Inclusive Education Teaching Practices and Use of Digital Storytelling among Non-Sped Teachers in Public High School

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Abstract. *This study explored the use of digital storytelling (DST) as an instructional tool for inclusive teaching among non-SPED teachers at Zapatera National High School in Cebu City, Cebu. It aimed to determine the extent of DST tool utilization, identify inclusive teaching strategies employed by teachers, assess the perceived effectiveness of DST in enhancing learning outcomes, and examine the challenges and support needs associated with its implementation. The study employed a quantitative, descriptive-correlational research design, with data collected from 20 non-SPED teachers using a validated, researcher-made questionnaire. Results indicated that teachers perceived digital storytelling as highly effective in improving student engagement, comprehension, attention, creativity, and digital literacy. Despite these positive perceptions, the actual use of DST tools was limited. Teachers primarily utilized commonly accessible platforms, such as PowerPoint, Canva, and Google Slides, while many other digital storytelling tools were rarely or never employed. This limited utilization was attributed to several challenges, including time constraints, insufficient ICT resources, lack of technical skills, and inadequate administrative support. The results showed that teachers consistently practiced inclusive teaching by using visual aids, creating supportive classroom environments, and giving clear instructions to learners. Although the use of digital storytelling tools alone was not directly linked to improved learning outcomes, the study found a moderate relationship between inclusive teaching practices and the effectiveness of digital storytelling. This indicates that digital storytelling is most effective when it is thoughtfully integrated with inclusive strategies in lesson planning and classroom instruction.*

Key words: *Special Education, Digital Storytelling (DST), Inclusive Education, Teaching Practices, Quantitative Descriptive- Correlational Design, Technology Integration, Learning Enhancement Plan, Cebu City, Cebu Philippines.*

Chapter 1

THE PROBLEM AND ITS SCOPE

INTRODUCTION

Rationale of the Study

Inclusive education in the Philippines is governed by mandates and laws that emphasize the critical role of qualified teachers to ensure quality education for all learners. The Department of Education (DepEd) Order No. 73, s. 2020, reiterates the necessity for teacher competence and continuous professional development as fundamental for effective inclusive education delivery (DepEd, 2020). Legal instruments insist on equipping teachers with the appropriate skills and knowledge to create responsive learning environments for diverse learners (Republic Act No. 11713, 2022).

The Philippines has committed to inclusive education as a social imperative, promoting equal access and participation for learners with disabilities. However, the success of inclusive education largely depends on teacher competence, as the ability to modify teaching methods and materials in respect to learners' needs determines the effectiveness of implementation (Santos & Cruz, 2023; Reyes et al., 2021). Professional preparation and ongoing training for non-special education teachers (Non-SPED) remain central challenges (Lopez et al., 2024).

The Inclusive Education Act (RA 10533 and RA 11713) mandates the establishment of learning centers equipped to cater to diverse learners and recognizes the vital social role of all learners as contributors to community development (Philippine Congress, 2020; Mendez, 2023). Such laws emphasize an integrated approach that bridges educational access with socio-emotional and developmental support for all students.

Despite legal frameworks, multiple challenges persist, such as insufficient educational resources, inadequately trained teachers, policy implementation gaps, and marginalized children remaining underserved (Delos Santos & Villanueva, 2022; Garcia et al., 2024). These barriers impede the realization of fully inclusive classrooms and hinder optimal learner outcomes, especially in resource-limited settings.

Digital storytelling, recognized as a dynamic, multimodal pedagogy, aligns with Universal Design for Learning (UDL) principles by promoting engagement, representation, and expression for diverse learners (Smith & Fernandez, 2023; Tan & Morales, 2022). As an instructional tool, it fosters creativity, inclusivity, and learner-centered approaches, making it a promising strategy to support inclusive education.

However, gaps in research remain on the practical use and effectiveness of digital storytelling in inclusive classrooms with limited resources, particularly within Philippine public schools (Alviar & Santiago, 2024). Existing studies highlight the need for localized evidence on how such digital interventions can be adapted and scaled. Non-SPED teachers frequently lack adequate training in differentiating instruction and assessing diverse learners' needs within inclusive classrooms (Bautista et al., 2023; Fernandez & Santos, 2025). Their instructional competence in digital tools use remains insufficient, limiting their capacity to apply innovative methods like digital storytelling effectively. In Cebu, particularly in schools like Zapatera National High School, there is a pressing need to explore the specific challenges faced by Non-SPED teachers in inclusive settings. Contextualized professional development programs grounded in local realities are crucial for equipping these teachers with relevant skills (Cebu Education Office, 2024; Ramirez & Villanueva, 2025). This study aims to fill this gap by investigating digital storytelling as a tool for inclusive teaching and using findings to create a needs-based training program tailored to Non-SPED teachers. The intended intervention will support instructional improvement and learner outcomes in inclusive classrooms within Cebu's public secondary schools.

Theoretical Background. This study is based on Vygotsky's Sociocultural Theory, Rose and Meyers Universal Design for Learning (UDL) Theory and Bandura's Social Learning Theory. Moreover, this is supported by some legal bases such as the 1987 Philippine Constitution of the Philippines, Inclusive Education Act (Republic Act No. 11650) and Republic Act 7277 (Magna Carta for Disabled Persons), which collectively support accessible education, special services, and the creation of an enabling environment for persons with disabilities.
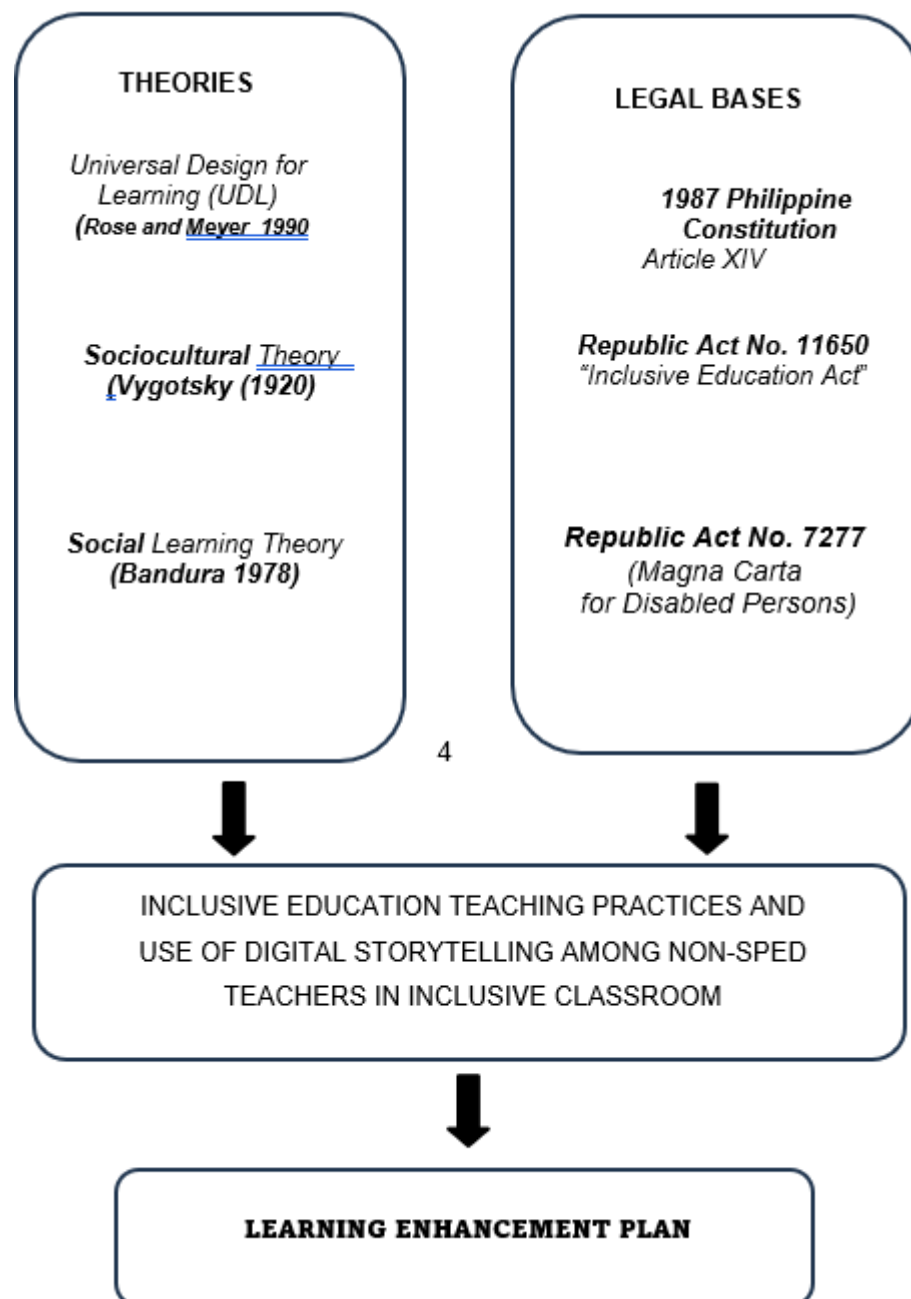
Figure 1. Theoretical Framework of the Study

Vygotsky's Sociocultural Theory explains that a child's learning and development are shaped by social interactions and cultural experiences. Parents serve as the first and most influential learning partners, providing guidance, encouragement, and opportunities for exploration. Their involvement not only helps children develop essential academic skills but also strengthens their sense of confidence and belief in their own abilities (Kong & Yasmin, 2022). In this context, the use of stories becomes an effective strategy in getting the students' attention and being able to help in the understanding of key concepts using some digital tools through pictures as teachers at like mothers telling stories to their children.

Social constructivism is a learning theory developed by Lev Vygotsky, which states that learning is a social and cultural process where knowledge is actively constructed through interactions with others and within a given cultural context. Key concepts include the importance of language, the zone of proximal development (ZPD), and the teacher's role as a facilitator. Learning is not just an individual process but occurs on a social level first and then internalizes within the individual.

Vygotsky's Sociocultural Theory emphasizes that learning is a socially mediated process where cognitive development occurs through interaction, communication, and collaboration with others in a cultural context. According to Lev Vygotsky, knowledge is not developed in isolation; rather, it is

constructed through social interactions and shared experiences with more knowledgeable individuals, such as teachers, peers, and family members. This process helps learners internalize new concepts and develop higher mental functions. The theory underscores that language, culture, and social engagement play central roles in shaping thought and learning.

A core component of Vygotsky's theory is the Zone of Proximal Development (ZPD), which refers to the gap between what a learner can do independently and what they can accomplish with appropriate guidance or collaboration. Learning is most effective within this zone, as it challenges the learner while providing adequate support through scaffolding—temporary assistance from teachers or peers that enables the learner to gradually gain independence. Another important concept is mediated learning, where tools, symbols, and language act as mediators that facilitate cognitive growth. In educational contexts, these mediators can include not only spoken or written language but also digital tools and multimedia resources.

In relation to inclusive education teaching practices, Vygotsky's Sociocultural Theory provides a strong theoretical foundation for understanding how students with special needs can thrive in diverse learning environments.

Inclusive education aims to provide equitable learning opportunities for all learners regardless of ability, and Vygotsky's emphasis on social interaction and collaboration highlights that SPED (Special Education) learners benefit from being actively involved in shared learning experiences with teachers and peers. The role of the teacher, in this context, is that of a facilitator or mediator who provides appropriate scaffolding based on each learner's unique abilities and needs. This perspective promotes the idea that all students can learn and develop cognitively when provided with the right kind of social and instructional support.

Vygotsky's ideas align closely with inclusive teaching practices among SPED teachers, as they emphasize individualized instruction, peer collaboration, and the use of culturally and contextually relevant materials. Through guided participation and interaction, SPED teachers can tailor instruction to students' developmental levels, recognizing that learning differences are not limitations but opportunities for differentiated teaching. Collaborative learning structures such as peer tutoring, group storytelling, and interactive discussions reflect Vygotsky's belief that learning occurs through participation in meaningful social activities.

The use of digital storytelling as a pedagogical tool in inclusive classrooms is an effective application of Vygotsky's Sociocultural Theory. Digital storytelling integrates technology, language, visuals, and narrative, serving as a powerful mediating tool for learning. For SPED students, digital storytelling provides multiple avenues for expression and comprehension—audio narration, images, videos, and text—catering to diverse learning styles and abilities. It also fosters social interaction as students collaborate in story creation, share personal experiences, and reflect on shared meanings within a supportive community of learners.

In the context of SPED education, digital storytelling embodies Vygotsky's concept of mediated learning by using digital tools as cultural artifacts that enhance communication and understanding. It encourages language development, critical thinking, and emotional engagement, allowing learners to express themselves creatively while connecting personal and social experiences. Teachers act as mediators who scaffold the storytelling process—guiding students in organizing their thoughts, using digital tools, and refining their stories for clarity and emotional depth. This collaborative, scaffolded process supports students in moving through their ZPD, thereby enhancing both cognitive and social development.

Furthermore, Vygotsky's theory underscores the importance of social inclusion and cultural context in learning. In inclusive classrooms, digital storytelling allows SPED learners to participate meaningfully in shared activities with typically developing peers, breaking down barriers of communication and fostering empathy and understanding. Through this interactive and participatory approach, SPED learners are not passive recipients of instruction but active constructors of meaning within their social environment. Vygotsky's Sociocultural Theory (1978) provides a theoretical lens that supports inclusive teaching practices and the integration of digital storytelling in SPED

classrooms. It reinforces the belief that learning is inherently social and that cognitive development is enhanced through collaboration, language, and cultural tools. For SPED teachers, applying Vygotsky's principles means creating inclusive, interactive, and scaffolded learning experiences where every learner—regardless of ability—can participate, communicate, and succeed through meaningful social and technological engagement.

Universal Design for Learning (UDL) is a framework for designing curricula that proactively reduces barriers and increases learning opportunities for all students by anticipating variability in learners' needs (Rose & Meyer, 2002). Originating in the early 2000s out of work by cognitive scientists and educators, UDL adapts principles from universal design in architecture to instruction: rather than retrofitting supports after the fact, instruction is planned so that multiple pathways to access, engage, and demonstrate learning are embedded from the start (Rose & Meyer, 2002). At the center of UDL are three primary principles that guide curriculum design: (1) Multiple Means of Representation, (2) Multiple Means of Action and Expression, and (3) Multiple Means of Engagement. Multiple Means of Representation addresses the "what" of learning by offering diverse ways of presenting information (e.g., text, audio, visuals, manipulatives) and by supporting comprehension through scaffolds such as summaries, glossaries, and explicit vocabulary support (CAST, 2018). Multiple Means of Action and Expression concerns the "how" students demonstrate learning and emphasizes offering varied tools and methods (e.g., writing, oral presentations, multimodal projects, assistive technologies) so students can express what they know in ways that fit their strengths (CAST, 2018). Multiple Means of Engagement attends to the "why" of learning by providing choices, relevance, adjustable challenge, and supports for persistence and self-regulation to tap into students' interests and motivation (Rose & Meyer, 2002; CAST, 2018). UDL is both theoretical and practical. Theoretically, it rests on contemporary understandings of neural and cognitive variability: learners differ in how they perceive information, how they strategize and act, and what motivates them (Rose & Meyer, 2002).

Practically, the CAST UDL Guidelines operationalize the three principles into specific checkpoints and design suggestions that educators can use to audit and redesign curricula (CAST, 2018). These guidelines have helped translate UDL from an abstract idea into usable classroom strategies, educational technologies, and policy recommendation.

International reviews highlight that evidence-based inclusive strategies include differentiated instruction, Universal Design for Learning (UDL), co-teaching models, individualized supports, and use of assistive technologies. Across contexts, common barriers are insufficient pre-service preparation, limited in- service professional development, large class sizes, and inadequate material resources; facilitators are collaborative cultures, mentoring, and ongoing coaching. These global patterns help interpret Philippine findings and identify practices (UDL, collaborative planning, assessment accommodations) that are promising to adapt locally.

In the context of inclusive education and the teaching practices of SPED (Special Education) teachers, Bandura's theory highlights the significance of social interaction, modeling, and scaffolding in facilitating learning among students with diverse needs. Inclusive education aims to ensure that all learners, regardless of ability or disability, have equitable access to learning opportunities within a supportive environment. Bandura's principle that learners construct understanding by observing and interacting with others supports this goal—students with disabilities can benefit from observing peer models, teachers, and even digital avatars demonstrating positive learning behaviors. Through observational learning, SPED students can acquire new skills, develop social-emotional competencies, and build self-efficacy, particularly when instruction is adapted to their cognitive and sensory levels.

For SPED teachers, applying Social Learning Theory means creating learning environments that encourage collaboration, peer modeling, and guided participation. Teachers serve as intentional role models, demonstrating empathy, problem-solving, and inclusive behaviors that students can imitate. When inclusive teaching practices are grounded in Bandura's framework, SPED teachers not only facilitate academic growth but also nurture self-confidence and social understanding among learners. For instance, teachers can model inclusive attitudes and adaptive strategies, encouraging neurotypical and neurodivergent learners alike to respect and support one another.

Another supporting theory in this study is Albert Bandura's Social Learning Theory (1978) is a foundational framework in educational psychology that emphasizes the importance of learning through observation, imitation, and modeling within social contexts. Bandura posited that learning is not solely a result of direct experience or reinforcement, as suggested by traditional behaviorist theories, but also occurs vicariously through observing others' behaviors and their consequences. Central to this theory are four key processes: attention, retention, reproduction, and motivation. Learners first pay attention to a model's behavior, then retain or remember what they observed, reproduce the behavior through practice, and are motivated to continue when they perceive positive reinforcement or rewards. Bandura's later concept of reciprocal determinism also underscores the dynamic interaction between personal factors (cognitive, emotional, and biological events), behavior, and environmental influences in shaping learning outcomes (Bandura, 1978).

The integration of digital storytelling as a pedagogical tool aligns strongly with Bandura's Social Learning Theory. Digital storytelling—using multimedia elements such as images, narration, sound, and video—creates engaging, socially relevant contexts for learning. SPED students can observe and internalize stories that model positive behaviors, problem-solving approaches, and emotional regulation. By watching digital stories that depict characters overcoming challenges or demonstrating empathy, students learn vicariously through these digital "models." Moreover, when SPED students create their own digital stories, they not only express their understanding but also model their learning for peers, reinforcing reciprocal learning processes. Digital storytelling also enhances attention and motivation—two critical components of Bandura's learning model. The multisensory nature of digital media captures students' focus and sustains engagement, while the social aspect of sharing stories encourages them to reproduce learned behaviors and reflect on moral or social lessons. In inclusive classrooms, this process promotes peer learning, empathy, and the celebration of diverse voices and abilities.

Bandura's Social Learning Theory (1978) provides a powerful lens for understanding how SPED teachers can implement inclusive teaching practices and utilize digital storytelling effectively. The theory supports the idea that students with special educational needs learn best through observation, imitation, and interaction within socially supportive environments. By modeling inclusive behaviors and using engaging digital narratives, SPED teachers foster an atmosphere where all learners can observe, participate, and thrive—reflecting the essence of inclusive education that values diversity, collaboration, and shared growth.

1987 Philippine Constitution – Article XIV (Education, Science and Technology, Arts, Culture, and Sports). Article XIV of the 1987 Philippine Constitution underscores education as a fundamental human right and a prime duty of the State. It states that the State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all (Sec. 1). The provision emphasizes that education shall aim to foster patriotism, nationalism, and total human development, preparing individuals to participate meaningfully in a democratic and productive society.

The Constitution also mandates the State to establish and maintain a system of free public education in the elementary and high school levels and to make education accessible through scholarships, subsidies, and other incentives (Sec. 2–5). Importantly, it highlights the recognition and promotion of the rights of people with disabilities, ensuring their access to quality education and services. Moreover, Article XIV directs the State to enhance teacher training and professional development, encourage research, and support educational institutions that serve diverse learners. These provisions collectively lay the constitutional foundation for inclusive education — ensuring that every Filipino learner, regardless of background, ability, or circumstance, has equal opportunities to learn and succeed.

Republic Act No. 11650, or the "Inclusive Education Act," institutionalizes the State's commitment to provide quality and equitable education to learners with disabilities. Signed into law in 2022, this Act operationalizes the constitutional mandate for inclusivity by ensuring that no learner is excluded or left behind in the formal education system. The law defines inclusive education as a process of addressing and responding to the diverse learning needs of all children by eliminating barriers to

participation and achievement. It calls for the establishment of Inclusive Learning Resource Centers (ILRCs) in every school district, designed to provide multidisciplinary support, such as therapy, assessment, early intervention, and counseling services. RA 11650 also mandates that teachers be trained in inclusive education strategies and that schools develop Individualized Education Programs (IEPs) for learners with disabilities. It further provides mechanisms for early identification and intervention, parent and community involvement, and continuous assessment to support learner progress. Through this Act, the government recognizes that inclusive education benefits not only learners with disabilities but all learners, fostering empathy, respect for diversity, and an inclusive culture in schools and communities. It represents a significant step toward fulfilling both the Education for All (EFA) and Sustainable Development Goal (SDG) 4 commitments of the Philippines.

Republic Act No. 7277, known as the "Magna Carta for Disabled Persons" (enacted in 1992), is a landmark law that promotes the rehabilitation, self- development, and integration of persons with disabilities (PWDs) into mainstream society. It recognizes PWDs as full members of the community with equal rights, responsibilities, and opportunities as other citizens. Under Title Two (Education), the law guarantees that PWDs shall be provided access to quality education and vocational training. It directs the State to consider the special needs of learners with disabilities in all stages of education and to ensure that schools, training centers, and learning institutions are physically and pedagogically accessible.

The Act also mandates the Department of Education (DepEd), Commission on Higher Education (CHED), and Technical Education and Skills Development Authority (TESDA) to develop special curricula, materials, and support services that promote inclusive and adaptive learning. Furthermore, it emphasizes teacher training, non-discrimination, and equal opportunity in employment for PWDs. By enacting RA 7277, the Philippines institutionalized the rights of persons with disabilities and aligned its policies with international commitments, such as the UN Convention on the Rights of Persons with Disabilities (UNCRPD).

The literature on special education and inclusive education in the recent years show interrelated scenarios that exist in the Philippines. Special education policies have limited implementation due to lack of diagnostic information, lack of training among teachers, lack of school facilities like resource rooms and school- level resources. With policy and positive teacher attitudes toward inclusion exist in the Philippines, but real-world implementation is constrained by variable training. Targeted, contextualized professional development—grounded in local evidence about SPED teachers' current practices in Cebu—offers a plausible and research-backed pathway for improving inclusive teaching practice and learner outcomes. Thus, this study is positioned to fill documented gaps and produce a practical training program aligned with existing evidence.

Inclusive education has been a policy priority in the Philippines, but implementation at the classroom level remains uneven. Recent studies report that teachers—both mainstream and SPED—face gaps in training, resources, and collaborative supports required to implement meaningful inclusion (e.g., gaps in formal SPED training, large caseloads, and limited specialized instructional materials). These constraints reduce teacher confidence and classroom responsiveness to diverse learners' needs, producing variability in inclusive practices across divisions and municipalities (Masongsong, J. M., Lopres, J. R., Aguirre, M. M., et al., 2023).

Research focused on Cebu and nearby Philippine divisions highlights similar patterns: teacher attitudes toward inclusion are generally positive, but readiness (knowledge, skills, practical strategies) and access to continuing professional development are inconsistent factors strongly associated with the quality of inclusive practice in classrooms. This localized evidence underscores the need for contextualized training tailored to teachers' everyday school realities.

The Department of Education (DepEd) has endorsed inclusion through policy and program initiatives (e.g., the SPED and Every Child a Reader-related policies), but the translation of policy into consistent practice remains uneven across regions and schools. Recent Philippine empirical studies show that while many teachers express positive attitudes toward inclusion, their actual readiness and

use of inclusive practices vary widely and are frequently constrained by limited training opportunities and scarce specialized resources.

Inclusive education in the Philippines has expanded rapidly since the K–12 reforms, but implementation gaps remain—particularly in teacher preparation, resources, and the distribution of specialized SPED services. A recent systematic review of Philippine special education literature highlights persistent shortages of SPED centers and trained personnel, uneven application of DepEd guidelines, and a research landscape that calls for more localized, implementation-focused studies to guide policy and practice (Reyes, 2023). These structural conditions shape classroom realities: many learners with special needs are mainstreamed into regular classrooms where general and even some SPED teachers must adapt instruction without consistent, context-sensitive support (Reyes, 2023).

Teacher readiness and attitudes are central to inclusive practice. Studies in Cebu and other Philippine locales reveal a mixed picture: while pre-service and in- service teachers often express willingness and some confidence to teach diverse learners, they report limited preparedness in practical inclusive strategies and express concerns about resources, large class sizes, and specialized instruction (Cebu Technological University study, 2024; Jugan, 2024). Research from Cebu shows pre-service teachers frequently rate their efficacy as moderate to high but simultaneously indicate gaps in concrete readiness to implement individualized or differentiated approaches—suggesting that self-efficacy alone does not guarantee practical capability in inclusive classrooms (Cebu Technological University study,2024). Local studies in Cebu (e.g., Liloan District) underline that teacher attitudes, while generally positive—vary with training exposure and workload, and that targeted professional development is needed to convert positive dispositions into effective inclusive practices (Jugan, 2024).

Effective inclusive teaching practices documented in the literature emphasize differentiated instruction, co-teaching models, individualized education planning, use of assistive technologies, collaboration with parents and allied professionals, and curriculum adaptations. However, Philippine studies repeatedly report that these practices are inconsistently applied due to limited specialized training, insufficient ongoing mentoring, and resource constraints at the school level (Reyes, 2023). Consequently, researchers call for context-responsive teacher education and in-service programs that combine theoretical grounding with hands-on practicum, coaching, and school-based supports (Reyes, 2023; Cebu Technological University study, 2024).Digital storytelling (DST) emerges in the international and Philippine literature as a promising pedagogical tool for inclusive education. DST integrates multimedia (voice, images, text, video) to create learner-centered narratives that can be tailored to diverse learners' needs and strengths. Experiences in teacher education and SPED training indicate that DST supports student engagement, multimodal literacy, identity expression, and differentiated demonstration of learning—benefits particularly relevant for learners with communication or learning differences (Lazzari, 2016). Additionally, collaborative and interactive forms of digital storytelling can foster dialogic learning and peer scaffolding, which are valuable for social inclusion and participation (Petousi et al., 2022).

Evidence from implementation studies suggests several advantages of DST in special education contexts: it enables multiple entry points for learners (visual, auditory, kinesthetic), supports personalization (adjustable pacing and scaffolds), and creates accessible artifacts of learning that teachers can use for assessment and individualized planning (Lazzari, 2016; Petousi et al., 2022). Philippine studies on DST remain limited but are growing—work by teacher educators and small-scale classroom studies indicate positive impacts on reading comprehension, motivation, and digital skills among mainstream and special needs learners (national case studies and theses). Nevertheless, the uptake of DST by SPED teachers in the Philippines is constrained by factors common to other inclusive practices: limited access to devices and connectivity, lack of training in multimedia authoring and pedagogical design, time pressures, and minimal school-level support for technology integration.

Taken together, the literature indicates three research and practice priorities relevant to a Cebu context: (1) strengthen teacher preparation and continuous professional development that blends inclusive pedagogy with practical, school- based coaching; (2) investigate how DST can be adapted

to local resource realities (e.g., low-bandwidth tools, mobile phones) and to specific learner profiles common in Cebu classrooms; and (3) document SPED teachers' lived implementation experiences (barriers, facilitators, and examples of best practice) to inform scalable, context-sensitive interventions. Empirical work that combines qualitative exploration of teacher perspectives with quantitative measures of learner outcomes will be especially useful in building an evidence base that links teacher practices (including DST use) to student engagement, participation, and learning in inclusive classrooms (Reyes, 2023; Cebu Technological University study, 2024; Lazzari, 2016; Petousi et al., 2022).

THE PROBLEM

Statement of the Problem

This study aimed to determine the extent of use of digital storytelling tools, their effectiveness in improving learning outcomes, the teaching practices employed, and the challenges and support needs in inclusive education classrooms among non-SPED teachers in Zapatera National High School, Cebu City, Cebu, as the basis for Learning Enhancement Plan.

Specifically, this study sought to answer the following questions:

1. What is the demographic profile of the respondents according to age, gender and number of years in teaching?

2. To what extent is the use of digital storytelling tools frequent among the respondents in inclusive education classrooms?

3. As perceived by respondents, what is the extent of their teaching practices in inclusive classrooms?

4. As perceived by respondents, what is the level of effectiveness of digital storytelling in improving the learning outcomes?

5. Is there a significant relationship between:

4.1 the use of digital storytelling tools and their effectiveness in improving learning outcomes, and

4.2 the extent of teaching strategy practices in inclusive classrooms and the effectiveness of digital storytelling in improving learning outcomes?

6. What challenges and corresponding support need do respondents identify in their use of digital storytelling in terms of:

6.1 Challenges Experienced

6.2 Specific Support or Training needed

6.3 Suggestions for improvement

7. Based on the findings of the study, what Learning Enhancement Plan can be crafted?

Statement of the Null Hypothesis

Based on the objectives of the study, the following null hypotheses were tested at the 0.05 significance level.

H₀1: There is no significant relationship between the use of digital storytelling tools and their effectiveness in improving the learning outcomes and the extent of teaching s practices in inclusive classrooms and the effectiveness of storytelling in improving the learning outcomes.

H₀2: There is a significant relationship between the use of digital storytelling tools and their effectiveness in improving the learning outcomes and the extent of teaching s practices in inclusive classrooms and the effectiveness of storytelling in improving the learning outcomes.

Significance of the Study

This study provides helpful contributions to the following beneficiaries

Curriculum Developers. They can obtain relevant data that will serve as a basis for designing programs that address the specific contextual needs of both SPED teachers and students with special needs.

DepEd Officials. The findings of this study may guide them in addressing and supporting the distinct learning needs of students with varied exceptionalities through appropriate policies and interventions.

Learners with Diverse Needs. Based on the results of this study, they may be provided with learning activities and strategies that cater to their unique needs, enabling them to learn more effectively and understand their lessons better.

Non-SPED Teachers. They can utilize and apply the outcomes of this study to enhance the teaching and learning process for students with exceptionalities in inclusive classrooms, thereby promoting more effective instruction.

Parents of Students with Diverse Needs. The findings of this study can help parents gain a deeper understanding of their children's needs. They may also use storytelling strategies and materials from the classroom to support their children's learning at home.

Researcher. In this study, the researcher enhances knowledge and understanding of how digital storytelling supports inclusive education. It helps develop research and professional skills while providing insights that contribute to

improving teaching practices and promoting innovative approaches in inclusive classrooms.

Future Researchers. This study may serve as a reference for future investigations focusing on other aspects of teaching and learning in inclusive education. It can provide a foundation for further improving instructional practices and developing relevant and effective learning activities for students with exceptionalities.

RESEARCH METHODOLOGY

This is the section of the study that presents the research design used in this study together with the research environment, research respondents, research instrument, and research procedures including the treatment of data and data analysis.

Design

This study employed a quantitative-descriptive correlational research design to determine the extent to which digital storytelling tools were used, their perceived effectiveness in improving learning outcomes, the inclusive teaching strategy practices implemented, as well as the challenges and support needs experienced by non-SPED teachers in the inclusive education classrooms of Zapatera National High School, Cebu City, Cebu. The design allowed the researcher to gather numerical data, describe trends, and examine relationships among variables relevant to the use of digital storytelling in inclusive teaching.

The descriptive component of the design focused on determining the frequency of use of digital storytelling tools, the extent of teaching strategy practices, and the level of effectiveness of digital storytelling in improving learning outcomes, as perceived by the respondents. The correlational component examined whether significant relationships existed between (1) the use of digital storytelling tools and their perceived effectiveness in improving learning outcomes, and (2) the extent of teaching strategy practices in inclusive classrooms and the perceived effectiveness of digital storytelling.

Flow of the Study

This study followed the Input, Process, and Output framework offering a transparent overview of how data will be gathered, managed, analyzed, and ultimately translated into actionable findings to achieve the study's stated goals.

Input. The study began with gathering the necessary inputs, which included information on the digital storytelling tools that were used in inclusive education classrooms, the practices of teaching strategies

implemented by non-SPED teachers, the perceived effectiveness of digital storytelling in improving learning outcomes, the significant relationships between the variables, and the challenges teachers faced in using digital storytelling.

Process. Using these inputs, the researcher secured an approved transmittal letter and obtained the informed consent of the respondents prior to data collection. The validated questionnaire was then administered, and the responses were subjected to statistical treatment to generate quantitative results.

Output. These results were analyzed and interpreted, which eventually led to the formulation of findings and recommendations. The overall process culminated in the development of a needs-based and inclusive Learning Enhancement Plan, which served as the primary output of the study.
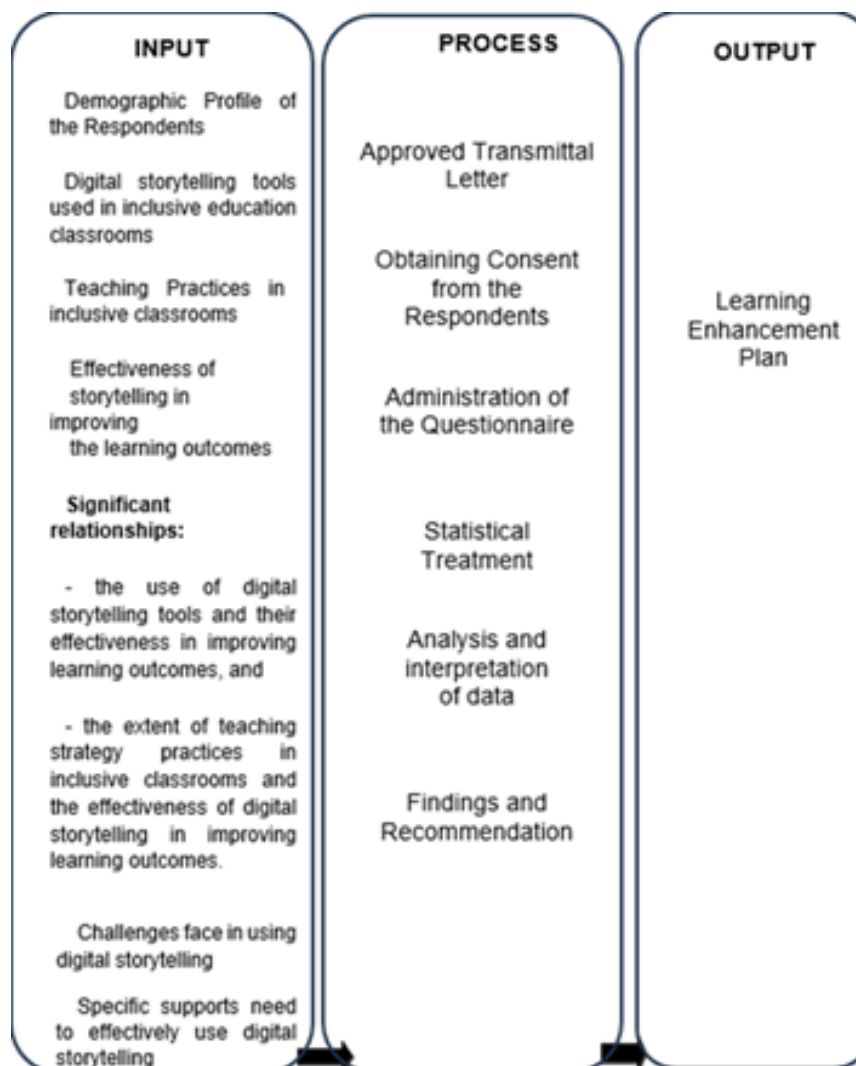
INPUT	PROCESS	OUTPUT
Demographic Profile of the Respondents	Approved Transmittal Letter	Learning Enhancement Plan
Digital storytelling tools used in inclusive education classrooms	Obtaining Consent from the Respondents	
Teaching Practices in inclusive classrooms	Administration of the Questionnaire	
Effectiveness of storytelling in improving the learning outcomes	Statistical Treatment	
Significant relationships:	Analysis and interpretation of data	
- the use of digital storytelling tools and their effectiveness in improving learning outcomes, and	Findings and Recommendation	
- the extent of teaching strategy practices in inclusive classrooms and the effectiveness of digital storytelling in improving learning outcomes.		
Challenges face in using digital storytelling		
Specific supports need to effectively use digital storytelling		

Figure 2. Flow of the Study

Environment

The study was conducted in Zapatera National High School. The school operates under the supervision of the Department of Education. Zapatera National High School is situated in Cebu City, Philippines. It is a renowned educational establishment dedicated to academic brilliance and community involvement. It was founded to provide primary education for the local populace, from kindergarten to elementary school. The school is well known for its committed instructors and staff, who work tirelessly to give students the opportunity for comprehensive growth and high-quality education.

Moreover, Zapatera National High School strongly emphasizes social and cultural activities to develop well-rounded people ready for whatever comes next. It is essential in forming Cebu City's educational environment since it emphasizes inclusive education and community engagement.

The facilities of school are made to meet the requirements of learners with diverse needs. It has classrooms suitable for all senses, with adjustable lighting and sound levels to make learning comfortable. The school has specially designed treatment rooms where counselors and occupational therapists collaborate closely with learners with diverse needs to address behavioral support requirements and difficulties with sensory processing.

Furthermore, the school offers access to visual aids, specific learning materials, and assistive technology designed to improve the educational experience of learners. These facilities reflect the school's dedication to diversity and meeting the various needs of every student in its community.

Figure 3. Location Map of the Research Environment

Research Respondents

The respondents of this study were teachers from Zapatera National High School who were accessible and willing to take part during the data collection period. A convenience sampling technique was employed, wherein teachers were selected based on their availability, proximity, and readiness to respond to the survey. This non-probability sampling approach allowed for efficient and practical data collection within the constraints of time, resources, and accessibility, particularly in a school setting where the researcher maintained direct contact with the teaching staff**.**

Table 1. **Distribution of the Respondents**

Grade Level of Teachers	f	%
Grade 7	3	15
Grade 8	4	20
Grade 9	4	20
Grade 10	3	15
Grade 11	4	20
Grade 12	2	10
Total	**20**	**100**

Table 1 presented the distribution of the respondents, totaling 20 teachers. The table also showed that the largest groups of respondents were from Grades 8,9 and 11, each comprising 20% of the sample, Grade 10 is 15% of the sample while the Grade 12 is at 10% of the respondents.

Instrument

A researcher-made questionnaire, validated by experts, served as the primary data-gathering tool. The questionnaire consisted of five parts: (1) profile o respondents, (2) extent of use of digital storytelling tools, (3) inclusive education teaching strategy practices, (4) perceived effectiveness of digital storytelling in improving learning outcomes, and (5) challenges, support needs, and improvement suggestions. Respondents expressed their degree of agreement or frequency of practice using five-point Likert scales, while Part V utilized a checklist format.

The instrument was pilot-tested prior to the main study, and all sections demonstrated satisfactory reliability, as indicated by acceptable Cronbach's alpha values.

Data Gathering Procedures

Preliminary Stage. The research process began with the preparation and submission of a transmittal letter addressed to the School's Division Superintendent (SDS) of Cebu City. Then the transmittal letter was submitted to the Office of the Principal of Zapatera National High School, which implemented inclusive education for learners with diverse needs. The letter requested approval to conduct the study among the identified non-SPED teachers and learners. Upon approval and signing of the transmittal letter, the researchers proceeded with the distribution of survey questionnaires to the non-SPED teachers.

To ensure ethical compliance and confidentiality, formal consent was obtained from both the school administration and the participating teachers, and respondents were assured that all information provided would remain confidential and be used solely for research purposes.

Gathering Stage. During the data collection period, the researchers distributed the survey questionnaires and ensured that each participant clearly understood the purpose of the study and the instructions for completing the instrument. After collection, the questionnaires were individually reviewed for completeness and accuracy. Verified responses were then encoded into a Data Matrix file as provided by the statistician. Data hygiene procedures were strictly followed to ensure that all entries were accurate, complete, and consistent prior to statistical processing.

Post–Data Collection Stage. Following the encoding and cleaning of the data, statistical software and Microsoft Excel were used to tabulate and analyze

responses. The processed data were interpreted, and the findings were used to inform the conclusions and the proposed needs-based Learning Enhancement Plan. Throughout this stage, the confidentiality of all respondent information was maintained, and all data collected were used exclusively for the purposes of the study.

Ethical Considerations

Informed consent/assent and right to withdraw without penalty was employed during data gathering and for the confidentiality, the research respondents' names and sensitive information was assigned

with codes. Special care when working with vulnerable learners asl also be observed so that assessments can be non-invasive and parental consent will also be included.

Statistical Treatment of Data

The data gathered from the validated questionnaires and interview transcripts were systematically analyzed using quantitative methods to ensure a comprehensive interpretation of the findings. The following statistical and analytical tools were employed in the study:

The data gathered in this study will be analyzed using both descriptive and inferential statistical techniques appropriate to the nature of each research question.

Frequency and Percentage Distribution - This was used to determine which of the selected digital storytelling tools are most used by respondents in inclusive education classrooms. It will show the proportion of respondents who use each tool, thereby identifying the most and least frequently utilized digital storytelling applications.

Weighted Mean and Standard Deviation - The weighted mean was used to determine: (1) The frequency of use of digital storytelling tools; (2) The perceived effectiveness of digital storytelling in improving learners' outcomes; and (3) The extent of enhancement of inclusive teaching practices using digital storytelling tools. The standard deviation will measure the variability of responses among the respondents.

The computed r-value was used to compare with the critical value at a 0.05 level of significance. If the computed p-value is less than 0.05, the null hypothesis will be rejected, indicating a significant relationship between the variables.

Frequency Count and Rank - This was applied to analyze responses regarding the challenges encountered, support needs, and suggestions for improvement in the implementation of digital storytelling tools. Items will be ranked according to the frequency of responses to determine which challenges and needs are most identified by the respondents.

The **Spearman Rank Correlation Coefficient (ρ),** depending on the was applied to determine the relationship between variables. Correlation analysis was conducted to assess the strength and direction of the relationships between (a) the use of digital storytelling tools and their effectiveness in improving learning outcomes, and (b) the extent of teaching strategies practiced in inclusive classrooms and the effectiveness of storytelling. The level of significance was set at 0.05. The null hypotheses stating that there was no significant relationship between these variables were statistically tested and interpreted based on the computed p-values.

Scoring Procedures

A five-point Likert scale was used to determine the respondents' answers to the different parts of the questionnaire. Each response was assigned a numerical value based on the scale provided for every section. The mean scores was computed, interpreted, and analyzed according to the descriptive equivalents shown below.

Part I. Extent of Use of Digital Storytelling Tools in Inclusive

Classrooms

Each statement is rated using a five-point Likert scale as follows:

Scale	Mean Range	Verbal Description	Interpretation
5	4.20 – 5.00	Always	Digital storytelling tools are always used.
4	3.40 – 4.19	Often	Digital storytelling tools are often used.
3	2.60 – 3.39	Sometimes	Digital storytelling tools are sometimes used.
2	1.80 – 2.59	Seldom	Digital storytelling tools are seldom used.
1	1.00 – 1.79	Never	Digital storytelling tools are never used.

Part II. Extent Education Teaching Practices in Inclusive Classroom

Each statement is rated using a five-point Likert scale as follows:

Scale	Mean Range	Verbal Description	Interpretation
5	4.20 – 5.00	Always	Inclusive Teaching Practices are Very High Effective
4	3.40 – 4.19	Often	Inclusive Teaching Practices are High Effective
3	2.60 – 3.39	Sometimes	Inclusive Teaching Practices are Moderate Effective
2	1.80 – 2.59	Rarely	Inclusive Teaching Practices are Low Effective
1	1.00 – 1.79	Never	Inclusive Teaching Practices are Very Low Effective

Part III. Perceived Level of Effectiveness of Digital Storytelling in

Improving Learning Outcomes

Each statement is rated using a five-point Likert scale as follows:

Scale	Mean Range	Verbal Description	Interpretation
5	4.20 – 5.00	Highly Effective	Digital Story telling greatly enhances learning outcomes.
4	3.40 – 4.19	Effective	Digital Story telling improves learning outcomes
3	2.60 – 3.39	Moderately Effective	Digital Story somewhat contributes to learning outcomes
2	1.80 – 2.59	Less Effective	Digital Story has minimal effect on earning outcomes
1	1.00 – 1.79	Not Effective	Digital Story telling does not enhance learning outcomes

DEFINITION OF TERMS

To ensure clarity and consistency throughout the study, the following key terms are operationally defined according to how they are measured or applied within the context of the research

Challenges. The difficulties or barriers encountered by teachers in implementing digital storytelling in instructions such as lack of time, technical skills, or access to digital resources.

Digital Storytelling. A pedagogical tool that integrates multimedia elements such as images, videos, and narration to create interactive and meaningful learning experiences.

Effectiveness of Digital Storytelling Tools. In this study, this refers to the extent to which digital storytelling (DST) enhances the teaching and learning process in inclusive classrooms. It is measured through its ability to improve student engagement, participation, understanding, and expression, as well as its usefulness in helping Non-SPED teachers deliver lessons that address diverse learning needs.

Inclusive Education. The policies of the inclusive education act stipulate the guidelines needed in the implementation on the teaching and learning in an inclusive classroom.

Learning Outcomes. This pertains to the observable and measurable results of the learning process among students with diverse needs. In this study, learning outcomes include students' comprehension, creativity, motivation, and ability to express ideas effectively after being taught using digital storytelling and inclusive teaching strategies.

Non-SPED Teachers. The general education teachers who do not have formal specialization or certification in Special Education but handle classes that may include students with diverse learning needs.

Special Education. The teaching and learning among students with special needs is based on the locality on where the special education classes are held.

Specific Supports. The types of assistance or resources provided to teachers to help them effectively use digital storytelling, including training, mentoring, technical support, or access to teaching materials.

Teaching Practices. This refers to specific instructional methods, approaches, and techniques used by non-SPED teachers to support inclusive education. It includes how teachers plan, deliver, and assess learning experiences that accommodate students with varied abilities and needs, with or without the integration of digital storytelling tools.

Chapter 2

PRESENTATION, ANALYSIS AND INTERPRETATIONS OF DATA

This chapter presented the data collected from Zapatera National High School for the school year 2025–2026. It covered the extent to which non-SPED teachers use digital storytelling tools, their perceived effectiveness in enhancing learning outcomes, the teaching strategies employed, and the challenges and support needs encountered in inclusive classrooms.

DEMOGRAPHIC PROFILE OF THE RESPONDENTS

This section presents demographic characteristics of the 20 non- specialized education (non-SPED) teachers from Zapatera National High School who participated in the study during the school year of 2025-2026. Understanding their gender, age , and number of years of teaching experience is vital for understanding the integration of digital storytelling tools in inclusive classrooms.

Table 2. **Profile of Respondents**

Characteristics	Category	Frequency	Percent
Gender	Male	4	20%
	Female	16	80%
Age			
	21 – 30	4	20%
	31 – 40	6	30%
	41 – 50	7	35%
Years of Teaching	51 and above	3	15%
	1 – 3	2	10%
	4 – 6	3	15%
	7 – 9	7	35%
	10 and above	8	40%

Table 2 presents the demographic characteristics of the respondents in terms of gender, age, and years of teaching experience. The data show that most respondents were female, accounting for 80% (n = 16) of the sample, while male respondents comprised 20% (n = 4). In terms of age, most of the respondents fell within the 41–50 age group (35%, n = 7), followed by those aged 31–40 (30%, n = 6). Younger respondents aged 21–30 made up 20% (n = 4) of the group, whereas those aged 51 and above represented 15% (n = 3).

Regarding teaching experience, a large proportion of respondents reported having 10 years or more of experience (40%, n = 8), while 35% (n = 7) had been teaching for 7–9 years. Fewer respondents indicated 4–6 years (15%, n = 3) and 1–3 years (10%, n = 2) of teaching experience. Overall, the findings suggest that the respondents were largely female, mostly within the middle-age range, and

possessed considerable teaching experience, providing a strong basis for informed perspectives on instructional practices.

The demographic trends shown in Table 2 imply that a significant proportion of respondents are female, aged from 31-50 and the majority are experienced (7 years or older) teachers. These characteristics are pivotal for embedding inclusive educational practice and digital storytelling in the hands of non-SPED teachers. Most of the female respondents may also indicate an influence in the design of inclusive teaching strategies based on their educational philosophies. Several previous studies have also identified that female teachers tend to demonstrate great relational skills and collaborate very effectively, which are important elements of inclusive teaching and learning environments (Francisco, 2020). This tendency may suggest that inclusive work can be seen by looking into behaviors that point to sensitivity to a range in learning needs which is critical for quality inclusion.

Secondly, as many respondents are in intermediate age periods (31-50 years), it is possible to infer that, when adequately supported by training programs, such teachers may have great experience and willingness to adapt new ways of teaching (Fälth & Selenius, 2022). Therefore, non-SPED teachers in Zapatera National High School can successfully implement digital storytelling in their classes when they obtain the necessary institutional infrastructure, such as institutional resources and professional development and/or institutional change opportunities.

Finally, the proportion of participants with 7 years or more educated suggests that these are the insights accumulated from more trained individuals. Although such expertise is helpful for managing classrooms and planning instruction as it encompasses all learners, the current literature shows that teachers need continuous professional development to help them foster long-lasting innovation and continue innovating, over time (OECD, 2024). Thus, even with their level of prior professional practice, non-SPED educators need extended training on digital storytelling strategies and inclusive pedagogies to effectively accommodate a range of learners. In other words, the demographic elements provided here support the credibility of the study as these demographic qualities relate to perspectives from mid-career educators who could evaluate both inclusions and influences of digital storytelling on educational achievement.

USAGE FREQUENCY AND RANKING OF DIGITAL STORYTELLING

TOOLS AMONG THE RESPONDENTS

Digital storytelling has emerged as a valuable instructional approach in inclusive education, offering diverse learners engaging and personalized learning experiences. This section highlights how frequently non-SPED teachers use various digital storytelling tools and ranks them according to their usage.

The table below illustrates which digital storytelling platforms are most used and how often they are incorporated into teaching practices to support learning in inclusive classrooms. Examining these usage patterns helps identify teachers' preferred tools, as well as potential gaps in the adoption of digital resources. This information can guide future professional development initiatives and support strategies, ultimately promoting more effective and inclusive teaching practices.

Table 3. **Usage Frequency and Ranking of Digital Storytelling Tools Among the Respondents**

No.	Digital Storytelling Tools	(f)	Percent of Responses	Percent of Cases (Respondents)	Rank	Weighted Mean	Verbal Description
1	PowerPoint	20	20.62%	100%	1	4.85	Always
2	Storybird	5	5.15%	25%	5	1.40	Never
3	VoiceThread	3	3.09%	15%	9.5	1.25	Never
4	PicLits	1	1.03%	5%	16.5	1.05	Never
5	Canva	19	19.5%	95%	2	4.20	Often

6	StoryJumper	1	1.03%	5%	16.5	1.05	Never
7	Toontastic	1	1.03%	5%	16.5	1.05	Never
8	Animaker	4	4.12%	20%	7	1.55	Never
9	Powtoon	4	4.12%	20%	7	1.45	Never
10	Microsoft Sway	2	2.06%	10.%	11.5	1.25	Never
11	Book Creator	3	3.09%	15%	9.5	1.30	Never
12	Pixton	1	1.03%	5%	16.5	1.05	Never
13	Visme	1	1.03%	5%	16.5	1.15	Never
14	Animoto	2	2.40%	10%	11.5	1.15	Never
15	WeVideo	1	1.03%	5%	16.5	1.05	Never
16	Adobe Express	8	8.25%	40%	4	1.90	Rarely
17	Adobe Slate	4	4.12%	20%	7	1.45	Never
18	Google Slides	15	15.46%	75%	3	2.75	Sometimes
19	Piktochart	1	1.03%	5%	16.5	1.15	Never
20	MapSkip	1	1.03%	5%	16.5	1.10	Never
	Total	**97**	**1.00%**	---------		**1.655**	**Never**

Table 3 presents the extent to which respondents frequently use various digital storytelling tools in inclusive education classrooms. The table lists 20 tools, along with frequencies, percentages of responses, percentages of cases, ranks, weighted means, and corresponding verbal descriptions. The data were analyzed using frequency counts, percentage distribution, and weighted mean interpretation to determine which tools were most and least commonly utilized. As the table shows, PowerPoint was as the most frequently used tool, receiving the highest frequency (f = 20), the greatest percentage of responses (20.62%), and the top rank (Rank 1), with a weighted mean of 4.85 interpreted as "Always." This indicates that nearly all respondents consistently rely on PowerPoint for digital storytelling activities. Canva followed closely (f = 19, 19.59%, Rank 2), interpreted as "Often," showing that it is also a widely preferred tool. Other moderately used tools included Google Slides (f = 15, 15.46%, Rank 3, "Sometimes") and Adobe Express (f = 8, 8.25%, Rank 4, "Rarely").

In contrast, the majority of tools such as Storybird, VoiceThread, PicLits, StoryJumper, Animaker, Microsoft Sway, Book Creator, PicLits, Visme, Animoto, WeVideo, Adobe Slate, Piktochart, and MapSkip—received very low frequencies (f = 1–4), low weighted means (1.05–1.55), and were verbally interpreted as "Never," indicating minimal adoption by teachers. Overall, the weighted mean for the entire set of tools (WM = 1.655) suggests that respondents generally use digital storytelling tools to a low extent, relying heavily on only a few accessible platforms, while most tools remain underutilized. This pattern highlights a strong preference for familiar and user-friendly applications and suggests a need for broader training and exposure to diverse digital storytelling tools.

The results indicate that teachers in inclusive education classrooms rely predominantly on familiar and accessible digital storytelling tools—particularly PowerPoint and Canva—while most other tools remain rarely utilized. This heavy reliance on only a few platforms suggests that teachers prefer tools that are easy

to navigate, readily available, and already integrated into their typical instructional practices. Recent studies have similarly noted that educators tend to adopt technologies that offer simplicity, familiarity, and low cognitive load, especially when teaching diverse learners (Sánchez-Cruzado, Santiago Campión, & Sánchez-Compaña, 2021).

The minimal use of a wide range of digital storytelling tools also implies gaps in teacher digital competence and limited exposure to emerging multimedia applications. Low utilization of specialized DST platforms, despite their potential to support differentiation and multimodal learning, may reflect insufficient training or lack of confidence in using more advanced tools. This aligns with research showing that teachers often underuse innovative digital resources when professional development and institutional support are inadequate (Scherer & Siddiq, 2020). As a result, opportunities to

enhance learner engagement, particularly for students with varied learning needs, may not be maximized.

Furthermore, the overall low weighted mean for the entire set of tools suggests that digital storytelling has not yet become a fully integrated pedagogical practice within inclusive classrooms. This underutilization limits the potential benefits of DST, such as improved creativity, motivation, and accessibility for students with diverse learning profiles. Recent findings emphasize that effective

technology integration, in inclusive education requires ongoing capacity building, structured ICT training, and administrative support to empower teachers to diversify their digital tool use (Bond et al., 2021).

EXTENT OF TEACHING PRACTICES IN INCLUSIVE CLASSROOMS AS PERCEIVED BY THE RESPONDENTS

Digital storytelling supports inclusive teaching by allowing educators to use a variety of strategies that cater to the diverse needs of learners. This section explores how non-SPED teachers perceive their own inclusive teaching practices, with a focus on important aspects such as differentiating activities and fostering collaboration in the classroom.

Table 4. Extent of Teaching Practices in Inclusive Classrooms as Perceived by the Respondents

S/N	Indicators	Weighted Mean	Verbal Description
1	I differentiate learning activities according to learners' abilities.	4.30	Always
2	I use visual aids and hands-on materials to support learning.	4.50	Always
3	I collaborate with SPED teachers and parents to address learners' needs.	3.45	Often
4	I adapt assessments to match diverse learners' abilities.	4.15	Often
5	I create an inclusive classroom environment where all students feel accepted.	4.80	Always
6	I explain lessons clearly to ensure understanding for all learners.	4.85	Always
7	I explain lessons clearly to ensure understanding for all learners.	4.80	Always
8	I encourage learners to respect and assist one another when using digital storytelling tools.	4.85	Always
9	I use pictures, videos, or stories to support diverse learners' understanding and engagement.	4.80	Always
10	I ensure that all learners feel accepted, participate actively, and are included in classroom activities.	4.90	Always
	Aggregated Weighted Mean	**4.54**	**Always**

Table 4 shows how frequently respondents implement inclusive teaching practices in their classroom, based on the weighted means and verbal descriptions. The table includes ten key indicators covering areas such as differentiating activities, fostering collaboration, adapting assessments, maintaining a positive classroom climate, providing clear instruction, and using visual and digital storytelling supports. A 5-point Likert scale was used, and the results were summarized to reflect the extent to which each practice is applied

The findings reveal that all ten practices were rated either "Always" or "Often," indicating a generally strong adherence to inclusive teaching principles. The highest-rated indicator was ensuring that all learners feel accepted and actively included in classroom activities (WM = 4.90, "Always"),

demonstrating a consistently positive classroom climate. This is closely followed by explaining lessons clearly to ensure understanding (WM = 4.85, "Always"), encouraging learners to respect and assist one another when using digital storytelling tools (WM = 4.85, "Always"), and using pictures, videos, or stories to support diverse learners (WM = 4.80, "Always"). Practices such as differentiating learning activities (WM = 4.30) and adapting assessments (WM = 4.15) received slightly lower means but still reflected high implementation levels, both rated as "Always" and "Often," respectively. The lowest rated was collaboration with SPED teachers and parents (WM = 3.45, "Often"), suggesting that while collaboration occurs, it may present opportunities for further strengthening. Overall, the aggregated weighted mean (WM = 4.54), interpreted as "Always," indicates that respondents consistently apply inclusive teaching practices, demonstrating a strong commitment to meeting the needs of diverse learners in their classrooms.

The findings indicate that teachers demonstrate a strong commitment to inclusive teaching practices, as evidenced by the consistently high ratings across all ten indicators. The high weighted means suggest that inclusive strategies—such as ensuring a positive classroom climate, promoting peer support, using multimodal materials, and providing clear instructional explanations—are deeply embedded in teachers' day-to-day practice. This aligns with recent literature highlighting the crucial role of supportive classroom environments and clear instructional communication in fostering equitable participation among diverse learners (Sari et al., 2020).

The strong use of visual materials, digital storytelling elements, and multimodal support also reflects teachers' awareness of the need to address varied learning preferences and abilities. Such practices enhance accessibility and support students with learning difficulties, consistent with findings that multimodal instruction contributes significantly to learner engagement and comprehension in inclusive settings (Mohammed & AbdulRahman, 2020). However, the slightly lower ratings for differentiated instruction and assessment adaptation imply that teachers may still face challenges in fully individualizing learning tasks, an area often identified as demanding in inclusive pedagogy.

The lowest rating—collaboration with SPED teachers and parents—suggests a potential gap that may limit the full implementation of inclusive education. Effective collaboration is widely recognized as a foundational component of inclusive practice, as shared expertise and coordinated support systems allow for more responsive instruction and interventions. Limited collaboration may therefore hinder the ability to provide comprehensive and consistent support for learners with special needs (Yada et al., 2020). Strengthening communication, co-planning, and partnership structures may further enhance inclusive outcomes. Overall, the aggregated weighted mean demonstrates that teachers are performing at a high level of inclusiveness; however, the findings also identify key areas—particularly collaboration and individualized accommodations—where targeted professional development and systemic support may lead to even more effective inclusive classroom practices.

LEVEL OF EFFECTIVENESS OF DIGITAL STORYTELLING IN IMPROVING LEARNING OUTCOMES AS PERCEIVED BY THE RESPONDENTS

Digital storytelling plays a key role in improving learning outcomes in inclusive classrooms by boosting student engagement, understanding, and skill development for learners with diverse needs. This section explores how non-SPED teachers perceive the effectiveness of digital storytelling tools in supporting these outcomes.

Table 5. Level of Effectiveness of Digital Storytelling in Improving Learning Outcomes as Perceived by the Respondents

S/N	Indicators	Weighted Mean	Verbal Description
1	Digital storytelling is effective in improving learners' reading comprehension.	4.40	Very Effective
2	Digital storytelling is effective in developing learners' listening skills.	4.45	Very Effective
3	Digital storytelling is effective in enhancing learners' vocabulary development.	4.40	Very Effective

4	Digital storytelling is effective in increasing learners' engagement and motivation.	4.50	Very Effective
5	Digital storytelling is effective in strengthening learners' critical thinking and creativity.	4.75	Very Effective
6	Digital storytelling is effective in improving learners' understanding of lessons	4.70	Very Effective
7	Digital storytelling is effective in helping learners maintain focus and attention during class.	4.45	Very Effective
8	Digital storytelling is effective in increasing learners' enjoyment and motivation to learn.	4.60	Very Effective
9	Digital storytelling is effective in developing learners' digital literacy skills.	4.55	Very Effective
10	Digital storytelling is effective in enhancing learners' creative self-expression and ability to share unique perspectives.	4.45	Very Effective
	Aggregated Weighted Mean	**4.525**	**Very Effective**

Table 5 shows how teachers perceive the effectiveness of digital storytelling in improving students' learning outcomes across ten key areas. Using a 5-point Likert scale, responses were summarized through weighted means and verbal interpretations to reflect the degree to which teachers believe digital storytelling enhances different aspects of learning.

The results show consistently high ratings across all indicators, with weighted means ranging from 4.40 to 4.75, all interpreted as "Very Effective." The highest-rated area was the impact of digital storytelling on developing learners' critical thinking and creativity (WM = 4.75), highlighting its role in fostering higher-order thinking and creative expression. This was followed by improvements in lesson comprehension (WM = 4.70) and increased student engagement and motivation (WM = 4.50), showing that digital storytelling not only supports understanding but also encourages active participation.

Other areas, such as building digital literacy skills (WM = 4.55), enhancing self-expression (WM = 4.45), and helping students maintain focus and attention (WM = 4.45), also received strong positive ratings. The lowest-rated areas though still considered "Very Effective"—were reading comprehension (WM = 4.40) and vocabulary development (WM = 4.40), suggesting slightly less but still meaningful impact in literacy outcomes.

Overall, the aggregated weighted mean of 4.525, interpreted as "Very Effective," indicates that teachers overwhelmingly believe digital storytelling

significantly enhances learning outcomes, demonstrating its value as a versatile and impactful instructional strategy across multiple areas of student development.

The findings imply that teachers in inclusive classrooms have established a strong foundation of inclusive instructional practices. The consistently high weighted means across all indicators suggest that teachers effectively maintain positive classroom climates, promote peer support, use multimodal instructional materials, and provide clear explanations. These results indicate that inclusive values are well-integrated into daily teaching routines, reinforcing research showing that supportive and well-managed classroom environments significantly enhance participation and engagement among diverse learners (Sari et al., 2020).

The strong use of visual resources and digital storytelling elements further implies that teachers recognize the importance of addressing varied learning needs through multimodal approaches. This suggests a commitment to ensuring accessibility for students with different learning profiles, including those with disabilities or learning difficulties. Such findings support recent studies demonstrating that multimodal strategies increase learner motivation, comprehension, and overall engagement in inclusive settings (Mohammed & AbdulRahman, 2020). However, the slightly lower ratings for differentiation and assessment adaptation highlight a continuing challenge for teachers in

fully customizing instruction. This may indicate the need for more specialized training and support to help teachers design individualized tasks and assessment modifications.

The lowest rating—collaboration with SPED teachers and parents suggests an important implication for inclusive education implementation. While collaboration occurs, it may not yet be strong or systematic enough to provide fully coordinated support for learners with special needs. Limited collaboration can hinder information-sharing, intervention planning, and consistent progress monitoring. This aligns with research emphasizing that effective collaboration among general education teachers, special educators, and families is essential for successful inclusive practices (Yada et al., 2020). Strengthening co-planning structures, communication systems, and parent partnerships will therefore be critical to improving inclusive processes and learner outcomes.

Overall, these findings imply that while teachers demonstrate a high level of inclusive practice, enhancing collaboration, differentiation, and assessment adaptation—supported by sustained professional development—can lead to even more effective and responsive inclusive education environments.

SIGNIFICANT RELATIONSHIPS

This section analyzes the relationships between the key variables of the study, specifically testing for the significant associations between the use of digital storytelling (DST) tools, the extent of inclusive teaching practices, and their effectiveness in improving student learning outcomes among non-SPED teachers at Zapatera National High School. The analysis addresses whether higher frequency of digital tool usage correlates with the greater effectiveness ratings providing evidence on practical integration impacts. It also investigates links between robust inclusive teaching practices and digital storytelling outcomes, highlighting potential synergies for diverse learners. These relationships offer insights into how tool adoption and pedagogical approaches mutually reinforce student achievement in inclusive settings. Tables 5 and 6 present these relationships using Spearman Rank-Order Correlation, a nonparametric method suitable for ordinal data.

Table 6 examines the correlation between how frequently DST tools are used and their perceived effectiveness in enhancing learning outcomes. Table 6, on the other hand, looks at the relationship between the extent of inclusive teaching practices and the effectiveness of digital storytelling tools.

Table 6. Correlation Between the Use of Digital Storytelling Tools and Their Effectiveness in Improving Learning Outcomes

			Use of Digital Storytelling Tools	Student Learning Outcomes
Spearman's rho	Use of Digital Storytelling Tools	Correlation Coefficient	1.000	0.465
		Sig. (2-tailed)		0.039
		N	20	20
	Student Learning Outcomes	Correlation Coefficient	0.465	1.000
		Sig. (2-tailed)	0.039	
		N	20	20

*Correlation is significant at the 0.05 level (2-tailed)

Table 6 shows the results of the Spearman Rank-Order Correlation analysis, which was conducted to determine whether there is a significant relationship between the use of digital storytelling (DST) tools and their effectiveness in improving student learning outcomes. The Spearman test, a nonparametric method, was used because the variables were measured on ordinal scales and did not meet the assumptions required for parametric correlation.

The results revealed a moderate positive correlation (rho = 0.465) between the frequency of using DST tools and student learning outcomes, indicating that teachers who use these tools more often tend to report higher perceived effectiveness in enhancing learning. This correlation was statistically significant at the 0.05 level (p = 0.039) based on a sample of 20 respondents.

These findings suggest that frequent use of digital storytelling tools is associated with better student comprehension, engagement, creativity, and overall academic performance. In other words, digital storytelling is not just a teaching method it plays a meaningful role in improving learning outcomes in inclusive classrooms. Overall, the moderate and significant correlation underscores DST's value as an effective instructional strategy that supports diverse learners and strengthens educational outcomes.

This implies that frequent and purposeful integration of DST can contribute meaningfully to students' learning experiences, supporting recent research that highlights the role of digital storytelling in improving academic achievement and narrative competence (Çetin et al., 2021).

Additionally, the use of multimedia elements within DST—such as text, images, audio, and video—supports inclusive education by accommodating diverse learning needs and promoting equitable participation among learners with

varied abilities (Karmini, Chai, Lek, & Rustiyana, 2025). The positive relationship further underscores the importance of teacher training and professional development in effectively implementing DST, as educators' competence and confidence in using these tools directly influence learning outcomes (Rosyid et al., 2025).

Overall, the results suggest that digital storytelling not only serves as an engaging instructional strategy but also fosters higher-order skills, including creativity, critical thinking, and digital literacy, and should be systematically integrated into inclusive classroom practices to maximize its educational benefits.

Table 7. Correlation Between the Extent of Teaching Practices in Inclusive Classrooms and Effectiveness of Digital Storytelling in Improving Learning Outcomes

			Teaching Practices	Student Learning Outcomes
Spearman's rho	Teaching Practices	Correlation Coefficient Sig. (2-tailed) N	1.000 20	0.272 0.245 20
	Student Learning Outcomes	Correlation Coefficient Sig. (2-tailed) N	0.272 0.245 20	1.000 20

*Correlation is significant at the 0.05 level (2-tailed)

Table 7 shows the results of the Spearman Rank-Order Correlation analysis examining the relationship between the extent of inclusive teaching practices and the effectiveness of digital storytelling (DST) in improving student learning outcomes. The Spearman test was used because the data were ordinal and did not meet the assumptions required for parametric tests.

The results revealed a weak positive correlation (rho = 0.272), suggesting that higher levels of inclusive teaching practices are only slightly associated with

higher perceived effectiveness of DST. However, this relationship was not statistically significant (p = 0.245), meaning it cannot be considered meaningful based on this sample of 20 respondents.

These findings indicate that while inclusive teaching practices and DST effectiveness tend to move in the same direction, the connection is not strong. In other words, the effectiveness of digital storytelling in improving learning outcomes may operate independently of the overall level of inclusive teaching practices.

This suggests that simply having strong inclusive strategies such as differentiated instruction, a supportive classroom environment, and the use of visual or digital supports does not automatically guarantee that DST will be effective. Instead, the impact of digital storytelling likely depends on other

factors, including how DST activities are designed and implemented, their alignment with the lesson content, teacher digital competence, and student access to technology. In essence, while inclusive practices create a supportive learning environment, the success of DST as a teaching strategy relies on thoughtful planning, proper execution, and adequate resources.

This also implies that digital storytelling's effectiveness may operate somewhat independently of overall teaching style or at least that inclusive practice alone are not sufficient; the alignment between content, instructional design, and DST tasks matters. As some recent studies argue, success of DST depends on careful instructional design, scaffolded support, and affordances for learner engagement (e.g., collaborative storytelling, well-structured narratives) rather than merely being embedded in an inclusive classroom environment. For example, collaborative DST implementations have been shown to improve group interactions and story quality, which may mediate learning outcomes even when classroom practices vary.

Moreover, the finding indicates that school contexts, resource availability, and teacher/digital literacy likely play a crucial moderating role. Without adequate digital infrastructure, teacher competence, and targeted DST tasks, even an inclusive teaching environment may not yield the full benefits of DST. This is consistent with research highlighting that to leverage DST effectively especially in inclusive or resource-constrained settings educators need institutional support, professional development, and careful planning.

In practice, this suggests that stakeholders (school administrators, curriculum developers) should not assume that inclusive pedagogy automatically ensures DST's success. Instead, they should (1) provide structured support for DST integration (training, resources, scaffolding), (2) pay attention to instructional design quality (relevant tasks, narrative structure, collaboration), and (3) consider contextual factors (student digital access, diversity of learners, subject matter) when applying DST in inclusive classrooms.

Overall, the findings highlight the importance of intentional design and resourcing when using DST inclusive teaching practices form a necessary but not sufficient foundation: to maximize DST's positive effects on learning outcomes, educators must couple inclusivity with well-designed digital pedagogy, technical competence, and responsive supports.

CHALLENGES EXPERIENCED, AND SUGGESTIONS FOR IMPROVEMENT IDENTIFIED BY RESPONDENTS IN USING DIGITAL STORYTELLING TOOLS

Implementing digital storytelling in inclusive classrooms often comes with practical challenges that can affect how non-SPED teachers adopt and use it effectively. This section highlights the obstacles teachers face, the types of support they need, and their suggestions for improving the use of digital storytelling in teaching.

Challenges Experienced

Table 8 presents the challenges encountered by the respondents in using digital storytelling tools, along with their corresponding support needs and suggested areas for improvement. The table highlights the most common difficulties faced by teachers, such as limited access to computers or internet connectivity, lack of technical or ICT skills, and time constraints in preparing digital storytelling materials. It also reflects concerns related to engaging learners with diverse abilities, insufficient school or administrative support, technical issues, and low student motivation. The data are summarized using frequency counts, percentages of responses, percent of cases, and ranking, providing a clear picture of the priority challenges that need to be addressed to enhance the effective implementation of digital storytelling in inclusive classroom settings.

Table 8. Challenges Experienced Identified by Respondents in Using Digital Storytelling Tools

	Indicators	f	Percent of Responses	Percent of Cases	Rank
	Challenges Experienced				
1		18	23.38%	90%	1

#	Indicator	f	Percentage	Percent of Cases	Rank
2	Limited access to computers or internet connection	10	12.99%	50%	3.5
	Lack of technical knowledge or ICT	15	19.48%	75%	2
3	skills	10	12.99%	50%	3.5
4	Time constraints in preparing				
	Difficulty engaging learners with diverse	9	11.69%	45%	5.5
5	abilities				
	Inadequate school or administrative	6	7.79%	30%	7
6	support				
	Technical issues (e.g., software glitches,	9	11.69%	45%	5.5
7	device)	77	100.00%		
	Insufficient motivation among students				
	Total				

Table 8 summarizes the challenges teachers face in using digital storytelling (DST) tools, along with the support they need and their suggestions for improving implementation in inclusive classrooms. The table is organized into three main components—challenges experienced, required support or training, and recommendations for improvement—analyzed through frequency counts, percentages, and rankings to identify the most pressing issues and priorities.

The most reported challenge was limited access to computers or reliable internet (f = 18, 23.38%, ranked 1), highlighting persistent gaps in technological resources. This was followed by time constraints in preparing digital storytelling materials (f = 15, 19.48%, ranked 2). Other significant challenges included lack of technical knowledge or ICT skills and difficulty engaging learners with diverse abilities (f = 10 each, 12.99%, tied rank 3.5). Less frequently mentioned issues were inadequate school or administrative support (f = 9, 11.69%, rank 5.5), insufficient student motivation (f = 9, 11.69%, rank 5.5), and technical problems like software glitches or device malfunctions (f = 6, 7.79%, rank 7).

Support or Training Needed

Table 9 presents the support and training needs identified by the respondents to enhance their effective use of digital storytelling (DST) tools inclusive classroom settings. The table outlines various forms of professional and institutional support, including hands-on training, seminars and workshops on DST integration, peer mentoring, provision of ICT facilities, technical assistance, and administrative support. The data are summarized through frequency counts, percentages of responses, percent of cases, and ranking, allowing for the identification of the most prioritized support mechanisms. Overall, the table provides a clear basis for determining the types of interventions and capacity-building initiatives needed to strengthen teachers' competence and confidence in implementing digital storytelling in teaching and learning.

Table 9. Support and Training Needed Identified by Respondents in Using Digital Storytelling Tools

	Indicators	f	Percentage of Responses	Percent of Cases	Rank
	Support or Training Needed				
1	Hands-on training on DST tools	19	19.19%	95%	1
2	Seminars/workshops on DST integration	18	18.18%	90%	2
3	Peer mentoring and best practice sharing	10	10.10%	50%	7
4	Provision of ICT facilities and digital materials	16	16.16%	80%	3
5	Technical assistance from IT/media specialists	11	11.11%	55%	5.5
6	Supportive policies from school administrators	14	14.14%	70%	4
7	Administrative support for inclusive digital teaching	11	11.11%	55%	5.5
	Total	99	100.00%		

Table 9 shows that the respondents primarily emphasized the need for hands-on training on digital storytelling (DST) tools, which ranked first, indicating that practical, skill-based training is the most critical form of support. This was followed by seminars and workshops on DST integration, reflecting teachers' desire to better understand how to effectively incorporate DST into classroom instruction. The provision of ICT facilities and digital materials also ranked high, highlighting the importance of adequate resources in supporting DST implementation. Other identified needs included supportive policies from school administrators, technical assistance from IT or media specialists, and administrative support for inclusive digital teaching, which point to the role of institutional backing in sustaining DST use. Peer mentoring and best practice sharing, although ranked lowest, still underscores the value of collaborative learning among teachers. Overall, the table suggests that both capacity-building initiatives and strong administrative and technical support are essential for the effective use of digital storytelling tools in inclusive education.

In terms of support needs, teachers most frequently requested hands-on training in DST tools (f = 19, 19.19%, rank 1) and seminars or workshops on integrating DST into teaching (f = 18, 18.18%, rank 2). Other needs included access to ICT facilities and digital resources (f = 16, 16.16%, rank 3), technical assistance from IT specialists (f = 11, 11.11%, rank 5.5), and supportive administrative policies to sustain inclusive digital teaching (f = 11, 11.11%).

Suggestions for Improvement

Table 10 presents the suggestions for improvement identified by the respondents to enhance the implementation of digital storytelling (DST) in teaching and learning. The table outlines key recommendations such as continuous DST training programs, inclusion of DST in professional development initiatives, allocation of sufficient time and resources for lesson preparation, recognition of best practices, and strengthened collaboration among teachers. The data are summarized using frequency counts, percentages, percent of cases, and ranking, providing insight into the most strongly endorsed strategies. Overall, the table highlights priority areas for sustaining and improving the effective use of digital storytelling in inclusive classroom settings.

Table 10. Suggestions for Improvement Identified by Respondents in Using Digital Storytelling Tools

	Indicators	f	Percentage of Responses	Percent of Cases	Rank
	Suggestions for Improvement				
1	Continuous DST training programs	20	24.69%	100%	1.5
2	Allocate more time and resources for lesson	15	18.52%	75%	3
3	Encourage collaboration among teachers	11	13.58%	55%	5
4	Recognize best practices in DST	15	18.52%	75%	3.5
5	Include DST in professional development programs	20	24.69%	100%	1.5
	Total	**81**	**100.00%**		

For improvements, teachers emphasized continuous DST training and integrating it into professional development programs (f = 20 each, 24.69%, tied rank 1.5). They also suggested allocating more time and resources for lesson preparation (f = 15, 18.52%, rank 3), encouraging teacher collaboration (f = 15, 52%, rank 3.5), and recognizing innovative DST practices (f = 11, 13.58%, rank 5).

Overall, these findings show that while teachers value digital storytelling, technological, instructional, and administrative barriers limit its full implementation. Addressing these challenges through sustained professional development, improved ICT infrastructure, and stronger institutional support is essential to maximize DST's potential in enhancing learning in inclusive classrooms.

The fact that limited access to computers and stable internet connection was the most frequently cited challenge (f = 18, 23.38%) highlights a structural barrier that undermines the effective use of digital storytelling (DST) in inclusive education. This underscores that without adequate ICT infrastructure, even motivated teachers and supportive inclusive practices may not suffice for meaningful DST implementation. This aligns with recent literature emphasizing the persistence of a "digital divide" in inclusive contexts, where unequal access to devices and connectivity continues to limit technology-based instruction and widen inequities (Kormos & Julio, 2025). Therefore, equitable infrastructure investment including reliable internet, up-to-date devices, and maintenance is essential to create a level playing field for all learners, particularly in under-resourced or rural schools.

The frequent concern about time constraints for preparing DST materials, along with lack of technical knowledge/ICT skills, points to the need for sustained teacher professional development and capacity building. Many teachers may value DST in principle, but without dedicated time, training, and support, they cannot effectively integrate it into their teaching. This corresponds with studies that identify insufficient teacher training and low digital literacy as major obstacles to integrating technology in inclusive settings — which in turn limits the potential benefits of digital tools for student engagement and learning outcomes (Frontiers review on inclusive digital education, 2025). Thus, for DST to be more than a one-off activity, schools must institutionalize continuous training, mentoring, and peer collaboration as part of teacher development programs.

Furthermore, the call for administrative support, policy backing, and recognition of teacher innovation suggests that sustainable use of DST requires systemic commitment rather than sporadic efforts. Without school-level support — in terms of resource allocation, time scheduling, and recognition of digital pedagogy — teachers' efforts may remain fragmented and short-lived. Research supports that effective integration of ICT in inclusive education depends not only on individual teacher initiative but also on supportive institutional policies, clear guidelines, and consistent resource provision (Sarueda et al., 2025). Therefore,

for DST to realize its full potential in inclusive classrooms, stakeholders must ensure holistic support: infrastructure, training, resources, policy frameworks, and appreciation of teacher innovative practice

Chapter 3

SUMMARY Of FINDINGS, CONCLUSION, AND RECOMMENDATIONS

This chapter provided a concise summary of the study's key findings related to the usage, effectiveness, and challenges of digital storytelling tools in inclusive classrooms. It synthesized data on how frequently teachers use these tools, their perception of the tools' impact on various learning outcomes, and the extent to which inclusive teaching strategies are practiced. The chapter also highlighted significant relationships between teaching strategies and digital storytelling effectiveness. Moreover, it summarized the challenges teachers faced, their support needs, and suggestions for improvement to maximize instructional benefit.

SUMMARY

This study examined how often non-SPED teachers in inclusive classrooms at Zapatera National High School in Cebu City, Cebu used digital storytelling (DST) and how effective they perceived it to be, with the goal of developing a needs-based Learning Enhancement Plan. Using a descriptive–correlational research design, data were gathered from 20 teachers through a validated questionnaire.

The respondents were predominantly female, aged 31–50 years and had seven years or more of teaching experience. These demographic characteristics indicate that the findings were informed by experienced, mid-career educators capable of evaluating inclusive practices and instructional innovations.

The findings showed that only a limited number of digital storytelling tools particularly PowerPoint, Canva, and Google Slides were used regularly, while most tools were rarely or never utilized. Despite this, teachers consistently demonstrated strong inclusive teaching practices, especially through clear

instruction, the use of visual aids, and the creation of inclusive and supportive classroom environments. Digital storytelling was perceived as highly effective in

improving learning outcomes, particularly in enhancing student engagement, comprehension, attention, and digital literacy skills.

Correlation analysis revealed no significant relationship between the frequency of digital storytelling tool use and learning outcomes. However, a significant moderate relationship was found between inclusive teaching practices and the effectiveness of digital storytelling, indicating that DST is most effective when supported by strong inclusive strategies. Teachers also identified several challenges, including time constraints, limited access to ICT resources, and technical difficulties, along with a strong need for further training and administrative support.

Based on these results, a Learning Enhancement Plan was developed to strengthen teachers' competencies and promote inclusive, technology-enhanced instruction in the classroom.

FINDINGS

The study revealed that non-SPED teachers at Zapatera National High School predominantly relied on a limited set of digital storytelling tools, specifically PowerPoint, Canva, and Google Slides, while most other tools were seldom or never used. This resulted in a low overall variety of DST tool usage, as indicated by a weighted mean of 1.655. Despite this limitation, teachers consistently demonstrated strong inclusive teaching practices, with all indicators rated within the "Often" or "Always" categories and an overall weighted mean of 4.54. This suggests that teachers are generally effective in implementing strategies that support diverse learners, likely influenced by their professional experience, mid-career age range (31–50 years), and collaborative tendencies, particularly among the majority female respondents.

Teachers also perceived digital storytelling as highly effective in improving student learning outcomes. All indicators were rated from "Effective" to "Very Effective," with weighted means ranging from 4.40 to 4.75 and an overall mean of 4.525. DST was found to enhance student engagement, comprehension, creativity, attention, and digital literacy skills. Correlation analysis revealed a moderate, positive, and statistically significant relationship between the use of DST tools and learning outcomes (Spearman's rho = 0.465, p = 0.039), indicating that increased and consistent use of these tools contributes positively to students' learning. In contrast, the relationship between inclusive teaching practices and the perceived effectiveness of digital storytelling was weak, positive, and not statistically significant (rho = 0.272, p = 0.245), suggesting that DST can independently enhance learning outcomes regardless of variations in inclusive practices.

Several challenges affecting the effective implementation of digital storytelling were identified, including limited access to ICT resources, insufficient technical skills, time constraints, and difficulties accommodating diverse learner needs. Teachers also highlighted inadequate administrative support and recurring technical issues as barriers. To address these challenges, respondents expressed a strong need for hands-on training, improved ICT facilities, reliable technical support, supportive school policies, and opportunities for professional collaboration. Overall, the findings indicate that while non-SPED teachers demonstrate strong inclusive practices and recognize the instructional value of DST, the limited variety of tools, institutional barriers, and training gaps constrain the full potential of digital storytelling in inclusive classrooms.

CONCLUSIONS

Based on the findings of the study, it is concluded that non-SPED teachers recognize the instructional value of digital storytelling and acknowledge its positive impact on student learning. However, their use of digital storytelling tools remains limited to a few familiar platforms. Despite this limitation, teachers consistently demonstrate strong inclusive teaching practices, which may be influenced by their professional experience, age, and collaborative tendencies. The study further concludes that increased use of digital storytelling tools significantly contributes to improved learning outcomes, emphasizing the importance of expanding both the frequency and variety of DST integration in inclusive classrooms. Moreover, the effectiveness of digital storytelling appears to operate

independently of inclusive teaching practices, suggesting that DST can enhance learning across different instructional contexts. Finally, although non-SPED teachers possess substantial teaching experience, continuous professional development remains necessary to sustain innovation in digital and inclusive pedagogies and to ensure effective accommodation of diverse learner needs.

RECOMMENDATIONS

Based on the findings, it is recommended that the school implement a comprehensive Learning Enhancement Plan to boost teachers' competence and confidence in using digital storytelling in inclusive classrooms. This plan could include ongoing, hands-on training workshops on a variety of digital storytelling tools, opportunities for peer mentoring, and collaborative sharing of skills and best practices among teachers. The school should also ensure that adequate ICT facilities are available, expand access to digital resources, and establish clear administrative support to facilitate smooth integration of technology into teaching.

Furthermore, policies that encourage collaborative planning between non-SPED and SPED teachers should be promoted to strengthen inclusive practices. Regular recognition of innovative teaching strategies and the inclusion of digital storytelling in professional development programs will help make its use a routine part of classroom instruction and support continuous teacher growth.

With these interventions, teachers will be better equipped to use digital storytelling effectively, creating more engaging and meaningful learning experiences. Ultimately, this will contribute to improved learning outcomes for all students in inclusive education settings.

Chapter 4

OUTPUT THE STUDY

LEARNING ENHANCEMENT PLAN

Rationale

The Learning Enhancement Plan (LEP) is developed in response to several key challenges identified in the integration of digital storytelling (DST) within inclusive classrooms. While teachers recognize the instructional benefits of DST, its full implementation is hindered by the limited use of diverse digital tools, insufficient ICT skills, and the significant time required to create DST-based lessons. Teachers also face difficulties in designing activities that engage learners with diverse abilities, and these challenges are further compounded by limited administrative support and a general lack of awareness of DST's instructional value. Additionally, the absence of sustainable professional development opportunities restricts ongoing growth and collaboration among teachers. Therefore, the LEP aims to build teacher competence, enhance resource availability, and strengthen collaborative practices to ensure that DST is effectively utilized to improve learner engagement and academic outcomes in inclusive education settings.

Objectives

The objectives of the Learning Enhancement Plan focus on addressing the specific areas of concern identified in the study. First, the LEP seeks to broaden teachers' knowledge and utilization of various digital storytelling platforms by exposing them to a wide range of tools and applications. It also aims to strengthen teachers' ICT skills to boost their confidence and competence in integrating technology into lessons. To ease time-related constraints, the plan intends to streamline lesson preparation through ready-made templates and dedicated planning periods. Another objective is to enhance learner engagement by designing differentiated DST activities that cater to the diverse needs of students in inclusive classrooms. Furthermore, the LEP aims to secure stronger administrative support by advocating for adequate resources, clear policies, and technical assistance. Increasing teachers' awareness of the instructional value of DST is also a central objective, ensuring that educators understand its benefits and are motivated to use it consistently. Finally, the plan promotes continuous professional development through collaborative learning communities and recognition of best practices, ensuring the long-term sustainability of DST integration across grade levels.

Learning Enhancement Plan (LEP) For SY 2025-2026

Area of Concern	Objectives	Strategies / Interventions	Persons Involved	Budget	Source of Budget	Time Frame	Expected outcome	Actual accomplishment	Remarks
1. Limited access to computers or internet connection	Broaden teachers' knowledge and utilization of various DST platforms.	Conduct hands-on workshops on Canva, Google Slides, Adobe Express, Powtoon, and others; Require teachers to practice at least two new tools per semester.	ICT Coordinator, SPED Teachers, Non-SPED Teachers	Php 7,000	School MOOE	Quarterly	Teachers effectively use at least 2–3 new DST tools in lesson delivery.		
2. Lack of technical knowledge ICT skills	Improve teachers' digital literacy and confidence in using technology.	ICT training sessions; Peer mentoring; Demonstration teaching with coaching.	ICT Coordinator, Master Teachers	Php 5,000	School MOOE	Ist-2nd Quarter	Increased self-reported ICT competence; Improved integration of ICT in lessons.		
3. Time constraints in preparing DST lessons	Reduce teacher workload and increase efficiency in creating DST-based tasks.	Provide ready-made templates, lesson plans, and storyboards; Allocate dedicated DST planning time.	Department Heads SPED Teachers, Non-SPED Teachers	Php 3,000	School MOOE	Quarterly	Faster preparation time; Increased number of DST lessons implemented.		
4. Difficulty engaging learners with diverse abilities	Enhance student participation and engagement through differentiated DST tasks.	Create differentiated DST tasks; Use multimedia elements (audio, visuals, text) tailored to diverse learning styles and needs.	SPED Coordinator Teachers	Php 3,000	School MOOE	Weekly implementation	Higher student engagement; Improved performance in DST activities.		
5. inadequate administrative support for ICT Equipment And internet connectivity	Establish strong administrative backing for DST integration.	Conduct dialogue with administrators; Request resources and technical assistance; Include DST in school improvement plans.	School Heads, ICT Coordinator Procurement committee	Php 20,000	School MOOE, LGU, Donations	2nd – 4th Quarter	Availability of DST resources; Policy support for ICT and DST activities.		
6. Limited awareness of DST benefits	Strengthen teachers' understanding of DST's instructional value.	Conduct seminars, share best practices, present research findings; Showcase success stories.	Resource Persons Teachers	Php 5,000	School MOOE,	Quarterly	Increased teacher motivation and willingness to use DST.		
7. Include DST teacher's professional development program	Ensure continuous improvement and collaboration among teachers.	Establish a professional learning community (PLC); Recognize best practices; Provide ongoing training	School Administrators Master Teachers, Teachers	Php 2,000		Year-round	Sustained teacher participation; Consistent use of DST across grade levels		

BIBLIOGRAPHY

A. Books

1. Bandura, A. (1978). *Social Learning Theory.* Englewood Cliffs, NJ: Prentice-Hall.

2. Rose, D. H., & Meyer, A. (2002). *Teaching every student in the digital age: Universal design for learning.* Harvard Education Press

3. Schunk, D. H. (2012). *Learning theories: An educational perspective* (6th ed.). Pearson Education.

4. Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

5. CAST. (2018). *Universal Design for Learning Guidelines version 2.2.* CAST. http://udlguidelines.cast.org

B. Journals

6. Al-Azawei, A., Serenelli, F., & Lundqvist, K. (2016). Universal Design for Learning (UDL): A content analysis of peer-reviewed journal papers from 2012 to 2015. *Journal of the Scholarship of Teaching and Learning, 16*(3), 39–56. https://doi.org/10.14434/josotl.v16i3.19295

7. Bond, M., Marín, V. I., Dolch, C., Bedenlier, S., & Zawacki-Richter, O. (2021). Digital transformation in German higher education: Student and teacher perceptions and usage. *International Journal of Educational Technology in Higher Education, 18*(1), 1–21.

8. Bratitsis, T., & Ziannas, P. (2015). From early childhood to special education: Interactive digital storytelling as a coaching approach for fostering social empathy. *Procedia Computer Science, 67*, 231–240.

9. Çetin, İ., Yıldırım, O., & Altınay, F. (2021). The effectiveness of digital storytelling in improving students' speaking and comprehension skills: A systematic review. *Sustainability, 13*(17), 9829. https://doi.org/10.3390/su13179829

10. Epe, C., Gadiana, S. M., Glodove, G. N., & Mobida, F. M. (2024). Inclusive education readiness among elementary educators: A case study in Tugbongan Elementary School.

11. Fälth, L., & Selenius, H. (2022). Teachers' perceptions of digital technology use in inclusive learning environments. *Behavioral Sciences*, 12(5), 1–15.

12. Francisco, J. (2020). *Enhanced teacher induction programs and professional competence of teachers*. International Journal of Research and Innovation in Social Science.

13. Galaterou, J., & Antoniou, A.-S. (2017). Teachers' attitudes towards inclusive education: The role of job stressors and demographic parameters. *International Journal of Special Education.*

14. Hennes, A. K., Büyüknarci, Ö., Rietz, C., & Grünke, M. (2015). Helping children with specific learning disability to improve their narrative writing competence by teaching them to use the story maps strategy. *Insights on Learning Disabilities, 12*(1), 35–56.

15. Invento, C., & Jaca, C. A. L. (2022). Adaptive storytelling as a teaching strategy with specific learning disability. *Volume 11*(1).

16. Jaca, C. A. L. (2021). Storytelling in online classes as an oral communication strategy during the Covid-19 pandemic. *Randwick International of Education and Linguistics Science Journal, 2*(1), 1–7.

17. Karmini, L., Chai, C. S., Lek, T., & Rustiyana, R. (2025). Digital storytelling as an inclusive instructional strategy: Supporting learners with diverse abilities. *International Journal of Education and New Learning Technologies, 12*(1), 78–95. https://research.adra.ac.id/index.php/ijen/article/view/2550

18. Kocaman-Karoglu, A. (2015). Personal and educational digital storytelling: Tools for teachers and learners. *Educational Media International, 52*(4), 340–359.

19. Kong, C., & Yasmin, F. (2022). Impact of parenting style on early childhood learning: Mediating role of parental self-efficacy. *Frontiers in Psychology, 13*, 928629.

20. Lazzari, M. (2017) – Digital storytelling for inclusive education: An experience in initial teacher training (Research on Education and Media / ERIC)

21. Marinay, V. C. M., & Delos Reyes, N. R. (2024). An in-depth analysis of receiving teacher practices for students with special educational needs in inclusive classrooms. *Scimatic Journal.*

22. Masongsong, J. M., Lopres, J. R., Aguirre, M. M., et al. (2023). Level of teachers' training in inclusive education and their sense of efficacy. *International Journal of Social Management Studies.*

23. Miña, A. (2024). The lived experiences of special education teachers in inclusive classrooms. *Philippine e-Journals.*

24. Mohammed, A., & AbdulRahman, A. (2020). The impact of multimodal learning on students' engagement and comprehension in inclusive classrooms. *Journal of Education and e-Learning Research, 7*(3), 270–276.

25. OECD. (2024). *Teaching for today's world: Results from TALIS 2024*. Organisation for Economic Co-operation and Development.

26. Robin, B. R. (2016). The power of digital storytelling to support teaching and learning. *Digital Education Review, 30*, 17–29.

27. Rosyid, F., Hasanah, U., & Widodo, A. (2025). The impact of digital storytelling applications on enhancing critical thinking abilities in higher education students.

28. *International Journal of Emerging Technologies in Learning, 20*(4), 45–60. https://www.researchgate.net/publication/389036990

29. Rose, D., & David. (2001). Universal Design for Learning. *Journal of Special Education Technology, 16*, 66–67. https://doi.org/10.1177/016264340101600208

30. Sánchez-Cruzado, C., Santiago Campión, R., & Sánchez-Compaña, M. T. (2021). Teacher digital literacy: The indisputable requirement for digital-based learning. *Education and Information Technologies, 26*, 3427–3445.

31. Saputra, D. – Digital storytelling for inclusive education: Voices of students with special needs in the classroom (IJEN)

32. Sari, H., Celik, H., & Koc, M. (2020). Classroom climate and inclusion: Teachers' practices in supporting diverse learners. *International Journal of Inclusive Education, 24*(12), 1314–1329.

33. Scherer, R., & Siddiq, F. (2020). The relation between teachers' pedagogical beliefs and technology use: A systematic review. *Computers & Education, 156*, 103936.

34. Saputra, D. – Digital storytelling for inclusive education: Voices of students with special needs in the classroom (IJEN)

35. Wass, R., Harland, T., & Mercer, A. (2011). Scaffolding critical thinking in the zone of proximal development. *Higher Education Research & Development, 30*(3), 317–328. https://doi.org/10.1080/07294360.2010.489237

36. Yada, A., Tolvanen, A., & Savolainen, H. (2020). Teachers' collaboration and its role in supporting inclusive education: A cross-sectional study. *European Journal of Special Needs Education, 35*(2), 175–190.

37. Yasar-Akyar, O., Rosa-Feliz, C., Sunday-Oyelere, S., Muñoz, D., & Demirhan, G. (2022). Special education teacher's professional development through digital storytelling. *Comunicar: Media Education Research Journal, 30*(71), 89–99.