

Art of Digital Storytelling: A Tool in Improving Listening Comprehension

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ABSTRACT

Listening is one of the most demanding English macro-skills but often receives less focus, despite its importance to language proficiency. As a result, it's vital to pay attention to this skill because its impact on language proficiency is just as significant as the other macro-skills in English. This study examined the effect of digital storytelling on the listening comprehension of Grade 7 students at Palompon Institute of Technology using an action research design and listening tests. Results showed students had an average pre-test mean of 12.47 and improved to a high level with a mean of 17.02 after the intervention, indicating a significant difference. This implies that when the students are exposed to digital storytelling, they are more likely to answer comprehension questions correctly, thus increasing their listening comprehension skills. It is recommended that teachers should use effective method such as Digital Storytelling in improving the listening comprehension of the students.

INTRODUCTION

Language acquisition begins at birth and develops continuously throughout an individual's life. Learners build their linguistic competence through communication, self-expression, and interaction with their environment, with prior knowledge of their native tongue serving as a foundation for acquiring new languages. Among the four macro-skills—listening, speaking, reading, and writing—listening is often considered the cornerstone of language development because it is the first skill acquired and essential for effective communication (Ellison & Wang, 2018).

Despite its significance, listening comprehension remains one of the least emphasized skills in classroom practice. Goh (2000) noted that learners frequently struggle with retaining information, recognizing familiar words, and constructing meaning from what they hear. In the Philippine context, while the K-12 curriculum highlights integration of listening and speaking, reading comprehension and writing remain the primary focus of instruction (Quijano, 2012; Department of Education, 2012). Consequently, listening tends to receive limited attention, with many teachers assuming it develops naturally alongside other skills (Hamouda, 2013).

Local research further underscores the importance of addressing this gap. Ambubuyog et al. (2023) demonstrated that active listening significantly improves phonological and pragmatic language learning among education students in Aklan State University, while Velasco and Acuña (2021) found that the use of metacognitive, cognitive, and socio-affective listening strategies positively influenced comprehension among Filipino ESL learners. These findings suggest that explicit listening instruction is essential for strengthening students' language learning outcomes.

The rise of educational technology offers innovative approaches to this challenge. Stahl (2015) argued that digital tools and platforms can enhance listening skills, while Repnik et al. (2012) emphasized that “digital natives” learn best with interactive e-learning materials. One promising tool is digital storytelling, which integrates narrative with multimedia elements such as sound, visuals, and music. Studies have shown that this approach increases engagement, comprehension, and motivation (Hamilton et al., as cited in Wu & Chen, 2020; Kervin & Mantei, 2017; Robin, 2008; Dreon et al., 2015).

Empirical evidence from the Philippines supports its effectiveness. Alipar et al. (2024) reported that Grade 7 students in Laguna significantly improved their listening comprehension when exposed to digital storytelling, while Loniza et al. (2018) found that kindergarten pupils achieved higher comprehension scores after similar interventions. Likewise, Estanislao (2023) showed that digital storytelling enhanced reading comprehension among Grade 7 students in Agusan del Norte, further highlighting its potential to develop multiple language domains. Despite these promising results, few local studies have focused specifically on its impact on listening comprehension at the secondary level.

At PIT Laboratory High School, classroom observations revealed that Grade 7 students often struggled to answer comprehension questions after teacher-led story readings, suggesting gaps in listening development. This

situation underscores the need to investigate whether digital storytelling can serve as an effective intervention for enhancing listening comprehension. Addressing this gap not only contributes to the growing body of literature on technology-enhanced learning but also provides context-specific evidence relevant to Philippine classrooms.

Objectives of the Study

This study aimed to investigate the effect of using digital storytelling in improving the listening comprehension level of the Grade 7 students in Palompon Institute of Technology for academic year 2021-2022. Moreover, the findings of this study served as basis in designing guidelines in using digital storytelling in the classroom to improve student's listening comprehension.

In particular, this study sought answers to the following questions:

1. What is the initial listening comprehension level of the students?
2. What is the final listening comprehension level of the students?
3. Is there a significant difference between the initial and final listening comprehension level of the students exposed to digital storytelling?
4. Based on the findings of the study, how will the guidelines in carrying out digital storytelling be designed?

LITERATURE REVIEW

Multimedia Learning Theory

This theory was proposed by Mayer (2001) and explains how students learn more effectively when information is presented through both verbal and visual channels. According to Mayer, digital storytelling enhances comprehension because it integrates narration (auditory input) with visuals (pictorial input), allowing learners to build stronger mental connections. The dual-channel processing increases retention and makes listening activities more meaningful (Fajardo, 2020).

There are two main principles relevant to listening comprehension:

1. Modality Principle – students learn better from spoken words and images than from printed text and images.
2. Multimedia Principle – combining words and pictures fosters deeper understanding compared to words alone.

H1: Multimedia input through digital storytelling significantly improves students' listening comprehension.

Constructivist Learning Theory

Based on Piaget and Vygotsky, constructivism emphasizes that learners actively construct knowledge from their experiences. In digital storytelling, students do not passively listen; instead, they interpret meaning, connect new information with prior knowledge, and engage in reflection (Hernández, 2019). When exposed to stories in digital format, learners process language in authentic contexts, which strengthens comprehension skills.

Key assumptions of this theory include:

1. Active Engagement – learners build meaning by interacting with the story.

2. Social Interaction – listening comprehension is improved when learners discuss and share interpretations of digital stories with peers.

H2: Constructivist approaches embedded in digital storytelling enhance learner engagement and interpretation.

Cognitive Theory of Listening Comprehension

According to Vandergrift and Goh (2012), listening is an active cognitive process that requires decoding sounds, understanding vocabulary, and interpreting meaning in real time. Digital storytelling supports this process by providing contextual cues (images, sounds, and animations) that reduce cognitive load. With contextual support, learners can focus on grasping meaning rather than struggling with isolated sounds (Ismail, 2021).

Listening comprehension is strengthened through:

1. Top-down processing – using background knowledge to understand the story.
2. Bottom-up processing – decoding sounds, words, and grammatical structures.

H3: Cognitive support provided by digital stories reduces listening difficulties and promotes comprehension.

Schema Theory

Anderson and Pearson (1984) define schema as the background knowledge structures that influence comprehension. When learners listen to digital stories, the visuals and narration activate prior knowledge, making it easier to predict, infer, and understand meaning (Yang, 2020). The activation of schema enhances students' ability to recall and apply information from listening texts.

H4: Activation of learners' schema during digital storytelling contributes to improved listening comprehension performance.

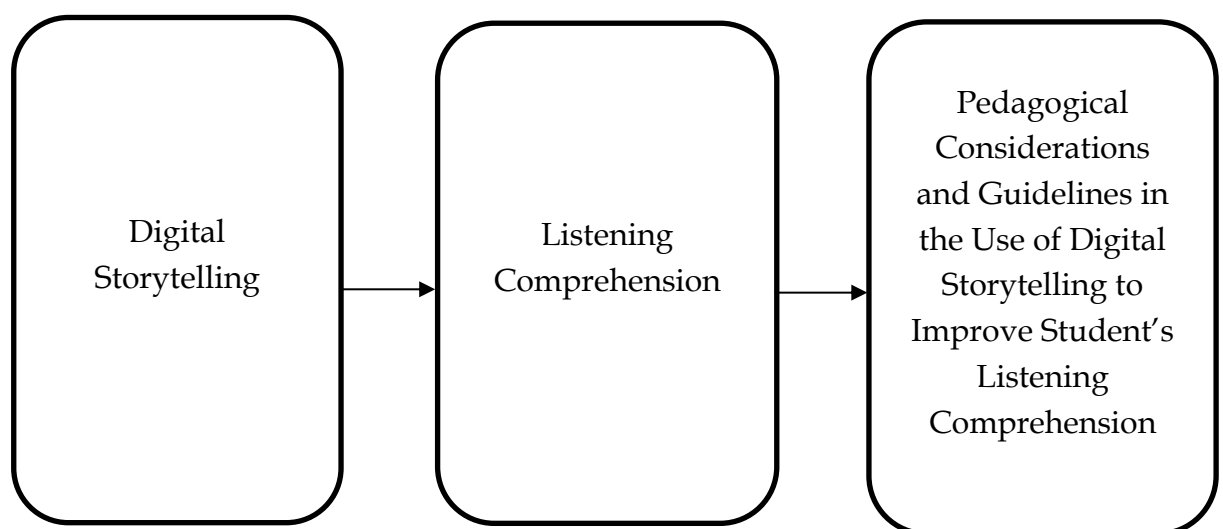


Figure 1. Conceptual Framework

METHODOLOGY

This study employed an action research design based on the framework of Boschmans et al. (2019), which involves collecting data on existing educational outcomes, analyzing the information, implementing an intervention, and evaluating the results. The process followed three key phases – pre-intervention, intervention, and post-intervention to determine the effectiveness of the strategy used. This design was appropriate for assessing what occurred before, during, and after the intervention.

The study was conducted at Palompon Institute of Technology (PIT), a chartered state college in Region VIII, Eastern Visayas, situated in the municipality of Palompon, Leyte. Specifically, it was carried out in the Laboratory High School under the College of Teacher Education. Due to the shift in learning modalities brought about by the COVID-19 pandemic, the research was conducted online with Grade 7 students, ensuring continuity of teaching and learning through digital platforms despite challenges such as unstable internet connectivity, power interruptions, and weather disturbances.

The participants were 60 Grade 7 students of PIT, composed of 29 males and 31 females. However, only 51 actively participated in the study. The research instrument used was a 20-item multiple-choice listening test developed by Davis Randall, an expert in Teaching English as a Second Language (TESL). The test, taken from Randall's ESL Cyber Listening Lab, was designed to measure everyday English comprehension skills across content, vocabulary, voices, and natural speed. It was chosen because its intermediate level was most appropriate for high school learners.

Data gathering followed three phases: pre-intervention, intervention, and post-intervention. Before the intervention, permission was sought from the Dean of the College of Teacher Education and the PIT-JHS principal. Students were oriented about the study, and consent was obtained before administering the pre-test online during regular class hours. The intervention involved three weekly sessions based on the DepEd curriculum guide, with lessons centered on Philippine literary stories. Each session included a review, motivation, presentation of digital storytelling materials, and comprehension questions. After three weeks, the same test was administered as a post-test to measure improvement.

The data collected were subjected to statistical treatment. The mean was used to determine students' initial and final listening comprehension levels, interpreted as high (13.35–20), average (6.68–13.32), or low (0–6.67). To test for significant differences between pre-test and post-test results, a paired z-test for dependent samples was applied since the participants exceeded 30. Ethical considerations were strictly observed: participants' identities were kept confidential, consent was obtained, and participation was voluntary without financial compensation. Students had the right to withdraw at any stage, and all procedures avoided any form of reputational harm to individuals or the institution.

RESULTS AND DISCUSSION

Initial Listening Comprehension Level

The primary purpose of this study investigated the initial listening comprehension level of the students prior to the implementation of the intervention. A standardized listening comprehension test was used to obtain the level of the listening comprehension.

Table 1. Initial Listening Comprehension Level

		Mean	SD	Interpretation
Initial Listening Comprehension Level of the Students	N=51	12.471	2.033	Average

In the initial test, the listening comprehension level of the students obtained a mean of 12.471 with the standard deviation of 2.033. This is interpreted as average level. This means that the students had an average proficiency of listening comprehension prior to the conduct or implementation of the digital storytelling strategy. In other words, the students were already capable of comprehending the plot of the story, identifying the theme and the characters, the mood, and other elements in relation to their comprehension.

As stipulated in table 1, it is evident that the students had already exceeded the low level since students already had a background and the necessary foundation about the different listening strategies in the class.

This result coincides to the study of Shore (2016) where some students have a problem in their ability to listen. They might have what is called an auditory processing problem, namely, a difficulty in understanding spoken language. They hear the sound, but their brain has difficulty making sense of what she is hearing. Simply telling a student with poor listening skills to “pay attention” is not sufficient to solve the problem. Teachers can, however, promote good listening skills by varying the ways in which they communicate, and by making subtle changes in the classroom setting.

Moreover, the results echo the work of Hamouda (2013), who found that learners often face challenges in listening comprehension such as forgetting information quickly and misunderstanding intended meaning. The average-level performance in this study indicates that although students had basic exposure to listening strategies, these challenges persisted and limited their comprehension to a moderate level. Similarly, Goh (2000) reported that even students with background knowledge frequently encounter difficulties in forming mental representations from spoken texts, which may explain why the learners here did not achieve a high level in the pre-test.

Overall, the initial findings affirm the consensus in literature that while students typically acquire basic listening comprehension skills through classroom exposure, they require more targeted, innovative, and multimodal approaches to advance from average to higher proficiency levels. This highlights the necessity of employing interventions such as digital storytelling, which integrates auditory and visual modalities to strengthen comprehension and overcome the limitations identified in both local and international studies.

Final Listening Comprehension Level

This study also stressed on the level of students' listening comprehension after being exposed to digital story telling. A standardized listening comprehension test was used to obtain the final listening comprehension level.

Table 2. Final Listening Comprehension Level

		MEAN	SD	INTERPRETATION
Final Listening Comprehension Level of the Students	N=51	17.020	1.748	High

As seen in the table shown, after the class was exposed to the digital storytelling strategy, they obtained a mean of 17.020 with the standard deviation of 1.748. This is interpreted as high level. This proved that the students had an increase level of listening comprehension after the intervention was administered. This result also implied that the students were more capable of comprehending the details in the story watched and listened to.

Furthermore, the digital storytelling which composed of visual imageries, motions and effects, and even facial expression of the characters as how they portrayed their roles in the story had helped the students to better comprehend the digital storytelling material watched and listened to.

This affirms the study of Cigerci and Gultekin (2017) which investigated the effect of digital stories on the Turkish (mother language) listening skills of fourth grade students. A significant difference was found between the post-test listening comprehension scores for the experimental and control groups. The qualitative data from student and teacher interviews, and from classroom observations, showed that digital stories, listening activities based on the stories, and the creation of a more engaging and motivating classroom environment had positive effects on listening comprehension skills in the experimental group.

Additionally, the improvement can be attributed to the multimodal nature of digital storytelling, which integrates visual imagery, sound effects, animations, and facial expressions that reinforce the spoken narrative. These multimodal cues provided learners with contextual support, making the content more meaningful and easier to recall. This finding supports Mayer's (2005) Cognitive Theory of Multimedia Learning, which posits that learners process information more effectively when it is presented through both auditory and visual channels.

Similarly, Weda et al. (2016) argued that digital storytelling enhances learners' interest in listening tasks by presenting materials in a more interactive format, thereby reducing cognitive load and sustaining motivation. The present findings also align with Verdugo and Belmonte (2007), who concluded that sixth-grade students in a quasi-experimental study performed better in listening comprehension when exposed to digital stories compared to peers in a traditional listening context. In both studies, as in the current one, the integration of technology not only improved comprehension but also cultivated higher levels of learner engagement.

Overall, the post-test results confirm that digital storytelling is an effective pedagogical tool for advancing listening comprehension from average to high levels. By leveraging multimodal features, it addresses common listening barriers identified in earlier literature (e.g., Goh, 2000; Hamouda, 2013) and provides empirical support for its integration in both local and international educational contexts.

Significant Difference of the Students' Initial and Final Listening Comprehension Levels After the Exposure to Digital Storytelling

The purpose of the third research question was to determine the significant difference between the students' initial and final listening comprehension level.

Table 3. Significant Difference of the Students' Initial and Final Listening Comprehension Levels

	Mean	z-value	p-value	Interpretation
Initial Listening Comprehension Level	12.471			
Final Listening Comprehension Level	17.020	-15.98	0.00	Significant

*Significant at 0.05

The data indicated in table 3 shows that there was a significant difference between the initial and final listening comprehension level of the students. Although the students displayed an average level of listening comprehension prior to the implementation of the found intervention, the students were able to obtain a high level of comprehension after the intervention is administered that turned out to be highly correlated with a mean gain of 4.549. The z-value result is -15.98 with p-value of 0.00. Since the p-value is highly significant even at 0.01 level, because it is lesser than the significant level at 0.01 even with the standard $\alpha = 0.05$, this implies that there's sufficient evidence to reject the null hypothesis. This also proves that there is a significant difference between the initial and final listening comprehension level of the students exposed to digital storytelling.

This confirms Weda et. al. (2016) idea that the use of digital storytelling helped students in understanding more about the listening material in the classroom and makes them interested in learning listening. Moreover, digital storytelling is an effective way to involve students with teaching materials and help them to learn language.

Furthermore, in both mother tongue and foreign language education, stories evoke children's imaginary worlds while also developing vocabulary, reading, speaking, listening, and writing skills. Digital stories, which use technology to tell stories, are effective tools for improving students' listening skills (Verdugo & Belmonte, 2007).

Students who watched and listened to digital stories were more focused and attentive during listening. They also provided more correct answers to questions about the stories. In a quasi-experimental study, Verdugo and Belmonte (2007) examined the effects of digital stories on the listening comprehension skills of sixth-year students and concluded that students in the experimental group outperformed students in the control group.

Additionally, Alipar et al. (2024) reported that digital storytelling was highly effective in improving students' comprehension skills. Its success was largely attributed to its engaging features, which sustained learners' attention throughout the activity. Specifically, the integration of animations, automated narration, and consistent voice quality made digital storytelling a powerful tool for enhancing students' listening comprehension.

Overall, the significant difference between pre-test and post-test scores in this study affirms that digital storytelling is not only effective but transformative in elevating listening comprehension from average to high levels. By merging narrative structures with multimedia, it supports both cognitive and affective dimensions of learning, making it an invaluable tool in language education.

CONCLUSIONS AND RECOMMENDATIONS

The study revealed that digital storytelling is effective in improving students' listening comprehension. Unlike traditional storytelling, it integrates visuals, sounds, and motion, engaging multiple senses and reinforcing learning. Students, being digital natives, are already accustomed to multimedia, which makes digital storytelling a more relatable and powerful tool in enhancing comprehension skills.

In light of these findings, students should be trained in various listening comprehension strategies to strengthen independent learning and mastery of the English language. Teachers are encouraged to integrate digital storytelling into their instruction, using the guidelines developed in this study to maximize its effectiveness. Schools may also initiate seminars and orientations to promote digital storytelling and other innovative strategies, thereby improving the quality of language teaching. Finally, future research may replicate this study in other contexts or explore qualitative, phenomenological, and experimental approaches to further examine the role of digital storytelling in language learning.

ADVANCED RESEARCH

Building upon the findings of this study, advanced research on digital storytelling could explore the integration of interactive multimedia platforms, such as augmented reality (AR), virtual reality (VR), or AI-enhanced storytelling tools, to examine how immersive and adaptive digital narratives impact learners' listening comprehension and overall language proficiency over time. Such research could employ a mixed-methods design, combining longitudinal quantitative assessments of listening and comprehension performance with qualitative data on students' engagement, motivation, and cognitive strategies while interacting with the digital content. Furthermore, investigating cross-cultural and multilingual contexts and comparing traditional storytelling,

standard digital storytelling, and immersive or AI-mediated digital narratives would provide deeper insights into the pedagogical implications, accessibility, and scalability of these tools in second language acquisition and broader language learning outcomes. This approach would not only advance theoretical models of multimedia-assisted language learning but also contribute to the development of innovative, sustainable, and technology-enhanced teaching practices in global education.

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REFERENCES

- Alipar, J., Reyes, M., & Dela Cruz, R. (2024). Digital storytelling as a strategy to improve Grade 7 students' listening comprehension. *Philippine Journal of Education*, 99(2), 45–60.
- Ambubuyog, M., Flores, J., & Dela Rama, J. (2023). Active listening and its effects on phonological and pragmatic language learning among education students. *Journal of Language and Literature Studies*, 15(1), 112–125.
- Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretic view of basic processes in reading comprehension. In P. D. Pearson (Ed.), *Handbook of reading research* (pp. 255–291). Longman.
- Cigerci, F. M., & Gultekin, M. (2017). Use of digital stories to develop listening comprehension skills. *Issues in Educational Research*, 27(2), 252–268.
- Department of Education. (2012). K to 12 curriculum guides in English. DepEd.
- Dreon, O., Kerper, R. M., & Landis, J. (2015). Digital storytelling: A tool for teaching and learning in the YouTube generation. *Middle School Journal*, 46(4), 9–17. <https://doi.org/10.1080/00940771.2015.11461910>
- Ellison, T. L., & Wang, Y. (2018). Expanding approaches to language learning: Listening as foundational literacy practice. *International Journal of Listening*, 32(3), 134–150. <https://doi.org/10.1080/10904018.2016.1214093>
- Fajardo, J. (2020). Multimedia learning in ESL classrooms: Applications of Mayer's theory. *Asian EFL Journal*, 27(4.3), 56–73.

- Goh, C. (2000). A cognitive perspective on language learners' listening comprehension problems. *System*, 28(1), 55-75.
[https://doi.org/10.1016/S0346-251X\(99\)00060-3](https://doi.org/10.1016/S0346-251X(99)00060-3)
- Hamouda, A. (2013). An investigation of listening comprehension problems encountered by Saudi students in the EL listening classroom. *International Journal of Academic Research in Progressive Education and Development*, 2(2), 113-155.
- Hernández, F. (2019). Constructivism and digital storytelling in English language learning. *International Journal of Instruction*, 12(1), 95-110.
- Ismail, H. (2021). Reducing cognitive load in listening comprehension through multimedia learning. *International Journal of TESOL Studies*, 3(2), 89-105.
- Kervin, L., & Mantei, J. (2017). Digital storytelling and literacy learning. *Pedagogies: An International Journal*, 12(2), 126-138.
<https://doi.org/10.1080/1554480X.2017.1281384>
- Loniza, A., Ramos, J., & Tagalog, M. (2018). Effectiveness of digital storytelling on kindergarten pupils' comprehension. *Philippine ESL Journal*, 21(1), 67-82.
- Mayer, R. E. (2001). *Multimedia learning*. Cambridge University Press.
- Mayer, R. E. (2005). *The Cambridge handbook of multimedia learning*. Cambridge University Press.
- Quijano, Y. S. (2012). The K to 12 basic education programs. *Philippine Education Research Journal*, 10(1), 5-14.
- Repnik, R., Bajsanski, I., & Bajsanski, A. (2012). E-learning and digital natives: Multimedia listening comprehension. *Journal of e-Learning and Knowledge Society*, 8(3), 23-34.
- Robin, B. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory Into Practice*, 47(3), 220-228.
<https://doi.org/10.1080/00405840802153916>
- Shore, K. (2016). Teaching students with poor listening skills. *Education World*.
https://www.educationworld.com/a_curr/shore/shore064.shtml
- Stahl, S. (2015). Technology integration in listening instruction. *Journal of Educational Technology*, 12(2), 88-97.
- Vandergrift, L., & Goh, C. (2012). *Teaching and learning second language listening: Metacognition in action*. Routledge.

- Velasco, R., & Acuña, J. (2021). Listening comprehension strategies among Filipino ESL learners. *Asian Journal of English Language Studies*, 9(1), 50–72. <https://doi.org/10.59960/9.a3>
- Verdugo, D. R., & Belmonte, I. A. (2007). Using digital stories to improve listening comprehension with Spanish young learners of English. *Language Learning & Technology*, 11(1), 87–101.
- Weda, S., Samad, I. A., & Fitriani, S. S. (2016). The effect of digital storytelling on students' listening comprehension. *International Journal of Language Education*, 1(2), 29–40. <https://doi.org/10.26858/ijole.v1i2.3085>
- Wu, T. T., & Chen, A. (2020). Effects of digital storytelling on student engagement. *Journal of Educational Computing Research*, 57(1), 1–21. <https://doi.org/10.1177/0735633117746747>
- Yang, C. (2020). Schema activation and listening comprehension in EFL contexts. *International Journal of English Linguistics*, 10(5), 45–53. <https://doi.org/10.5539/ijel.v10n5p45>