inclination toward instructional improvisation—using tactile tools, auditory cues, and descriptive teaching methods—as a deliberate move to engage students who rely on non-visual sensory input. For these teachers, innovation was not optional but essential to fostering equitable access to learning.

This theme implies that teachers view adaptability as a mindset, not merely a method. Their willingness to "think outside the box" underscores the importance of continuous reflection and responsiveness in teaching practices. By embracing innovation, teachers create dynamic learning environments that support the success of students with VI. This perception advocates for integrating adaptive practices into professional development, ensuring that teachers are empowered to transform challenges into inclusive opportunities for all learners.

These are evidently reflected in the following responses of the teachers:

> It is all about being extra patient and thinking outside the box. Every learner is different, so you can't just teach them all the same way. You need to get to know each learner and make them feel safe and comfortable. Working with their classmates, teachers, and parents is a must – it's like a team effort to help these learners. And honestly, the best part is celebrating even the tiniest wins – it is a huge boost for everyone!.
>
> - *Teacher 8*

> As an instructor without specialization in teaching students with special needs, I believe that it needs lot of patience and courage, and it requires a focus on inclusivity, empathy, and adaptable pedagogy. It involves understanding the individual needs through collaboration professionals that are more knowledgeable about teaching SPEd class, fostering a safe and inclusive classroom, and employing diverse teaching strategies like differentiated instruction. Patience, empathy, and continuous assessment are vital for sustaining student motivation and celebrating progress. Despite the complexities, I think that a commitment to adaptive methods and lifelong learning can significantly enhance students' academic and developmental outcomes.
>
> - *Teacher 1*

It is evident from the responses that teaching students with VI requires patience, creativity, and the use of diverse strategies such as differentiated instruction to meet their unique learning needs. This approach encourages flexibility and innovation, enabling teachers to tailor instruction that fosters both accessibility and meaningful engagement.

These findings coincide with the study of Dumbuya (2025) stressed the importance of differentiated instruction in addressing diverse learning profiles, especially in inclusive settings. Dagunduro et al. (2024) and Savinova et al. (2024) argued that adaptive pedagogy, defined by responsiveness, reflection, and innovation is a hallmark of effective inclusive education. Additionally, Pădeanu (2023) and Nkomo and Dube (2022) highlighted that creative instructional adjustments are essential in supporting learners with disabilities, particularly when mainstream curricula and assessments fall short of accommodating their unique needs.

Implications of this theme point to the urgent need for teacher training and institutional policies that support instructional autonomy and innovation. Educators should be encouraged and empowered to experiment with varied instructional strategies, including UDL, assistive technologies, and project-based learning. Schools and universities should also provide time, resources, and collaborative platforms for teachers to share adaptive practices. By normalizing innovative instruction, educational systems can better support all learners, especially those with special needs, in achieving their fullest potential.

Recognition of learner diversity and the need for personalization. The fourth theme suggests how teachers recognize the wide range of learning needs and styles among their students, particularly those with visual impairments, and perceive personalization as essential to effective instruction. They understand that students with VI require more than accommodations—they need instruction that is thoughtfully designed around their individual strengths, challenges, and preferences. This recognition pushes teachers to move beyond traditional teaching methods, embracing flexible and creative approaches to better connect with each learner.

This theme implies that personalization is not viewed as an added effort but as a core teaching responsibility. Teachers believe that recognizing learner diversity and responding with customized strategies promotes both equity and engagement. Their insights reveal a commitment to fostering inclusive learning environments where every student, regardless of ability, has meaningful access to the curriculum and opportunities to succeed.

The above claims are in the following interview excerpts:

> Every learner is different, so you can't just teach them all the same way.
>
> - *Teacher 8*

> My experience teaching a visually impaired (VI) student has been both challenging and inspiring. It required me to rethink traditional teaching methods, focusing more on verbal explanations and tactile resources rather than visual aids. The student's perseverance and willingness to learn motivated me to continuously find ways to enhance accessibility and inclusivity. Despite the hurdles, such as translating visual content and accommodating their learning pace, the journey underscored the importance of patience, creativity, and the transformative power of inclusive education. It has been a learning experience for both the student and me as an educator.
>
> - *Teacher 3*

This shift in perspective underscores the teachers' commitment to equity in the classroom. Their willingness to adapt reflects a proactive stance in ensuring that every student, regardless of ability, has meaningful access to learning.

Such insights also point to the evolving role of educators as facilitators of inclusive education. Ultimately, these practices contribute to a more responsive and student-centered learning environment.

These findings coincide with the study of Beirnes (2022) assert that learner-centered pedagogies contribute to greater student engagement and motivation, particularly when students feel their individual needs and identities are acknowledged. Veshal (2024) and Evans (2020) emphasized the value of Universal Design for Learning (UDL) in making learning accessible through multiple means of representation, engagement, and expression. Similarly, Faerm (2022) and Rodríguez et al. (2019) asserted that inclusive classrooms flourish when teachers design learning around the diverse realities of their students rather than fitting students into pre-existing molds.

Implications of this theme suggest that schools and teacher education programs must prioritize the development of learner-centered strategies, such as differentiated instruction, personalized learning plans, and the integration of sensory-based tools. Institutional support should focus on empowering teachers with the autonomy and resources to modify their teaching approaches creatively.

Furthermore, assessment methods should be diversified to allow students to demonstrate understanding in ways that align with their strengths. A true learner-centered pedagogy moves beyond access; it cultivates a sense of belonging, purpose, and potential in every student.

Challenges Met by the Teachers in Teaching A Student with Visual Impairment

Table 2 below presents the major challenges experienced by teachers in delivering inclusive education to students with visual impairments. These challenges are organized into three overarching themes under the broader category of teacher-related concerns.

Table 2. Challenges met by teachers in teaching a student with visual impairment.

Themes	Category	Codes	Particulars
A. Teachers-related Challenges			
Inadequate Professional Preparation for Inclusive Teaching	Insufficient Training in Braille and Inclusive Pedagogy	Learning Braille basics	*... I am unfamiliar with Braile alphabet. (Teacher 10)*
		Researching teaching strategies	*...I am unsure of effective inclusive methods for engaging visually impaired students.* *...I asked for advise from colleagues and did research on effective strategies (Teacher 12)*

Themes	Category	Codes	Particulars
	Concerns on Adapting Teaching Strategies for Non-Visual Learning	Use of descriptive and verbal explanations	*…hard to choose teaching methods and strategies suitable for students with or without visual impairment*
		Encouraging verbal or collaborative participation	*…If I use a video, I give detailed descriptions for a student with VI (Teacher 7)*
Barriers in Instructional Delivery and Assessment	Limited Access to Available Learning Resources	Adjusted PowerPoint/visual content	*…I have limited access and engagement in visual-based activities (Teacher 9)*
		Adaptation of materials to alternative formats	*…lack resources to convert printed materials into Braille, large print, or audio formats. (Teacher 4)*
		Modification of lab activities	*…Science experiments rely heavily on sight-based observation, limiting hands-on participation for VI students. (Teacher 3)*
Difficulty in Creating an Inclusive Physical Learning Environment	Challenges in Implementing Inclusive Assessment Practices	Braille responses and audio submissions	*…read aloud the test content in one-on-one basis and allowed the student to use Braille. (Teacher 1)* *…I gave him the question and let him voice record his answer then I listen to it when grading. (Teacher 4)*
		Alternative formats (e.g., storytelling or video)	*…I provided oral exams and alternative assessments using assistive tech. (Teacher 7)*
	Challenges in Promoting Active Participation in Group and Physical Tasks	Group work with peer support	*…Student has limited involvement in group or physical tasks. (Teacher 12)*
	Challenges in Ensuring Safe and Navigable Classroom Layouts for Student with VI	Reorganizing classroom layout and establishing routines for mobility	*…student needs support in mobility and navigation inside the classroom. (Teacher 3)* *…I arranged furniture for easy movement (Teacher 9)*

Each theme highlights specific areas of difficulty, including limited professional preparation, instructional and assessment barriers, and issues in creating an inclusive and accessible classroom environment. Corresponding codes and particulars illustrate the nuanced ways these challenges manifest in actual teaching practices, emphasizing the urgent need for systemic support, resource adaptation, and capacity building for inclusive education.

Inadequate professional preparation for inclusive teaching.

This first overarching theme captures the multifaceted challenges teachers face when educating students with visual impairments. Central to these challenges are gaps in both specialized knowledge, such as Braille literacy and the ability to modify instructional methods to accommodate non-visual learning needs. Teachers' limited training in these areas often results in uncertainty and decreased confidence, which affect their capacity to deliver effective, inclusive education. The following discussion explores two key aspects of this theme: insufficient training in Braille and inclusive pedagogy, and concerns related to adapting teaching

strategies for students who rely on non-visual modes of learning.

Insufficient training in Braille and inclusive pedagogy. This category highlights a critical gap in teacher preparation regarding Braille literacy and inclusive teaching strategies for students with visual impairments (VI). Many teachers begin their careers without formal training in Braille, which limits their ability to effectively communicate and engage VI learners. The lack of foundational Braille skills hampers not only lesson delivery but also the development of instructional materials tailored to VI students.

Additionally, the absence of structured training in inclusive pedagogy contributes to educators' uncertainty in choosing the most effective teaching strategies. As reflected in teachers' own words, many rely on peer advice or self-directed research, which often fails to fully address their instructional challenges. This hesitation and lack of confidence in teaching VI students may unintentionally lead to their exclusion from meaningful learning experiences.

The following responses from the teachers underscore the above observations:

> I am unfamiliar with Braille alphabet, leading to difficulties in reading or producing Braille-based materials.
>
> – *Teacher 10*

> I am unsure of effective inclusive methods for engaging visually impaired students within a mixed-ability classroom. I enrich my experience, I asked for advice from colleagues and even did research on effective strategies.
>
> – *Teacher 12*

> It is hard to choose teaching methods and strategies that are suitable for both students with or without visual impairment.
>
> – *Teacher 7*

These findings echo the research of Awang et al. (2024), who identified barriers such as inadequate teacher training and scarce resources as significant obstacles in Braille education. Awang et al. emphasize the need for comprehensive professional development programs that address both skill gaps and confidence issues to better equip teachers for inclusive classrooms. Overall, this category underscores the systemic issue in teacher education programs that insufficiently prepare educators to support VI learners, calling for targeted interventions to improve teacher competence and confidence.

Concerns on adapting teaching strategies for non-visual learning. Adapting teaching strategies to meet the non-visual learning needs of students with visual impairments presents another formidable challenge. Conventional methods often depend heavily on visual cues like diagrams, written texts, and body language, which are inaccessible to VI learners. Teachers express uncertainty about how to effectively translate these materials into auditory or tactile formats, frequently resorting to extended verbal explanations.

While these adaptations are necessary, they may not fully engage VI students or facilitate deep understanding, as some students appear disengaged during typical classroom interactions.

The following responses from the teachers underscore the above observations:

> I had problem in the employment of visual-based teaching methods, so I (the teacher) details the elements of the visual aids. For example, if I use a video, I give detailed verbal descriptions for the student with VI.
>
> – *Teacher 7*

> I am unsure of effective inclusive methods for engaging visually impaired students within a mixed-ability classroom. I enrich my experience, I asked for advice from colleagues and even did research on effective strategies.
>
> – *Teacher 12*

> It is hard to choose teaching methods and strategies that are suitable for

> both students with or without visual impairment.
>
> – *Teacher 7*

The responses from teachers underscore struggle mentioned above, revealing a need for more effective instructional strategies that go beyond verbal narration to incorporate multisensory learning approaches.

This aligns with the findings of Pov and Kawai (2024), who demonstrated that the use of multisensory techniques such as storytelling, peer dialogue, tactile aids, and collaborative activities significantly improve participation and comprehension among VI students. Furthermore, Johnson et al. (2024) reported that teacher confidence in delivering inclusive lessons increases with targeted training on these methods. These studies highlight the importance of ongoing professional development focused on inclusive pedagogy for sensory impairments, including access to assistive tools and support personnel like co-teachers and learning aides. By equipping teachers with these resources, schools can foster a more authentic and effective inclusive learning environment where VI students are meaningfully engaged alongside their sighted peers.

In sum, this theme underscores the significant challenges teachers face due to limited training in Braille literacy and inclusive pedagogical strategies. Many teachers begin their careers without the foundational skills needed to support students with visual impairments, leading to uncertainty and a lack of confidence when designing and delivering instruction. The absence of formal preparation in inclusive methods forces teachers to rely on self-guided learning or peer advice, which may not fully address the complex needs of student with VI. This results in difficulties adapting visual-based content into accessible formats and in selecting teaching strategies that accommodate both sighted and visually impaired students. Consequently, student with VI may be unintentionally excluded from meaningful classroom participation, emphasizing the urgent need for targeted teacher training and support systems that prioritize accessibility and inclusion.

Barriers in instructional delivery and assessment.

The second overarching theme captures the barriers in instructional delivery and assessment. Teachers encounter significant obstacles in effectively delivering instruction and assessing students with VI due to limited access to appropriate learning resources and challenges inherent in adapting assessment methods. Instructional materials often remain predominantly visual, such as PowerPoint slides, charts, or lab activities that rely heavily on sight, making them inaccessible or difficult to use for VI learners.

Furthermore, assessment practices, which traditionally depend on written or visual responses, do not always accommodate the unique needs of VI students, restricting their ability to demonstrate understanding fully. These instructional and evaluative barriers not only limit the academic participation of VI learners but also place added pressure on teachers to modify or reinvent materials without sufficient support or resources. The following sub-discussions explore these critical challenges in more detail.

Limited access to available learning resources. Teachers consistently reported that delivering instruction to VI students is hindered by the dominance of visual formats in mainstream educational resources. These include PowerPoint presentations, textbooks, charts, instructional videos, and laboratory manuals, all of which are not easily convertible into accessible forms such as tactile graphics, audio narration, or Braille without requiring specialized tools and training.

The following responses from the teachers underscore the above observations:

> I have limited access and engagement in visual-based activities (e.g., PowerPoint presentations, diagrams), so I used verbal descriptions, tactile graphics, and interactive discussions to convey information.
>
> – *Teacher 9*

> I sometimes lack resources to convert printed materials into Braille, large print, or audio formats. So, I gave

him the activity as a take-home assignment as an alternative.

– *Teacher 4*

Science experiments rely heavily on sight-based observation, limiting hands-on participation for VI students. Developed modified experiments using sensory methods like touch, sound, and verbal feedback.

– *Teacher 3*

These teacher-led adaptations, though commendable, are reactive rather than proactive, underscoring a systemic gap in accessible instructional design. The lack of pre-adapted or universally designed materials not only delays lesson delivery but risks delivering diluted educational content to VI learners. This echoes Hayes and Proulx (2023), who found that VI students in general education classrooms often underperform in science and mathematics due to inaccessibility of adapted materials. Their findings show how lack of access isn't simply a logistical issue it directly correlates with lower academic achievement and disengagement.

Furthermore, Zakiah et al. (2024) and Dabi and Golga (2022) highlighted that although assistive technologies (e.g., screen readers, tactile graphics, audio-described content) significantly improve learning outcomes, they remain underutilized. This underutilization stems from a lack of awareness, inadequate teacher training, and limited institutional support, issues also observed in the participating teachers' testimonies.

In sum, these findings call for a proactive, system-wide response. School systems must invest in assistive technologies and create centralized repositories of adapted content to reduce the burden on individual teachers. Moreover, collaborative planning between general and special educators should become institutionalized practice, allowing for the co-development of universally accessible instructional strategies. Embedding practical training on tactile and auditory material creation into teacher preparation programs would empower educators to preemptively design inclusive lessons. Ultimately, achieving resource equity is not merely about access but about ensuring student with VI receive learning experiences that are as robust, engaging, and intellectually stimulating as those offered to sighted peers.

Difficulty in creating an inclusive physical learning environment

The third overarching theme captures how difficult it is for teachers to create an inclusive physical learning environment for student with VI. Creating an inclusive classroom for student with VI extends beyond curriculum design and instructional accommodations. A truly inclusive environment must address how students navigate and interact within the physical space, how they participate in collaborative activities, and how their safety and social belonging are upheld. However, teachers face substantial challenges in adapting both the physical layout of classrooms and the structure of group activities to meet these needs. This theme is explored through two interrelated categories below.

Challenges in implementing inclusive assessment practices. Assessment practices present another layer of difficulty in achieving educational equity for VI students. Traditional testing formats, predominantly visual and text-based, often exclude or limit VI students' ability to demonstrate complex thinking.

The following responses from the teachers underscore the above observations:

I allowed extra time for answering questions. I also, read aloud the test content in one-on-one basis and allowed the student to use Braille.

– *Teacher 1*

I adjusted it (test) to oral reading of questions (text to speech), and either I will write the answer for him or ask him to write in Braille.

–*Teacher 2*

For essay exams, I gave him the question and let him voice record his answer then I listen to it when grading.

– *Teacher 4*

I provided oral exams and alternative assessments using assistive tech.

– *Teacher 7*

> I let my student with VI sit beside me as I read to him the exam questions. I also recorded the midterm and final exams for him.
>
> – *Teacher 10*

It is clearly pictured in the responses that the core issue lies in the misalignment between standard assessment tools and the diverse modes through which VI learners can express understanding. For example, Braille-based assessments are often simplified due to formatting and time constraints, limiting expressive depth. As Teacher 2 explained, while oral reading and Braille writing were used, they required significant assistance and still lacked parity with mainstream evaluation formats. These adaptations, though well-intentioned, can unintentionally restrict creativity, critical thinking, and performance under pressure factors essential in accurately evaluating student competence.

These classroom realities affirm the arguments of Hovey et al. (2022), who advocated for Universal Design for Assessment (UDA). The UDA supports varied methods audio journals, tactile projects, oral defenses as valid and equitable means of assessment. Their findings revealed that such flexibility not only improved learning outcomes but also increased engagement and confidence among VI learners. Yet, this shift is hampered by the lack of institutional frameworks to guide the use, scoring, and standardization of these assessments. As Park (2024) noted, many educators hesitate to fully embrace alternative formats without clear guidelines, fearing compromises in academic rigor or non-recognition by educational authorities. Kushwaha and Maurya (2024) similarly underscored the absence of formal rubrics and professional development for assessing non-traditional outputs. This is supported by Mir et al. (2023) whose findings indicate that while rubrics are perceived as beneficial, there are gaps in training and support for prospective teachers to effectively utilize them.

The implication is clear: teacher efforts to accommodate VI students must be formally integrated into curriculum and assessment policies. Recognizing alternative assessments as legitimate, equally rigorous forms of evaluation within standardized testing systems is essential. Moreover, professional development should train teachers to design fair rubrics and apply consistent grading criteria across diverse student responses. Without such structural reforms, inclusivity remains contingent on individual effort and innovation, rather than being a guaranteed right supported by the education system.

In sum, the combined barriers of instructional material inaccessibility and restrictive assessment practices underscore the pressing need for inclusive education reform. Teachers are doing admirable work to ensure VI students participate meaningfully in learning and assessment, but without systemic investment in adaptive technologies, training, and policy frameworks, these efforts remain isolated and inconsistent. The findings from both themes call for a unified approach grounded in Universal Design principles, ensuring that from planning to delivery to assessment, the diverse needs of learners are proactively addressed, not reactively managed.

Challenges in promoting active participation in group and physical tasks. Beyond physical layout, teachers also face barriers in promoting social inclusion during group work and physical classroom tasks. Activities such as watching videos, copying diagrams, or interacting with visual displays tend to dominate classroom practice and often marginalize student with VI, reducing them to passive observers rather than active participants.

While some teachers implement peer support systems to foster inclusion, these are not always thoughtfully structured, leading to limited engagement for student VI in collaborative or physically interactive learning. This lack of meaningful participation negatively impacts not only their academic engagement but also their emotional well-being and sense of belonging.

The response of one of the teachers underscores the above observations:

> The student has limited involvement in group or physical tasks. I ensure inclusion in group work through fit-for-ability tasks.
>
> -*Teacher 12*

The work of Arslan et al. (2022) affirms this concern, emphasizing the importance of inclusive social experiences for VI learners. Their research demonstrates that structured peer support systems where VI students are assigned verbal, auditory, or tactile roles promote empathy, emotional connectedness, and improved academic performance. Arslan et al. argue that when group tasks are intentionally designed to be multi-modal, they transform the learning environment into a space of cooperation and inclusion rather than exclusion.

In sum, this overarching theme highlights the multifaceted challenges teachers face in supporting students with VI within classroom settings. Teachers struggle to create safe, navigable spaces that allow students with VI to move independently, often resorting to furniture adjustments and routine-based guidance despite limited training and a lack of tactile or adaptive tools. In addition, visually dominated group activities frequently marginalize these students, limiting their participation and reducing them to passive roles. Even with peer support efforts, tasks are not always thoughtfully designed to match their abilities, leading to emotional and academic disengagement. These challenges underscore the need for deliberate, systemic approaches to both classroom layout and collaborative learning structures that truly foster inclusion, autonomy, and a sense of belonging for students with visual impairment.

Challenges in ensuring safe and navigable classroom layouts for students with VI. Teachers of students with VI often struggle to design physical classroom environments that are both safe and independently navigable. Traditional classroom layouts tend to cater to sighted learners, neglecting the spatial and sensory needs of those with visual impairments. As a result, visually impaired students may encounter obstacles that hinder their ability to move freely, access learning materials, or transition from one area to another. To address this, teachers attempt to reorganize classroom furniture, eliminate hazards, and establish consistent routines that guide mobility. However, these efforts are limited by the lack of formal training, the absence of tactile markers, and constraints in classroom infrastructure.

The following responses from the teachers underscore the above observations:

> The student needs support in mobility and navigation inside the classroom. I ensured that classroom layout was consistent and accessible."
>
> – *Teacher 3*

> I arranged furniture for easy movement and guided the student when needed.
>
> – *Teacher* 9

The teachers manifest that the adjustments they made to address the problems. These difficulties are strongly supported by the findings of Ahmad Najmee et al. (2024), who emphasized that optimized spatial design, including clear and consistent layouts, high-contrast visual cues, and tactile navigation aids. This significantly enhances orientation and reduces anxiety among VI learners. The study also highlights the critical role of teacher preparedness, asserting that educators must be trained in environmental adaptations to effectively support students' independence. Furthermore, Ahmad Najmee et al. stress the importance of institutional infrastructure, recommending that schools conduct regular accessibility audits to ensure that classrooms are physically inclusive.

Support Received by the Teachings in Teaching A Student with Visual Impairment

The experiences of teachers in supporting a student with VI emphasize the critical role of collaboration, resource sharing, and institutional support in fostering an inclusive learning environment. Collegial teamwork, peer assistance, expert consultation, and family involvement all contribute to responsive and effective instructional delivery. Additionally, accessible technologies, tailored materials, and administrative backing help create the necessary conditions for successful teaching and assessment.

Table 4. Support received and needed by the teachers in teaching a student with VI.

Themes	Categories	Codes	Particulars
Collaborative, Peer, and Expert Support	Collegial Collaboration	Peer Strategy Sharing	*…Previous teachers of the student with visual impairment provide key points and advice that I can use. (Teacher 1)*
		Collaborative Planning and Co-Teaching	*…have brainstorming and sharing of best practices on how to teach students with visual impairment. (Teacher 10)*
		SPED and ECSNED Assistance	*…Teachers from ECSNED extend support through Braille interpretation. (Teacher 4)*
	Peer Support	Classroom Buddy System	*…provided peer assistance and classroom support. (Teacher 9)* *…they are always ready to give help, especially when doing mobile activities. (Teacher 5)*
Family and Home-Based Support	Learning Reinforcement at Home	Family Academic Support	*…Educational mentors and school administrators provided suggestions for alternative assessment methods. (Teacher 12)* *…I give ppt presentations of our lesson to him (Teacher 5)*
		Ongoing Home Guidance	*…student was advised to ask his family members for assistance in reading the data or doing the illustration. (Teacher 4)*
Technological and Instructional Resource Support	Instructional Tools and Resources	Assistive Technologies and Online Materials	*…After some time, I learned to read Braille for a few letters and numbers. (Teacher 4)*
		Inclusive Learning Resource Center	*…I also used online resources to learn Braille letters. (Teacher 6)*
	Content Development	SPED-Guided Content Adaptation	*…I provided detailed verbal explanations and used tactile aids (Teacher 12)* *…I provided audio recordings and digital text-to-speech resources. (Teacher 9)* *…employment of multisensory learning (Teacher 7)*
Institutional and Inclusive Assessment Support	School-Level Support	Inclusive Classroom Setup and Admin Backing	*…he uses mobility supports like the utilizing canes and mobility aids as needed. (Teacher 11)* *…In class, he is near me for auditory cues. (Teacher 11)*
	Inclusive Assessment	Alternative and Supported Assessment	*…no adaptations used but only accommodations. (Teacher 11)*

Themes	Categories	Codes	Particulars
			…I let him use technology for him to complete the activity. (Teacher 2)

Table 4 presents a detailed overview of these supports, organizing them into collaborative, familial, technological, and institutional dimensions. This categorization highlights how interconnected forms of assistance work together to address the unique challenges of teaching students with visual impairments.

Collaborative, Peer, and Expert Support

The first theme forms the cornerstone of effective teaching for students with VI. The success of this endeavor largely depends on a multifaceted support system that integrates collaboration among educators, peer involvement, and expert guidance. This interconnected network enables teachers to design and deliver inclusive instruction tailored to the unique needs of these learners. Under this broader theme, several key forms of professional support emerged that significantly enhanced teachers' ability to address the learning needs of a student with visual impairment.

Collegial collaboration. One important aspect that emerged in the study is peer strategy sharing, wherein previous teachers openly communicated helpful tips and effective approaches based on their direct experiences with the learner. This continuity of practice helped current teachers avoid redundant trial-and-error methods and instead build upon established, learner-specific strategies.

In addition to this horizontal excange of knowledge, collaborative planning and co-teaching also played a crucial role. Teachers engaged in joint discussions to design inclusive lesson plans and implement differentiated instruction, sharing instructional responsibilities to ensure the students received appropriate support. This cooperative effort fostered a sense of shared accountability and collective problem-solving that enhanced both teaching quality and teacher confidence.

Complementing the collegial support among general education teachers was the specialized assistance provided by SPED and ECSNED professionals. These experts offered technical guidance on adapting materials for accessibility, such as providing braille resources and advising on suitable instructional modifications. Their involvement added a layer of expert validation to the strategies in place and bridged any gaps in teachers' knowledge regarding visual impairment accommodations.

Together, these interrelated forms of collaboration—peer-to-peer knowledge exchange, co-teaching practices, and expert consultation—demonstrate the critical role of professional synergy in fostering an inclusive and responsive classroom environment for students with visual impairments.

The following responses from the teachers underscore the above observations:

> Previous teachers of the student with visual impairment provide key points and advice that I can use.
>
> *-Teacher 1*

> Co-teachers from my department extend moral support. We even have brainstorming and sharing of best practices on how to teach students with visual impairment.
>
> *-Teacher 10*

> Teachers from ECSNED extend support through braille interpretation.
>
> *-Teacher 4*

> I give PowerPoint presentations of our lesson to him so that he can review the lesson with a family member.
>
> *– Teacher 5*

Peer support. Complementing the professional collaboration among teachers is the essential role of peer support within the classroom. Classmates serving as buddies offered consistent assistance with academic tasks such as reading and writing, as well as practical help with mobility around the learning space. This peer involvement was crucial in promoting the student's active participation and engagement,

reducing feelings of isolation often experienced by learners with visual impairments. Beyond academic aid, the buddy system cultivated a sense of belonging and social inclusion, which is vital for the student's confidence and overall well-being. The integration of peer support thus bridged academic and social domains, reinforcing an inclusive classroom culture.

The following responses from the teachers underscore the above observations:

> Classmates of the VI student served as volunteer buddies - provided peer assistance and classroom support.
>
> – *Teacher 9*

> Everyone in class understands his situation, and they are always ready to give help, especially when doing mobile activities.
>
> *-Teacher 5*

In the study of Sandelius (2024) highlight that while 80% of educators recognize the importance of collaboration in special education, only 10% of schools have formal structures to support it. Implementing regular co-planning sessions and integrating SPED teachers into curriculum design are recommended strategies to enhance inclusivity. Research conducted in a Philippine high school setting found a positive correlation between teachers' attitudes toward inclusive education and their collaborative practices. This suggests that fostering positive perceptions can enhance cooperative efforts among educators (Kyamko e al., 2024). Lakkala et al. (2024) noted that underscores the importance of involving various stakeholders—teachers, families, and experts, in fostering inclusive education. Such collaboration enhances students' sense of belonging and agency within the school community.

In summary, this theme highlights how a layered support system, comprising collegial collaboration and peer involvement. This enables teachers to effectively meet the needs of students with visual impairment. Teachers benefitted from the shared strategies of previous educators, joint planning, and co-teaching arrangements. SPED and ECSNED specialists provided critical guidance, especially in adapting materials like braille. Meanwhile, classmates offered consistent academic and mobility support, fostering inclusion and social integration. Collectively, these supports formed a cohesive framework that enhanced both teaching effectiveness and student engagement in an inclusive classroom environment.

Family and Home-Based Support

Another theme that emerged as a crucial pillar in ensuring continuity of learning and emotional stability for the student with VI is family and home-based support. Teachers consistently emphasized the central role that families played in complementing school-based instruction, particularly by reinforcing lessons at home and maintaining consistent involvement in the learner's academic journey.

Learning reinforcement at home. One prominent category under this theme is learning reinforcement at home, which reflects the families' commitment to supporting educational tasks outside the classroom. Teachers noted that parents and guardians regularly assisted the student in accomplishing take-home assignments and reviewing key concepts introduced during class. This form of family academic support ensured that instructional goals were not only extended beyond the school setting but also repeated and internalized in a familiar, low-pressure environment.

Such reinforcement proved especially important for a student with VI, as lessons often needed to be revisited using alternative sensory modalities such as verbal repetition, tactile materials, or audio aids to strengthen comprehension. The home thus became an essential space for continuous learning, where the student could consolidate knowledge at their own pace and in the presence of trusted adults. The effectiveness of this category lies not just in the repetition of academic content but in the emotional reassurance that comes from knowing the learning process is supported by both educators and family members. It cultivates a learning ecosystem where parents are recognized as vital contributors, enhancing the learner's confidence and fostering a sense of shared responsibility in achieving academic success.

The following responses from the teachers underscore the above observations:

> Educational mentors and school administrators provided suggestions for alternative assessment methods.
>
> – *Teacher 12*

> I give ppt presentations of our lesson to him so that he can review the lesson with a family member.
>
> – *Teacher 5*

> For take home activities, student was advised to ask his family members for assistance in reading the data or doing the illustration.
>
> – *Teacher 4*

In sum, this theme played a crucial role in reinforcing the academic and emotional well-being of the student with VI. Central to this theme is learning reinforcement at home, where families actively assisted with assignments and lesson reviews, often using alternative formats such as tactile materials or audio tools. This consistent involvement extended learning beyond the classroom, helped solidify key concepts, and offered emotional reassurance. By supporting the child in a familiar environment, families became integral partners in inclusive education, contributing to both academic success and the learner's overall confidence.

Technological and Instructional Resource Support

The third theme that emerged in the study regarding the types of support teachers experience when teaching students with visual impairments is Technological and Instructional Resource Support. This theme highlights how access to specialized tools, resources, and expert-guided content development plays a crucial role in facilitating inclusive and effective teaching practices. Two key categories under this theme are Instructional Tools and Resources, and Content Development. These categories illustrate how technology and expertise combine to meet the unique learning needs of students with visual impairment.

Instructional tools and resources. Teachers reported the vital role of assistive technologies and digital materials in making learning accessible for students with visual impairments. Tools such as braille devices, audio materials, and various digital aids were frequently provided, enhancing the student's ability to engage with lessons independently.

Additionally, access to online resources and braille guides allowed teachers and students to supplement traditional instruction with versatile, accessible content. These instructional tools not only bridged sensory gaps but also empowered teachers to adapt their teaching methods, ensuring that learning was more interactive and tailored to the student's needs.

The following responses from the teachers underscore the above observations:

> After some time, I learned to read Braille for a few letters and numbers.
>
> - *Teacher 4*

> I also used online resources to learn Braille letters.
>
> - *Teacher 6*

> The student's determination and resilience inspired me to innovate and explore alternative teaching methods, such as using tactile materials and verbal explanations to replace visual aids.
>
> - *Teacher 3*

Content development. Complementing the availability of instructional tools was the critical support provided through content development, particularly guided by SPEd professionals. Teachers described how SPEd staff assisted in creating and adapting learning materials, such as braille texts, that were specifically tailored to the visual and cognitive needs of their students. This collaboration ensured that educational content was not only accessible but also pedagogically appropriate, reinforcing comprehension and engagement. The active involvement of specialists in content adaptation thus enriched the teaching-learning process, providing a foundation for more meaningful and effective instruction.

The following responses from the teachers underscore the above observations:

> I provided detailed verbal explanations and used tactile aids like raised diagrams and Braille texts.
>
> *-Teacher 12*

> I send him copies of PPTs in PDF for his independent learning. I gave activities such as interpreting graphs and illustrations as take-home activity and advised him to ask his family members for assistance. I let him voice record for essay-type activities. I also give him additional time to accomplish some tasks because of his limitations
>
> *-Teacher 4*

> My student with VI had difficulty in accessing visual materials (e.g., textbooks, handouts), so I provided audio recordings and digital text-to-speech resources. He also had limited engagement in visual-based activities (e.g., PowerPoint presentations, diagrams), so I used verbal descriptions, tactile graphics, and interactive discussions to convey information
>
> *-Teacher 9*

> There were only limited adaptations I employed during my class with a student with VI because I was not prepared to teach this kind of student. First, the employment of multi-sensory teaching. I combined auditory, tactile, and kinesthetic methods to reinforce concepts. Second, I made sure that I clearly described visual elements when I used visual presentations. Lastly, I encouraged his classmates to assist him during classroom activities.
>
> *-Teacher 7*

To synthesize, the supports cited emphasize the critical role of both access to assistive technologies and the expert adaptation of educational content in fostering an inclusive learning environment for students with visual impairments. The provision of braille materials, audio aids, digital tools, and online resources equips learners with the necessary means to engage with the curriculum in accessible formats.

Simultaneously, collaboration with SPEd professionals to adapt and customize instructional materials ensures that content is not only available but also appropriately tailored to meet the unique sensory and learning needs of each student. This dual approach creates a comprehensive support system that empowers teachers to deliver instruction that is responsive, effective, and inclusive, ultimately enhancing the academic success and participation of students with visual impairments.

Institutional and Inclusive Assessment Support

The final theme identified in the study focuses on institutional and inclusive assessment support, highlighting the critical role that school leadership and systemic practices play in fostering an accessible and equitable learning environment for students with visual impairments.

School-level support. Central to this support is the proactive role of school administrators in enhancing the classroom environment to better accommodate the needs of visually impaired learners. Efforts such as reorganizing classroom layouts improved accessibility and ease of movement, creating a safer and more functional space for the student. Beyond physical adjustments, administrators demonstrated commitment by endorsing inclusive policies and providing ongoing support to teachers, which collectively helped cultivate a school culture that values and promotes inclusive education.

The following responses from the teachers underscore the above observations:

> I arranged furniture for easy movement and guided the student when needed.
>
> *-Teacher 9*

> For environmental accommodations, he uses mobility supports like the utilizing canes and mobility aids as needed. As mentioned, he also was

> oriented and trained to navigate the campus environment. In class, he is near me for auditory cues. All of his classes are situated downstairs to support his needs, minimizing obstacles like furniture on his way. He is sensitive with lights so whenever he was irritated or uncomfortable, he would self-advocate. Moreover, he is also supported by the students and would often agree for peer buddy system.
>
> *-Teacher 11*

Inclusive assessment. In tandem with these structural supports, inclusive assessment practices were emphasized as essential to accurately gauge student learning. Administrators encouraged the use of alternative and flexible assessment methods tailored to the unique abilities of students with visual impairments—such as oral responses or adapted tasks—to ensure fairness and validity. Family involvement further strengthened this approach, with parents and guardians assisting in take-home assessments and learning activities, thus reinforcing a supportive link between school and home environments.

The following responses from the teachers underscore the above observations:

> There were no adaptations used but only accommodations. He is an abled student who is motivated to learn. I was so proud of him because even before he starts attending the college, he has to master how to navigate the campus on his own. He was able to do it because he has strong support system.
>
> *- Teacher 11*

> In the course EDUC146, which requires a lot of reflective essays, I let him use technology for him to complete the activity. Most of the students' activities are collaborative for him to feel engaged and belonged in which he is free to collaborate with his classmates.
>
> *-Teacher 2*

These coincide with the findings of Pov and Kawai (2024) emphasize that accessible classroom environments and predictable spatial organization significantly reduce anxiety and increase independence for students with VI. Similarly, the use of mobility aids such as canes, combined with teacher guidance and orientation programs, contribute to greater spatial competence and self-reliance (Berndtsson, 2024). Studies by Sivanathan et al. (2024) found that teacher-led modifications of seating, lighting, and classroom layout directly impact student participation and learning outcomes.

In sum, these types of supports play a vital role in creating an accessible and equitable learning environment for students with visual impairments. School administrators contribute by improving classroom layouts and providing ongoing backing for inclusive practices. Additionally, flexible and alternative assessment methods, supported by family involvement, ensure fair evaluation of student learning. Together, these efforts foster a collaborative, supportive framework that promotes meaningful inclusion and academic success for visually impaired learners.

Implications of the Teachers' Perceptions, Challenges, and Support in Teaching a Student with Visual Impairment

This section presents key insights drawn from teachers' experiences and recent research, emphasizing three interconnected areas vital to advancing inclusive education for students with visual impairments: innovative teaching approaches, robust institutional support, and ongoing professional development.

First, there is a pressing need for curriculum enhancement and instructional innovation. This involves incorporating flexible, personalized, and multisensory strategies alongside accessible learning materials such as Braille, tactile, audio, and digital resources. Recent studies highlight teachers' use of tactile models, audio-based content, and accessible digital formats that move beyond traditional, visually-centered curricula (Kapil et al., 2024; Fadiana et al., 2022). These approaches align with the Universal Design for Learning (UDL) framework, which advocates for multiple means of representation and engagement to ensure equitable access for all learners. Priyadharsini and Sahaya (2024) demonstrated

how UDL's three pillars, representation, engagement, and expression—actively enhance equity in inclusive settings, improving teaching practices and student outcomes. Additionally, adapting assessments through audio, Braille, and digital alternatives has been shown to support fairer evaluations of students with visual impairments (Baring et al., 2024; Karvonen et al., 2024; Kerdar et al., 2024).

Second, the experiences of teachers underscore the critical role of strong policy and institutional support. Creating safe and accessible classroom environments requires the provision of assistive technologies and resource centers. Institutional policies that mandate accommodations such as screen readers and text-to-speech software are essential for meeting students' diverse needs (De Sousa Crepaldi et al., 2024). Furthermore, collaborative frameworks involving educators, specialists, families, and peers are key to addressing these needs effectively (Harutyunyan & Aleksanyan, 2023; Li & Li, 2024). Such collaboration not only enhances teacher confidence and student outcomes but also ensures sustained accessibility through policy-backed resource centers (Dube, 2022; Magaba, 2022).

Lastly, teachers' accounts highlight an urgent need for continuous professional development. Specialized training in Braille literacy, assistive technology use, adaptive pedagogy, and emotional competencies like empathy and patience is often lacking, leaving educators underprepared and hindering inclusive practices (De Oliveira et al., 2024; Odhiambo, 2024). Professional development programs incorporating hands-on workshops, digital modules, and peer learning networks have proven effective in building teacher capacity and confidence (Chorosova et al., 2022; You et al., 2024).

Additionally, fostering a collaborative professional culture encourages reflective teaching and emotional support strategies vital for sustaining inclusive education (Kiryakova & Kozhuharova, 2024; Gomes et al., 2024).

In sum, the shared experiences of teachers highlight important implications for inclusive education of students with visual impairments. There is a clear need to innovate curricula with multisensory, flexible teaching strategies and accessible materials to ensure equitable learning. Strong institutional policies and support systems, including assistive technologies and collaborative networks, are essential to create accessible, safe classroom environments. Additionally, ongoing professional development is critical to equip teachers with specialized skills and emotional competencies necessary for effective inclusive teaching. These implications underscore the necessity of integrated efforts across curriculum, policy, and teacher training to foster truly inclusive education.

Summary, Conclusions, and Recommendations

This section presents the summary of the research aims, methodology used, as well as the findings of this study. This also includes the conclusions and recommendations drawn from the findings.

Summary

The study investigated teachers' perceptions, challenges, and support systems in handling students with visual impairment (VI) within Teacher Education Institutions (TEIs) that implement inclusive education programs. Using a qualitative-descriptive case study design, the researchers interviewed eight to fifteen purposively selected teachers who had taught at least one student with VI for at least one semester. Data were gathered through a semi-structured interview guide and analyzed thematically following Braun and Clarke's (2012) framework.

The findings revealed that teachers held strong beliefs in the value of inclusive education, emphasizing equity, inclusivity, and learner-centered pedagogy. They also highlighted the importance of emotional intelligence, including empathy, patience, and creating a safe environment for learners with VI. Instruction was viewed as requiring adaptability and innovation, with teachers employing flexible strategies, tactile tools, auditory cues, and personalized approaches.

Despite these strengths, teachers encountered significant challenges such as inadequate professional preparation, particularly in Braille literacy and inclusive pedagogy, barriers in instructional delivery and assessment due to the

predominance of visual materials, and difficulty creating safe and inclusive classroom environments. Support systems that enabled teachers to address these challenges included collegial collaboration, peer assistance, expert guidance from SPED and ECSNED specialists, family involvement, access to assistive technologies, adapted materials, and institutional support such as flexible classroom layouts and inclusive assessment methods.

Findings

The study showed that teachers possessed an inclusive mindset and were committed to ensuring equity and dignity for all learners. They emphasized emotional sensitivity as a critical element of teaching, viewing empathy and patience as necessary traits when handling students with VI. Teachers demonstrated adaptability and innovation, using non-traditional teaching strategies such as tactile resources, auditory instructions, and creative techniques to make lessons accessible. They also recognized learner diversity, acknowledging that personalization and flexibility were essential for meeting the unique needs of VI students.

However, teachers also faced notable challenges. Professional preparation was a significant gap, as many lacked training in Braille and inclusive pedagogy, leaving them uncertain about strategies for non-visual learning. Instructional delivery and assessment posed barriers due to visual-based resources, lack of adapted materials, and difficulty implementing inclusive evaluation methods. Additionally, teachers struggled to create physically inclusive classrooms, particularly in promoting safe mobility and encouraging active participation in group and physical tasks.

Support systems emerged as crucial in addressing these difficulties. Collegial collaboration and co-teaching allowed teachers to share strategies, while SPED and ECSNED experts provided guidance in adapting materials such as Braille texts. Peer support, through classroom buddy systems, and family involvement reinforced learning beyond school hours. Technology also played a key role, with teachers using Braille devices, audio aids, tactile materials, and online resources. Institutional backing was evident through efforts such as reorganized classroom layouts, mobility supports, inclusive policies, and flexible assessments.

Conclusions

In conclusion, findings of this study confirms that teachers possess the philosophical commitment required for inclusion, viewing it through the lenses of equity and empathy. However, their competence is limited more by their reliance on individual initiative rather than institutional support. The gaps identified, specifically the lack of training on the use of Braille, accessible resources, and mandated collaborative structures, highlight that inclusive education in the TEI where the study was conducted is currently struggling without immediate and structured intervention (i.e. professional development and provision of more available and accessible inclusive education resources).

Recommendations

The study forwards actionable recommendations categorized into three pillars: teacher preparation and pedagogy; resources and accessibility; and institutional and collaborative support.

For teacher preparation and pedagogy, strengthening teacher training and professional development programs to address the identified gaps must be done. Comprehensive training modules should be developed focusing on Braille literacy, inclusive pedagogy, and socio-emotional skills such as empathy and patience. For resources and accessibility, schools and TEIs should create repositories of accessible materials in Braille, audio, tactile, and digital formats and invest in assistive technologies while providing adequate training for their use. Institutional policies must mandate inclusive classroom layouts, mobility aids, and flexible assessment practices, recognizing oral, audio, and tactile evaluations as valid. Along institutional and collaborative support, collaboration should be institutionalized through co-teaching arrangements, peer-buddy systems, and regular consultations with SPED and ECSNED department experts. Family engagement must also be encouraged to reinforce learning at home. Finally, future research should extend

this investigation to other education levels and regions, as well as integrate quantitative measures to assess teacher readiness and student outcomes more broadly.

Bibliography

Ahmad Najmee N.A., Mohammed Z., Rahman M.H.A., Fadzil NM, Ludin A.F.M. (2024). Optimizing classroom environments for visually impaired school children a scoping review protocol. *PLoS ONE 19(*10): e0308149. https://doi.org/10.1371/journal.pone.0308149

Ahmad, F. K. (2015). Use of assistive technology in inclusive education: Making room for diverse learning needs. *Transcience, 6,* 62-77. https://www2.hu-berlin.de/transcience/Vol6_No2_62_77.pdf

Albert, J. (2016). *What do statistics say about basic education in the Philippines* (No. 2016–19). Phillipine Institute for Development Studies. http://hdl.handle.net/11540/6837

Ampofo, J., Bentum-Micah, G., Xusheng, Q., Sun, B., & Asumang, R. M. (2025). Exploring the role of teacher empathy in student mental health outcomes: A comparative SEM approach to understanding the complexities of emotional support in educational settings. *Frontiers in Psychology*, *16*, 1503258. https://doi.org/10.3389/fpsyg.2025.1503258

Arslan, N., Ceylan, J. A., & Hatipoğlu, A. (2022). The relationship of fast food consumption with sociodemographic factors, body mass index and dietary habits among university students. *Nutrition & Food Science*, *53*(1), 112–123. https://doi.org/10.1108/nfs-01-2022-0003

Awang, L. A., Yusop, F. D., & Danaee, M. (2024). Insights on usability testing: The effectiveness of an adaptive e-learning system for secondary school mathematics. *International Electronic Journal of Mathematics Education*, *19*(3), em0782. https://doi.org/10.29333/iejme/14621

Baring, F. L. S., Garces, M. E. L., Buenviaje, D. G., & Biag, M. A. B. (2024). Usability evaluation of braille tactile audio device (BTAD): Basis for technological improvement. *International Journal of Future Multidisciplinary Research, 5*(3), 1–9. https://doi.org/10.61367/ijfmr040131

Beirnes, S. (2022). Learner-centered pedagogy and student engagement in a virtual elementary instrumental music program. *International Journal of Music Education*, *40*(4), 530 - 541. https://doi.org/10.1177/02557614221074378

Benemerito, P., Delos Reyes, N. R. T., Espina, R. C., Peteros, E. D., & Sitoy, R. E. (2024). The role of professional development in enhancing pedagogical practices of teachers in inclusive classrooms. *International Journal of Intelligent Systems and Applications in Engineering, 12*(3), 45–56. https://doi.org/10.47191/ijisae/v12i3.7351

Berndtsson, I. C. (2024). Lived experiences of learning to use a long cane: the importance of integrating perceptual, existential, and social dimensions for active cane use. *Qualitative Health Research*. https://doi.org/10.1177/10497323241277111

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57–71). American Psychological Association. https://doi.org/10.1037/13620-004

Campado, R. J., Dabi Toquero, C. M., & Ulanday, D. M. P. (2023). Integration of assistive technology in teaching learners with special educational needs and disabilities in the Philippines. *International Journal of Professional Development, Learners and Learning*, *5*(1), ep2308. https://doi.org/10.30935/ijpdll/13062

Chorosova, O. M., Solomonova, G. S., & Struchkov, V. G. (2020). Prospects for the

development of digital educational environment in North-Eastern Federal University in the context of Adult Education. *Advances in Economics, Business and Management Research/Advances in Economics, Business and Management Research*. https://doi.org/10.2991/aebmr.k.200312.388

Commission on Higher Education. (2000). *CHED Memorandum Order No. 023, series of 2000: Quality education for learners with special needs*. Commission on Higher Education. https://legaldex.com/laws/quality-education-for-learners-with-special-needs

Congress of the Philippines. (2013). Republic Act No. 10533. In *Official Gazette*. https://www.officialgazette.gov.ph/2013/05/15/republic-act-no-10533/

Congress of the Philippines. (2022). Republic Act No. 11650. *Supreme Court E-library*. https://elibrary.judiciary.gov.ph/thebookshelf/showdocs/2/94483

Dabi G. K., Golga D. N. (2022). Availability, awareness, and utilization of assistive technologies among students with visual impairment: The case of Haramaya University, Ethiopia. *British Journal of Visual Impairment*, *5*. https://doi.org/10.1177/02646196221124420

Dagunduro, C., Ajuwon, P., Ediae, P., Lahcen, P., & Paradiso, P. (2024). Adaptive learning models for diverse classrooms: Enhancing educational equity. *International Journal of Applied Research in Social Sciences, 6*(9), 2228–2240. https://doi.org/10.52291/ijarss.2024.6.9.2228

De Borba, N. J., Ferreira, V. a. S., Santos, T. P. D., & Carvalho, S. (2024). *Inclusive education*. *Revista Gênero E Interdisciplinaridade, 5*(03), 182–191. https://doi.org/10.51249/gei.v5i03.2073

De Oliveira, L.S. (2025). Curricular and methodological adaptations for teaching inclusive chemistry in high school. *RCMOS – Multidisciplinary Scientific Journal of Knowledge*, *1*. https://doi.org/10.51473/rcmos.v1i1.2025.857

De Sousa Crepaldi, L., Silva, M. A. F. da, Silva, E. A. da, Silva, L. B. da, Silva, L., Meller, E. B., Rodrigues, A. P. D. C. D., Silva, S. C. da, Silva, J. B. R. da, Montes, K. S. D. C., & Barbosa, A. M. P. B. (2024). *The role of games and play in the cognitive development of children with disabilities. IOSR Journal of Business and Management*, *26*(10), 1–7. https://doi.org/10.9790/487X-26100107

De Verdier, K. (2016). Inclusion in and out of the classroom: A longitudinal study of students with visual impairments in inclusive education. *British Journal of Visual Impairment, 34*(2), 130-140. https://doi.org/10.1177/0264619615625428

Debasu, H., & Yitayew, A. (2024). Examining elements of designing and managing of creating inclusive learning environment: Systematic literature review. *International Journal of Special Education, 39*(1), 33–43. https://doi.org/10.52291/ijse.2024.39.4

Demirdiş, B. (2024). Mathematics Teachers' Attitudes towards Inclusive Education in Türkiye. *Bayburt Eğitim Fakültesi Dergisi*, *19*(43), 2468–2491. https://doi.org/10.35675/befdergi.1468104

Dube, B. (2022). Rural online learning in the context of COVID-19 in South Africa: Evoking an inclusive education approach. *Multidisciplinary Journal of Educational Research, 10*(2), 135–157. https://doi.org/10.17583/remie.2020.5607

Dumbuya, E. (2025). *Inclusive curriculum development for special education and differentiated instruction*. https://doi.org/10.2139/ssrn.5018551

Evans, C. (2020). Exploiting students' part-time work to enhance learning, teaching and assessment. *Industry and Higher Education, 35*, 10-13. https://doi.org/10.1177/0950422220930182

Fadiana, M., Widiyanti, I.S.R., and Mizan, S. (2022). *Development of tactil audio media for low vision students*.

http://dx.doi.org/10.17977/um005v6i12022p059

Fearm, S. (2022). *Introduction to design education, chapter on teaching as performance*. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003049166-20/teaching-performance-steven-faerm

Fitas, R. (2025). *Inclusive education with AI: Supporting special needs and tackling language barriers*. *arXiv.* https://arxiv.org/abs/2504.14120

Gomes, R. L. R., Santos de Oliveira, E. G., Menezes, F. F. de, Silva, F. M. D., Fontes, I. M., & Pereira, J. R. M. C. et al. (2025). Digital inclusion in full-time education: Impacts on organizational climate and professional development. In *Transforming Education: The Future of Learning* (pp. 58-73). https://doi.org/10.56238/sevened2025.002-003

Harutyunyan, M., & Aleksanyan, M. (2023). Cooperation between specialists while providing psycho-pedagogical support to children with special education needs. *Main Issues of Pedagogy and Psychology*, *10*(2), 94–102. https://doi.org/10.24234/miopap.v2i10.11

Hayes, C., & Proulx, M. J. (2023). Turning a blind eye? Removing barriers to science and mathematics education for students with visual impairments. *British Journal of Visual Impairment, 42*(2), 544–556. https://doi.org/10.1177/02646196221149561

Hovey, K. A., Gauvreau, A. N., & Lohmann, M. J. (2022). Providing multiple means of action and expression in the early childhood classroom through a universal design for learning framework. *The Journal of Special Education Apprenticeship, 11*(2). https://doi.org/10.58729/2167-3454.1150

Johnson, C. A., Gerwin, K. L., Tichenor, S. E., Tichenor, M. P., & Walsh, B. (2024). Evaluating stuttering self-stigma and its relationship to adverse impact in children and adolescents with the child stuttering self-stigma scale. *Journal of Speech, Language, and Hearing Research*, *67*(9), 2920–2934. https://doi.org/10.1044/2024_JSLHR-24-00069

Joshi, H., & Joseph, S. (2024). ULMFiT: Universal language model fine-tuning for text classification. *International Journal of Advanced Medical Sciences and Technology, 4*(6), 1-9. https://doi.org/10.54105/ijamst.E3049.04061024

Kapil, Y., Jeyaprathaban, S., & Halder, T. (2024). Effectiveness of universal design of learning for students with mild intellectual disabilities - a review. *International Journal of Research and Review*, *11*(3), 271-280.

Karvonen, M., Swinburne Romine, R. & Clark, A., (2024). Response process evidence for academic assessments of students with significant cognitive disabilities, *Practical Assessment, Research, and Evaluation, 29*(1), 13. https://doi.org/10.7275/pare.2060

Kerdar, S. H., Bächler, L., & Kirchhoff, B. M. (2024). The accessibility of digital technologies for people with visual impairment and blindness: A scoping review. *Universal Access in the Information Society, 27*, Article 24. https://doi.org/10.1007/s10209-024-00962-6

Kiryakova, G., & Kozhuharova, D. (2024). Addressing pedagogical digital competencies in Bulgarian pre-service teacher education: A curriculum and policy analysis. *Education Sciences*, *15*(4), 404. https://doi.org/10.3390/educsci15040404

Koehler, K. E. and Wild, T. A. (2019). students with visual impairments' access and participation in the science curriculum: Views of teachers of students with visual impairments, *Journal of Science Education for Students with Disabilities*, *22*(1).

Kushwaha, R. K., & Maurya, H. K. (2024). Institutional barriers to inclusive assessment for students with special needs in Indian Higher Education. *Khwopa Journal*, *6*(2), 115–132. https://doi.org/10.3126/kjour.v6i2.73221

Kyamko, V. F., Tenerife, J. J., Opingo, K. M., Pinili, L., Espina, R., & Suson, R. (2024). *Teacher*

perceptions and collaborative efforts in inclusive education: A path to effective implementation. World Journal on Education and Humanities Research, 4(3), 286–296. https://www.researchgate.net/publication/385420527_Teacher_Perceptions_and_Collaborative_Efforts_in_Inclusive_Education_A_Path_to_Effective_Implementation

Lakkala, S., Beaton, M. C., & Kokko, K. (2024). A conceptual analysis of inclusive education in terms of participation and agency. *Support for Learning*, *39*(3), 125–136. https://doi.org/10.1111/1467-9604.12477

LAWPHil (2022). *Republic Act No. 11650*. The LAWPHil project, Arellano law foundation Philippine laws and jurisprudence databank. https://lawphil.net/statutes/repacts/ra2022/ra_11650_2022.html

Lebeco, E. E. and Verano, M.L.E. (2023). Teachers' perceptions on the implementation of inclusive education (IE) in public elementary schools in Northern Samar. Internatio*nal Journal of Research and Innovation in Social Science,* 792), 1003-1010.

Li, L., & Li, L. (2024). Research on the embodiment of educational equity in inclusive education: Present situation. *Lecture Notes in Education Psychology and Public Media*, *52*(1), 269–274. https://doi.org/10.54254/2753-7048/52/20241612

Lyanda, J.N. & Owidi, S. (20225). Affective pedagogy and emotional intelligence in online learning: Enhancing teacher-student relationships. *Research Journal of Education Teaching and Curriculum Studies* *3*(1), 15-25. https:/doi.org/10.58721/rjetcs.v3i1.891

Magaba, V. (2022). Inclusive education – A prescript to engagement by all stakeholders. *EDConference Proceedings*, 70–83. https://www.ed- conference.org/uploads/1/1/4/7/11479227/edc2022_07.pdf

Manligoy, R. G. (2017). Teachers' attitude towards inclusive education and their sense of well-being. *University of Mindanao Repository.* http://103.123.43.47:8080/handle/20.500.14045/711

Mboshi, S. (2018). Teaching learners with visual impairment in an inclusive education setting: the Cameroon perspective. *International Journal of Education and Research,* *6*(2), 109-114. https://www.ijern.com/journal/2018/February-2018/11.pdf

Mir, T. T., Arif, A., & Gul, F. (2023). Assessment rubrics as effective feedback: Prospective teachers' perceptions and practices. *Global Educational Studies Review, 8*(2), 293–301. https://doi.org/10.31703/gesr.2023(VIII-II).27

Miyauchi, H. (2020). *A systematic review on inclusive education of students with visual impairment.* MDPI Education Sciences.

Nkomo, D. and Dube, B. (2022). Implementation of open and distance learning programmes in primary teacher education in Zimbabwe. *Malaysian Journal of Social Sciences and Humanities, 7*(11).

Odhiambo, J. A. (2024). Exploring the attitudes of girl learners with physical disabilities towards education in Kisumu, Kenya. *International Journal of Studies in Inclusive Education*, *1*(2), 68–71.

Pădeanu, L. (2023). Differentiated teaching-learning-assessment of students with disabilities in mainstream education. *Review of Psychopedagogy, 12*(1), 127–145. https://doi.org/10.56663/rop.v12i1.64

Park, J. and Lee, J. (2024). *The role of grit in inclusive education: A study of motivation and achievement among preservice physical education teachers.* https://doi.org/10.3389/fpsyg.2024.1332464

Pattiasina, P.J., Hikmah, H., & Nugroho, P. (2024). The effect of project-based learning (pbl) method on improving students' writing ability. *Jurnal of Pedagogi : Jurnal Pendidikan, 1*(5).

Pov, S., & Kawai, N. (2024). *Are teachers adequately prepared for inclusive classrooms in Cambodia? Knowledge and experience for inclusive practices. International Journal of Instruction*, *17*(3), 491–508.

https://doi.org/10.29333/iji.2024.17327a

Priyadharsini, V., & Sahaya, M. R. (2024). *Universal Design for Learning (UDL) in inclusive education: Accelerating learning for all*. *Shanlax International Journal of Arts, Science and Humanities*, *11*(4), 145–150. https://doi.org/10.34293/sijash.v11i4.7489

Quiño-Justol, J. B. (2024). Perspectives of teachers on the integration of assistive technology in higher education inclusive classrooms in the Philippines: Importance, benefits, social support, and challenges. *Journal of Interdisciplinary Perspectives, 2*(12), 497–509. https://doi.org/10.69569/jip.2024.0428

Rodriguez, J. (2019). Moving towards inclusive education for all: Examining stakeholder perceptions of educating students with special needs in schools operated by the Jordan field of the UNRWA. *International Journal of Disability Development and Education* *68*(4), 1-19. DOI:10.1080/1034912X.2019.1671580

Sandelius, S. (2024). *Maximizing student success: The pivotal role of collaborative planning in inclusive education. The Ability Challenge*. https://theabilitychallenge.org/blog/maximizing-student-success-the-pivotal-role-of-collaborative-planning-in-inclusive-education

Sasikala, C. (2023). Attitudes towards inclusive education among prospective teachers. *Shanlax International Journal of Arts, Science, and Humanities, 11*(1). DOI: https://doi.org/10.34293/sijash.v11iS1-Nov.6861

Sele, J. P., & Mukundi, M. B. (2023). The impact of emotional intelligence on pedagogy: Fostering a supportive classroom environment. *Greener Journal of Social Sciences*, *13*(1), 172–183. https://doi.org/10.15580/gjss.2023.1.122024210

Sivanathan, I., Thamburaj, K.P., Ponniah, K., Arumugum, L., & Rajamani, R. (2024). Transforming classroom dynamics: A comparative analysis of U-style, Vstyle, and circle innovative teaching techniques. *International Journal of Advanced and Applied Sciences, 11*(10) 2024, Pages: 105-113. https://www.science-gate.com/IJAAS/Articles/2024/2024-11-10/1021833ijaas202410012.pdf

Tenerife, J. J. L., Peteros, E., Zaragoza, I. D., de Vera, J. V., Pinili, L. C., & Fulgencio, M. D. (2024). Teachers' perceptions on their competence and the benefits of inclusive education. *Cypriot Journal of Educational Sciences. 6*. https://doi.org/10.18844/cjes.v19i1.7784

United Nations Educational, Scientific and Cultural Organization (UNESCO) (2017). *A guide for ensuring inclusion and equity in education*. https://unesdoc.unesco.org/ark:/48223/pf0000248254

Vergara, M., Pinili, L., Reyes, N. R. D., Sitoy, R., Espina, R., & Saladaga, L. (2025). Teachers' preparedness for inclusive education: Analyzing knowledge, confidence, and classroom management. *International Journal of Educational Studies, 8*(2), 54–64. https://doi.org/10.53935/2641533x.v8i2.323

Veshal, I. (2024). *Enhancing inclusive education: A comprehensive guide to universal design for learning (UDL)*. https://doi.org/10.22541/au.171052965.50164898/v1

You, H., Park, S., & Hong, M. (2024). *Unveiling effectiveness: A meta-analysis of professional development programs in science education. Journal of Research in Science Teaching, 7*. Advance online publication. https://doi.org/10.1002/tea.21985

Zakiah, W. G., Karsidi, R., & Yusuf, M. (2024). The implementation of inclusive educational policies in elementary school. *Jurnal Pedidikan Pengajaran, 54*(1):130. DOI:10.23887/jpp.v54i1.32210