DIGITAL STORYTELLING AS AN EFFECTIVE STRATEGY FOR ENHANCING DIGITAL LITERACY IN EDUCATION

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ABSTRACT

In addition to being able to deliver learning directed to increasing students' skills in line with the demands of the 21st century, digital storytelling is anticipated to be the best technique for satisfying the needs of students who are digital natives. Unfortunately, there is a negative impact of these demands on decreasing in students' literacy levels. Each of the alternatives that the teacher ought to try is provided, along with a breakdown of the issues. One of them is mastering digital storytelling, a learning paradigm that is focused on addressing students' digital needs by utilizing technology as a medium for literacy and creativity. In order to compare and develop the best teaching tactics for students who cannot be separated from digital literacy, research is created using the library approach, referring to international journals that have already explored the urgency of learning through the use of digital storytelling. By analyzing 23 journals, 3 books, and 4 articles related to digital storytelling in education. The data is identified, classified, and interpreted which is then validated by data triangulation. According to the study's findings, there are some components of a teacher's responsibility when using digital storytelling in the classroom. Developing teacher skills in technology is crucial to effectively guide students in technology-assisted learning. Additionally, the implementation of a strategic plan for teaching digital literacy through digital storytelling can be a useful tool. Lastly, having proficient technology skills can help teachers overcome any potential problems that may arise during technology-assisted learning.

Keywords: digital storytelling, digital literacy, the role of the teacher, language learning.

1. INTRODUCTION

The COVID-19 pandemic has significantly affected learning practices in Indonesia, decreasing the role of teachers as instructors and instead driving parents to take on this role (Lim et. al, 2022). Indonesian children have already lost 11 points on the program for international student assessment (PISA) reading scale due to the pandemic (Yarrow et al., 2020). School closures precipitated by the COVID-19 pandemic could result in a total loss of between 0.9 and 1.2 years of learning adjusted schooling and on average between 25 and 35 points on student's PISA reading scores (Yarrow et al., 2020). A qualitative study was conducted to explore the understanding of teachers and parents in Indonesia about learning loss during the pandemic. A total of 16 participants consisting of teachers and parents were involved in focus group discussions as part of this study (Kristiana et al., 2022). The study found that learning loss has become an unanticipated impact that threatens almost all students in Indonesia who have shifted from face-to-face learning to online-based distance learning (Kristiana et al., 2022).

Digital-based learning actually facilitates students with their needs as digital natives, unfortunately, from the data presented, a significant decrease in literacy levels occurs due to the shift from offline to online learning. This resulted in students being dependent on the digital world but only as entertainment, the use of online games and social media increased drastically and learning was increasingly lagging behind. Children have lost learning during the crisis, creating a gap that needs to be addressed (UNICEF, 2021). A June 2022 report by UNICEF, UNESCO, the World Bank and others finds an estimated 70 percent of 10-year-olds globally are unable to understand basic text (UNICEF, 2021). There are several strategies that can be used to help children with learning loss, specially to solve downgrading student's literacy. As digital natives, students need digital literacy.

Digital literacy is important because it helps students master their ability to understand and effectively navigate digital challenges, making them more responsible. It also allows individuals to find, use and create information online in a productive and useful way. According to a study, digital literacy is the ability to find, evaluate, utilize, share, and create content using information technologies and the internet (Walton, 2016). Becoming digitally literate means that students develop technological skills, learn authorship rules such as copyright and plagiarism, understand how to access information efficiently and effectively, and are able to evaluate the credibility of sources. Digital literacy has become indispensable for every global citizen, whether to communicate, find employment, and receive comprehensive education.

Teachers can teach digital literacy by emphasizing the importance of critical thinking, using social media for learning and collaborating, showing videos about using technology to spark discussion in the classroom, reviewing the "digital citizenship" concept with students, and assessing what students already know and are able to do (Stenger, 2018). Digital storytelling can be an effective tool to improve digital literacy in students. Through digital storytelling, students can improve their digital competence and master basic skills to create stories using digital platforms (Kansemsap, 2017). Using technology for digital storytelling allows students to increase literacy and academic skills (Foeleske, 2014). The process of researching and creating a digital story provides an authentic opportunity to practice essential literacy skills in areas of reading, writing, speaking, and listening. Digital storytelling can be used to develop writing and storytelling among young learners of a foreign language.

Tapping into new literacies like digital storytelling may boost motivation and scaffold struggling writers. Teachers can use digital storytelling projects to help students improve in fluency and vocabulary and to help reluctant readers become excited about reading. Students develop enhanced communication skills by learning to organize their ideas, ask questions, express opinions, and construct narratives as they create digital stories (O'Byrne, 2014). Digital storytelling is a compact package to use in the classroom, the learning process would be fun for students to create and explore their digital world.

So that digital storytelling can be used by teachers to solve learning loss impacted by pandemic. Especially the gap between high maintenance in using technology but at the same time downgrading in literacy aspec, students cannot leave either one behind. After all, the digital world cannot be avoided, while leaving literacy is the same as entering the abyss of stupidity. Therefore, teachers need digital storytelling to elaborate between technology and literacy, combine them in the right syntax so that students with a global outlook are realized and are not out of date. In accordance with the background and urgency that has been described, this research was made in accordance with the rules of research and can be used by various educational institutions that seek fun and useful digital-based learning.

2. LITERATURE REVIEW
2.1 Digital Literacy
Digital literacy is the capacity to use a variety of digital platforms, including typing, writing, tapping, and other input devices, as well as other media (such as multimedia videos, video calling, and texting), to search for, assess, and write clear information (Bawden, 2008). A fundamental understanding of computers is needed. Digital literacy is the capacity to locate, assess, produce, and convey information using information and communication technologies, according to the American Library Association (ALA). The ability to live, learn, and work in a culture where communication and information access are increasingly digital is referred to as digital literacy (Jenkins, 2009). Digital literacy is the capacity to use technology effectively for a range of tasks, including communication, research, source evaluation, and content creation.

2.2 Digital Based Learning
Digital-based learning is a method of teaching and learning that distributes instructional material through digital technology including computers, tablets, and the internet (Argawati & Suryani, 2020). This might involve a variety of techniques, such as digital game-based learning (DGBL), which uses digital games or other game-based settings to provide engrossing, engaging, fun, and difficult learning experiences (Ishak et. al., 2021; Wang, 2013). Digital-based learning is a cutting-edge method of teaching that makes use of technology to improve the teaching and learning process.

2.3 Digital Storytelling
Digital storytelling was originally developed as a tool for community interaction, development, and empowerment by Joe Lambert and Dana Atchley in the 1990s (De Jager et al., 2017).

Digital storytelling is the practice of narrating a tale using a variety of media, including digital images, video, text, audio, and music (Keengwe, 2015). A multimedia presentation called a "digital story" combines various digital elements with a narrative structure. To enable the development of stories that can be shared with others, digital storytelling combines narrative, teamwork, and technology (Alismail, 2015).

3. METHODS
To explore the urgency of digital storytelling as a teacher's strategy to prove digital literacy, a method of research could involve conducting a literature review of relevant studies. This could include searching academic databases for articles that discuss the effectiveness of digital storytelling in promoting digital literacy. The research sources consist of 23 research journals, 3 books, and 4 articles, and they are used for exploring how digital storytelling that has been used in constructivist learning environments could provide insights into its potential applications in education.

Three analysis data stages include—identification, data classification, and data interpretation—of a qualitative examination of this volume of data were completed (Miles & Huberman, 1994). Firstly, the researchers find out how much digital storytelling has been included into academic studies in order to assess its usability. The second step was examining how journals, books, and articles are related to one another before codifying the information based on these connections. Lastly, in this study, the interpretation of the data was carried out into major points that were written into the results and discussion that addressed the formulation of the research topic about the significance of digital storytelling in an attempt to increase student literacy. In this study, a triangulation technique is used to assess the validity. Triangulation is a method for evaluating the reliability of data that involves comparing it to other data or other pieces of information (Moleong, 2001). Data is validated through triangulation of data collection techniques, data source triangulation, and theory triangulation.

4. RESULTS & DISCUSSION
4.1 How Digital Storytelling's Work

Stories are powerful educational tools that connect with learners on a personal level and alchemize practical lessons with an emotional impact. Digital storytelling has been used in education to support learning and skills development (Alismail, 2015; Rahiem, 2021). It allows teachers to adopt innovative and improved teaching methods and can be used to support instruction (Robin, 20016). Digital stories produced by students in the classroom can serve as artefacts that demonstrate progress in their knowledge and skills development. Additionally, digital storytelling has been found to have a positive impact on student engagement, motivation, and literacy skills (Foelske, 2014).

Digital storytelling has the ability to involve students in multimodal learning strategies. Digital storytelling also improves student motivation and aids instructors in creating constructivist learning environments (Smeda et al., 2014). The requirements and skills of students at their various learning stages should be taken into consideration by this framework (i.e. catering for learners from

primary school to university level, and even professional e-Learning content creators).

Teachers play an important role in digital storytelling in education. In the classroom, teachers can encourage students to create digital stories in collaborative groups, taking on different roles such as the writer, director, editor, and narrator (Wyman, n.d.). Teacher-created digital stories may also be used to enhance current lessons within a larger unit and facilitate discussion about the topics presented. Many teachers are integrating multimedia tools in teaching students' different skills including synthesizing, analyzing, evaluating, and presenting information (Alismail, 2015). Digital storytelling is a powerful tool that can be used by teachers to integrate instructional messages with learning activities.

Teachers and students can follow the steps to use digital storytelling effectively (Smeda et al., 2014).

a)   Brainstorming

Brainstorming ideas for the story is the lesson's goal. In this lesson, teachers break the class into groups and assign subjects so that the groups can talk among themselves, exchange ideas, and brainstorm the story in various ways. For a specific theme that the teacher had assigned, the students jot down thoughts and construct the basic narrative for the story.

b)   Storyline

The storyboard's creation is the goal of this class. Teachers assist their students in constructing the storyboard in this session to organize the tale sequences. They also assist students in understanding the story's essential points. While choosing the appropriate element or elements for the storyline, the students develop it. Students might also begin by outlining their storyboard in writing. This makes it easier to arrange the visual resources properly and to consider how to pair pictures or videos with narration and background music.

c)   Find the components

This lesson is directed towards collecting the material required to create the digital story. Teachers give their pupils examples of how to find photos using a variety of resources, including books, periodicals, and the internet. Regarding the resources used, they also address copyright and digital rights problems. If necessary, teachers also demonstrate how to operate the digital camera to the student. The students are in charge of picking components like images, movies, and music that fit their digital story.

d)   Creating the digital story

The goal is to use video editing tools to produce a digital story. This lesson's duration, which is the longest among the processes involved in creating a digital story, ranges from five to ten days due to the quantity of labor involved. This lesson is intended for teachers to assist students in creating the digital story and demonstrate how to input images and videos into the program. Also, teachers support students who want to record their voices and incorporate them into the narrative. By importing the components into software and recording their voices to add to the narrative and see how well it works with the digital story, the students

constructed the digital story based on the storyboard. Also, they can change the length of each visual component and apply additional effects. This is accomplished by selecting and including some additional effects, such as music and transitions, to enhance the story's appeal. Moreover, the length of each visual component is adjusted to ensure that it corresponds with the narration throughout the full digital story.

e)   Editing and feedback

After the student has developed the initial version of the digital story, this class will focus on modifying and finishing it. Before the digital story's final draft, teachers offer some input in this session that can be used to make additional modifications. Based on the teachers' comments and input, the students modify and revise their initial versions. They then have a teacher and other students around to discuss the final versions. These suggestions and criticisms are used to prepare the story in its final form.

f)   Presentation and evaluation

Presenting and assessing the finished digital tales over the course of one or two days is the last phase in the creative process for digital stories. In this session, the students' primary duty is to convey the digital story to the instructors, their peers, and their parents. Teachers attend the student presentation and evaluate them based on story elements, story creation and presentation.

4.2 Point Out Narrative Side of Digital Storytelling

The method of merging narrative with digital audio and visual content to create a 3- to 5-minute film that often features a strong reflective, emotive, and personal component is known as digital storytelling (Lambert & Hessler, 2018). The subject of the narrative is typically an encounter, occurrence, or event that marks a turning point, coupled with the storyteller's views and interpretations of it in light of their own situation (Jamissen, 2008). The aforementioned items will reach the audience if they are presented in a narrative that clearly conveys messages and aims. The simplicity and accessibility of digital storytelling are what make it so powerful. This applies to both creating and comprehending the stories. An effective digital story can be as simple as a slideshow with appropriate narration; it doesn't have to be a complex multimedia presentation. The mix of the narrative, aural, and visual elements is what is most important, not the technological part (Martin et al., 2019). The objective to promote contemplation, deeper learning, and perhaps transformation. In digital storytelling, the process is just as important as the final product.

Students can reach digital literacy by focusing on narrative aspects in digital storytelling. Effective digital stories require extensive research, ideation, critical thinking, organizing, writing, editing, and media literacy. When students are engaged in the process of creating a digital story, they must synthesize a variety of literacy skills for the authentic product: researching, writing, editing and media literacy (Baggett, n.d.). In educational settings from kindergarten through graduate school, teachers and students are creating digital stories on every topic imaginable. By empowering students as emerging digital storytellers through instructional

models designed to incorporate narrative aspects, they can learn to incorporate ICT elements into their stories and share digital narratives that echo their experiences and choices (Shahid & Khan, 2022). Focusing on narrative aspects in digital storytelling can help students develop essential skills for digital literacy.

4.3 Teacher Challenges to Implementing Digital Storytelling

Digital storytelling has many opportunities to develop the abilities of both students and teachers, especially digital skills and literacy skills. The high role of technology in the application of digital storytelling means that the process can be categorized as a type of digital-based learning. Although Indonesia has long used digital technology in education, the actual usage of digital storytelling is still quite limited. Several studies have identified challenges that teachers face when implementing digital storytelling in the classroom. Some of these challenges include a lack of technical skills and knowledge, limited access to technology, and difficulty integrating digital storytelling into the curriculum (Dogan & Robin, 2008; Shinas & Wen, 2022; Vice e al., 2023). Following is the discussion in detail:

First, a lack of technical skills and knowledge about digital storytelling experienced by teachers. Some teachers may struggle with finding appropriate content for digital stories or may not be comfortable with using technology in their teaching (Matamit, et. al, 2020). Digital stories can contain a mix of music, video clips, and other media. The key component that eventually makes up a digital storytelling piece is content, and as the main subject, the instructor must naturally consider content that is appropriate and in line with learning. By letting students create or narrate their own stories, teachers can use digital stories in the classroom. Content creation does not have to result in completely original work; it might instead begin with pupils copying previously published material and expand from there using their own ingenuity.

Second, including digital storytelling in the classroom can in fact be quite difficult when there is a lack of access to technology. According to a research, students only used computers for an average of 4 hours per week (Gobel & Kano, 2017). Access to computers, tablets, or smartphones is often necessary for digital storytelling, as well as programs or apps for writing, editing, and sharing digital stories. It could be challenging or impossible for students to engage in digital storytelling activities without access to these technologies. While technology is frequently linked to digital storytelling, interesting stories can also be produced using low-tech techniques. Students might use conventional art equipment to make comics or storyboards, or they might compose play or puppet show scripts.

Third, difficulty integrating digital storytelling into the curriculum. Studies have found that digital storytelling is a powerful tool to integrate instructional messages with learning activities (Smeda et al., 2014). This possibility suggests that it's crucial to incorporate digital storytelling into the curriculum at schools. Teachers can plan a digital storytelling project that aligns with their curriculum objectives (Barber, 2016). For example, students can create a digital story about a historical event or a scientific concept. In particular language learning, teachers can teach students the essential elements of storytelling, such as plot, character development, and setting. They can also help students learn how to use digital tools to enhance their stories. Digital storytelling can be applied specifically and generally in every lesson and linked to the curriculum that has been designed.

5. CONCLUSION

g) Digital storytelling not only helps students to survive from learning loss after a pandemic, but also provides an authentic opportunity to develop the different types of literacy that students will need in the 21st century. Digital storytelling can help develop various types of literacy skills. The seven steps that instructors can take to use digital storytelling in the classroom are brainstorming, storyline, find the components, creating the digital story, editing and feedback, also presentation and evaluations. The process of creating a digital story provides an authentic opportunity to practice essential literacy skills such as reading, writing, speaking, and listening. Digital storytelling is a powerful tool that helps students develop essential literacy skills across multiple domains with teachers guidance to explore student talents. It should not be a barrier to trying to promote student digital literacy through digital storytelling, despite the fact that there are a number of barriers to its implementation, including accessibility issues, a lack of technological proficiency on the part of both teachers and students, and a lack of connections to the existing curriculum.

6. REFERENCES

Alismail, H. A. (2015). Integrate digital storytelling in education. *Journal of Education and Practice*, 6(9), 126-129.

Argawati, N. O., & Suryani, L. (2020). Digital-based instruction: Chances and challenges in English language teaching context. *International Journal of Evaluation and Research in Education*, *9*(4), 1138-1144.

Baggett, P. (n.d.). Educational uses of digital storytelling. educational uses of digital storytelling. Retrieved March 8, 2023, from https://digitalstorytelling.coe.uh.edu/page.cfm?cid=27&id=27.

Barber, J. F. (2016). Digital storytelling: New opportunities for humanities scholarship and pedagogy. *Cogent Arts & Humanities, 3*(1), 1181037.

Bawden, D. (2008). Origins and concepts of digital literacy. Digital literacies: Concepts, policies and practices, *30*(2), 17-32.

Dogan, B., & Robin, B. (2008, March). Implementation of digital storytelling in the classroom by teachers trained in a digital storytelling workshop. In Society for Information Technology & Teacher Education International Conference (pp. 902-907). Association for the Advancement of Computing in Education (AACE).

Foelske, M. (2014). Digital storytelling: the impact on student engagement, motivation and academic learning. Graduate Research Papers, University of Northern Iowa, 167. https://scholarworks.uni.edu/grp/167.

Gobel, P., & Kano, M. (2017). The complexities of digital storytelling: factors affecting performance, production, and project completion. In Smart technology applications in business environments (pp. 343-360). IGI Global.

Ishak, S. A., Din, R., & Hasran, U. A. (2021). Defining digital game-based learning for science, technology, engineering, and mathematics: a new perspective on design and developmental research. *Journal of medical Internet research,* 23(2), https://doi.org/10.2196/20537.

Jamissen, G. (2008). Digital storytelling for learning and content production. Oslo University College.

Jenkins, H. (2009). Confronting the challenges of participatory culture: Media education for the 21st Century. Cambridge Publishing

Keengwe, J. (2015). Handbook of research on educational technology integration and active learning. IGI Global.

Kristiana, I. F., Widayanti, C. G., Widodo, P. B., Indriana, Y. (2022). Learning loss during the pandemic: Views of Indonesian teachers and parents. *International Journal of Education and Learning, 4*(3), 179-190, https://doi.org/10.31763/ijele.v4i3.765.

Lambert J., Hessler B. (2018). Digital storytelling: Capturing lives, creating community. Routledge.

Lim, D., Rarasati, N., Tresnatri, F. & Barasa, A. R. (2022). Learning loss or learning gain? A potential silver lining to school closures in Indonesia. *RISE Insight Series.* 2022/041. https://doi.org/10.35489/BSG-RISE-RI_2022/041.

Martin S. L., McLean J., Brooks C., Wood K. (2019). "I've been silenced for so long": Relational engagement and empowerment in a digital storytelling project with young women exposed to dating violence. *International Journal of Qualitative Methods, 18*, 1–12. https://doi.org/10.1177/1609406919825932.

Matamit, H. N. H., Roslan, R., Shahrill, M., & Said, H. M. (2020). Teaching challenges on the use of storytelling in elementary science lessons. *International Journal of Evaluation and Research in Education, 9*(3), 716-722.

Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook. Sage.

Moleong, L. R. (2010). Metode penelitian kualitatif. Remaja Rosda Karya.

O'Byrne, W. I., Houser, K., Stone, R., & White, M. (2018). Digital storytelling in early childhood: Student illustrations shaping social interactions. Frontiers in psychology, 1800.

Rahiem, M. D. H. (2021). Storytelling in early childhood education: Time to go digital. International Journal of Child Care and Education Policy, *15*(1), 1-20. https://doi.org/10.1186/s40723-021-00081-x.

Robin, B. (2006, March). The educational uses of digital storytelling. In Society for information technology & teacher education international conference (pp. 709-716). Association for the Advancement of Computing in Education (AACE).

Shahid, M., & Khan, M. R. (2022). Use of Digital Storytelling in Classrooms and Beyond. *Journal of Educational Technology Systems, 51*(1), 63–77. https://doi.org/10.1177/00472395221112599.

Shinas, V. H., & Wen, H. (2022). Preparing teacher candidates to implement digital storytelling. Computers and Education Open, *3,* https://doi.org/10.1016/j.caeo.2022.100079.

Smeda, N., Dakich, E. & Sharda, N. (2014). The effectiveness of digital storytelling in the classrooms: a comprehensive study. Smart Learn. Environ, *1*(6), 1-21 https://doi.org/10.1186/s40561-014-0006-3.

Stenger, M. (2018, October 22). 7 Ways to teach digital literacy: |Tips and Tricks for Educators. Open Colleges. Retrieved March 8, 2023, from https://www.opencolleges.edu.au/informed/edtech-integration/7-ways-teach-digital-literacy/.

UNICEF. (2021). Indonesia case study: situation analysis on the effects of and responses to covid-19 on the education sector in Asia. United Nations Children's Fund (UNICEF) and United Nations Educational, Scientific, and Cultural Organization.

Vice, T. A., Pittman, R. T., & Warnick, E. M. (2023). Blocked or unlocked: Recognizing the benefits and challenges of digital literacy storytelling projects. *Journal of Education, 203*(2). https://doi.org/10.1177/00220574231162590.

Walton, G. (2016). "Digital literacy" (DL): Establishing the boundaries and identifying the partners. *New Review of Academic Librarianship*, *22*(1), 1-4.

Wyman, K. (n.d.). Why teachers need to embrace digital storytelling. Retrieved March 9, 2023, from https://resilienteducator.com/classroom-resources/digital-storytelling/

Yarrow, N., Masood, E., Afkar, R. (2020). Estimates of COVID-19 impacts on learning and earning in Indonesia: How to turn the tide. World Bank. Retrieved from https://openknowledge.worldbank.org/handle/10986/34378 4License: CC BY 3.0 IGO.