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Between Innovation and Inclusion: Teachers' Experiences of Preparing and Using Technology in Special Needs Education

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Abstract. Special Needs Education teachers in the Philippines are expected to use technology while responding to the varied needs of individual learners, but little is known about how they turn digital skills into accessible classroom instruction in local public schools. This qualitative study, which had a descriptive phenomenological orientation, explored how Special Needs Education teachers experience technology integration, including their reasons for choosing the field, the practices and challenges they described, and their recommendations. Thirteen purposively selected teachers from two public schools in the Schools Division of Valencia City, Bukidnon, Philippines, answered four open-ended questions in writing through an online form, and their responses were analyzed thematically. Four themes emerged: (1) from assigned responsibility to purposeful commitment, as teachers, some of whom entered the field through administrative assignment, found meaning in supporting learners; (2) making learning accessible and meaningful through adaptive technology integration, in which teachers prepared materials, used digital presentations and visuals, and produced printed and hands-on materials; (3) adapting through challenges, in which limited devices, unreliable internet, power interruptions, and preparation time led teachers to use flexible strategies and backup materials; and (4) building an accessible and sustainable technology-supported learning environment, for which participants recommended adequate resources, practical training, and individualized instruction. Teachers reported that learners appeared more engaged and understood lessons more easily, but these are teachers' perceptions and not measured learner outcomes. Assistive technology appeared mainly as a recommendation, whereas the practices described relied on general presentation and production tools. The findings suggest that technology integration in this setting depends less on equipment alone than on reliable infrastructure, continuing professional development, and materials adapted to learners' needs. Future studies should combine classroom observation and learner assessment with teachers' accounts.

Keywords: Instructional Adaptation; Special Needs Education; Teacher Experiences; Teacher Training; Technology Integration

Introduction

Technology is increasingly used in classroom instruction to support teaching and learning, including in Special Needs Education (SNED). Digital learning materials, multimedia, educational applications, communication tools, and assistive technologies can help teachers present lessons in different ways and respond to learners with varied educational needs. However, integrating technology into SNED requires more than access to digital devices. Teachers need to decide whether a particular technology is appropriate for a learner, how it fits the lesson, and how it can be adjusted when learners respond differently. Thus, technology integration is closely connected to teachers' classroom experiences, instructional decisions, and understanding of their learners' needs.

Studies have shown that teachers' experiences and beliefs influence how technology is used in special education. Anderson and Putman (2020) found that special education teachers' confidence, beliefs, experience, and technological knowledge were related to their use of technology in teaching. Courduff and Moktari (2022) likewise reported that technology integration among special education teachers was influenced by personal, cultural, and institutional factors. In the Philippine setting, Campado et al. (2023)

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found that special education teachers used multimedia, educational applications, and other technologies but also experienced difficulties related to resources, technical problems, learner behavior, and technology-related skills. More recently, Uy (2026) reported challenges involving instructional resources, preparation time, technical support, and teachers' confidence in using technology with learners with different exceptionalities. These studies indicate that technology use in special education involves both opportunities and difficulties that are experienced directly by teachers.

In the Philippines, Republic Act No. 11650 sets a policy of inclusion for learners with disabilities, recognizes individualized education plans, and calls for inclusive education to be part of teacher education and continuing education (Republic of the Philippines, 2022). The Philippine Professional Standards for Teachers likewise expect teachers to select, develop, and use teaching and learning resources, including information and communications technology (Department of Education, 2017). These documents state expectations and entitlements; they do not show how the expectations are met in particular classrooms, which is what a local account of teachers' experience can describe.

Prior studies have documented teachers' confidence, beliefs, and competence in using technology (Anderson & Putman, 2020; Courduff & Moktari, 2022; Tercero & Delos Reyes, 2025), the resource and technical difficulties teachers face in Philippine classrooms (Campado et al., 2023; Uy, 2026), and the opportunities, challenges, and training needs mapped by reviews (Fernández-Batanero et al., 2022; Griffiths & Slaughter, 2026; Voultsiou & Moussiades, 2025). Among the sources reviewed for this study, fewer accounts follow individual teachers from their reasons for entering Special Needs Education (SNED) to what they actually prepare, adjust, and do when resources fail. That connection matters because, for some teachers, SNED began as an administrative assignment, and the effort they invest in adapting technology may be related to how that assignment came to be meaningful. A phenomenologically oriented local account can show how teachers translate digital competence into accessible, individualized instruction in their own classrooms, in their own words, without assuming that policy expectations or training translate directly into practice. This study therefore explores how SNED teachers experience technology integration, including the reasons that led them to choose SNED teaching, their experiences and challenges in using technology, and the recommendations they can offer based on their classroom experiences.

Terms are used as follows. Technology integration refers to the practices teachers described: preparing lesson materials and worksheets with digital tools, presenting lessons through slides, images, and videos, producing printed or hands-on materials such as modified worksheets and 3D-pen models, and arranging backup resources when technology fails. Assistive technology refers to devices, software, or equipment that help an individual learner with a disability to access, participate in, or demonstrate learning. General presentation and production tools, such as slide software, are not assistive technology by themselves; they serve as individual access supports only when teachers adapt them to a particular learner, and the participants' accounts are read with this distinction in mind. Digital competence refers to teachers' knowledge, skills, and confidence in selecting and using digital tools for instruction. Special Needs Education (SNED) is the term used by the Department of Education for education serving learners with disabilities, and this paper uses it, or "special education" when discussing studies from other settings, throughout. An Individualized Education Program (IEP) is a plan that sets learning goals and supports for an individual learner.

The study was conducted at Valencia City Central School and Valencia National High School, two very large schools in the Division of Valencia City, Province of Bukidnon, Philippines, that offer Special Needs Education. The study focuses on SNED teachers in these schools and examines their experiences of using technology in classroom instruction within their respective school and learner contexts.

Research Questions

This study explored the lived experiences of Special Needs Education (SNED) teachers in integrating technology into classroom instruction.

Specifically, the study aims to address the questions:

1. What are the reasons that motivate you to choose teaching in Special Needs Education (SNED)?
2. How would you describe your lived experiences in integrating technology into your classroom instruction as a SNED teacher?
3. What challenges, adjustments, and meaningful experiences have you encountered when integrating technology to support the learning needs of your students?
4. What recommendations can you offer to improve the integration of technology in Special Needs Education classroom instruction?

Scope and Delimitation of the Study

This study explored the lived experiences of Special Needs Education (SNED) teachers in integrating technology into classroom instruction. It was limited to 13 SNED teachers from Valencia City Central School

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and Valencia National High School in the Schools Division of Valencia City, Bukidnon, Philippines, who had experience integrating technology into their teaching. The study covered four areas: the teachers' reasons for choosing SNED, their experiences in integrating technology, the challenges, adjustments, and meaningful experiences they encountered, and their recommendations for improving technology integration. Data were limited to written responses to four open-ended questions submitted through an interview guide, and the findings reflect teachers' reported experiences rather than direct measurements of learners' academic achievement or outcomes. The study did not include classroom observation or learner assessment. As a qualitative study involving a small, purposively selected group, it describes the participants' experiences and is not intended to be generalized to all SNED teachers.

Literature Review

Teachers' Beliefs, Competence, and Motivation

Studies of special education teachers consistently place teachers at the center of technology use, but they differ in what they emphasize. Anderson and Putman (2020) related teachers' confidence, beliefs, experience, and technological knowledge to their use of technology, an individual-level explanation. Courduff and Moktari (2022), using narrative inquiry with special education technology integrators, reported that integration was shaped by personal, cultural, and institutional factors, which widens the explanation beyond the individual teacher. Tercero and Delos Reyes (2025) examined teachers' knowledge and competence in assistive technology in inclusive environments in the Philippines, so competence is also a focus of local research, although competence alone does not describe what teachers actually do with technology in their lessons. A second strand asks why teachers enter and stay in special education. Göktürk et al. (2021) examined retention in Turkey from a motivational perspective, and Varela (2026) described how Philippine special education teachers who were committed to staying experienced thriving, identifying a sense of mission, fulfillment, and professional support. In China, Fu et al. (2022) examined how well-being, social support, and work engagement relate to turnover intention, and Xie (2023) examined work motivation and organizational commitment with job crafting as a mediating factor. Across these studies, commitment is shaped by personal meaning and workplace support, yet they concern retention, thriving, and turnover rather than technology. Among the sources reviewed here, how teachers' reasons for choosing SNED relate to the effort they put into integrating technology has not been examined directly. The present study therefore asks about motivation first, as context for teachers' technology experiences, without assuming a causal relationship.

Accessibility and Individualized Instruction

Reviews agree that technology can widen access for learners with disabilities but differ in scope. Fernández-Batanero et al. (2022) reviewed assistive technology and highlighted its potential to support accessibility and inclusion. Voultsiou and Moussiades (2025) reviewed 139 studies on artificial intelligence, virtual reality, and large language models in special education, identified key themes and challenges, and recommended cross-sector collaboration and inclusive policies. Bsharat et al. (2026) reviewed teachers' attitudes and perceptions of the accessibility, psychosocial, and academic benefits of assistive technology. Their shared message is that benefits depend on implementation, and they differ in the technologies examined, from established assistive devices to emerging tools. Because much of this work concerns assistive or emerging technologies, the role of everyday digital tools, such as presentations, images, and printed materials, in individualized instruction is less often described in the sources reviewed here. Universal Design for Learning offers a way to connect the two. It proposes designing lessons proactively with flexible methods, materials, and assessments that address learner variability (Rao & Meo, 2016), which places the teacher's design decisions at the center of accessibility. Access to technology therefore does not by itself ensure meaningful learning; what matters is how teachers select, adapt, and use tools for particular learners (Anderson & Putman, 2020).

Infrastructure, Resources, and Institutional Support

Philippine studies converge on resource and technical constraints. Campado et al. (2023) found that special education teachers used multimedia, educational applications, and other technologies but encountered difficulties related to resources, technical problems, learner behavior, and technology-related skills. Uy (2026), studying special education centers in the Division of Cebu City, found that teachers rated technology integration as useful and reported often using technology-based activities, while also reporting challenges involving instructional resources, preparation time, technical support, and confidence. The two studies agree on resource and support constraints; they differ in focus, one on assistive technology integration and the other on the effectiveness and extent of technology use, and in setting. Training is the

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usual remedy. In a scoping review, Griffiths and Slaughter (2026) found that assistive technology training is highly valued but inconsistently available, with barriers that include time, funding, and lack of awareness, and noted that flexible and blended models combining online and hands-on components may be effective. Utami et al. (2025) reviewed professional development in digital competence for special education teachers. Both reviews concern training rather than classroom practice, and Griffiths and Slaughter reported that confidence and self-efficacy were the most frequently measured indicators of training success, so what training changes in daily instruction remains less clear. Workplace support also matters for sustaining teachers' work (Fu et al., 2022; Xie, 2023).

Teachers' Lived Experiences

A smaller set of studies approaches teachers' experiences directly. Courduff and Moktari (2022) used narrative inquiry, and Cagape and Bauyot (2024) used a phenomenological approach to describe the experiences of special education teachers in a Philippine division, with a focus, as the title indicates, on teaching experiences in general. Phenomenology suits questions about how people experience and make sense of a phenomenon in their own words, rather than how often or how strongly something occurs (Creswell & Poth, 2018). This is the kind of question raised by teachers who must decide, lesson by lesson, whether and how a digital tool fits a particular learner.

Methodology

Research Design

This study employed a qualitative design with a descriptive phenomenological orientation to explore the experiences of Special Needs Education (SNED) teachers in integrating technology into classroom instruction. A phenomenological orientation was appropriate because the study sought to understand how teachers experienced, interpreted, and responded to the use of technology in their daily teaching (Creswell & Poth, 2018). The data were participants' written descriptions of their experiences, analyzed thematically; the study is therefore phenomenological in its focus on described experience and does not apply a full phenomenological analytic procedure.

Research Locale

The study was conducted at Valencia City Central School and Valencia National High School in the Division of Valencia City, Province of Bukidnon, Philippines.

Research Participants

Thirteen teacher-informants took part in the study and are referred to as KI1 to KI13 in the discussion of results. 6 were from Valencia City Central School and 7 were from Valencia National High School. Their years of teaching in SNED ranged from 2 years to 20 years, and their years of using technology in instruction ranged from 10 years to 15 years. They handled learners with intellectual disability, autism spectrum disorder, hearing impairment, learning disabilities, and blind.

Research Instrument

The research instrument was a researcher-developed, semi-structured interview guide used to explore SNED teachers' lived experiences of integrating technology into classroom instruction. It contained four open-ended questions, one for each research question, worded as in the Research Questions section. The questions asked about teachers' motivations for entering SNED, their experiences integrating technology, the challenges, adjustments, and meaningful experiences they encountered, and their recommendations for improvement. Before use, the guide was reviewed by experts: who have background in qualitative research, and expertise in educational technology. The experts evaluated each question for clarity, relevance, appropriateness, and alignment with the study's objectives using a validation rating form and written comments. Based on their feedback, revisions were made to simplify ambiguous wording, remove overlapping questions, and improve the sequence of questions. The revised guide was then pilot-tested with two teachers who had characteristics similar to the target participants but were not included in the final sample, to assess the clarity, flow, and appropriateness of the questions. Minor adjustments were made based on the pilot-test feedback.

Data Gathering Procedure

Permission to conduct the study was sought from the Schools Division of Valencia City and the heads of Valencia City Central School and Valencia National High School. Eligible teachers were invited to participate, and those who agreed received the interview guide containing the informed consent statement

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and the four questions. Participants signed the informed consent before proceeding to the questions and answered them in writing. Responses were compiled and encoded verbatim, and participants were assigned codes (KI1 to KI13) to protect their identities. Participants answered in english. Data were collected from September 28, 2026 to October 9, 2026. Answering the interview guide typically took 10 minutes to complete.

Results and Discussions

Research Question 1: What are the reasons that motivate you to choose teaching in Special Needs Education (SNED)?

Emerging Theme: From Assigned Responsibility to Purposeful Commitment: Finding Meaning in Supporting Learners with Special Educational Needs

Subtheme 1: From assignment to commitment

"At first, I have no choice, because it was an order from my principal to handle SNED, but later on I realized that the learners in SNED need me, so I was then motivated to continue teaching them and be with them." — KI1

"I had no other choice, but I believe it was God's choice to place me here and entrust me with these children." — KI3

Both accounts show that entering SNED was not always a personal choice: KI1 and KI3 each describe an initial lack of choice that was later reinterpreted, through recognition of learners' needs (KI1) or a sense of religious purpose (KI3). Commitment, in these accounts, developed after placement rather than before it. This agrees with Varela (2026), who found that Philippine special education teachers who stayed described a sense of mission, fulfillment, and professional support, and it extends that finding by showing that, for these teachers, the sense of mission was found through assignment. Why some teachers were assigned and others chose SNED cannot be determined from the responses.

Subtheme 2: Teaching as meaningful work and personal commitment

"ITS A CALLING" — KI2

"After years in a regular classroom, I transferred to SNED because I wanted to make a deeper, more meaningful impact." — KI9

"Because I love to handle children with special needs." — KI12

These responses express purpose in different registers: vocation (KI2), a deliberate move toward more meaningful work (KI9), and affection for the learners (KI12). Among the quoted responses, KI9 is the only one who describes transferring to SNED after years in a regular classroom, which contrasts with KI1 and KI3 and shows that routes into SNED varied within the group. The personal meaning teachers attach to the work resembles the sense of mission reported by Varela (2026) and fits studies of motivation, commitment, and engagement among teachers in China (Fu et al., 2022; Xie, 2023), although those studies were conducted in a different institutional context and did not address technology.

Subtheme 3: Responding to learners' individual needs

"I … strive harder to make them understand academics in a simplified and modified structure according to their learning styles/needs." — KI5

"It is about understanding each learner's unique needs, providing appropriate support, celebrating their progress, and helping them become more independent members of the community." — KI11

For KI5 and KI11, the reason for teaching in SNED is already expressed in terms of adjusting instruction to each learner's needs. This links motivation to the adaptation practices reported under Problems 2 and 3. The motivation studies reviewed here focus on retention, thriving, and commitment (Göktürk et al., 2021; Varela, 2026) and do not describe instructional adaptation, so this connection is one place where the present study adds a local account; it remains an observation from two responses and not a demonstrated relationship.

Subtheme 4: Finding fulfillment in learner progress and independence

"Seeing their progress, even in small steps, inspires me to continue improving my teaching strategies." — KI6

"Seeing their small progress and knowing that I can make a difference in their lives gives me fulfillment as a teacher." — KI7

"Not only their academic skills but also their confidence, independence, and social abilities." — KI10

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Fulfillment here is tied to learner progress as the teachers perceive it; no learner measures were collected. KI6 links progress to improving teaching strategies, which suggests that perceived progress can feed further adaptation. Fu et al. (2022) and Xie (2023) link teachers' well-being, support, and motivation to engagement and commitment; the accounts here add that perceived learner progress itself may sustain commitment, a possibility the present data can suggest but not test.

Subtheme 5. Personal and family connections

"I have a daughter with Autism." — KI8

"I have an aunt and uncle who are SNED teachers who happen to have kids with special needs. I want to understand and live the life they are in." — KI13

KI8's statement is too brief to show how having a daughter with autism shaped the decision to teach SNED, so it is reported without interpretation. KI13 explicitly connects family experience with a wish to understand the lives of relatives who are SNED teachers. Because only two participants raised family connections, this subtheme is reported as a distinct but limited dimension of motivation.

Implications for Problem 1. Motivation developed along different routes, and for several teachers it followed an administrative assignment. These findings explain why teachers entered or stayed in SNED; technology integration is addressed by Problems 2 and 3, and the data do not establish that motivation caused teachers' technology practices. As a researcher implication, and not a participant recommendation, the placement of some teachers by assignment suggests that newly assigned SNED teachers may benefit from orientation, practical training, collaboration opportunities, and instructional resources (see Varela, 2026; Fu et al., 2022).

Research Question 2: How would you describe your lived experiences in integrating technology into your classroom instruction as a SNED teacher?

Emerging Theme: Making Learning Accessible and Meaningful Through Adaptive Technology Integration

Subtheme 1: Technology makes lessons accessible and understandable

"Many of my learners are visual and they best understand things when concepts are taught or introduced accompanied by images." — KI1

"Technology helps me present lessons in a more engaging, interactive, and understandable way, especially for learners who have different learning needs and abilities." — KI2

"It can help teachers make lessons and activities more accessible, engaging and suitable for each learner." — KI3

This subtheme concerns accessibility as a matter of how content is presented: images for visual learners (KI1), interactive and understandable presentation (KI2), and suitability to each learner (KI3). It agrees with Fernández-Batanero et al. (2022), who highlighted the potential of assistive technology for accessibility and inclusion, and with the multiple representations that Universal Design for Learning encourages (Rao & Meo, 2016). It also differs from that literature in kind: the participants mainly describe general presentation tools such as images, slides, and videos, not devices designed for individual access needs, so their accounts show access to content in general rather than assistive technology in the strict sense.

Subtheme 2: Technology supports individualized and adapted instruction

"I adjust the use of technology by providing visual, step-by-step, and hands-on activities." — KI6

"I also use a 3D pen to create simple models and hands-on learning materials, especially for learners who learn better through visual and tactile activities." — KI7

"I adjust the font size, add pictures, and simplify the instructions before printing them out." — KI9

Where the previous subtheme concerned presentation, this one concerns what teachers change in the materials themselves for particular learners: step-by-step and hands-on activities (KI6), tactile models made with a 3D pen (KI7), and larger fonts, added pictures, and simplified instructions before printing (KI9). These practices show that technology integration in these classrooms includes producing physical materials as well as displaying digital content. They fit the flexible methods and materials of Universal Design for Learning (Rao & Meo, 2016) and the view of teachers as active decision-makers whose beliefs and circumstances shape practice (Anderson & Putman, 2020; Courduff & Moktari, 2022). The excerpts do not show how teachers decided which adaptation suited which learner; that question is taken up under Problem 3.

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Subtheme 3: Technology improves teaching efficiency and preparation

"It makes my work faster and more efficient, allowing me to save time in preparing instructional materials (IMs) and worksheets." — KI8

"Technology is my best buddy, and the device I can not live without as far as teaching the learners with special needs is concerned. It made my tasks easier and meaningful." — KI1

KI8 and KI1 describe technology as making preparation faster and tasks easier. This contrasts with KI9's report under Problem 3 that making visual presentations and customized worksheets on a laptop takes hours. The responses do not explain the difference. It could reflect different kinds of materials (general worksheets compared with individually customized ones), different devices or skills, or different numbers of learners, but these are possibilities, not findings. The contrast shows that time savings cannot be assumed, and it is consistent with the preparation-time challenges reported by Uy (2026).

Subtheme 4: Technology encourages learner interest and participation

"One of my most meaningful experiences is seeing how technology can increase learners' participation and motivation." — KI10

"Visual and interactive materials help them understand instructions and concepts more easily." — KI11

"As a SNED teacher, technology helped me to improve my lessons and make them easier and make them interesting for the learners." — KI13

This subtheme concerns participation as teachers observe it. These are teachers' observations, not measured outcomes. They are of the same kind as the perceived benefits reviewed by Bsharat et al. (2026) and the benefits of technology reported by Campado et al. (2023) in Philippine classrooms, and they share the limitation that perceived benefit is not demonstrated effect.

Subtheme 5: Meaningful integration requires adjustment despite challenges

"Limited devices and resources can sometimes be a challenge, but I try to maximize what is available in the classroom." — KI6

"As a SNED teacher, my experience in integrating technology into classroom instruction has been both challenging and rewarding." — KI2

"Very interesting and challenging." — KI12

Positive and difficult experiences coexist: KI6 maximizes limited devices, KI2 calls the experience both challenging and rewarding, and KI12 gives a brief reply. This agrees with Campado et al. (2023), who reported both the use of technology and difficulties with resources and technical skills, and with Uy (2026), whose teacher-respondents rated technology as useful while reporting challenges.

Research Question 3: What challenges, adjustments, and meaningful experiences have you encountered when integrating technology to support the learning needs of your students?

Emerging Theme: Adapting Through Challenges: Making Technology Work for Diverse Learners

Subtheme 1: Overcoming technological and resource-related barriers

"Challenges and adjustments were when there are unscheduled power interruption, and I was not able to prepare an alternative teaching materials, when gadgets won't work the way I expected them to work well." — KI1

"Limited access to devices, internet connectivity, and appropriate digital learning materials can also make technology integration difficult." — KI2

"The biggest challenge is time. Making visual presentations and customized worksheets on my laptop takes hours." — KI9

Power interruptions without a prepared alternative (KI1), limited devices, connectivity, and digital materials (KI2), and preparation time (KI9) are described as barriers. They agree with the resource and technical difficulties reported by Campado et al. (2023) and the resource, preparation-time, and technical-support challenges reported by Uy (2026) in other Philippine settings. The time pressure described here also differs in kind from the one in Griffiths and Slaughter (2026), where time was a barrier to attending training; for KI9 it is time to prepare materials. KI9's experience should be read together with KI8's report of time saved (Problem 2).

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Subtheme 2: Responding to diverse learning needs

"I have learned to adjust technology use based on each learner's IEP goals, interests, abilities, combining videos, songs, visual supports, and digital materials with hands-on activities and real-life tasks." — KI8

"One challenge is adjusting technology-based activities to the different needs of my SNED learners. I simplify instructions and provide more guidance when needed." — KI7

Problem 2 described what teachers change in materials; these accounts concern how they decide and support learners. KI8 uses each learner's IEP goals, interests, and abilities as the basis for combining videos, songs, visual supports, and digital materials with hands-on tasks, and KI7 describes simplifying instructions and giving more guidance when needed. That an IEP serves as a reference for technology use is consistent with the recognition of individualized plans in Republic Act No. 11650 (Republic of the Philippines, 2022), but KI8's account describes one teacher's practice and does not show how the policy is implemented across the schools.

Subtheme 3: Using flexible teaching strategies and alternative materials

"I adjust my instruction by using pictures, videos, presentations, demonstrations, and simple step-by-step activities to make TLE lessons easier to understand and follow." — KI6

"I learned to prepare ahead of time. I now download all my materials at home when the internet is stable and save them on my laptop. … I always have printed copies ready as backup." — KI9

KI9's practice of downloading materials while the internet is stable and keeping printed copies is a teacher-initiated workaround that does not depend on outside support, and KI9 says it was learned ("I learned to prepare ahead of time"). By contrast, KI1 described being unable to prepare an alternative during an outage, so preparedness differed among teachers. Such workarounds are consistent with the picture of teachers as active decision-makers who fill gaps left by institutional conditions (Anderson & Putman, 2020; Courduff & Moktari, 2022).

Subtheme 4: Finding meaning in learners' participation and progress

"A meaningful experience for me is seeing my learners participate, become more interested, and gradually perform tasks with less assistance." — KI6

"Seeing my learners understand a lesson because of a simple presentation I made, or watching them happily answer a worksheet I customized just for them." — KI9

"One meaningful experience was seeing students become more interested and motivated when technology was incorporated into lessons." — KI11

Where Problem 2 reported participation as an observed effect of technology, this subtheme concerns what makes the effort worthwhile despite the barriers: seeing learners participate, understand, and perform tasks with less assistance (KI6, KI9, KI11). KI6 also appears under Problem 1, where seeing progress inspired the teacher to keep improving, which suggests that perceived progress motivates continued adaptation. All of these are teachers' observations; no learner outcomes were measured.

Subtheme 5: Easing preparation and broadening information sources

"Some AI integrated worksheets or lesson slides has helped greatly in making our task teachers easier and less heavy." — KI5

"Technology facilitates communication with peers and experts worldwide, broadening learning horizons." — KI12

KI5's comment concerns the teacher's own workload: AI-assisted worksheets or slides make teachers' tasks easier and less heavy. Like KI8 under Problem 2, KI5 describes preparation as easier, in contrast with KI9. One comment cannot indicate how widely AI tools were used, and Voultsiou and Moussiades (2025) caution that emerging tools bring challenges alongside opportunities. KI12's statement that technology facilitates communication with peers and experts worldwide is a general statement; it does not describe learners' communication opportunities, so it is not treated as evidence of them.

Researcher implications (not participant recommendations). For these two schools, administrators may consider improving access to devices, providing technical assistance, and supporting training in accessible digital materials and individualized instruction, and teachers may prepare offline resources and printed alternatives to maintain continuity during technical disruptions. Technology could be evaluated by its contribution to learners' participation, comprehension, and independence and not by frequency of use alone. These implications are consistent with Campado et al. (2023) and Griffiths and Slaughter (2026), who point to resources, training, and institutional support, and they remain proposals drawn from teachers' reports.

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Research Question 4: What recommendations can you offer to improve the integration of technology in Special Needs Education classroom instruction?

Emerging Theme: Building an Accessible and Sustainable Technology-Supported SNED Learning Environment

The subthemes below are recommendations made by the participants. Recommendations developed by the researchers are labeled as such and are given in the Recommendations section.

Subtheme 1: Providing adequate and reliable technology resources

"Schools should also provide reliable internet connectivity, sufficient devices, assistive technologies, and appropriate digital learning resources." — KI2

"I recommend providing SNED classrooms with sufficient and appropriate technology resources, such as computers, and reliable internet access." — KI6

"Schools should provide enough gadgets and learning materials for learners with special needs." — KI13

Participants (KI2, KI6, KI13) recommend devices, reliable connectivity, and appropriate digital learning resources. These recommendations answer the barriers described under Problem 3 (KI1, KI2) and agree with the resource and technical limitations identified by Campado et al. (2023). Among the quoted recommendations, only KI2 names assistive technologies; the other participants refer to computers, internet access, and gadgets, and the practices reported under Problem 2 relied on general tools. In this study, assistive technology therefore appears mainly as a recommendation and not as a reported practice.

Subtheme 2: Strengthening teacher training and professional development

"I recommend providing SNED teachers with regular training on accessible and appropriate educational technologies." — KI2

"Teacher should be equipped with practical knowledge on selecting appropriate digital tools and adapting them to the different needs and abilities of learners." — KI10

"Teachers should also receive training on how to use technology effectively in the classroom, especially since we are now in the age where AI tools and apps are being used inside the classroom." — KI13

Participants (KI2, KI10, KI13) ask for regular, practical training on accessible technologies and on selecting and adapting tools, and KI13 adds AI tools. KI10's emphasis on selecting and adapting matches what teachers already described doing under Problems 2 and 3, which suggests that the training they want is tied to adaptation. Griffiths and Slaughter (2026) found assistive technology training to be valued but inconsistently available and noted that flexible and blended models may be effective; the participants did not specify a format, so any format suggestion is the researchers' and not the participants'. KI13's mention of AI tools points to a newer training need than those emphasized in the studies reviewed.

Subtheme 3: Making technology accessible and responsive to individual needs

"Technology must act as an equalizer rather than an instruction. Teachers must select tech tools based on specific IEP goals." — KI4

"Most importantly, technology should be used alongside hands-on activities and individualized support to make learning more meaningful, accessible, and practical for every learner." — KI6

"Apply Universal Design for Learning (UDL)." — KI11

Participants (KI4, KI6, KI11) recommend selecting tools by IEP goals, pairing technology with hands-on and individualized support, and applying Universal Design for Learning. KI11's one-line recommendation is a recommendation and not evidence of Universal Design for Learning practice. The recommendations agree with the flexible design emphasized by Rao and Meo (2016) and with the potential of assistive technology for inclusion described by Fernández-Batanero et al. (2022).

Subtheme 4: Promoting interactive and hands-on learning

"Teachers should not only make use of the technology for herself, but she should have provided learners the opportunity to experience the same by crafting lessons and activities that are technology driven, interactive, and manipulatives." — KI1

"Teachers will have a chance to explore more on interactive game-based activities to sustain and prolong learners' attention in learning, listening and understanding." — KI5

"Technology should be used not only to present lessons but to help learners communicate, participate, practice skills, and become more independent." — KI7

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Participants (KI1, KI5, KI7) recommend that learners also use technology, through interactive, game-based, and hands-on activities, to practice skills, communicate, and gain independence. Under Problem 2 the reported practices were mostly teacher-operated, such as presentations and prepared materials, so the recommendation extends current practice; the data do not show how often learners themselves used devices. Voultsiou and Moussiades (2025) reviewed interactive and emerging technologies in special education and reported challenges alongside opportunities, which is a reminder that learner use would need to be planned and supported.

Subtheme 5: Ensuring continuity and sharing effective practices

"Schools can also encourage teachers to share resources and strategies that have been effective in their SNED classrooms." — KI6

"Schools should also improve internet connection and provide other options when technology is not available." — KI13

Participants recommend sharing effective resources and strategies (KI6) and providing alternatives when technology is unavailable (KI13). The second recommendation matches the personal backup practice KI9 described under Problem 3. That a school could organize such individual practices into a shared collection is a researcher's suggestion, developed in the Recommendations section, and not a participant statement.

These recommendations reflect teachers' perspectives and are not evidence that the recommended measures improve learner outcomes. Table 2 condenses the themes and subthemes for the four research questions.

Ethical Considerations

Permission to conduct the study was obtained from the Schools Division of Valencia City and the heads of Valencia City Central School and Valencia National High School before data collection. The research protocol was also submitted to the Institutional Research Ethics Committee for review. The committee assessed the study's procedures for informed consent, voluntary participation, confidentiality, privacy, and the protection of participants from potential harm, and data collection began only after the necessary approvals and ethics clearance had been obtained. Participants were informed of the purpose and procedures of the study, their right to decline or withdraw without penalty, and the measures used to protect their identities. Informed consent was obtained before participants proceeded to the Google Form, and participants could skip any question or stop answering at any time without penalty. Responses were compiled and encoded verbatim, and participants were identified only by the codes KI1 to KI13 in the analysis and in all reports of the findings. The form did not collect names, email addresses, or other identifying information. No personally identifiable information is disclosed in the report, and the data were handled in accordance with the Data Privacy Act of 2012 (Republic Act No. 10173). The responses were stored in password-protected files accessible only to the researcher[s], used solely for research purposes, and will be retained for one year after completion of the study, or the period required by the ethics committee and school research policies, after which electronic files, including backup copies, will be permanently deleted using secure deletion procedures. Direct quotations are presented with participant codes only. Because the two schools are named and each has few SNED teachers, steps were taken to reduce the risk of identifying participants. Participants are referred to only by codes (KI1 to KI13), the codes do not indicate the school or the order in which teachers responded, and no individual's school, years of service, or learner exceptionalities are reported together. Participant characteristics are presented only as aggregate ranges, and any names of colleagues, learners, or other identifying details in the quotations were removed or replaced with neutral terms.. The questions concerned professional experiences with technology, and the study was designed to carry minimal risk.

Conclusion

Teachers' accounts indicate that technology integration in Special Needs Education (SNED) at Valencia City Central School and Valencia National High School, Schools Division of Valencia City, Bukidnon, presents both opportunities and challenges. The 13 teachers described a commitment that, for several of them, developed through work with learners after an administrative assignment. They also described adaptive practices, namely preparing and customizing materials, using digital presentations and visuals, producing printed and hands-on materials, and keeping offline backups, which they used to make lessons more accessible to learners with different needs. These practices were constrained by limited devices, unreliable connectivity and power, and preparation time, and teachers' experiences of time savings differed. Learner engagement and understanding were reported by teachers and were not measured. The study contributes a local, teacher-centered account showing that, in these two schools, technology integration was

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less a matter of adopting particular tools than of teachers' continuing adjustment of materials to individual learners, sustained by personal commitment and limited by infrastructure. Assistive technology appeared mainly as a recommendation, while the practices described relied on general presentation and production tools. The findings can inform decisions on resource allocation (reliable connectivity, devices, and backup power), teacher training focused on selecting and adapting tools to learners' IEP goals, and accessible instructional planning that includes offline alternatives. Because the findings rest on teachers' perspectives from two schools, they are not generalizable and do not show learner outcomes. Future research should examine specific technology-supported practices and their relationship to learners' participation, comprehension, communication, and independence, using classroom observation and learner assessment alongside teachers' accounts.

Recommendations

Immediate actions (within the current school term). Teachers are encouraged to prepare printed or offline alternatives for planned lessons so that instruction can continue during power interruptions, connectivity problems, or device failures, and to select and adapt technology according to learners' abilities, communication needs, interests, and IEP goals. School heads are encouraged to start a shared collection of modified worksheets, presentations, and offline materials using resources the schools already have. A designated SNED teacher-coordinator in each school can maintain the collection. Short-term actions (within the school year). School heads, with the SNED coordinators, can organize practical training in accessible digital materials, selecting and adapting tools to IEP goals, assistive technologies, and emerging tools, preferably as short hands-on sessions that teachers can attend within their schedules; the Schools Division Office can support by providing resource persons and technical assistance. Each school can name an ICT coordinator or technical focal person to handle basic troubleshooting and maintenance. Longer-term actions (one to three years). School administrators are encouraged to assess the technological needs of SNED classrooms and to plan phased purchases of functional computers, appropriate assistive technologies, reliable internet connectivity, backup power, and technical maintenance, guided by learners' accessibility needs and by school budgets, and using existing devices wherever possible. Resource allocation should consider the accessibility requirements and individual needs of learners. Monitoring. Teachers and school administrators can review each learner's progress at the end of every quarter, through classroom observation and learner progress records, considering participation, task completion, communication, comprehension, and independence in relation to individual learning goals, and use the results to adjust the tools, materials, and strategies in the following quarter. Collaboration among teachers, families, school administrators, and other relevant stakeholders should also be encouraged to identify appropriate learning tools, share resources, and support continuity between school and home when feasible. Future research. Future researchers may study other schools and include learners' and families' perspectives. They should also use direct classroom observations and learner assessments to examine how specific technology-supported practices relate to learners' participation, comprehension, communication, and independence, which goes beyond the teachers' reported experiences on which this study is based. Implementing these recommendations may help schools develop a more accessible, responsive, and sustainable technology-supported SNED environment in which technology complements individualized teaching and human support.

References

Anderson, S. E., & Putman, R. S. (2020). Special education teachers' experience, confidence, beliefs, and knowledge about integrating technology. Journal of Special Education Technology, 35(1), 37–50. https://doi.org/10.1177/0162643419836409

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bsharat, B. A., Begeske, J., & Cao, F. (2026). Assistive technology in special education: A systematic review of teachers' attitudes and perceptions of accessibility, psychosocial, and academic benefits. Journal of Special Education Technology. Advance online publication. https://doi.org/10.1177/01626434261476315

Cagape, E. M., & Bauyot, M. M. (2024). Experiences of special education teachers teaching in Panabo City Division: A phenomenological study. Asian Journal of Education and Social Studies, 50(7), 395–407. https://doi.org/10.9734/ajess/2024/v50i71472

Campado, R. J., Toquero, C. M. D., & Ulanday, D. M. (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), Article ep2308. https://doi.org/10.30935/ijpdll/13062

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https://ijroms.com
Original Article

Courduff, J., & Moktari, A. (2022). Personal, cultural, and institutional perspectives of special education technology integrators: A narrative inquiry. Journal of Special Education Technology, 37(3). https://doi.org/10.1177/01626434211019393

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). SAGE Publications.

Department of Education. (2017). DepEd Order No. 42, s. 2017: National adoption and implementation of the Philippine Professional Standards for Teachers. https://deped.gov.ph/?p=1619

Fernández-Batanero, J. M., Montenegro-Rueda, M., Fernández-Cerero, J., & García-Martínez, I. (2022). Assistive technology for the inclusion of students with disabilities: A systematic review. Educational Technology Research and Development, 70, 1911–1930. https://doi.org/10.1007/s11423-022-10127-7

Fu, W., Pan, Q., Zhang, C., & Cheng, L. (2022). Influencing factors of Chinese special education teacher turnover intention: Understanding the roles of subject well-being, social support, and work engagement. International Journal of Developmental Disabilities, 68(3), 342–353. https://doi.org/10.1080/20473869.2020.1780553

Göktürk, Ş., Tülübaş, T., & Bozoğlu, O. A. (2021). A motivational perspective on teacher retention in special education: A critical case from Turkey. Educational Research for Policy and Practice, 20, 63–78. https://doi.org/10.1007/s10671-020-09267-5

Griffiths, T., & Slaughter, R. (2026). Assistive technology training for education professionals in schools and colleges: A scoping review and narrative synthesis. Journal of Enabling Technologies, 20(2), 111–130. https://doi.org/10.1108/JET-01-2026-0001

Philippine Health Research Ethics Board. (2017). National ethical guidelines for health and health-related research 2017. Philippine Council for Health Research and Development. http://www.ethics.healthresearch.ph/

Rao, K., & Meo, G. (2016). Using Universal Design for Learning to design standards-based lessons. SAGE Open, 6(4), Article 2158244016680688. https://doi.org/10.1177/2158244016680688

Republic of the Philippines. (2012). Republic Act No. 10173: Data Privacy Act of 2012. https://lawphil.net/statutes/repacts/ra2012/ra_10173_2012.html

Republic of the Philippines. (2022). Republic Act No. 11650: An act instituting a policy of inclusion and services for learners with disabilities in support of inclusive education. https://lawphil.net/statutes/repacts/ra2022/ra_11650_2022.html

Tercero, L., & Delos Reyes, N. R. (2025). Assistive technology for special needs education students in an inclusive environment: Teachers' knowledge and competence. Psychology and Education: A Multidisciplinary Journal, 49(3). https://ejournals.ph/article.php?id=33388

Utami, I. S., Ghufron, A., & Ishartiwi. (2025). Professional development in digital competence for special education teachers: A systematic review. Electronic Journal of e-Learning, 23(4). https://doi.org/10.34190/ejel.23.4.4273

Uy, J. R. (2026). Technology integration and utilization in teaching learners with different exceptionalities. Journal of Learning and Development Studies, 6(8), 19–29. https://doi.org/10.32996/jlds.2026.6.8.2

Varela, R. P. (2026). Thriving experiences of special education teachers in the Philippines: From the perspective of those committed to stay. British Journal of Special Education, 53(1), 101–117. https://doi.org/10.1111/1467-8578.70076

Voultsiou, E., & Moussiades, L. (2025). A systematic review of AI, VR, and LLM applications in special education: Opportunities, challenges, and future directions. Education and Information Technologies, 30, 19141–19181. https://doi.org/10.1007/s10639-025-13550-4

Xie, Z. (2023). Work motivation and organisational commitment among inclusive education teachers in China: The mediating role of job crafting. International Journal of Developmental Disabilities, 69(6), 896–905. https://doi.org/10.1080/20473869.2022.2042157

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