EXPLORING THE IMPACT OF DIGITAL STORYTELLING ON READING AND CRITICAL THINKING: A PRELIMINARY STUDY

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Abstract:

The Reading and Writing classroom introduces a digital storytelling project to engage students in meaningful learning experiences. Digital storytelling integrates multimedia elements such as images, audio, and video with narrative structures, offering an engaging and interactive approach to language learning. By immersing English as a Second Language (ESL) learners in rich, contextually relevant stories, digital storytelling can cater to diverse learning styles and promote a deeper understanding of textual content. This study investigated students' perceptions of digital storytelling projects and their potential impact on reading and critical thinking skills in Reading and Writing classrooms. This preliminary study involved 64 first-year ESL students from Universiti Malaysia Sabah Labuan International Campus. The data gathered from the study were taken through a mixed-method approach, combining questionnaires and qualitative feedback from the participants. The data analysis revealed that students generally had positive perceptions of the project, with most participants agreeing that the digital storytelling project enhanced their reading comprehension, critical thinking, and creativity. The study suggests that digital storytelling can be a valuable tool for developing reading skills and higher-order thinking in ESL learners. Future research is needed to explore digital storytelling projects' long-term effects on reading and critical skills.

Keywords:

Critical Thinking, Digital Storytelling, ESL, Reading Skill

Introduction

Technology has created a culture of desire towards gadgets in today's technologically fast-paced society. This digital revolution has led to a shift in reading habits, with many children opting for screens over books. The visual nature of digital content can make it more engaging

for some children. Not only that, games, videos, and social media platforms provide endless entertainment at the touch of a button. While digital technology has undeniable benefits, it is important to recognise the value of reading. Books can foster critical thinking, imagination, and empathy. Furthermore, they expose the younger generation to different perspectives, expand their vocabulary, and improve their language skills.

The term digital natives associated with the present student population made educators worldwide experiment with new technology to be integrated into the classroom. Digital natives, which Marc Prensky coined, refer to students growing up with technology as an integral part of their lives and are fluent in the language of computers, video games and the Internet (Prensky, 2001). Prensky (2001) suggested that teachers reconsider teaching methods and content when encountering digital natives in the classroom. Teachers must learn to communicate in their students' language and style and pay attention to the subject's content. Additionally, exploring digital technologies can help bridge the gap between traditional curricula such as reading, writing and listening and digital literacy. This is how digital storytelling found its way to the classroom, which has proven to be an innovative pedagogical approach that enhances students' engagement, language skills and meaningful learning (Smeda et al., 2012).

The rapid evolution of technology has given birth to the modern version of digital storytelling, which was further developed at the Centre for Digital Storytelling in California in the 1990s, founded by Dana Atchley, Joe Lambert and Nina Mullen (Aboo Bakar, 2019; Mirza, 2020). They discovered that the new digital media technology allows people with little prior multimedia experience to create strong personal stories. Since then, digital storytelling has been widely used in the teaching and learning environment and has been regarded as one of the innovative pedagogical approaches which provide a myriad of educational benefits. The combination of text, images, audio, and video makes digital storytelling compelling for educators in the classroom, particularly in the teaching of the English language. Digital storytelling is widely regarded as an effective method for improving students' skills in speaking, writing, critical thinking, and problem-solving (Jitpaisarnwattana, 2018). However, despite its widespread use in language-learning classrooms, limited studies have investigated students' perceptions or attitudes towards its use as a project, particularly in their reading and critical thinking skills. Understanding students' perceptions is crucial in assessing the effectiveness of technology integration in the classroom (Al-Shammy, 2007, as cited in Jitpaisarnwattana, 2018). Thus, this paper explores students' perceptions of digital storytelling projects and their potential benefits for reading and critical thinking.

Literature Review

This literature review will explore into the concept of digital storytelling, exploring its definition and key elements. In addition, this section will review past studies that investigate how digital storytelling affects reading and critical thinking.

Digital Storytelling

Storytelling is the oldest form of human communication that has been used throughout human history. Storytelling could captivate, inspire, and educate, whether it is a bedtime story, a historical moment or a fairytale. Humans have used storytelling as a tool for entertainment, education and sharing traditions and values of their cultures. The educational benefit of storytelling, which is a natural yet powerful technique for the students to communicate,

personalise and construct their own meaning based on what they know and experience, is the reason storytelling is applied in the classroom as one of the pedagogical approaches (Behmer, 2005; Smeda et al., 2014). The evolution of technology and the emergence of digital media have revolutionised how storytelling is applied in the classroom. The traditional form of oral narratives has shifted to digital experiences with a modern approach. Normann (2011), cited in Smeda et al. (2014), stated that "Today people still tell stories, but now we have new media tools with which to share them. A digital story can hence be seen as a merger between the old storytelling tradition and the use of new technology," (p.3).

Digital storytelling definition varies according to researchers however most of them share several elements in their definition where digital storytelling uses digital multimedia or tools to create stories by combining images, narration and audio more engagingly. Robin (2006) defined digital storytelling as digital stories that mix various digital elements to convey information on a particular topic. These digital stories are a blend of digital graphics, text, recorded audio narration, video and music to enhance the storytelling experience. By incorporating these types of digital multimedia, digital storytelling offers a dynamic way to present information and understand certain subject matter.

Multi-elements of Digital Storytelling

As noted earlier, the Centre for Digital Storytelling has been instrumental in shaping the landscape of digital storytelling. They have identified seven key components, or "The Seven Elements of Digital Storytelling," as outlined in Table 1.

Table 1: The Seven Elements of Digital Storytelling

Element	Description
Point of View	What is the perspective of the author?
A Dramatic Question	A question that will be answered by the end of the story
Emotional Content	Serious issues that speak to us in a personal and powerful way
The Gift of Your Voice	A way to personalize the story to help the audience understand the context
The Power of the Soundtrack	Music or other sounds that support the storyline
Economy	Simply put, using just enough content to tell the story without overloading the viewer with too much information
Pacing	Related to Economy, but specifically deals with how slowly or quickly the story progresses

Source: (Robin, 2006, p.2)

In 2005, Robin and Pierson further developed the seven-element framework into a more comprehensive ten-element model, specifically tailored to the digital storytelling projects of their students as shown in Table 2 below.

Table 2: Expanded and Modified Digital Storytelling Elements

1. The Overall Purpose of the Story	6. Pacing of the Narrative
2. The Narrator's Point of View	7. Use of a Meaningful Audio Soundtrack
3. A Dramatic Question or Questions	8. Quality of the Images, Video & other Multimedia elements
4. The Choice of Content	9. Economy of the Story Detail
5. Clarity of Voice	10. Good Grammar and Language Usage

Source: (Yuksel et al., 2011, p.1265)

Digital Storytelling and Reading Skills

Recognising the potential of digital storytelling as an effective educational tool, teachers across the globe have increasingly begun to incorporate it into their classrooms. They have seen how digital storytelling provides engaging and interactive environments. Digital storytelling not only serves as a medium that combines digital media with innovative teaching and learning practices but also significantly enhances students' motivation, collaboration and higher-order thinking skills (Dakich, 2008 cited in Smeda et al., 2014).

Language teachers have increasingly embraced digital storytelling in the classroom, leveraging its unique ability to improve students' language skills. Several studies have demonstrated that digital storytelling has positively impacted students' language skills, learning motivation and student engagement (Sadik, 2008; Snelson & Sheffield, 2009; Smeda et al., 2014; Mirza, 2020). Integrating multimedia elements into digital storytelling gives students immersive learning experiences beyond traditional methods. This method actively involves them creating narratives, making learning more interactive and meaningful.

Alshrari (2015) examined the effect of digital storytelling on the reading skills of EFL second-intermediate students in Saudi Arabia. The study involved fifty students who were divided into two groups: experimental and control groups. A pre-test and post-test were administered to measure the impact. The finding revealed that students in the experimental group showed greater progress than the control group, which received instructions through the traditional method (cited in Radaideh et al., 2020). Hamdy (2017) also produced a similar result where the experimental group performed better in reading and listening comprehension than the control group. Another study by Adiguzel and Kumkale (2018) explored the effect of digital stories on reading comprehension in a secondary school in Turkey. The result suggested that using digital stories in English lessons positively impacted reading comprehension.

While previous studies have demonstrated the effectiveness of digital storytelling as a tool in enhancing reading comprehension, limited studies address how students' creation of digital storytelling projects contributes to improving their reading skills. Yang and Wu (2012) studied the impact of digital storytelling projects on students' academic achievement, critical thinking and learning motivation. The year-long experimental study revealed that engaging in a digital storytelling project enhances students' reading and writing skills, and the students collaborate to construct the meaning of content-related themes by browsing, summarising, and sharing several English materials while composing their drafts. Another study by Jitpaisarnwattana (2018) investigates EFL students' attitudes towards digital storytelling projects at a university in Thailand that focuses on language improvement and motivation. The study found that

integrating digital storytelling projects in the classroom improves their language skills, particularly reading and writing. Recently, Mirza (2020) also explored the effectiveness of digital storytelling projects in improving the student's language proficiency. The result shows that creating digital storytelling videos provides enjoyable learning experiences and simultaneously improves language proficiency in areas such as pronunciation, oral communication, and writing.

Digital Storytelling and Critical Thinking Skills

Critical thinking skills have become one of the main skills in the 21st century, which are essential for schools and work (Wiwikananda & Susanti, 2022). In language learning, critical thinking is essential in comprehending the reading materials and questions and interpreting them on a deeper level. Critical thinking is a higher-order thinking skill (HOTS) which, according to Bloom (1956), involves problem-solving, decision-making and creative thinking (cited in Wiwikananda & Susanti, 2022). Facione (2013) defined critical thinking as "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based" (p.26). Critical thinking involves analysing and evaluating information, identifying logical relationships and drawing conclusions based on evidence. The use of digital storytelling as an educational approach has the potential to promote critical thinking skills in students. Digital storytelling requires them to engage in reflective thinking as they conceptualise, design, and present their stories. Yang and Wu (2012) found that digital storytelling projects allow students to make critical decisions about structuring their narrative, selecting multimedia elements, and interpreting those elements in their projects, which contributes to developing their critical thinking skills. Wiwikananda & Susanti (2022) found that deploying digital storytelling improved students' critical thinking. They found digital storytelling "encourages the students to actively participate in the teaching and learning session in order to examine, evaluate and make decisions regarding a certain subject," (p.372).

Previous research has demonstrated the effectiveness of digital storytelling as a teaching method in language-learning classrooms. Additionally, digital storytelling can be used as a student-centred project. This preliminary study aims to explore students' perceptions of these projects and their potential benefits for developing reading and critical thinking skills to delve deeper into the potential impact of digital storytelling projects on student learning. This study addresses two primary research questions:

i. What are students' perceptions of digital storytelling projects regarding their reading skills?
ii. What are students' perceptions of digital storytelling projects regarding their critical thinking skills?

Methodology

Setting and Participant

The researcher conducted the study at Universiti Malaysia Sabah Labuan International Campus (UMSLIC), the second branch of Universiti Malaysia Sabah (UMS). The participants of this study were 64 first-year students enrolled in Reading and Writing in English class. The participants comprised 26 male and 38 female students, from the Faculty of International Finance Labuan (FKAL) and the Faculty of Computing and Informatics (FKI).

Digital Storytelling Project Description

All participants in this study enrolled in Reading and Writing in English class. Reading and Writing in English is one of the English subjects offered to proficiency-level students at Universiti Malaysia Sabah. It is a three-hour class per week for 14 weeks. The class aims to enhance students' reading and writing skills through exposure to various reading materials and essay genres. The digital storytelling project is one of the assessments for this subject. For this project, students are required to select an English novel from a list of classic titles, including The Old Man and The Sea, The Hound of Baskerville, Of Mice and Men, Animal Farm, Lord of the Flies, To Kill a Mockingbird, The Outsider, The Great Gatsby and Journey to the Center of the Earth. At the start of the semester, the lecturer briefed the students on the project, which was carried out in groups of four or five. After reading their chosen novel, students began the project by creating a storyboard, a crucial step for visualising their digital story. A storyboard template was provided to guide them in including the necessary elements of their story. After completing their storyboards, each group met with the lecturer for feedback before producing their digital story video. Each group then created a seven-minute digital video. Each group presented their digital story videos in the 14th week of the semester. Figure 1 illustrates the flowchart of the digital storytelling project.
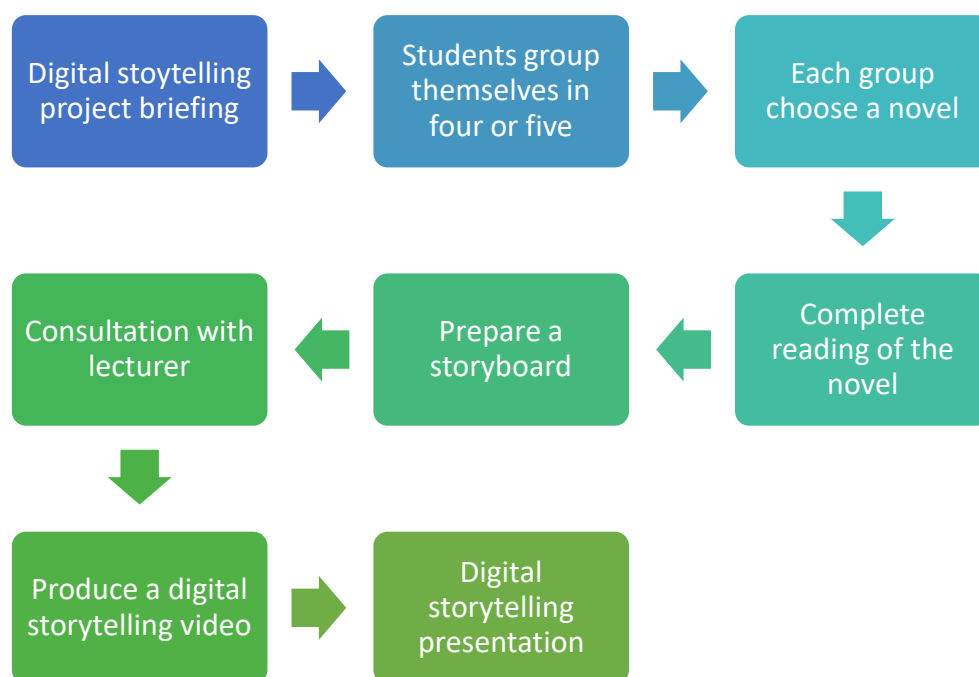

Figure 1: Flowchart of Digital Storytelling Project

Data Collection and Instrument

To collect data, a set of closed and open-ended questionnaires was administered to the participants to complete using Microsoft Forms. The researcher used a questionnaire adapted from Jitpaisarnwattana (2018) in his study. There are three sections to the questionnaire. Section A includes demographic questions, Section B contains 16 five-point Likert scales with 1 being 'Strongly Disagree and 5 being Strongly Agree' measuring students' perceptions on digital storytelling projects and Section C consists of 11 open-ended questions (see Appendix). The open-ended questions sought to gain additional insights into students' perceptions and opinions as reflected in their answers to Section B.

Data Analysis

The data from the closed-ended questions were analysed using frequency analysis to examine the distribution of responses for each question. The five-point Likert-scale items were interpreted as follows: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. When reporting the data, the scores for the Likert-scale items were combined, such as 4 (agree) and 5 (strongly agree) or 2 (disagree) and 1 (strongly disagree). The open-ended questions provided additional insight into the answer from Section B and support for the quantitative findings.

Result and Discussion

Research Question One: What Are Students' Perceptions Of Digital Storytelling Projects Regarding Their Reading Skills?

Questions one and seven in Section B of the questionnaire assessed participants' perceptions of how the digital storytelling project enhanced their reading skills. These questions specifically focused on the project's effectiveness in improving reading comprehension of the chosen novel and overall reading ability. Additionally, open-ended questions were included to elicit detailed responses from participants. The quantitative and qualitative results consistently indicated that the digital storytelling project positively impacted students' reading skills and understanding of the chosen novel. As shown in Figure 2, a significant majority of participants (95.3%) agreed that the project improved their overall reading skills, while only 4.7% disagreed.
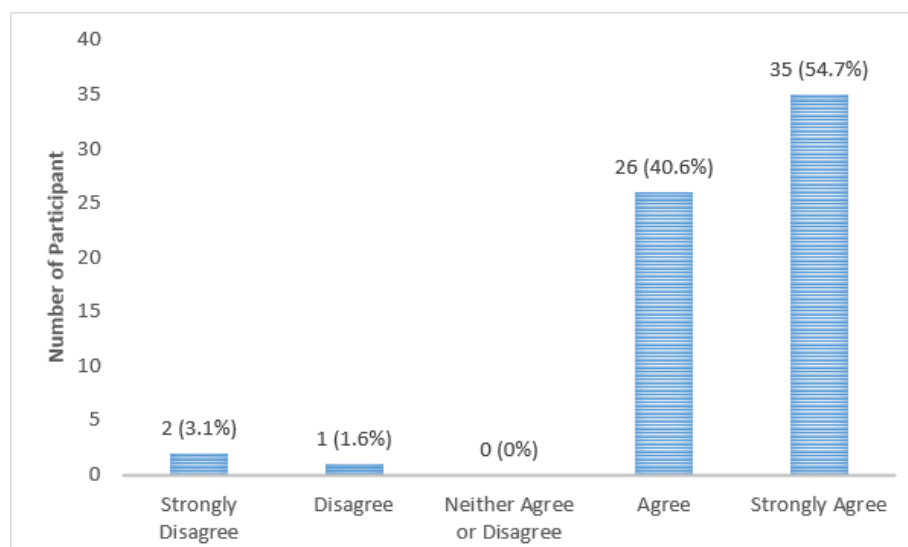

Figure 2: The Digital Storytelling Project Helped Me Improve My Reading Skill

Question seven revealed that most participants found the digital storytelling project to be beneficial for deepening their understanding of the novel. This was reflected in their ability to choose critical parts of the story, identify themes, and connect the novel to their personal experiences, as demonstrated in their digital story videos. Figure 3 further supports this finding, with 95.3% of participants agreeing that the project improved their understanding of the novel and only 4.7% disagreeing.
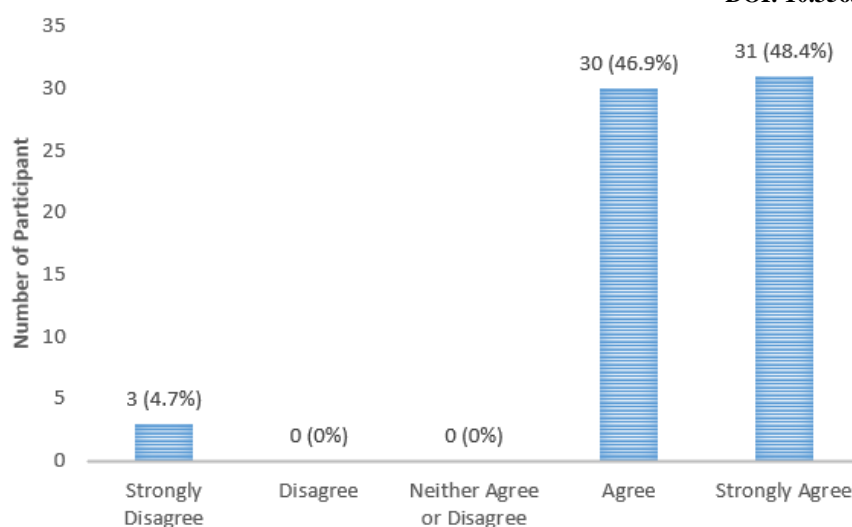
Figure 3: The Digital Storytelling Project Enhanced My Understanding of the Novel That I Read

These findings are consistent with previous research by Anggeraini and Nurul (2017) and Jitpaisarnwattana (2018), highlighting the positive effects of digital storytelling projects on students' reading skills. As outlined previously, students were assigned to read a novel from the provided selection and then create a digital storytelling video based on the novel. This process required a deep engagement with the reading material, as students must choose significant scenes, analyse events and connect them with the novel's theme. This active engagement enhances their comprehension of the novel.

The qualitative feedback provided by the participants further supported these quantitative findings, with students reporting increased comprehension and a deeper understanding of the story's key elements prior to creating their digital storytelling videos.

> "by reading the novel and the understanding the story" - R5
> "What I like about digital storytelling is it make me more clear about the story that we have read" – R17
> "Its help me to read the whole novel and understand it on my own. Then, do our part that already been seperated for each member" - R24
> "For me,digital storytelling project helped me by teach me to understand well the story and put short summary on it so that i can explain to the audiences" - R38
> "The project improved my reading skills by requiring me to research and analyze texts for story creation" – R41
> "The digital storytelling project helped me develop my reading skills by reading a novel. Reading a full novel allows me to focus on the storyline and every line the novel author tried to convey" - R53
> "While reading the novel to know and understand the story in the novel before it is made into an animation" - R63

Additionally, students reported that working together on a digital storytelling project encouraged knowledge sharing and helped clarify any misunderstandings, ultimately leading to a deeper understanding of the novel and improved digital story video production.

"We need to discuss what are the different understanding between us and we need to include it in the book review video" – R49
"The digital storytelling project helped me improve collaboration with my group members by sharing ideas, communicating, and helping to solve problems together. This will make us to be more close towards each other" – R53
"Enhanced Communication: Working on a digital storytelling project requires constant communication. This has fostered better dialogue among group members, ensuring everyone is on the same page and contributing their ideas" – R60

Educators worldwide have recognised the potential of digital storytelling to enhance students' understanding of content. This approach allows students to actively construct meaning from content, share experiences, and facilitate collaboration and discussion (Yuksel et.al., 2011). A study by Yang and Wu (2012) found that collaboration among participants in preparing their digital story project can enhance their understanding of content-related themes from multiple sources of English materials. These quantitative and qualitative results strongly indicate that the digital storytelling project significantly improved students' reading skills. By requiring the students to thoroughly explore and analyse the key elements of the reading materials, the project supported a more active and engaged approach to reading.

Research Question Two: What Are Students' Perceptions Of Digital Storytelling Projects Regarding Their Critical Thinking Skills?

The findings of this research suggest that digital storytelling projects enhance students' critical thinking skills. As illustrated in Figure 4, 89.1% of participants agreed that creating a digital storytelling video improved their critical thinking skills, while 10.9% either disagreed or remained neutral. The result obtained in this study echoes the studies by Al-Shaye (2021) and Wiwikananda & Susanti (2022) which also demonstrated that integrating digital storytelling into classroom activities improved students' critical thinking.
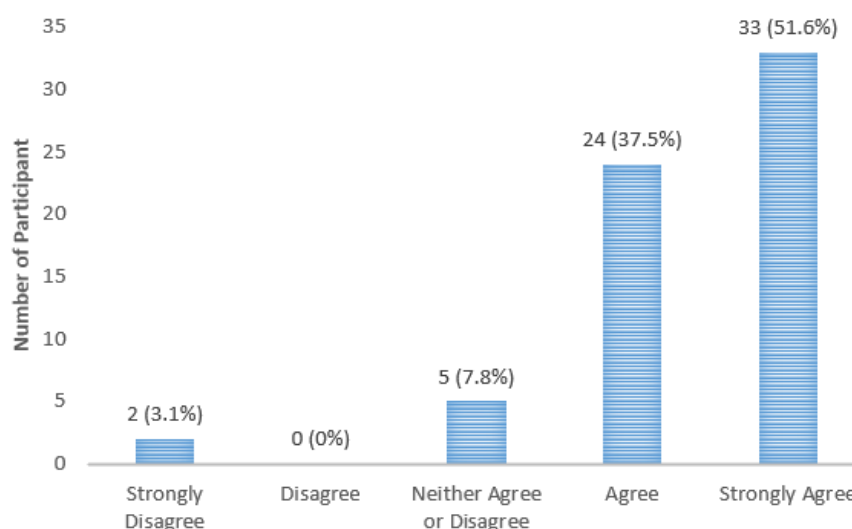

Figure 4: The Digital Storytelling Project Improved My Critical Thinking

This digital storytelling project is a multifaceted process that can significantly enhance students' critical thinking skills. Before creating their digital story video, students must analyse the story by breaking it down into several key elements: plot, characters, themes, and personal

review. This analysis allows them to synthesise these components into their own version of the narrative for the digital story. Creating a digital story requires a deep understanding of the original material and its accurate representation in animation. Sadik (2008) stated that the digital storytelling process enables students to think critically about their subject matter and helps clarify and reflect on their knowledge. These can be seen in the responses from the students, who indicated that their critical thinking was enhanced during the preparation of their digital storytelling projects.

> "Critical thinking, new word discovery, and development my English accent even more fluent" – R34
> "Critical thinking skills" – R36
> "Critical Thinking: Analyzing and constructing stories has enhanced my ability to think critically and organize ideas logically. This has translated into clearer and more persuasive communication. - R60
> "Creating digital stories helps me develop these technical skills because it makes me do some research, writing, critical thinking and creativity. - R63

Producing a digital story video does more than just summarise the novel they have read. Still, the students must also consider which important element to include while adhering to the time limit. The summary presented in the video must be clear and concise. Addressing these difficulties requires critical thinking and problem-solving skills. Mirza (2020) found that integrating digital storytelling projects in the classroom can significantly enhance students' critical thinking skills as they learn to communicate relevant information within a limited timeframe.

The process of transforming the content of the text into animations includes various steps that the students need to follow to make their digital storytelling video successful. Other than reading and understanding the text, the students must carefully choose the appropriate visuals, such as images, illustrations or live-action footage, to accurately represent the story's content. Adding audio components to digital storytelling videos, such as voice-overs or background music and special effects, can also enhance the viewing experience for audiences.

> "Digital storytelling project allows me to creative thinking and create story visual in interesting way" – R52
> "Digital storytelling projects an interesting way to learn through video. The way digital storytelling conveys information is easy to understand which is interesting with whatever method is used in the background such as animation" – R53
> "I have learned how to create engaging digital content, including interactive elements and dynamic storytelling techniques" – R58
> "While reading the novel to know and understand the story in the novel before it is made into an animation" – R63

This result is supported by studies conducted by Yang and Wu (2012) and Abdel-Hack & Helwa (2014) who found that using digital storytelling projects to develop critical thinking abilities helped the participants to interpret the significance of certain elements of stories, visuals, and software. This corroboration of findings strengthens the effectiveness of digital storytelling projects in improving critical thinking skills.

Pedagogical Implications

The result of this study provides evidence that digital storytelling projects can be an effective tool for teaching and learning in improving language skills. This approach offers a modern and innovative alternative to traditional teaching methods by integrating technology into the learning process. The digital storytelling project stimulates engagement by encouraging the students to participate actively in the learning process rather than be passive readers or listeners. By combining storytelling with digital media, students develop their language skills, particularly in this study, reading skills and enhance their creativity and critical thinking skills.

Conclusion

The findings of this study show that digital storytelling projects can play a pivotal role as a teaching and learning tool for stimulating learning in the 21st-century classroom. The digital storytelling project is making students become content creators where they can select the text's key elements, identify themes and make personal connections with the material. This hands-on approach is aligned with the digital native habits of the current generation of students, making reading more relevant and stimulating. Through this study, integrating digital storytelling projects into reading and writing classes can significantly improve students' comprehension of the reading material. It provides opportunities to analyse and synthesise the content, selecting only the most important elements to include in their storytelling video. Robin (2006) stated that digital storytelling empowers students to create meaningful stories and present their ideas compellingly.

The study also highlights the significant role of digital storytelling projects in enhancing students' critical thinking skills. In completing the project, students were required to be creative in crafting their stories and analysing information, evaluating different perspectives, and making thoughtful decisions on presenting their stories. The reflection, organisation, and decision-making process encouraged them to think critically, thus improving their critical thinking abilities. Smeda et al., (2010) cited in Abdel-Hack & Helwa (2014) emphasised that integrating digital storytelling into the curriculum is a strategic approach to fostering higher-order thinking skills which require students to actively engage and reflect on the content rather than passively receive information. Moreover, digital storytelling projects also allow students to take an active role in their learning, where they would be responsible for their projects with minimal teacher guidance (Ohler, 2006; Al-Shaye, 2021). This student-centred approach promotes autonomy, allowing students to take ownership of their learning while improving problem-solving, creativity and critical thinking.

Limitation of the Study

This preliminary study has several limitations. First, the sample size was limited to the sections taught by the researcher, which may only partially reflect part of the student population. Thus, a comparison study between English classes employing digital storytelling projects is recommended to validate the current findings and obtain a comprehensive view of this issue. Secondly, the study focused solely on students' perceptions and did not include a direct measure of reading and critical thinking skills. Finally, the present study was conducted over a short timeframe, which limits the ability to assess the long-term impact of digital storytelling projects on students' reading and critical thinking skills. Future research could address these limitations by including a larger, more diverse sample over a longer period, including direct measures of reading and critical thinking skills, and employing a longitudinal design to examine the effectiveness of digital storytelling projects on reading skills.

Acknowledgement

References

Abdel-Hack, E. M., & Helwa, H. (2014). Using digital storytelling and weblogs instruction to enhance EFL narrative writing and critical thinking skills among EFL majors at faculty of education. *Educational Research Journal*, *5*(1), 8–41. doi:10.14303/er.2014.011

Aboo Bakar, R. (2019). Digital Storytelling: an influential reading comprehension and creativity tool for the 21st Century literacy skills. *JELTIM (Journal of English Language Teaching Innovations and Materials)*, *1*(2), 49–53. doi:10.26418/jeltim.v1i2.34362

Adiguzel, A., & Kumkale, Z. (2018). The effect of digital story preparation program on reading comprehension in English. *Electronic Journal of Education Sciences*,*7*(14), 176–186.

Al-shaye, S. (2021). Digital storytelling for improving critical reading skills, critical thinking skills, and self-regulated learning skills. *Cypriot Journal of Educational Sciences*, *16*(4), 2049–2069. doi:10.18844/cjes.v16i4.6074

Anggeraini, Y & Afifah, N. (2017). Digital Storytelling as a Teaching Medium in Reading Classroom. *Journal of Language and Literature.* 12. 83-89. 10.15294/lc.v12i1.11472.

Behmer, S. (2005). Literature review digital storytelling: Examining the process with middle school students. *Proceedings of the Society for Information Technology & Teacher Education International Conference*, USA, 822-827.

Braun, V., & Clarke, V. (2012). Thematic Analysis. *APA Handbook of Research Methods in Psychology, Vol 2: Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological.*, 57–71. doi:10.1037/13620-004

Facione, P. (2013). Critical Thinking: What It Is and Why It Counts. *Insight Assessment.* 2-28.

Hamdy, M.F. (2017). The Effect of Using Digital Comprehension and Listening Comprehension. *Journal of Arabic and English Teaching.* 8(2), 112-123.

Maguire, M., & Delahunt, B. (2017) Doing a Thematic Analysis: A Practical, Step-by-Step Guide for Learning and Teaching Scholars. *All Ireland Journal of Higher Education (AISHE-J)*, 9, 3351-33514.

Mirza, H., S. (2020). Improving university students' English Proficiency with digital storytelling. *International Online Journal of Education and Teaching (IOJET)*, *7*(1), 84-94.

Jitpaisarnwattana, N. (2018). Students' attitudes towards the use of digital storytelling in Foreign language classroom: The Zimmer twins project. *rEFLections*, *25*(2), 59–75. doi:10.61508/refl.v25i2.165359

Ohler, J. (2006). The World of Digital Storytelling. *Educational Leadership*, *63*(4), 44-47.

Prensky, M. (2001). Digital Natives, digital immigrants part 1. *On the Horizon*, *9*(5), 1–6.doi:10.1108/10748120110424816

Sadik, A. (2008). Digital Storytelling: A meaningful technology-integrated approach for engaged student learning. *Educational Technology Research and Development*, *56*(4), 487–506. doi:10.1007/s11423-008-9091-8

Smeda, N., Dakich, E., & Sharda, N. (2012). Transforming pedagogies through Digital Storytelling: Framework and methodology. *Conference Proceedings on 2nd Annual International Conference on Education and E-Learning*. doi:10.5176/2251-1814_eel12.98

Smeda, N., Dakich, E., & Sharda, N. (2014). The effectiveness of digital storytelling in the classrooms: A comprehensive study. *Smart Learning Environments*, *1*(1), 1–21. doi:10.1186/s40561-014-0006-3

Snelson, C. & Sheffield, A. (2009). Digital Storytelling in a Web 2.0 World. *Proceedings of Technology, Colleges and Community Worldwide Online Conference*, 159-167.

Radaideh, E., Al-Jamal, D., & Sa'di, I. (2020). Digital storytelling: Time to be considered in reading comprehension. *Universal Journal of Educational Research*, *8*(6), 2621–2633. doi:10.13189/ujer.2020.080645

Robin, B. (2006). The educational uses of digital storytelling. *Proceedings of SITE 2006 Society for Information Technology and Teacher Education International Conference,* 709-716. https://www.learntechlib.org/primary/p/22129/

Wiwikananda, S. K., & Susanti, A. (2022). Improving students' critical thinking skills through digital storytelling on narrative text. *Pioneer: Journal of Language and Literature*, *14*(2), 356–375. doi:10.36841/pioneer.v14i2.1685

Yang, Y.-T. C., & Wu, W.-C. I. (2012). Digital storytelling for enhancing student academic achievement, critical thinking, and learning motivation: A year-long experimental study. *Computers & Education*, *59*(2), 339–352. doi:10.1016/j.compedu.2011.12.012

Yuksel, P., Robin, B.R., & McNeil, S.G. (2011). Educational Uses of Digital Storytelling all around the World. *Proceedings of SITE 2011 Society for Information Technology and Teacher Education International Conference,* 1264-1271. https://www.learntechlib.org/primary/p/36461/.

Appendix: Students' Perceptions of Digital Storytelling Project Questionnaire

No	Item
	Section A
1	Age:
2	Gender: Male / Female
3	Faculty: FKAL / FKI
4	Race:
	Section B
1	The digital storytelling project helped me improve my reading skill
2	The digital storytelling project helped me improve my writing skill
3	The digital storytelling project helped me improve my grammar
4	The digital storytelling project helped me improve my vocabulary knowledge
5	The digital storytelling project helped me improve my critical thinking
6	The digital storytelling project improved my teamwork skill
7	The digital storytelling project enhanced my understanding of the book that I read
8	The digital storytelling project aroused my curiosity, even if it was difficult to do
9	The digital storytelling project made me like English more
10	The digital storytelling project was challenging
11	The digital storytelling project was interesting
12	The digital storytelling project was a motivational tool for me to learn English
13	The digital storytelling project was very engaging
14	The digital storytelling project is useful for my English learning
15	I think I will be able to use the skills that I learned from the digital storytelling project in other aspects of my life.
16	I am satisfied with my digital storytelling project
	Section C
1	What do you like about the digital storytelling project?
2	What do you dislike about the digital storytelling project?
3	What is the most challenging part of the digital storytelling project?
4	How did the digital storytelling project improve your reading skills?
5	How did the digital storytelling project improve your writing skills?
6	How did the digital storytelling project improve your critical thinking?
7	How did the digital storytelling project improve your vocabulary knowledge?
8	How did the digital storytelling project improve your overall English skills?
9	How did the digital storytelling project improve your editing skills?
10	How did the digital storytelling project improve your collaboration with your group members?
11	How did the digital storytelling project enhance your learning experience?