

Inclusivity to children with disabilities for sustainable learning: Case study of special education teachers in General Santos City, Philippines

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ABSTRACT

Special education (SPED) teachers circumnavigate suitable pedagogies to cater to the educational needs of children with disabilities and to foster inclusivity during a crisis in learning. This research explores the difficulties, pedagogy, and inclusivity from the vantage point of SPED teachers. Using a qualitative case study design, the researchers gathered data from 12 purposively selected SPED teachers through a one-on-one interview conducted via face-to-face and online in three public elementary schools. The data responses from the participants were analyzed through the utilization and guidance of a thematic data framework. The findings indicate that SPED teachers experienced interconnected challenges in providing effective instruction in remote learning. The pedagogies of SPED teachers solely rely on fostering individualized and contextualized educational plans, distribution of modified learning modules, integration of educational technology, and home visitation of children with SPED. SPED teachers shared the concept of inclusivity, which includes promotion or provision of equal treatment and opportunities to learners with disabilities, inclusivity is experimental, consistency of inclusive practices, and innovative strategies for inclusion. An emergency preparedness plan may minimize the difficulties in teaching students with special needs during a crisis, while an emergency recovery plan with disability tracking and monitoring system integrated with assistive technologies can favorably address the needs of children with disabilities after a crisis. It is recommended to strengthen the stakeholders' engagement to support SPED as it is a vital component to establishing the learning welfare of students with special needs and disabilities.

Keywords: pedagogy, assistive technology, inclusivity, crisis learning, special education

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INTRODUCTION

Multiple issues in navigating guidelines has placed more pressure and anxieties on teachers than ever before (Cachón-Zagalaz et al., 2020; Pellerone, 2021; University of Oregon, 2022). Challenges are greater for educators who work with students with disabilities or those from underrepresented populations (UNESCO, 2024). The main goal of special education (SPED) teachers is to hone the ultimate potential of students despite their disabilities, emotional challenges, and learning differences, which require specialized instruction (Terry, 2020). These quick transitions give heavy responsibilities and adjustments for SPED teachers who mostly rely on personal contact to

effectively connect and support their students with special needs. Recent studies indicate that SPED teachers continue to encounter challenges in providing individualized support and ensuring inclusive learning opportunities, highlighting the need for sustained professional development and institutional support (Kilag et al., 2025; UNESCO, 2024).

Moreover, the pandemic crisis has wreaked havoc on education throughout the world, posing unprecedented problems for students, families, educators, and policymakers (Morando-Rhim & Ekin, 2021; OECD, 2023; Olaniran & Uleanya, 2021). Relationships began to look and feel different in distance education, creating feelings of isolation and loneliness (Dai et al., 2026; Glessner & Johnson, 2020; Parmigiani et al., 2021; Zaheer & Munir, 2020).

Remote learning necessitates technological expertise, including sustained attention, motivation, organization, and teamwork, which can be difficult for students with special needs and their teachers (Sakarneh, 2023). In this sense, SPED teachers must work twice as hard to meet the needs of every SPED student amid distance learning (UNESCO, 2024). However, SPED teachers' role lies in the preparation of teaching materials and other interventions designed to address the needs of children with learning differences, disabilities, and giftedness (UNESCO, 2020, 2021). Teachers are unfamiliar with the field of modification and innovation of individualized instruction to cater to the special needs of distance learning. Moreover, the attitudes of teachers, especially in relation to their self-efficacy and the provision of inclusive learning, indicate that there is a need for policymakers to address gaps in the provision of the necessary resources in adapting e-learning to the needs of disabled children (Sakarneh, 2023).

Supratiwi et al. (2021) argued that remote learning poses challenges for teachers relative to their teaching effectiveness during the crisis. Zhang et al. (2020) also noted that "there is ambiguity and disagreement about what to teach, how to teach, the workload of teachers and students, the teaching environment, and the implications for education equity" (p. 1). During a crisis, SPED teachers experienced work difficulties in obtaining suitable learning resources and strategies that are appropriate for learners with disabilities (Florian & Beaton, 2018). SPED teachers face unparalleled challenges in shifting to home-based learning tailored to their students' needs. There is unfamiliarity with the new learning context on how to meet the needs of learners in remote learning. Struggles multiplied when SPED teachers were required to monitor their students' individualized educational plan (IEP) goals.

Likewise, Simó-Pinatella et al. (2022) suggested that online procedures cannot guarantee positive engagement between SPED teachers and their students with exceptional needs. With the new learning context, there is a missing factor of hands-on experience. Glessner and Johnson (2020) evaluated SPED teachers' experiences during the pandemic to identify factors that influence the effectiveness of remote learning or distance learning. It stated that direct instruction, behavior control, and social skills are among the strategies used by SPED teachers in standard settings to improve inclusion for children with disabilities. Teachers report limited control over the material and learning experiences of learners with special educational needs (LSENs); it is uncertain whether these strategies might be implemented (Archambault & Crippen, 2009; Florian & Beaton, 2018).

Among SPED teachers, ambiguity and disagreements arise about what to teach, how to teach, heavy workload, teaching environment, and implications for education equity (Zhang et al., 2020). Murez (2022) reported that SPED teachers faced challenges in planning online lessons. Despite wanting to solve the problems, the solutions are

beyond their reach, or they were prohibited from enacting the solutions due to pandemic restrictions.

Inclusivity is applied in accommodating students with disabilities and integrating students with different learning needs (UNESCO, 2024; UNICEF, 2017). However, transitioning to remote learning to achieve accessibility for students with disabilities proved challenging for educators (Morando-Rhim & Ekin, 2021). Learners with disabilities also suffer as assistive technologies and disability-friendly software pose additional challenges, which are equally critical for their learning (UNESCO, 2021). Simó-Pinatella et al. (2022) reported that SPED teachers deployed various interventions to provide adequate support to their students and families, such as delivering materials to families, communicating in diverse ways, providing academic or functional tasks, and working with other services.

Some studies (Allam & Martin, 2021; Toquero, 2021) highlight the difficulties and inclusivity of SPED teachers during the pandemic. However, these studies did not clearly address the pedagogies of SPED teachers. Hence, the researchers aimed to examine the difficulties of SPED teachers to understand how they conceptualize a crisis pedagogy and how they perceive inclusion before, during, and after a crisis. This study also explores the SPED teachers' experiences while delivering instruction for students with special needs amid a crisis.

The study is significant to the SPED teachers and instructional designers to design instruction better and meet the needs of students with special needs in future emergencies. This study sought to better understand the difficulties, pedagogy, and inclusivity of SPED teachers. The objectives of the study are to describe the experienced work difficulties of SPED teachers during a crisis; examine the pedagogies of SPED teachers to cater to their students with special needs; and determine recommendations of SPED teachers towards the advocacy of inclusion for sustainable learning.

CONCEPTUAL FRAMEWORK

Numerous schools were compelled to shift from traditional face-to-face education to distance learning (Crawford et al., 2020; Zawadka et al., 2021). Institutions took this approach to utilize distance learning to implement remote teaching practices. These apply crisis pedagogy to cater to LSENs. A crisis pedagogy involves teaching strategies and techniques of SPED teachers to teach students with special needs amid a learning disruption.

The pedagogies of SPED teachers include teaching practices and strategies that are utilized in different learning modalities. It is the application of different approaches to continue the learning endeavor of the students. Through modification, each student can learn according to their capabilities to cater to their unique needs and learning levels.

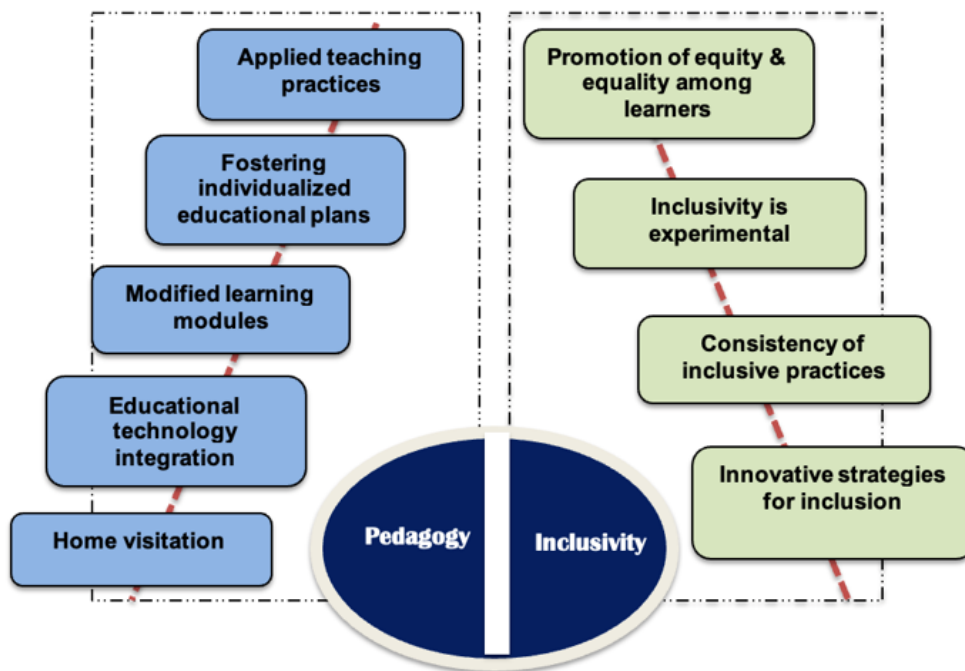


Figure 1. Conceptual framework (the authors' own elaboration)

If a student cannot achieve success at the target level, using modifications to make the material more manageable is an important part of teaching (Malm, 2019). Students with special needs usually benefit from strong interpersonal connections, modelling, and the use of physical manipulatives (Schuck & Lambert, 2020). SPED learners need physical connection, but socializing has been a significant loss for teachers and students across all populations during the pandemic (Heather, 2022). Moreover, parents' engagement in SPED is extremely crucial for the implementation of distance learning as they scaffold their children with exceptional needs at their respective homes.

Inclusive education is pivotal for all children to be treated equally to meet their learning needs that have been historically and contemporarily marginalized (Kozleski, 2020; Waitoller, 2020). It is the initiative of the educational sector and the school to ensure that every child, regardless of his/her disabilities, must be included in regular classrooms as much as possible (Ricee, 2022), where they can participate equally, confidently, and independently in everyday activities together with the children in regular classrooms. In other words, no children should be left behind. Suffice to say, inclusivity was designed to remove barriers that cause undue effort and separation. The mantra of inclusive education is to pay attention to children's potential and capabilities despite their disabilities.

By definition, equality means an individual should have equal treatment, access, and opportunity to resources and opportunities (Gunn, 2018), while equity is the provision of personalized resources for all individuals to reach common goals (Amadeo, 2021). In other words, the goals and expectations are the same for all students, but the support needed to achieve those goals depends on the students' needs. In this sense, the promotion of equity and equality

has a strong emphasis on fair treatment and equal access to quality education. Regardless of diversity, children should be given equal rights and opportunities according to their individual needs.

At the beginning of the crisis, SPED teachers experienced emotional instability due to numerous adjustments. It is said that teachers have accumulated stress due to some adjustments in the new learning context (Besser et al., 2020). Nonetheless, Supratiwi et al. (2021) emphasized that distance learning poses challenges for SPED teachers as they are worried and struggling with their teaching effectiveness during the crisis. The SPED context needs extra support from various external outsourcing resources and government intervention, such as charitable organizations, training for professional growth and development, and parental scaffolding. These supports are highly significant in catering to the needs of the SPED teachers and children with disabilities.

Additionally, these are the contributing factors that enable the pursuit of the education of young children during distance learning. Through webinars, SPED teachers addressed the challenges in remote teaching while simultaneously preventing the spread of the virus (Toquero & Talidong, 2020).

The overall learning success of SPED learners largely depends on parental intervention. Parental support is also a significant part of children's learning amid distance learning. The study by Börnert-Ringleb et al. (2021) indicates that parental support is crucial to the implementation of online learning for students with learning and/or behavioral difficulties.

The framework in **Figure 1** illustrates the themes in the study. It is used to understand the pedagogy and inclusivity from the vantage point of SPED teachers during a crisis.

METHOD

This study's primary focus was to determine and understand the difficulties, pedagogy, and inclusivity of SPED teachers amid crisis learning. The researchers conducted this study to acknowledge and understand the experiences of SPED teachers in teaching students with disabilities. The researchers conducted this study in three specific schools in General Santos City that include SPED programs.

Research Design

The researchers utilized a case study approach to investigate a phenomenon in its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (VanWynsberghe & Khan, 2007). This approach allows in-depth, multi-faceted explorations of complex issues in real-life settings (Crowe et al., 2011). Furthermore, the case study explored the views and difficulties of SPED teachers amid crisis learning.

An exploratory case study was suitable for this research because of the need to explore and understand the difficulties of SPED teachers from the multiple perspectives of SPED teachers. Additionally, exploratory research is a methodology approach that investigates previously unexplored problems, and it is usually open-ended in nature. Thus, this research design is applicable in this study as it explored the experiences, perspectives, pedagogical approach, and attitudes of SPED teachers in dealing with difficulties, pedagogy, and inclusivity amid crisis learning.

Participant Selection and Sampling Design

The participants of the study were the 12 SPED teachers coming from different public elementary schools that provide SPED centers or programs within General Santos City, South Cotabato, Philippines. The choice of participants from each school was solely dependent on the availability, convenience, and willingness of the SPED teachers. The qualitative data of the teachers came from three schools, coded as SPED schools A, B, and C. Hence, there were three schools that were suitable enough as the research locale of the study.

The 12 participants of the study were approached via messenger, face-to-face, and even referred to by the SPED heads. Among the 31 SPED teachers at SPED school A, only four of them willingly participated in the research study. Out of 7 SPED teachers from SPED school B, only four agreed, while all four SPED teachers from SPED school C willingly shared their experiences as SPED teachers. As a point of clarity, an equal number of participants from each school was unintentionally distributed because the main goal of the researchers was to gather at least 12 SPED teachers as participants of the study. The SPED teachers handled students in a class with different exceptionalities, and all of these SPED teachers had undergone webinars and training.

The sampling technique applied in the study was purposive sampling. The researchers utilized purposive sampling since the selection of respondents was in line with the study's purpose, to find SPED teachers coming from different schools in General Santos City who were teaching students with special needs. Moreover, purposive sampling was often used in qualitative research to gain detailed knowledge about a specific phenomenon rather than to conduct statistical analysis. Thus, the SPED teachers who participated in the study came from different schools within General Santos City. The researchers specifically utilized a homogenous sampling. In line with this research, the chosen participants, specifically the SPED teachers, shared the same work or occupation; teaching LSENs amid distance learning, which then allows researchers to gather qualitative responses. This selection led to better insights and more precise research results. The researchers mostly dwell their attentions on the patterns of homogenous sampling, which is to find SPED teachers who are teaching LSENs amid the crisis.

Table 1 shows the participants' profile and teaching background.

Research Instruments

The researchers utilized the prepared and evaluated questionnaire as a guide in conducting the open-ended interview with the participants. This open-ended interview was the main research instrument utilized by the researchers of the study. An open-ended interview is one of the data collection methodologies in exploratory research design, as it allows researchers to gain in-depth responses from the respondents of the study. Thus, the researchers' mode in conducting the open-ended interview was done in both face-to-face and online settings, depending on the availability and the choice of the participants.

Ethics and Trustworthiness

Following ethical considerations, the researchers first secured letters of permission from the school principals and the SPED head teachers of the three schools. Additionally, the target numbers of SPED teachers at the said schools were asked to participate in this study. They were given two copies of consent forms:

- (1) consent as participants of the study and
- (2) consent to audio or video recording, where they affixed their signatures on the consent forms as evidence of approval.

The mode of interview was conducted either face-to-face or online, depending on the choice and the availability of the participants.

Prior to starting the interviews, the researchers prepared a recording device with consent from the participants. The researchers utilized a recording device to refer back to during the transcription process. The researchers transcribed each interview in the order they were given.

Table 1. Participants' profile and teaching background

Variable		Frequency (N)	Percentage (%)
Gender	Female	10	83
	Male	2	17
Grade advisee	Non-graded	11	92
	Multi-grade	1	8
Number of learners	1-5	5	42
	6-10	5	42
	11-15	1	8
	16-20	0	0
	21-25	1	8
Master's degree status	Holder	10	84
	Ongoing	1	8
	None	1	8
Handled SPED learners difficulties	(1) Autism	1	8
	(1) Hearing impaired	2	16
	(1) Intellectual disability	2	16
	(2) Autism and intellectual disability	3	28
	(2) Hearing impaired and multi-disability		8
	(2) Hearing impaired and visual impaired	2	16
	(3) Hearing impaired, intellectual disability, and visual impaired	1	8
Attending webinars and trainings	Yes	12	100
	No	0	0

To protect confidentiality, the researchers made sure that the narrative responses of each participant from the recordings were uploaded to a USB drive that was safely stored. After transcription, the narrative responses were erased and/or deleted. Additionally, since the researchers utilized an open-ended interview, questions were asked, and afterwards, participants were allowed to give their responses. From such responses, the researchers came up with probing or follow-up questions.

The researchers transcribed all the data that were gathered manually into English translations since the languages used during the interview process were in line with the mother tongue of the participants. Thereafter, we analyzed the theme considering a coherent, concise, and interesting account of the story to tell the data. To provide sufficient evidence of themes within the data, we included rich excerpts from the participants' answers to support the theme and to demonstrate the prevalence of the theme in general. Therefore, the open-ended interview of each participant was checked and presented in relation to the research questions of the study.

Prior to the conduct of the study, researchers had a peer debriefing session to ensure that the interview would not disturb or distract the train of thought of the interviewees during the interview session. Moreover, the researchers ensured trustworthiness through an appropriate qualitative sample for the interviews. Since the study relied on a voluntary nature, only those who were willing to be interviewed participated in the study. The participants were able to share their experiences in detail since there was no coercion to join or withdraw from the interview. The researchers also checked and revisited the data multiple times to check for the relevance of the themes in accordance with the participants' responses. The analysis of the themes remained true to the participants' voices. Data triangulation was achieved when repetitive responses and

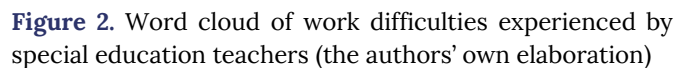
similar rich transcripts came from the teachers of the three different SPED schools. The same scenario also ensured the applicability of the study in different settings. Though teachers were the only interview sources, they are the core group who have rich experiences in dealing with their students with disabilities. Likewise, their different geographical settings can already provide a cross-case analysis of their perceptions and experiences. Hence, the teachers were sufficient to provide rich data to achieve the purpose of this study.

Data Analysis

Thematic analysis was used to discover repeating themes in the text. The theme is a "patterned response or meaning" (Braun & Clarke 2006, p. 82) derived from the data that informs the research question.

To specify, there are different approaches to consider in utilizing the thematic analysis. Thus, the researchers chose the inductive type of approach in thematic analysis as it allowed them to construct and determine themes based on the participants' responses. In this study, we focused on Braun and Clarke's (2006) thematic analysis since it is widely adopted within the qualitative literature (Clarke & Braun, 2017). This helped the researchers to examine the perspectives of different participants' responses, highlighting similarities and differences, and generating unanticipated insights.

However, many types of coding can be utilized in determining patterns in any data set. Thus, the researchers used *vivo* coding. *In vivo* coding is championed for its usefulness in highlighting the voices of the participants and for giving meaning to the data (Manning, 2017). Through this *in vivo* coding, the researchers highlighted phrases and words in which the meaning provides the same patterns and can be linked to a bigger idea. Through the use of a Microsoft Word highlighter, the researchers were able to



FINDINGS

To analyze the data gathered corresponding to the difficulties of the SPED teachers, the researchers arrived at five aspects that specify the difficulties of SPED teachers during crisis learning. **Figure 2** is a word cloud with the most common words that show the difficulties of SPED teachers.

When asked about their technological difficulties, SPED teachers stated that one of the main barriers in carrying out the distance education process was poor internet connection. They conduct an online class once or twice a week to track the learning progress of the children with disabilities and to help them understand the lesson through sign language. Furthermore, SPED teachers stated that children with disabilities find it difficult to enter the loop during synchronous classes due to slow internet connections. As a result, many children are left behind since they were unable to participate or simply connect with their teacher.

during online class as it interrupts our discussion ...
[T#2]

... For my visual impaired, I instructed the parents to play the videos I sent in the group chat to allow the learner to hear what is being presented. That's why some parents don't really have the chance to play the video due to poor internet connection. [T#10]

SPED teachers find it very difficult to connect with the parents or to simply update them with the current instructions that are being disseminated in messenger group chat since most of them do not have gadgets or any communication devices to use whenever possible. They cannot even make phone calls to the parents, particularly those who are located in remote areas, because they cannot afford to purchase mobile phones.

SPED teachers found difficulties in connecting and communicating with their students due to restrictions. Considering that learners with disabilities are the most vulnerable individuals during this time, SPED teachers rely on the parents of these children whenever they want to check them out through call, text or even updates from their group chats. Though they are willing to conduct home visitation just to check out their students and to see them personally, it seems impossible to do so as they have to abide by the DepEd memoranda. Thus, SPED teachers still found it very difficult to connect with the SPED learners.

... I found it very difficult to connect with them, especially during these times when we are obviously prohibited to do home visitation due to the rising cases of COVID-19 infections here in Gensan since as SPED teachers we are expected to see them personally even once a month or vice versa to monitor them and not to exclude them from the PASSING. Actually, we are very willing to do home visitation but it is not possible due to DEPED memos ... [T#7]

Teachers and parents engagement in SPED is extremely crucial for the implementation of distance learning because parents are responsible for guiding and scaffolding their children with exceptional difficulties at their respective homes. However, problems may impact parental involvement in remote learning settings due to some priorities.

Since the beginning of the crisis, SPED teachers have experienced chronic stress due to numerous adjustments. Some SPED teachers admitted that they feel worried about their students' futures because they believe that their learning is at risk. One of the reasons that causes emotional distress is the workload and the unjustified division of the workload. They affirmed that it is too exhausting to accomplish tons of paperwork one at a time.

The SPED teachers also stressed that pandemic pedagogy deals with strategizing, contextualizing, and modifying the self-learning modules of the children with special needs to teach the basic skills and cater to their individual needs. Additionally, collaboration between the teachers and parents is a must to support and guide the children in their learning process.

Theme 2. Foster Individualized Educational Plan

IEP serves as a guide for the SPED teachers to make use of to help a student meet individual outcomes or goals beyond his or her current skill. This IEP guides the SPED teachers on how to address students' individual needs. Through this, they can plan what to provide to students to address their learning needs during this time. The IEP helps plan the delivery of instruction because it intends to address the student's needs.

... In my transition class, I first identified the strengths of my pupils then followed by what learning package would be suited for them. I create ITP and IEP so that I am guided to what skills they excel at the most and what needs need to be addressed ... [T#9]

... The first thing we do is to identify the disability and capacity of the child through an evaluation coming from the psychologist, afterwards, we would create his/her IEP right at hand ... [T#10]

Theme 3. Distribute Modified Learning Modules

One of the pedagogies or strategies of SPED teachers is the modification of modules being distributed to the SPED learners. Thus, when these SPED teachers were asked about their particular pedagogy, they harmoniously stated that modifying and simplifying the module content and activities of SPED learners are their techniques to satisfy the intellectual level and the capability of each learner with disability.

... Since the mode of learning is modular, our focus mostly relies on adding or simplifying activities for our LSENs. Giving the simplest form of activities for these particular LSENs to help them learn is the most appropriate thing to do ... [T#3]

... My students are given modified activities that will match the learning capacity of the learners. Yes. I made modifications by creating supplementary activity sheets to align the topics with the level of understanding of the learners. [T#11]

Usually, SPED teachers do modified and simplified activities and content of the module itself since there are parts of the modules given that are way too difficult to comprehend by that particular child with a disability.

Theme 4. Integrate Educational Technology

The central purpose of technology in SPED is to enable students to learn in a way that accommodates their individual learning styles and limitations. Hence, SPED teachers integrate and utilize educational technology in delivering instruction. They create PowerPoint presentations and provide instructional videos according to the learning needs of the SPED students.

... Since I handled students whose level can be compared to those of regular students, I utilized some strategies that regular classes usually integrate in their instruction like creating a PPT. Here in the presentation, like I would include sign language per words or thoughts and a subtitle below ... [T#2]

... What I did during this time is that I created interactive videos using sign language for my hearing impaired students ... [T#12]

... By using an EdTech approach in teaching LSENs through online in modular learning (e.g., the teacher will send instructions in the group chat and the video lesson will also be provided) or the teacher might video call the pupils when it is needed ... [T#9]

The usage of technology does not revolve solely on the part of the SPED teachers, but parents also use this to deliver the progress of the learner so that the SPED teacher can be able to monitor the learning of the child. Thus, the teachers instructed parents to take videos of their children performing a particular task.

Theme 5. Conduct Home Visitation

SPED teachers had to do home visitation to monitor the progress and the learning needs of the LSENs, most especially to learners who do not have any gadgets to get updates and information from the teacher. Parents are more likely to be engaged in their son's or daughter's progress if they feel that they have a real partner. Home visitation among SPED teachers is their refuge to monitor their students, especially to those children who are residing in far-flung areas and those students who cannot access the internet.

... To cope up, I do home visitation and even through text and call to communicate with them (SPED learners). I also connect to parents in messenger or group chat ... [T#10]

... I really had to do home visitation in order to really monitor them ... [T#2]

... Number one is, for those parents who do not have gadgets, we usually conduct home visitation to check out how far they (students) have gone with the modules and what are part in the module they found it difficult. So, we do the home visitation ... [T#5]



Figure 4. Word cloud of Inclusivity based on SPED teachers' descriptions (the authors' own elaboration)

Lastly, SPED teachers' descriptions of inclusivity indicate a consistency of inclusive practices and innovative strategies for sustainable learning. **Figure 4** shows a Word cloud of Inclusivity based on SPED teachers' descriptions.

Theme 1. Promotion of Equity and Equality Among Learners

The teachers stated that inclusivity is about providing equal access to quality education despite the children's disabilities. Some of the participants added that they must build upon the children's potential to scaffold them successfully. Thus, inclusive education is thought to be a fairer kind of education since it provides access to a wider range of educational and social possibilities.

... Inclusivity before pandemic gives quality education for all. It revolves on the idea that no one will be left behind ... [T#4]

... The main mantra of inclusion is that, regardless of the child's disability, we must give more attention to his potentials and the benefit he could get despite of his conditions ... [T#6]

... Inclusivity means 'no learners would be left behind like everyone is treated fairly and equally despite their difficulties or disabilities. They are considered as regular students ... [T#7]

... it is something that must be promoted in school because it is really needed. Children with disabilities shall be given the chance to practice their rights in education so that they will not left behind ... [T#12]

Theme 2. Inclusivity is Experimental

Inclusive education faces the challenges connected to ideas and implementation during a crisis. There appears to be deep uncertainty about how to create inclusive environments within schools and about how to teach inclusively amid the crisis. To solicit more ideas and reliable information, the SPED teachers were asked how they perceive inclusivity during the COVID-19 crisis based on their experiences. Most of the participants stressed that

inclusivity undergoes a tentative procedure. In other words, it is still experimental. In fact, are a lot of uncertainties about the possible outcome of mainstreaming. In conclusion, the implementation of inclusive education during this time extremely needs a keen observation to address the problems or barriers that usually occur in order to provide viable solutions.

... During this time, inclusion is still under observation because SPED teachers cannot supervise the child directly ... [T#4]

... As of now, inclusion practices seem to be like a trial and error ... [T#5]

... If I were to define inclusivity during the pandemic based on our practices in school, I can say it is still in the process of testing ... [T#9]

... Inclusivity during this time undergoes a tentative procedure .. [T#10]

Theme 3. Consistency of Inclusive Practices

When SPED teachers defined inclusivity in post-crisis, they clearly expressed their idea that inclusive education has the consistency of inclusive practices. The practices that they usually carry out in school before a crisis are similar to what inclusion would look like in the future. After the pandemic, they stressed that inclusion would be improved since

... there will be more designed strategies to discover.
[T#4]

But a few also noted that inclusion practices in the post-crisis would mean similar patterns of monitoring and mainstreaming prior to the pandemic.

... There's a continuation of practices because it is something that they used to utilize ... [T#1]

... When the school reopens for face-to-face classes, I think the inclusion or mainstreaming will still follow the same pattern, just like prior to the pandemic ... [T#2]

... Yes. It will most likely improve. Every year, we are doing something to improve our practices in school ... [T#12]

... There is interaction among the students. The teacher will also incorporate new and improved strategies for inclusion ... [T#9]

Theme 4. Innovative Strategies for Inclusion

Inclusion is including students with exceptionalities to socialize with the regular students in a regular classroom and in every aspect of education, from the same classroom to the same social activities and support groups. When these SPED teachers were asked to foresee what inclusion

will look like in the future, they expressed how inclusion is more innovative after the crisis and the possibilities that educators will integrate more sophisticated strategies to implement mainstreaming or inclusion in the post-crisis. Despite the challenges, educators found innovative ways to incorporate technology to engage students. The continuous processes of inclusion until the reopening of the school will still be utilized by the SPED teachers.

... After the pandemic, I think inclusion has the chance to improve more since there will be more designed strategies to explore and to integrate along the process ... [T#4]

... Inclusivity after this pandemic will likely be more advanced ... [T#12]

... There is the interaction among the students. The teacher will also incorporate new and improved strategies for inclusion ... [T#9]

DISCUSSION

Difficulties During a Crisis

A global or communal crisis can cause many rural teachers and learners to suffer due to a lack of internet, a lack of a learning management system, low-tech software, a lack of trainer and student skills, and a lack of support services (Burns, 2023; Dube, 2020; OECD, 2023). SPED teachers faced obstacles in delivering the instructions, monitoring the child's progress, and communicating with the parents due to an unstable internet connection. Teachers face barriers in distance education due to an unstable connection (Rasmitadila et al., 2020). Struggles with online courses negatively affect students' attention span, increasing their stress and anxiety and lowering their self-esteem (Lambert & Dryer, 2018; Toquero, 2020). Learning in a crisis meant remote learning was a struggle for children with disabilities due to increased distractions at home and a lack of structure.

Through coordination with the parents, SPED teachers can be able to create a home environment, provide instruction, and successfully provide services that engage students and meet their IEP goals (Rev, 2020; UNESCO, 2024). However, the barrier that usually holds back the smooth communication between teachers and SPED parents is the online connectivity, since some parents do not get updates about needed information (Murillo-Jiménez et al., 2025; OECD, 2025). Some parents are unable to afford gadgets due to a low income. As a result, they missed every single update and instructions due to a lack of communication and the unavailability of gadgets. Moreover, insufficient technology equipment is also one of the challenges affecting the integration of technology in teaching (Navas-Bonilla et al., 2025; Ricoy et al., 2025). Gadgets or devices' unavailability poses a great challenge among SPED teachers in teaching students with special

needs during a crisis. Apart from these, some students need assistive technologies to communicate with their teachers.

In a crisis, children with special needs face hindrance in communicating with the people around them since they are the most vulnerable ones. These students have more needs for adaptation than others and they require more attention from the teachers than their counterparts do (Sakarneh, 2023). No matter how the SPED teachers wish to communicate directly with their students, they cannot do so because they have to abide by the mandate of the department of education. Likewise, the social interconnectedness between the teachers and children is greatly affected. The disruption of the pandemic presented challenges in face-to-face educational settings for LSENs (Mier & Quezada, 2024). The loss of physical presence has been a significant loss for teachers and students (Heather, 2022; Øhrstedt et al., 2024). SPED teachers stated that the current mode of learning was challenging for them as educators of children with disabilities and they find it even harder to retain the learners' attention compared to face-to-face classes (Aldousari & Yuan, 2024; Fisher et al., 2024). Likewise, it is undeniably true that parents have to work hard to sustain the financial needs of the family amid the crisis. The major stressors identified by parents during the pandemic were economic uncertainty that disrupts children's schedules (Parmar, 2021). As a result, this priority often hinders the collaboration between the teacher and parents.

SPED teachers also experience psychological struggles due to teaching adjustments and heavy workloads. They also feel mentally exhausted and anxious because they can no longer teach their students directly and physically. With the quick transformation of the educational landscape, SPED teachers have accumulated too much stress due to some adjustments in the new learning contexts (Besser et al., 2020; Cornell & Sayman, 2021; Fisher et al., 2024; Pellerone, 2021). The SPED teachers also have financial difficulties due to classroom restructuring and printing of materials for their learners with special educational needs. Teachers are required to beautify their classrooms, and the necessary money for printing materials and classroom decorating is taken from their personal resources. The funds intended for the enhancement of the classroom are insufficient, the budget is mainly coming from their own pockets, which literally caused them to have financial difficulties. The obligations to beautify and enhance rooms required sufficient resources and materials to put them all into action. Ninety-four percent of SPED teachers spend their own money on the necessary school supplies and resources (Walker, 2018). Teachers encounter financial challenges because their monthly salary does not suffice due to various reasons. Hence, teachers resort to loans due to a lack of emergency funds during a crisis (Plaza & Jamito, 2021).

SPED teachers also highlighted that they find it difficult to modify the learning modules of the children with learning needs. The SPED teachers have difficulty in their

instructional designs since they have to modify the curricular competencies that the LSENS should learn according to the context of the crisis (Fisher et al., 2024). The SPED teachers change the IEP to give support or adjustments better than accommodations can provide (McClain-Nhlapo & d'Addio, 2020). It is the role of the SPED teachers to change the finished modules into a more simplified and attractive way to cater to their learning capacity. Though there are ready-made modules provided by the Department of Education, they contextualize the materials to meet each child's educational needs.

Pedagogy Amid a Crisis

Despite the difficulties and issues encountered by the SPED teachers, they managed to formulate strategies and ways for coping with the instructional needs of the LSENS. They applied crisis pedagogy as a means of using approaches, strategies, and teaching through different learning modalities, which are applicable to the context of the students, to continue their learning during the crisis. The SPED teachers strategize, contextualize, and modify the self-learning modules of the children with special needs to teach the basic skills and cater to their individual needs. SPED teachers stated that they use IEPs as part of their pedagogy to plan what to provide for the students to address their learning needs. IEP has been a vital program to determine the learning needs of every student with particular exceptionalities. If a student cannot achieve success at the target level, using modifications to make the material more manageable for the student is an important part of teaching (Malm, 2019). Modifications simplify the content of the lesson to adjust the content that will be learned compared to other learners.

SPED teachers integrate and utilize educational technology in delivering instruction. They also use technology to monitor whether the child has performed a certain activity at home so that they can assess if the child has learned the relevant competencies. Although restrictions have spread all throughout, there are still opportunities when teachers can do home visitation. Home visits are part of their pedagogy. SPED teachers had to conduct home visits to monitor the progress and the learning needs of the LSENS. They conduct home visits out of extreme need to reach the students who have no gadgets.

Inclusion Before, During, and After a Crisis

SPED teachers perceive inclusion as highly valuable so that children with disabilities are given equal privileges, are treated equally, and can practice their rights in education. They defined inclusivity as the promotion of equity & equality among learners regardless of their race, background, and disabilities. The teachers emphasized that inclusion means no child is left behind. Equality in education is beneficial for students to have equal opportunities to start off with positive educational outcomes, and equity entails verifying those equal opportunities to make a place for students who might need extra help and attention (Ainscow & Haile-Giorgis, 1999; Ainscow et al., 2013).

During a crisis, SPED teachers perceive inclusion as an experimental, tentative, and trial-and-error process of testing due to a lot of uncertainties during the pandemic. They have difficulty creating inclusive environments for their learners with disabilities since they cannot directly supervise the children. They are also testing some of the modular strategies without cognizance of whether it would work to address the needs of the children with disabilities. Meanwhile, some participants believed that there are advancements and innovations in the teaching strategies and practices for inclusion after a crisis. The designed strategies applied in teaching will most likely be improved in the future scenario. In contrast, others believe that it is the same continuation and pattern of inclusion practices in monitoring and mainstreaming.

The schools indispensably need support from different organizations. According to the participants, the local government units, persons with disabilities office, and private individuals succored by donating printers and printing materials, which are the primary needs in producing learning modules for children with disabilities, and by giving free services for the SPED learners. The SPED teachers received government and organizational support for printing materials, including free health support services for the children with disabilities, including their personal check-ups.

SPED teachers need to be trained on novel or innovative strategies in delivering services for students with disabilities post-crisis. Likewise, the hope for consistency of inclusive practices for sustainable learning among children with disabilities means a sustainable future. The entire community has a role to play in achieving a sustainable and inclusive future. Thus, a social justice lens and support system will help teachers expand their pedagogical practices and inclusive strategies that anchor their instruction (Fisher et al., 2024; Talaman & Toquero, 2024). Webinars for professional growth and AI-built assistive technologies can pave the way to address the challenges in remote teaching (Talaman & Toquero, 2024; Toquero & Talidong, 2020). Multiple trainings can help SPED teachers to become effective in their own work settings. While any climate crisis can disrupt education, SPED teachers are faced with rethinking instruction, much of which has to take place virtually or remotely. At the same time, teachers must partner closely with their students' parents to achieve learning goals. Special educators highlighted the significance of efficient communication systems that provide families with accessible information and updates. This will allow families to engage in strong communication about their student's educational plans (Ondrasek, 2020; Wabingga, 2025). Hence, SPED teachers call for parental engagement to carry out the delivery of education that helps support a child's development. Additionally, this research revealed that SPED teachers mostly rely on parents, as they are the ones assisting their children at home (Gelir & Duzen, 2022). Indeed, parent-teacher partnership in teaching is a vital component for the successful learning of the LSENS. Thus, SPED teachers

needed parental support during the educational crisis. Without the teacher-parent intervention, homeschooling would not be possible for children with disabilities.

CONCLUSIONS

SPED teachers experience technical issues, intermittent socialization, psychological struggles, financial constraints, and challenges in providing effective instruction during a climate emergency situation. SPED teachers apply crisis pedagogy, which solely relies on fostering individualized plans, distribution of modified learning modules, integration of educational technology, and home visitation of SPED learners. Before a crisis, the SPED teachers perceive inclusivity as a promotion of equity and equality among learners. During the pandemic crisis, they view inclusivity as an experimental or a trial-and-error process of testing. The SPED teachers perceive inclusion for sustainable futures as a consistency or continuation of inclusive practices and a provision of innovative strategies for inclusion of SPED learners. SPED teachers desire the intervention of government and charitable organizations, professional growth and development, and parental scaffolding.

This study offers curricular, research, and social implications. An emergency preparedness plan should be coordinated with parents. SPED teachers may establish an emergency preparedness plan together with a parent-teacher collaboration to minimize the difficulties in teaching students with special needs during a crisis. An emergency recovery plan with disability tracking and monitoring system integrated with assistive technologies may also favorably address the needs of children with disabilities after a crisis. Instructional designers could provide an evidence-based design with disability lens to support instruction during the crisis. In the distance learning approach, parents of the LSENs should communicate regularly with the SPED teachers to receive supervision on the next steps of assessing their children's learning. Likewise, the school administrators should provide funding for training opportunities for SPED teachers to explore innovative teaching strategies that would cater to the actual needs of learners with disabilities for a more inclusive teaching-learning process amid a crisis. Educational assistance and upgraded training opportunities can also strengthen the expertise of SPED teachers and benefit LSENs. Despite these results, the study encountered limitations such as the lack of a quantitative empirical analysis that would have yielded better results, but which was not possible during a crisis. Nevertheless, this study serves its purpose of exploring the inclusion practices and pedagogies of SPED teachers amid a crisis.

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