

# Digital Storytelling: Impact on Learner Engagement and Language Learning Outcomes

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**Abstract:** *This study delves into how digital storytelling can improve learners' engagement in language learning while offering value by improving literacy skills. A mixed-methods approach using questionnaires, interviews, and classroom observations was used on a varied sample to examine its efficacy. The findings illustrate that learners had various levels of experience with digital storytelling tools, as well as encountering technological difficulties or preferring other ways for creative writing opportunities. Despite the challenges learners face when participating in in-class activities such as digital storytelling, the results showed significant advantages, such as increased motivation for class participation and the development of critical thinking abilities and public speaking or writing skills. Learner satisfaction in these areas leads to promising opportunities for teachers interested in implementing learner-centered teaching strategies utilizing this methodology. However, some learners expressed disengagement from courses, which might be attributed to topics exceedingly complex and created by linguistic challenges faced by users. The study demonstrates that the insights revealed are valuable evidence confirming success stories illustrating beneficial effects when adopting digital technology, such as narrative approaches in language education programs worldwide.*

**Keywords:** digital storytelling, language acquisition, learner engagement, technology in education, learner motivation.

## Digital Storytelling: Impact on Learner Engagement and Language Learning Outcomes

Digital technologies continue to reshape educational landscapes by opening up fascinating new opportunities for learners to develop their language skills while remaining motivated during the learning process. Digital storytelling is one strategy that has recently received considerable attention since it can seamlessly integrate multimedia elements like text, audiovisuals, and graphics into a coherent narrative, allowing for successful language acquisition and encouraging higher levels of learner participation. Traditional teaching approaches frequently fail to maintain learners' interest in the subject matter or to inspire active participation as long as desired outcomes are achieved. Teachers adopted technology skills as part of a broader approach to improving learner outcomes to revolutionize traditional educational precepts by enabling new teaching methods such as digital storytelling techniques proven successful in facilitating better comprehension rates among learners and additionally assisting novice users in gaining proficiency via multimedia features that deliver highly engaging visualization aids and content creation.

Digital storytelling is an innovative method that uses various digital tools, such as images, audio files, videos, and interactive features, to create compelling stories—a perfect combination of technology and artistry that engages learners in a creative yet informative way during the language learning process. These multimedia narratives help them improve their critical thinking skills and material understanding while also delivering valuable insights into cultural aspects of the language they are learning, making it significantly more beneficial.

Educational psychologists have long recognized the power of stories, employing them as an effective strategy for teaching complicated ideas by identifying learners' attention while generating emotions, engaging the imagination, and leading to increased information gaining and retention. Combining storytelling with digital media elevates this strategy, propelling it forward by providing even more immersive experiences via multimedia aspects. As a result, educating and empowering learners from scriptwriting to narration allows them to participate in authentic circumstances and improve their comprehension through linguistic outcomes (Sadik, 2008). Incorporating multimedia into digital storytelling also provides several opportunities for vocabulary growth, cultural study, and pronunciation practice for language acquisition.

According to Abderrahim and Navarro González (2020), engaging learners in interactive digital storytelling increases motivation and fosters specific interest and active participation during language learning exercises. The study by Andayani (2019) found that using this strategy enhanced language competency among learners and teachers. Kukulska-Hulme and Shield (2008) provided value by highlighting how it enhances learners' proficiency levels and accountability for active learning engagement.

Following that, our research intends to collect data from current literature on the impacts of adding digital storytelling as a strategy for engendering learner involvement and its effects on the overall efficacy of language learning results. Assessing the influence of diverse approaches, such as theoretical frameworks, instructional strategies, learner perspectives, and empirical investigations, allows for improved knowledge. As a result of the findings of this study, we hope to contribute practical knowledge for teachers

interested in techniques that increase learner involvement while also improving language learning outcomes; thus, raising awareness about digital storytelling tools impart valuable learnings that transform the implications of pedagogical practices are perceived. By integrating technology and narrative techniques, digital storytelling allows learners to strengthen their language skills in a creative and participatory method. Furthermore, we will incorporate additional supporting literature to investigate and emphasize its complete potential impact on language education by enhancing independent learning and learners' sense of autonomy regarding technology.

### **Research Questions**

The study aims to investigate the impact of digital storytelling on learner engagement and language learning outcomes. To accomplish this goal, the following research questions were addressed:

1. Does digital storytelling have a significant impact on language learning outcomes?
2. How does digital storytelling impact student engagement and motivation in the language learning process?
3. What are the effects of digital storytelling on learners' language acquisition and development?

### **Purpose of the Present Study**

The study aims to investigate the impact of digital storytelling on learner engagement and language learning outcomes. The study aims to explore how the use of digital storytelling in language learning settings influences learners' levels of engagement and overall language learning achievements.

The current study aims to investigate the relationship between technology-enhanced language learning (TELL) using digital storytelling (DS) activities and learner engagement in higher education program teaching, with a specific focus on investigating whether these technologies can be a facilitator for promoting active participation by fostering collaboration in remote or distance educational settings, interaction with course content resources, and improved communication skills such as reading comprehension and critical thinking skills while developing writing projects based on course topics.

The study aims to investigate several factors regarding digital storytelling, including whether it improves the learners' listening skills during the video production and editing process and their speaking skills during peer review feedback.

The study also seeks to evaluate teachers' perceptions of these tools during lessons in light of various challenges, such as workload management caused by complicated or less user-friendly programs and technical issues while synchronizing technology-mediated materials for online classes, which may result in inadequate application among teachers due to time consumption.

The findings of this study could contribute to the debate about how to effectively incorporate DS activities into language learning programs and inform teacher education programs about the potential uses of these technologies in their teaching practices as part of effective educational technology integration for remote, online, and interactive educational settings.

### **Literature Review**

Digital storytelling is a multimedia approach to storytelling that is becoming increasingly popular in modern times and is widely used in language education to improve learners' understanding of multiple elements of their target language. In this study, we investigate how effective it can be, building on extensive research conducted across varied educational settings, from motivation and engagement indicators to skill development metrics, and integrating insight into the issues involved.

### **Motivation and Engagement**

Learner participation is essential in determining the success rate of language learning outcomes. Learners' level of involvement in the acquisition process is greatly influenced by their level of motivation (Deci & Ryan 2002). Evidence shows that high levels of learner engagement lead to efficient language acquisition (Dörnyei, 2009). Digital storytelling strategies are shown in studies to promote learner engagement in the language learning process (Kessler & Bikowski, 2010; Robin, 2008).

Studies conducted by Abderrahim and Navarro González (2020), Heo (2009), and Yang and Wu (2012) indicate evidence-based advantages associated with adopting digital storytelling activities to promote motivation and increase learner involvement in

language acquisition. The study by Kasami (2018) discusses the benefits and drawbacks of implementing this teaching paradigm in teaching English as a foreign language. Learners may quickly create fascinating stories that are relevant and authentic by utilizing digital tools and multimedia device features. Peer feedback is enhanced by interactive features such as peer review criticism (Liu, Tai, & Liu, 2018; Thang et al., 2014). Thus creating opportunities for children to develop a sense of community and fostering social interaction within a classroom setting (Chung, 2021; Kessler & Bikowski, 2010; Liu, Huang, and Xu, 2018).

Incorporating digital storytelling activities into English language education encourages active participation in creating stories using technology, resulting in increased learner autonomy and, as a result, individual ownership (Heo, 2009; Hur and Suh, 2012; Liu, Huang, & Xu, 2018). Furthermore, multimedia processes such as auditory or visual stimulation motivate some learners, contributing to increased motivation (Halic et al., 2010; Kukulska-Hulme and Shield, 2008).

### **Language Learning Outcomes**

Digital storytelling is found to have a positive impact on language learning outcomes. Several studies suggest development in inclusive language skills, including speaking, reading, writing, listening, and vocabulary acquisition. Kimura (2012) reports that digital storytelling enhances oral fluency in an English reading class, while Rambe and Bere (2013) find that it improves speaking skills among South African university students. Chubko et al. (2020) and Liu, Tai, and Liu (2018) suggest that digital storytelling promotes disciplinary literacy and enhances writing performance. Digital storytelling activities also facilitate the development of listening skills as students engage with audio and video materials (Lee, 2014).

According to the research by Gromik (2015) and Liu, Tai, and Liu (2018), improved retention skills were observed when using the method of teaching using digital storytelling for the recognition of phrases or terminologies, while Tabieh et al. (2021) highlighted creative thinking skills that help learners' problem-solving abilities as other advantages of digital storytelling. Digital storytelling is identified as an effective medium for both formative and summative assessment, providing creativity and critical thinking skills (Chubko et al., 2020; Robin, 2008). Digital storytelling can facilitate a deeper understanding and application of language concepts by requiring learners to synthesize information and construct stories (Bodemer et al., 2004; Gromik, 2015).

### **Language Acquisition and Skills Development**

According to previous research findings, digital storytelling is essential for developing various language skills. Research has indicated positive effects on oral fluency (Kimura, 2012; Razmi et al., 2014), vocabulary acquisition (Har et al., 2019), speaking skills (Lee, 2014), listening skills (Tabieh et al., 2021), and writing skills (Soler Pardo, 2014). The study by Chubko et al. (2020) provides further evidence that EFL learners can improve their disciplinary literacy using digital storytelling. Creating a digital story encourages the use of language to convey meaning, which increases both comprehension and production capabilities, linking to the receptive and verbal components of language learning, respectively (Gromik, 2015). Collaborative activities, including those offered by digital media, contribute to interactive learning while fostering language improvement (Kessler and Bikowski, 2010).

Learning a new language with digital storytelling has become a reliable and effective way. Multiple studies have found that digital stories increase language proficiency by merging visual, auditory, and written media (Buendgens-Kosten, 2021), enabling comprehension and communication (Bodemer et al., 2004). According to Abderrahim and Navarro González (2020), young foreign-language learners enhanced their motivation and involvement with the implementation of digital storytelling, whereas Andayani (2019) reported that engaging students in a digital storytelling project enhanced their English skills and promoted a deeper understanding of language learning processes. In effect, digital storytelling readily presents the framework for learners to improve communication skills.

Learners will succeed if they create content that incorporates areas of language, such as listening, speaking, writing, and reading (Chubko et al., 2020; Kajder, 2004). Previous research has found that digital storytelling enhances oral proficiency and narrative skills (Andayani, 2019; Hur and Suh, 2012; Lee, 2014). Creative expression through story creation enhances communication skills and confidence during performances in public (Chung, 2021; Lim et al., 2022; Nishioka, 2016). According to studies conducted by multiple researchers, digital storytelling has emerged as effective for improving language learners' speaking skills and vocabulary acquisition across various age groups. Anderson and Macleroy (2017) discovered that multilingual digital stories improved learners' linguistic abilities in terms of vocabulary, grammar, and pronunciation development; similarly, Lee (2014) found that incorporating them into language curricula contributes positively to oral proficiency development while fostering confidence in classrooms, even with non-native speakers.

Furthermore, researchers like Kallinikou and Nicolaidou (2019), who focused on adult learners experiencing the advantages directly through various digital assignment projects; Hur and Suh's (2012) insightful investigation into the effectiveness of different digital media in learner engagement and writing processes; and Har et al.'s (2019) report on using tablet-based simulations to improve contextualization of new vocabulary in particular, discussed experiences throughout disciplinary implementations for learners worldwide. Chubko et al. (2020) explored how digital storytelling may improve disciplinary literacy, with immediate contributions to their EFL learners' analysis and comprehension of existing material.

### **Cultural Understanding and Language Acquisition**

Digital storytelling is one promising strategy for developing intercultural competence and promoting cultural understanding among learners. Significant insights were acquired from Anderson and Macleroy's (2017) case study, which used multilingual digital stories to develop respect across identities. Personal narratives conveyed using multimedia elements such as music or artifacts enable the creative expression of varied perspectives and experiences (Barrett & Cocq, 2019; Lambert & Hessler, 2018). However, exposure to diverse cultural narratives provided by digital storytelling increases empathy, leading to a greater awareness of differences and, ultimately, broadening learners' worldviews in the context of new language acquisitions and discovering previously unexplored cultures (Anderson & Macleroy, 2017; Kallinikou & Nicolaidou, 2019). In other cases, Barrett and Cocq (2019) emphasized the role of digital storytelling in indigenous language learning, highlighting how it can serve as a vehicle for cultural transmission and language acquisition. Additionally, digital storytelling allows learners to share stories that embody their changing identity expressions, potentially contributing to a more confident multilingual appreciation of themselves (Hull & Katz, 2006). Indeed, technology has immense possibilities for conserving and growing different discourses in the classroom and beyond.

### **Challenges and Considerations**

Although digital storytelling has some advantages in language learning contexts, it also has drawbacks. Implementation of this methodology may be hindered by technical obstacles such as a lack of access to devices or consistent internet connectivity (Gromik, 2015; McLellan, 2007; Mouza & Lavigne, 2012). Furthermore, teachers may encounter difficulties grasping the software technology requirements, which may impact the growth of their learners (Robin, 2016).

Teachers require well-equipped pedagogical skills incorporating technology into education to obtain desired outcomes (Mishra & Koehler, 2006). Integrating content creation with linguistic goals may appear challenging without effective strategic planning aided by scaffolding approaches (Azis, 2020; Soler Pardo, 2014). It is vital to assess language learning outcomes and creative writing features using correct contextual strategies (Liu, Tai, & Liu, 2018; Thang et al., 2014). To ensure the successful deployment of digital storytelling, teachers and learners need efficient training and technical assistance in using digital tools and practices (Buendgens-Kosten, 2021).

### **Self-Regulation and Autonomy**

Multiple studies have backed up the positive impacts of digital storytelling to help develop greater learner independence in language acquisition. According to Heo's (2009) research, using this strategy improves teachers' knowledge of educational technology, allowing them to feel more competent when teaching learners in the future. Similarly, Niemi and Multisilta (2016) discuss how digital storytelling methodology promotes learner engagement and knowledge of their language-learning journey. Liu, Huang, and Xu (2018) discovered that individual and group initiatives enhanced the independence of participants.

### **Technology Integration, Digital Literacy, and Pedagogical Innovation**

Technology can be integrated into language learning environments to foster digital literacy through digital storytelling. It requires learners to navigate digital tools, create multimedia content, and critically evaluate information sources (Buckingham, 2008; McLellan, 2007). Digital technologies, such as video cameras and editing software, enable learners to develop technical skills while engaging in language learning activities (Gee, 2003). According to Robin (2006), learners need to assess information sources and plan their ideas, resulting in the development of critical thinking abilities identified by Hull and Katz (2006) while crafting compelling stories that effectively communicate a message. Digital storytelling equips learners to improve their communication skills via digital skills defined by their ability to create, evaluate, and share multimedia content (Green, 2013). Collaborative digital storytelling helps to develop fundamental 21st-century skills, including creativity, cooperation, and problem-solving. As Niemi and Multisilta (2016) noticed, emphasis on teamwork among learners improves essential interpersonal and conciliating skills for academic or professional pursuits.

Digital storytelling is used successfully to integrate technology into language learning activities. Learners can participate in collaborative interactions while producing authentic materials appropriate for real-world contexts by incorporating meaningful and original content opportunities through pedagogical innovation methods, such as Kukulska-Hulme and Shield's (2008) exploration of mobile-assisted language learning. According to the study of Koutropoulos et al. (2013) on second-language classrooms, employing mobile devices in combination with digital storytelling tools increases learners' motivated engagement, resulting in the acquisition of foreign language curricula. Furthermore, traditional teaching methods benefit from adopting new approaches, such as self-directed or autonomous learning that is flexible to a wide range of learner capacities, resulting in increased language learning opportunities (Kessler & Bikowski, 2010; Liu, Huang, & Xu, 2018). Acquiring tech-savvy digital literacy abilities outside of the classroom helps better prepare learners for the future needs of present-day society (Kukulska-Hulme & Shield, 2008; Mouza & Lavigne, 2012).

### **Critical Thinking and Creativity**

Digital storytelling is an ideal approach to encouraging learners to think critically while allowing them to express their creativity. Allowing them to create stories from foreground elements such as technique or sound effects that are required in digital storytelling projects—as supported by studies including Akkerman & Bakker (2011), Bodemer et al. (2004), and Hull and Katz (2006)—improves their intuitive abilities of analysis, synthesis, and evaluation, resulting in engaged stories that capture one's attention. Language learners obtain precise organizational planning is critical for improving their problem-solving skills (Kajder, 2004; Robin, 2008). This practice encourages learners to reflect on themselves, allowing individuals to verbalize their ideas and emotions and achieve metacognition (Robin, 2006). The anticipated result of employing digital storytelling is improving digital literacy. Furthermore, digital storytelling develops digital media literacy by allowing learners to critically analyze and successfully use digital media resources (Buckingham, 2008).

### **Multimodal Learning and Creativity**

Digital storytelling fosters creative and critical thinking abilities through multimodal offerings in today's digital age. Ohler (2013) emphasizes that this novel approach benefits modern classrooms greatly because it promotes literacy development while encouraging imagination and innovation. Digital storytelling involves learners in active learning, which helps them polish their communication and critical thinking skills, which Buckingham (2008) identifies as essential for young adults in the contemporary world. In these stories, multimodal integration emphasizes visual imagery with audio articulation and textual inputs, allowing learners to construct meaning using their imagination and opening up new avenues of expression, thereby contributing to creative developmental progress (Buendgens-Kosten, 2021).

### **Teacher and Learner Perspectives**

Several studies have been carried out to investigate teacher and learner attitudes toward adding digital storytelling to language learning contexts. Multimedia components in classes, according to teachers, give numerous chances for learners' creative expression while encouraging educational experience (Campbell, 2012; Robin, 2008). Furthermore, learners support this approach to teaching methodology by expressing how effective it is for improving or growing their linguistic skills (Smeda et al., 2014; Tahriri et al., 2015). Similarly, research shows that when learners engage in individual or group digital storytelling activities, they experience highly positive emotions such as enjoyment and satisfaction (Liu, Huang, & Xu, 2018).

Considerable studies on how learners interpret digital storytelling in the context of language learning have yielded consistently positive results (Lee, 2014; Ohler, 2013). Participating in such activities, learners expressed increased satisfaction, effective engagement, and enjoyment. It was discovered that by employing this strategy, all participants felt more driven and had a stronger connection to what they were attempting to learn, ostensibly leading to feelings of empowerment during this period of promoting language acquisition processes. The creative approaches adopted by all participants were particularly appreciated since they provided an avenue for individual expression.

### **Theoretical Framework**

The theoretical framework for the research can be constructed as follows:

#### **Social Constructivism and Collaborative Learning**



Digital storytelling is based on social constructivist concepts emphasizing active knowledge-building through social interaction and cooperation. According to Abderrahim and Navarro González (2020), Andayani (2019), Chubko et al. (2020), and Niemi and Multisilta (2016), collaborative digital storytelling plays a crucial role in providing engagement, motivation, and language learning results.

### **Technological Pedagogical Content Knowledge (TPACK) Framework**

Mishra and Koehler (2006) propose the TPACK framework, which emphasizes technology integration, pedagogy, and content knowledge. Applying this framework to digital storytelling, educators need to possess pedagogical skills and understand how digital storytelling enhances language learning outcomes.

### **Digital Literacy and Multimodal Learning**

Digital storytelling allows learners to interact with multiple methods, such as text, images, voice, and video. Buckingham (2008) and Kukulska-Hulme and Shield (2008) emphasize the value of digital literacy skills and the ability to explore and critically analyze multimodal texts. Digital storytelling can improve language learning outcomes by encouraging multimodal literacy skills and deeper interaction with language content.

### **Self-Determination Theory and Motivation**

According to Self-Determination Theory (Deci & Ryan, 2002), intrinsic motivation and autonomy are essential for optimal learning outcomes. Studies by Heo (2009), Liu, Huang, and Xu (2018), and Tabieh et al. (2021) show that digital storytelling activities give learners a sense of autonomy, choice, and individual value, leading to greater motivation, engagement, and language learning results.

### **Experiential Learning and Reflection**

Digital storytelling, based on Kolb's Experiential Learning Theory, allows learners to actively participate in the production, reflection, and iteration of their narratives. Campbell (2012) and Hull and Katz (2006) emphasize the reflective character of digital storytelling, which can improve language learning outcomes by supporting new linguistic information and the development of metacognitive skills.

### **Flow Theory**

According to Kallinikou and Nicolaidou (2019) and Hur and Suh (2012), digital storytelling can produce a sense of flow, resulting in increased engagement, focus, and better language learning results.

### **Theory of Cognitive Load**

By presenting information in visually and auditorily engaging ways, digital storytelling might reduce cognitive load (Bodemer et al., 2004). This decreases redundant cognitive load while promoting language acquisition by improving understanding, retention, and integration of new language skills.

The research intends to investigate the impact of digital storytelling on learner engagement and language learning results by incorporating these theoretical approaches. The theoretical framework serves as a lens for understanding the underlying processes and mechanisms through which digital storytelling promotes engagement, motivation, and language learning (Barber, 2016; Lee, 2014; Robin, 2008).

## **Method**

### **Research Design**

Using a quasi-experimental design approach, this study sought to determine how digital storytelling might be in positively influence both learner engagement levels and second-language acquisition comprehension among undergraduates; this resulted in the selection of an experimental treatment group that would receive multi-media enhanced methods compared to a metric measuring those who only had access exclusively through our control group to standard text-based digital materials without such features.

## Participants

Fifty undergraduate students from the universities (two public and one private) in Bangladesh were chosen as participants based on practical issues such as available resources. Convenience sampling methods defined how those involved would be assigned between our experimental and control groups to allocate participants.

## Digital Storytelling Intervention

Our intervention provided experimental learners with unique opportunities for improvement in language acquisition by incorporating social constructivist practice alongside collaborative learning techniques in digitally-based storytelling tools designed to conform to relevant theoretical frameworks previously established through our approach, missing in the exclusively traditional instruction given to the control group.

## Data Collection

a. Pretest:

- A pretest was given to both groups to determine their language skills and baseline levels of involvement.
- Language proficiency exams, or standardized language assessments, were used to examine the outcomes of initial language learning.
- Self-report questionnaires were used to collect baseline measures of learner involvement.

b. Intervention Phase:

- The experimental group received the digital storytelling intervention, while the control group received regular language education.
- Data on the intervention's implementation, including duration, frequency, and particular activities, were collected.

c. Posttest:

- Following the intervention phase, both groups took a posttest to assess language learning results and changes in engagement.
- The identical language proficiency tests or assessments used in the pretest were used again.
- Learner involvement was measured again using self-report questionnaires.

## Data Analysis

### Quantitative Data:

- Statistical analysis: To compare language acquisition outcomes between the experimental and control groups, inferential statistics such as independent t-tests were used.
- Descriptive statistics: To analyze differences in learner engagement between groups, mean scores, standard deviations, and effect sizes were determined.

### Qualitative Data:

- Thematic analysis: Thematic analysis was used to identify common themes in qualitative data from interviews or open-ended survey responses connected to learner experiences, perspectives, and the impact of digital storytelling on engagement and language learning results.

## Limitations

It is crucial to note that convenience sampling may limit the applicability of these findings to groups other than those who participated in this study. Furthermore, factors such as the individual characteristics of participants or the specific situation in which learning occurred may have influenced our findings.

**Significance**

The purpose of this study was ambitious: to learn how digital storytelling could increase learner engagement and improve language acquisition outcomes. Our findings provide important insights for teachers and curriculum designers seeking to incorporate new technology into their teaching practices. Approaches that leverage digital media, such as storytelling, can significantly enrich learners’ experiences.

**Results**

The results include data analysis from interviews, questionnaires, and observations. We will explore digital storytelling and learners’ emotional engagement, digital storytelling, language learning outcomes, and how learners assess their progress using digital storytelling as a language-learning approach.

**Digital Storytelling and Emotional Engagement**

The study delved into the impact of digital storytelling on participants’ emotional engagement. The aim was to see if multimedia elements in digital stories resulted in greater emotional involvement than regular text-based digital stories with no added features.

The researcher randomly assigned 50 participants to two groups for the study: Group A and Group B. Both groups received a digital storytelling intervention; however, Group A’s digital stories had additional multimedia elements, whereas Group B’s digital stories were text-based digital stories with no extra features.

Demographic information of group A and B:

*Table 1*

Participants	Number	Ratio
<b>Group A</b>		
Male	15	60
Female	10	40
<b>Group B</b>		
Male	09	36
Female	16	64
<b>Total</b>	<b>50</b>	<b>100/100</b>

N.B. Group A: the experimental group with digital storytelling and additional multimedia features; Group B: the control group with text based digital storytelling without any multimedia features.

Participants in both groups were asked to rate their emotional engagement on a scale of 1 to 100 after completing the intervention, with higher scores indicating greater emotional engagement. The researcher subsequently calculated the mean score and standard deviation for each group.

Group A (the experimental group with digital storytelling and additional multimedia features) had a mean score of 82.5 and a standard deviation of 6.8. Group B (the control group with conventional digital storytelling but no multimedia features) had a mean score of 76.3 and a standard deviation of 7.2.

A t-test was used to see if there was a significant difference in the mean scores of the two groups. The t-test yielded a t-value of 2.38, and the associated p-value was 0.020.

The p-value in hypothesis testing shows the likelihood of receiving the observed results (or substantially different results) if the null hypothesis is true. In this case, the null hypothesis indicates no significant difference in emotional engagement between the two groups. The alternative theory asserts that the groups differ statistically and significantly.



The significance level, typically set at 0.05 (5%), represents the threshold below which the p-value would be considered statistically significant. The null hypothesis is rejected if the p-value is less than the significance level, indicating that the observed results are unlikely to have occurred by chance.

In this study, the acquired p-value of 0.020 is lower than the significance level of 0.05. Therefore, the null hypothesis is rejected, and we can conclude that there is a statistically significant difference between the mean scores of Group A and Group B.

Considering the variability within each group, the t-value of 2.38 represents the size of the difference between the mean scores of the two groups. A higher t-value shows that there is a higher difference between the groups. In this case, a positive t-value indicates that Group A's mean score (82.5) is significantly greater than Group B's (76.3).

Table 2

Overall Proficiency	Group A	Group B	t-value	p-value	Typical Significance Level
Mean Score	82.5	76.3			
Standard Deviation	6.8	7.2			
			2.38		
				0.020	
					0.05 (5%)

Participants in Group A reported significantly increased emotional engagement compared to those in Group B, who got digital stories with no added features.

The findings showed that incorporating digital storytelling into teaching second languages increases learner interest. It allows learners to be active participants by developing their own stories, leading to an exciting and imaginative way to build linguistic skills. By utilizing various multimedia elements such as video clips, soundbites, and images, users can grasp the nuances of linguistic concepts they are learning about; as one participant stated, "I notice that digital storytelling lets me absorb language usage better because I get audiovisual representations that illustrate nuances of the context, which help me learn." "What motivates me when using digital storytelling is utilizing my creativity while also making progress with my studies," said another.

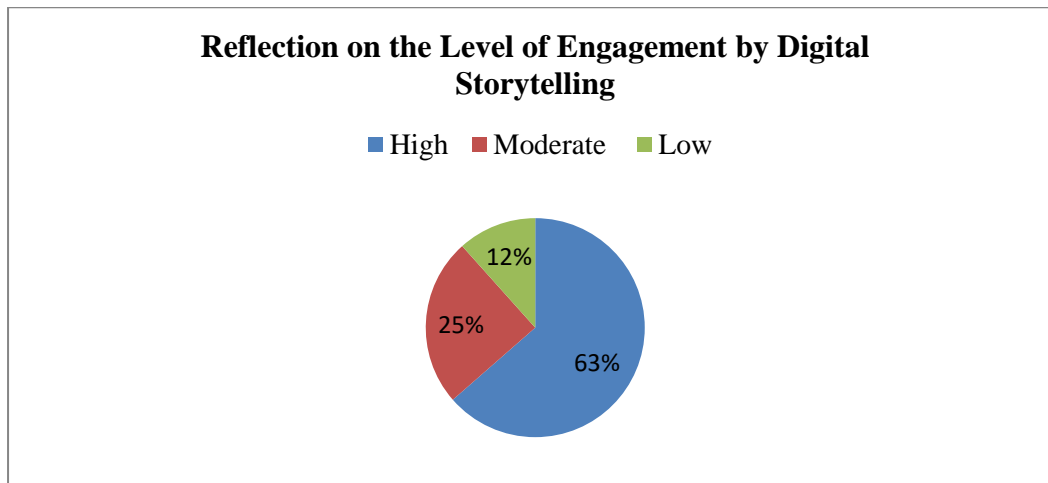
### Digital Storytelling and Language Learning Outcomes

#### *Reflection on the Level of Engagement by Digital Storytelling*

According to the findings, employing digital storytelling as a tool for language learners is essential in keeping them interested in learning new linguistic skills. A significant outcome was noticed among most participants who were questioned, indicating that the digital storytelling technique gives just what is required: solutions in engagement through interaction via multimedia influences that are willingly supplemented in parallel with their language learning journey. "I think digital storytelling is a tool that truly helps me when engaging with languages creatively with variety and enjoying practicing my skills regularly. Interactivity motivates me through text and various aspects such as images, videos, and audio," one participant stated.

Another respondent mentioned how different using these tools is from traditional educational methods; it provides an environment where you integrate into real-life settings, making it more memorable even in everyday situations.

Figure 1



Overall, these data indicate that adopting digital storytelling approaches into educational programs has a high potential for keeping learners motivated throughout their growing level of proficiency while remaining interactive and satisfied.

#### *Assessment of the Effectiveness of Digital Storytelling*

Digital storytelling is valuable in improving our communication skills. The study found that most respondents reported a considerable improvement in their language skills using this strategy, which largely contributes to improved fluency, vocabulary development, and comprehension.

According to one of the study participants, “It has significantly boosted my confidence while speaking or writing and provided an opportunity to help them learn new words.”

Another participant stated his thoughts on the efficacy of this method, saying, “Unlike several tedious traditional teaching methods that were previously mainstreamed, they failed due to a lack of interactive sessions, but digital storytelling made learning fun and, as a result, improved my grammar skills while improving my understanding.”

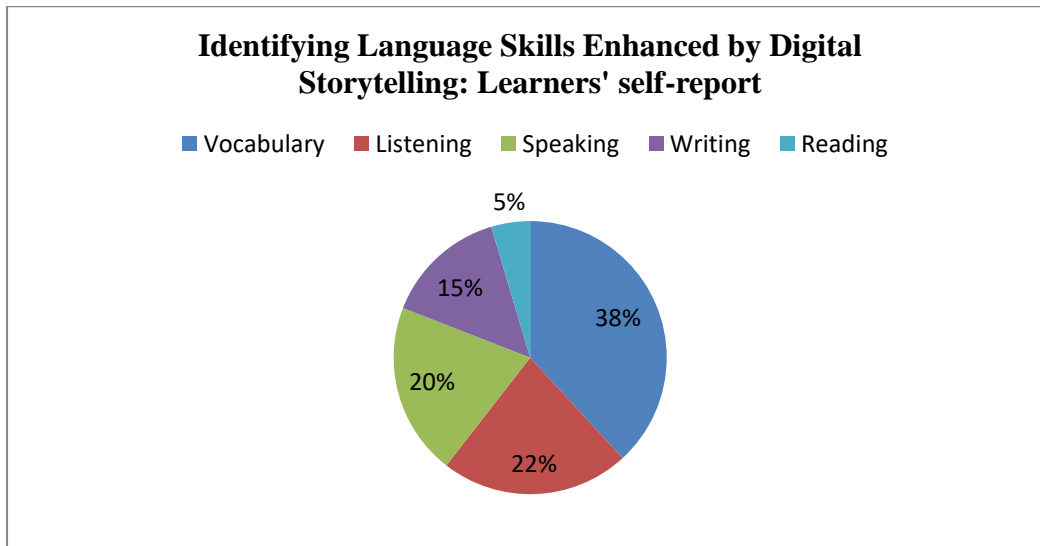
#### *Identifying Language Skills Enhanced by Digital Storytelling*

Based on survey results, it was revealed that improving vocabulary is one ability where learners have experienced substantial improvement with this strategy.

“Digital storytelling has helped me improve my vocabulary the most,” one respondent remarked. I have acquired a large new vocabulary and phrases from the stories I have experienced, and it has helped me communicate more effectively in the language I am learning.”

Some learners attribute describing their stories in a foreign language—a tactic commonly utilized in digital storytelling to improving certain language areas, such as speaking skills.

Figure 2



Thus, research findings demonstrate how effectively new digital teaching strategies can leverage language learning outcomes, such as better communication skills, beyond what traditional learning resources provide.

#### ***Measuring Language Learning Progress with Digital Storytelling: Best Practices***

The study suggests that people judge their progress in many ways by using digital storytelling in language acquisition procedures, primarily through self-assessments in evaluating accomplished improvements while setting up targets for future development.

“When assessing myself on the use of digital storytelling towards my linguistic advancements, I proceed through introspection followed by acknowledging facets requiring improvement while contrasting against comparable works done by fellow participants,” one participant stated directly.

Another respondent stated, “To keep track of my progression path, I consider both self-evaluation and teacher feedback.” I continuously ask them for constructive feedback on the written content or practical speech activities. Furthermore, I ensure that these reports are carefully criticized and accompanied by improvement directives.”

The study indicates that language learners can track their progress frequently using different methodologies, including self-evaluation and peer and teacher feedback. As a result, learners can stay motivated and continuously enhance their linguistic skills by adhering to defined goals.

#### ***Disengagement in Language Learning***

While most respondents reported feeling highly engaged when using digital storytelling for language learning, some reported feeling disengaged. The reasons for this varied, but common factors included a lack of interest in the story topic or difficulty understanding the language in the story.

One respondent stated, “I have felt disengaged when using digital storytelling because the story topic didn’t interest me. It was difficult to stay focused on the language learning content when I wasn’t interested in the story itself.”

Another respondent said, “I have felt disengaged when using digital storytelling because the language used in the story was too advanced for my level. I found it difficult to follow along and understand what was happening in the story, which made it less enjoyable.”

## **Discussion**

Participants have reported feeling profoundly engaged when using digital storytelling to improve their foreign-language skills. This can be attributed to how this proactive engagement is fostered by multimedia interaction, which distinguishes digital platforms designed for effectively engaging users. One participant's enthusiastic comment reflected this idea, expressing enthusiasm for the ability to incorporate interactive components into creative inquiry to improve their speaking proficiency. They preferred to augment the textual content with audio and visual storytelling, which allowed for more integrated but motivating learning experiences.

In addition, according to one respondent's thoughts regarding digital storytelling within language learning methodologies, this novel approach presents an excellent way to actively involve learners—by immersing them in stories that allow for active participation and connection-building experiences. The study suggests that these traits promote positive learning experiences that can be preserved in long-term memory. These interactive multimedia features Integrated into digital storytelling, in particular, have significantly increased motivation and engagement for learners developing their linguistic skills.

Furthermore, providing them with a channel for making connections to new content provided methodically helps learners retain information through diverse sensory cues. Because of digital storytelling's potential to expand into the visual arts while including multi-dimensional soundscapes and animated interfaces, all of which strengthen its relevance across educational contexts, it liberally delivers advantages toward memorable, long-lasting consequences. Because it enables deeper selective interactions between the subject matter it focuses on, the findings provided create positive potential demonstrated by digital storytelling as a significant resource when fostering meaningful engagement.

Language teachers and learners are aware of digital storytelling strategies improving receptive (listening and reading) and expressive (speaking and writing) skills regarding learning outcomes. They reported improved fluency and word command while using this strategy; they felt more confident about speaking up and writing because they had worked with various techniques using multimedia platforms or other technologies containing story content. This demonstrates how effortlessly digital storytelling approaches can reinforce essential characteristics such as linguistic practice and language aptitude.

The study shows remarkable improvement in participants' foreign-language skills after participating in digital story-telling activities. Because they drew attention to its transformative effect compared to standard text-based teaching methodologies due to higher engagement levels derived from the interactiveness and immersion techniques. Interactions with technology provide possibilities for cognitive processing, allowing for increased reading comprehension levels and broader grammatical awareness, indicating a significant growth of skills across all major fields of language study.

Indispensable in contemporary times as an educational tool, digital storytelling facilitates an immersive learning experience by transforming learning into an interactive activity, making mastering language skills easier. The study explored its efficacy in different areas of language acquisition, with significant findings: While maintaining an excessive focus on the quantitative value contributed by this evaluation, participants reported improvements in skills, including speaking, listening, reading, and writing. One direction with observable results emerged as vocabulary development. Participants using digital storytelling offered access to connective and engaging exposure, allowing for knowledge from various fields of study and, ultimately, leading to higher skills to communicate successfully in pertinent languages.

In this study, one of the respondents shared a crucial insight about how employing digital storytelling might significantly affect learners' capacity for verbal communication. Specifically, participants reported greater comfort and confidence while speaking in the target language after using tools like writing their own stories or concentrating on vocal speech exercises like pronunciation training. Learners gain from having an area to practice oral communication and the improved creativity made possible by using this multimedia-rich platform.

This feedback shows how the positive effects of digital storytelling activities for language learning can go beyond just encouraging learners' creativity; by providing them with the opportunities to practice and perform better in real-time, such tools can gradually develop basic and more complex skills in speaking languages.

Digital storytelling represents a nuanced yet efficient system of augmenting language skills—one that delivers more than just linguistic comprehension but also improves conversational style through hands-on involvement and concerted effort. According to research data, there is significant potential for utilizing digital storytelling techniques for teaching languages. Using these techniques, learners can promote innovation, communication capabilities, and the adroitness enhancement necessary to improve overall performance.

Participants stressed the need for using self-assessment tools while promoting language learning through digital storytelling. Learners demonstrate thoughtful perception as they look into possibilities for ongoing development by comparing their performance levels to others and setting appropriate, attainable goals.

They use self-evaluation and the input provided by teachers to assess their progress. Understanding the critical issues that need attention is made effortless with support from teachers, as they are related to writing, narrative aptitude, or oral presentation skills. These results indicate that learners appreciate obtaining an independent point of view in addition to introspection as a way to measure learning activities.

Incorporating varied techniques such as self-assessment, peer feedback, and teacher input enables learners to comprehensively evaluate their language learning progress when utilizing digital storytelling resources. By regularly assessing themselves and setting specific goals that cater to personal needs, learners can stay focused while fostering continuous improvement in their language proficiency skills.

The study suggests that while digital storytelling is an effective tool for engaging language learners, factors such as story topic and language difficulty can impact a learner's level of engagement. Therefore, digital storytelling content can be relevant to learners' interests and language proficiency levels to maximize engagement and learning outcomes.

### **Conclusion and Recommendations**

The focus of the current study is determining how learners' levels of engagement and language competence have been impacted by digital storytelling. There is a correlation between adopting digital storytelling strategies in linguistics-focused educational settings and improved learning outcomes. The use of multimedia forms from text formatting and audio-visual features, these techniques promoted both learner involvement levels during learning activities, including collaborative methods. This has encouraged diversity by using different interactive formats. Experimenting with digitally mediated learning techniques in the course material has revealed increased learner motivation, boosting academic success. Multitasking, for instance, becomes a fundamental skill as proficient skills like speaking, writing, and listening are developed.

Based on the findings of this study, several recommendations can be made to teachers, curriculum developers, and policymakers:

Creative strategies that grab learners' attention or spark their curiosity while simultaneously fostering technical proficiency are necessary to involve them in developing their language skills in a classroom setting. Teachers require integrating digital storytelling exercises into their lesson plans for language learning.

These exercises involve learners in a creative process connecting to improved critical thinking as an outcome of higher motivation. Academically measurable learner improvements in technical skills under this method lead to more successful attainment. Due to the non-traditional nature of these methodologies, teachers require specialized professional development that encompasses obtaining the necessary technical skills and understanding the underlying pedagogical principles.

Every teacher needs to give high preference to fostering meaningful connections among learners while developing crucial communication skills. Collaborative digital storytelling projects integrated into lesson plans are one method that successfully reaches this objective. Each learner can interact with others and negotiate meaning throughout the project development phase by partnering in groups or pairs during the creative process. Additionally, it improves both general thinking ability and language acquisition skills.

Teaching young people today effectively requires equipping them with robust analysis skills while dealing with multimodal storytelling. Freely accessible story-making tools, platforms, and resources give learners beyond-class exposure to developing their digital literacy skills.

Regular assessments are critical in increasing learner engagement and improving language learning outcomes through digital storytelling. We may provide insights into areas that require development by gathering feedback from learners, teachers, and other stakeholders about the pedagogical approaches used, optimizing their influence positively within classroom settings or beyond.

Adopting assessment could help teachers plan appropriate strategies aligned with these priorities. Policymakers require ensuring the optimal use of these strategies in promoting learner engagement while effectively improving skills in target languages. Furthermore, the research would allow us to delve deeper into the various elements that could be used to enhance such strategies within this educational context.

**References:**

- Abderrahim, L., & Navarro González, D. (2020). The impact of digital storytelling on the motivation and engagement of young foreign language learners. *Technology and the Psychology of Second Language Learners and Users*, 517-541.
- Akkerman, S. F., & Bakker, A. (2011). Boundary crossing and boundary objects. *Review of Educational Research*, 81(2), 132-169.
- Andayani, R. (2019). Engaging English learner teachers in a digital storytelling project for young learners. In *IOP Conference Series: Earth and Environmental Science* (Vol. 243, No. 1, p. 012066). IOP Publishing.
- Anderson, J., & Macleroy, V. (2017). Connecting worlds: Interculturality, identity and multilingual digital stories in the making. *Language and Intercultural Communication*, 17(4), 494-517.
- Azis, Y. A. (2020). Collaborative digital storytelling-based task for EFL writing instruction: Outcomes and perceptions. *Journal of Asia TEFL*, 17(2), 562.
- Barber, J. F. (2016). Digital storytelling: New opportunities for humanities scholarship and pedagogy. *Cogent Arts & Humanities*, 3(1), 1181037.
- Barrett, J., & Cocq, C. (2019). Indigenous storytelling and language learning: digital media as a vehicle for cultural transmission and language acquisition. In *Perspectives on Indigenous writing and literacies* (pp. 89-112). Brill.
- Bodemer, D., Ploetzner, R., Feuerlein, I., & Spada, H. (2004). The active integration of information during learning with dynamic and interactive visualisations. *Learning and instruction*, 14(3), 325-341.
- Buckingham, D. (2008). Defining digital literacy: What do young people need to know about digital media. *Digital literacies: Concepts, policies and practices*, 30, 73-90.
- Buendgens-Kosten, J. (2021). Digital Storytelling: Multimodal Meaning Making. Research-publishing.net.
- Campbell, T. A. (2012). Digital storytelling in an elementary classroom: Going beyond entertainment. *Procedia-Social and Behavioral Sciences*, 69, 385-393.
- Chubko, N., Morris, J. E., McKinnon, D. H., Slater, E. V., & Lummis, G. W. (2020). Digital storytelling as a disciplinary literacy enhancement tool for EFL learners. *Educational Technology Research and Development*, 68, 3587-3604.
- Chung, M. H. (2021). Digital storytelling project for language teachers: Using personal narratives and technology for authentic learning experience. In *Interdisciplinary Approaches Toward Enhancing Teacher Education* (pp. 50-68). IGI Global.
- Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Dörnyei, Z. (2009). *The psychology of second language acquisition*. Oxford: Oxford University Press.
- Gee, J. P. (2003). What video games have to teach us about learning and literacy. *Computers in Entertainment (CIE)*, 1(1), 20-20.
- Green, L. (2013). Language learning through a lens: The case for digital storytelling in the second language classroom. *School Libraries Worldwide*, 22-36.
- Gromik, N. A. (2015). The Effect of Smartphone Video Camera as a Tool to Create Gigital Stories for English Learning Purposes. *Journal of Education and Learning*, 4(4), 64-79.
- Halic, O., Lee, D., Paulus, T., & Spence, M. (2010). To blog or not to blog: Learner perceptions of blog effectiveness for learning in a college-level course. *The Internet and higher education*, 13(4), 206-213.
- Har, A. L. C., Mohamad, J. Z. A., & Jamal, S. S. (2019). The benefits and drawbacks of using tablet-based digital storytelling in vocabulary learning among Malaysian young English as a Second Language (ESL) learners. *Asia Pacific Journal of Educators and Education*, 34, 17-47.
- Heo, M. (2009). Digital storytelling: An empirical study of the impact of digital storytelling on pre-service teachers' self-efficacy and dispositions towards educational technology. *Journal of Educational Multimedia and Hypermedia*, 18(4), 405-428.
- Hull, G. A., & Katz, M. L. (2006). Crafting an agentive self: Case studies of digital storytelling. *Research in the Teaching of English*, 41(1), 43-81.
- Hur, J. W., & Suh, S. (2012). Making learning active with interactive whiteboards, podcasts, and digital storytelling in ELL classrooms. *Computers in the Schools*, 29(4), 320-338.
- Kajder, S. B. (2004). Enter here: Personal narrative and digital storytelling. *English Journal*, 64-68.
- Kallinikou, E., & Nicolaidou, I. (2019). Digital storytelling to enhance adults' speaking skills in learning foreign languages: A case study. *Multimodal Technologies and Interaction*, 3(3), 59.
- Kasami, N. (2018). Advantages and disadvantages of digital storytelling assignments in EFL education in terms of learning motivation. *Future-proof CALL: language learning as exploration and encounters—short papers from EUROCALL*, 130.
- Kessler, G., & Bikowski, D. (2010). Developing collaborative autonomous learning abilities in computer mediated language learning: Attention to meaning among learners in wiki space. *Computer Assisted Language Learning*, 23(1), 41-58.
- Kimura, M. (2012). Digital storytelling and oral fluency in an English reading class at a Japanese university. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, 2(1), 1-12.
- Koutropoulos, A., Hattem, D., & Zelezny-Green, R. (2013). Mobile digital storytelling in the second language classroom. In *The Plugged-In Professor* (pp. 225-237). Chandos Publishing.



- Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3), 271-289.
- Lambert, J., & Hessler, B. (2018). *Digital storytelling: Capturing lives, creating community*. Routledge.
- Lee, L. (2014). Digital news stories: Building language learners' content knowledge and speaking skills. *Foreign Language Annals*, 47(2), 338-356.
- Lim, N. Z. L., Zakaria, A., & Aryadoust, V. (2022). A systematic review of digital storytelling in language learning in adolescents and adults. *Education and Information Technologies*, 27(5), 6125-6155.
- Liu, K. P., Tai, S. J. D., & Liu, C. C. (2018). Enhancing language learning through creation: The effect of digital storytelling on learner learning motivation and performance in a school English course. *Educational Technology Research and Development*, 66, 913-935.
- Liu, M. C., Huang, Y. M., & Xu, Y. H. (2018). Effects of individual versus group work on learner autonomy and emotion in digital storytelling. *Educational technology research and development*, 66, 1009-1028.
- McLellan, H. (2007). Digital storytelling in higher education. *Journal of Computing in Higher Education*, 19, 65-79.
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054.
- Mouza, C., & Lavigne, N. C. (2012). Introduction to emerging technologies for the classroom: A learning sciences perspective. *Emerging technologies for the classroom: A learning sciences perspective*, 1-12.
- Niemi, H., & Multisilta, J. (2016). Digital storytelling promoting twenty-first century skills and learner engagement. *Technology, Pedagogy and Education*, 25(4), 451-468.
- Nishioka, H. (2016). Analysing language development in a collaborative digital storytelling project: Sociocultural perspectives. *System*, 62, 39-52.
- Ohler, J. B. (2013). *Digital storytelling in the classroom: New media pathways to literacy, learning, and creativity*. Corwin Press.
- Rambe, P., & Bere, A. (2013). Using mobile instant messaging to leverage learner participation and transform pedagogy at a South African University of Technology. *British Journal of Educational Technology*, 44(4), 544-561.
- Razmi, M., Pourali, S., & Nozad, S. (2014). Digital storytelling in EFL classroom (oral presentation of the story): A pathway to improve oral production. *Procedia-Social and Behavioral Sciences*, 98, 1541-1544.
- Robin, B. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory into Practice*, 47(3), 220-228.
- Robin, B. R. (2006). The Educational Uses of Digital Storytelling. In C. Crawford, R. Carlsen, K. McFerrin, J. Price, R. Weber, & D. Willis (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2006* (pp. 709-716). Chesapeake, VA: AACE.
- Robin, B. R. (2016). The power of digital storytelling to support teaching and learning. *Digital Education Review*, (30), 17-29.
- Sadik, A. (2008). Digital storytelling: A meaningful technology-integrated approach for engaged learner learning. *Educational Technology Research and Development*, 56(4), 487-506.
- Smeda, N., Dakich, E., & Sharda, N. (2014). The effectiveness of digital storytelling in the classrooms: a comprehensive study. *Smart Learning Environments*, 1, 1-21.
- Soler Pardo, B. (2014). Digital Storytelling: A Case Study of the Creation, and Narration of a Story by EFL Learners. *Digital Education Review*, 26, 74-84.
- Tabieh, A. A., Al-Hileh, M. M., Abu Afifa, H. M., & Abuzagha, H. Y. (2021). The Effect of Using Digital Storytelling on Developing Active Listening and Creative Thinking Skills. *European Journal of Educational Research*, 10(1), 13-21.
- Tahriri, A., Tous, M. D., & MovahedFar, S. (2015). The impact of digital storytelling on EFL learners' oracy skills and motivation. *International Journal of Applied Linguistics and English Literature*, 4(3), 144-153.
- Thang, S. M., Lin, L. K., Mahmud, N., Ismail, K., & Zabidi, N. A. (2014). Technology integration in the form of digital storytelling: mapping the concerns of four Malaysian ESL instructors. *Computer Assisted Language Learning*, 27(4), 311-329.
- Yang, Y. T. C., & Wu, W. C. I. (2012). Digital storytelling for enhancing learner academic achievement, critical thinking, and learning motivation: A year-long experimental study. *Computers & Education*, 59(2), 339-352.