

## RESEARCH ARTICLE

# The use of digital storytelling to improve students' writing skills

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**Abstract:** Digital storytelling emerges from the integration of storytelling and digital to meet media needs in learning, such as communication and self-expression, as well as to facilitate learning by improving language skills, one aspect of story writing skills. The purpose of this research is to find out the needs of teachers and students in using digital storytelling. This study uses a descriptive qualitative approach with data collection sources from teachers, as many as 10 participants and 60 students—data collection techniques through observation, semi-structured interviews via video calls, and supporting documentation. Based on the data analysis, most of them show that media and teaching materials used in offline and online learning are not much different. This fact illustrates that offline and online learning requires innovation from an educator to create an active and fun learning process for elementary school students to achieve learning objectives.

**Keywords:** digital storytelling, writing skills, elementary school students

## 1 Introduction

Changes in the learning paradigm during the pandemic in schools (Karakose et al., 2022), especially elementary schools, have made fundamental changes in terms of objectives, processes and learning outcomes. Limitations and even bans on face-to-face learning force teachers to create safe learning according to student's needs (Aguayo et al., 2022). So, digitalization in learning is a must (Barianos, Papadakis, & Vidakis, 2022). Based on observations in the field during offline and online learning, researchers found that the learning process was still conventional; most teachers used books as the primary medium that was often used in learning (Kalogiannakis & Papadakis, 2017a; 2020). The implementation of education in the world has undergone drastic changes. For instance, previously, face-to-face learning has now become hybrid learning (Ololube, 2014), blended learning (Fong & Wang, 2007), and flipped learning (Casselmann et al., 2020). Although these techniques and approaches significantly impact learning, they demand literacy and digital skills for teachers and students (Grimaldi & Ball, 2019). This research is motivated by the current educational situation that requires technology-based learning innovations in elementary schools. One of them is by developing digital teaching materials.

The use of information technology is the keyword in online learning so that students can learn better, faster and more intelligently (Pujilestari, 2020). Another term is known as ICT (Information and Communication Technology). UNESCO revealed that several benefits could be obtained by implementing information and communication technology in the education system. They facilitated and expanded access to education networks, increasing educational equity, learning quality, teacher professionalism, and more effective and efficient education management and governance (Adisel & Gawdy, 2020). People who are digital and information technology literate can be said to have adequate information and communication technology literacy (Tesi Muskanika & Wilujeng, 2017). Teachers implementing online and offline learning must also have sufficient information and communication technology literacy to facilitate learning (Karakose, Yirci, & Papadakis, 2022). Teachers need special training to improve information communication technology competencies (König et al., 2020; Lavidas, Apostolou, & Papadakis, 2022).

Digital storytelling emerges from the integration of storytelling and digital to meet learning needs, such as communication and self-expression, as well as to facilitate teaching in improving language skills, one of which is story writing skills (Maksum et al., 2022). Previous research shows that digital storytelling effectively develops cognitive structures, which were initially believed to develop in the long term. Therefore, this study reveals the contribution of digital storytelling to the development of visual memory, which positively impacts the development and

acquisition of information and abilities acquired during the learning process (Sarica & Usluel, 2016).

Other studies show that digital storytelling in learning can generate positive responses to engaging learning, and the use of digital storytelling is recommended for continuous integration into the curriculum, which further supports effective learning (Yocom et al., 2020). The use of digital media storytelling shows that it can increase self-confidence and open-mindedness (Mohammed, 2022). Research subjects become more aware of their power, alternative voices, and potential choices (Chan, 2019).

Digital-based applications are suitable for use in elementary schools. This is supported by research results showing that digital-based learning processes are essential as current learning media (Papadakis, 2018; 2021). The designed digital-based system consists of various components, namely text, images, graphics, animation, audio and video, which complement each and thus become a strong and precise system. Digital-based applications are acceptable for use in learning because they can enhance the independent learning process and the active role of students (Rachmadtullah et al., 2018). In addition, literature review research indicates that the use of digital storytelling shows a continuing interest in primary, secondary, and tertiary education students. The use of digital storytelling is also often used in learning. This study recommends further research on digital storytelling design for education (Wu & Chen, 2020).

Media development is one of the obligations of teachers to become professional educators (Papadakis & Orfanakis, 2018). Learning media can convey messages to stimulate students' thoughts, feelings, concerns, and interests in such a way that a learning process occurs. Learning media is basically to improve the quality of teaching and learning (Papadakis et al., 2021). Therefore, in teaching and learning in schools, learning media has a vital role (Fahrurrozi et al., 2019).

In developing learning media, we have to pay attention to several things. The main principle of selecting learning media is the effectiveness of learning media in achieving learning objectives and helping students understand the material that will be presented. We must consider whether the learning media will be more effective than other media (Strataki, 2022). Learning media must also be selected based on the principles of students' thinking levels. The third principle that must be considered when choosing media in classroom learning is interactivity and flexibility (Alexander et al., 2016).

The learning media the teacher chooses for teaching and learning activities in the classroom must have good interactivity and flexibility. Learning media has good flexibility if it can be used in various situations. Thus, some of these things are considered for researchers to develop learning media. As science and technology advance, the media develops into digital-based, which can facilitate the learning process with various learning styles (auditory, visual, kinesthetic) (Huang et al., 2019).

The use of digital-based media is more effective than other media or traditional education channels because information can be seen, heard, and carried out. In this case, the researcher will develop language learning, especially aspects of writing stories for lower-grade students in elementary schools. The use of digital storytelling shows that in the learning process, children quickly understand and adapt the various mechanisms behind the system to create their stories; most are involved in creating narratives or language games with various stories. This study describes the application of digital manipulative systems in an educational context, demonstrating that it is a valuable tool that integrates into high-quality learning practices (Sylla et al., 2015).

There is an increase in abilities in Information Technology, especially in making videos using specific software, working together in groups, and making presentations in addition to speaking skills and vocabulary mastery (Asri et al., 2017). Research (Bron & Barrio, 2019) shows that the existence of media that has been implemented in elementary schools is in the form of presentation slides, learning videos, and animated videos. The digital storytelling being developed is an interactive picture story media in the form of a combination of illustrated animated videos, story text, and audiovisual so that learning will be more fun and contextual (Anisimova, 2020).

The application of *digital storytelling* used by students makes students feel even happier and want to wait to change lessons (Kalogiannakis & Papadakis, 2017b). For this case study, the researcher included additional pictograms/pictures with vocabulary related to the cards used by the children. The idea is first to see if children know this vocabulary and if they do not, it is taught first by showing the corresponding word marks and then they are asked to associate each word with a specific story card (scene). From now on, the teacher begins teaching literacy from stories created by students and selected vocabulary based on the current knowledge and age of children's literacy (Flórez-Aristizábal et al., 2019).

Writing is one of the most complex cognitive activities and involves many cognitive com-

ponents (Olive, 2004). Individuals find the thoughts and ideas they want to express in their stories through the writing process (Miller, 2010). With digital storytelling, students can learn the art of writing good stories, how text and art can be integrated and how technology can be used creatively (Miller, 2010). In addition, when students fully engage in the writing process, they compose stories and participate more effectively in the digital story creation process by developing good scenarios (Xu et al., 2011). Previous research has shown that *digital storytelling* develops students' writing skills and can be used as a practical learning tool, especially in computer-assisted language acquisition (Abdollahpour, 2018).

Further, the results of CSIS (*Center for Strategic and International Studies*) research which tries to reveal activities that interest children. Based on respondents from 34 provinces in Indonesia. Using two groups with millennial and non-millennial samples of 600 respondents each, it turns out that writing is not their favourite choice, as shown in Figure 1.



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### Kegiatan Yang Paling Menarik Minat

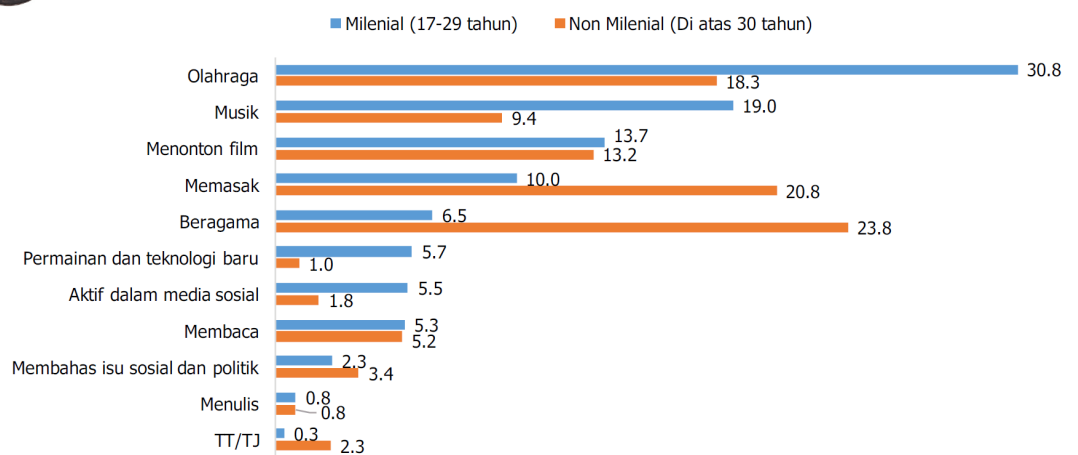


Figure 1 CSIS Research Results (CSIS, 2017)

Based on the data presented above, writing is only of interest to 0.8% of all respondents; in the current situation expressing thoughts and feelings is significant. Furthermore, good writing skills certainly strengthen Indonesia's character and human resources. So, writing education must be developed from elementary education, especially in the fourth grade.

In the preliminary study, the researcher conducted observations and interviews in elementary schools regarding the story-writing skills of elementary school students, especially fourth graders, both *offline* and *online*. It was found that the student's writing skills could have been more optimal, and they tended to encounter obstacles. Many children have difficulty stringing words and doing simple writing in several activities. As children have difficulty expressing opinions, giving information, answering questions, or telling simple experiences is difficult. Also, children's vocabulary could be improved, so it isn't easy to assemble a plain text or story. Learning *offline* and *online* requires innovation from an educator so that the learning process can run well and be fun for students so that learning objectives can be achieved.

Based on the identification results, it is known that teachers are still limited in innovating, so the learning media used are not digital-based, negatively impacting the achievement of learning outcomes for elementary school students. At the same time, education development requires innovation following the times. Thus, it is necessary to study the use of digital storytelling in learning in elementary schools to improve story writing skills. In this paper, researchers examine how digital storytelling needs in elementary schools are used in offline and online learning.

## 2 Methods

Uses a qualitative approach with descriptive methods. Descriptive methods explain or describe facts, data, and research objects systematically and appropriately. Regarding what is researched, research results emphasize meaning rather than results, and research results are not binding. They can change according to conditions encountered in the field and are interpreted and written in descriptive words or forms based on facts in the field (Sugiono, 2016). This study aims to obtain a complete and detailed description of the use of digital storytelling in learning

in elementary schools to improve story-writing skills. This research was carried out intensively within two months—sources of data collection from teachers, as many as 10 participants and 60 students.

The data analysis technique used in this study used the Milles and Huberman model; namely, the analysis in this study was carried out interactively. The stages of research were carried out through three stages: the data reduction stage was carried out to determine relevant, meaningful, and essential data based on the research conducted and to obtain the data the researcher needed. Data display (data display) The data obtained in this study are presented in a short narrative description (with text). Drawing conclusions (verification) researchers will draw or make conclusions by explaining data collection activities through observation, semi-structured interviews via video calls, and supported by documentation (Miles, Huberman, & Saldana, 2014).

### 3 Results and discussion

Based on the results of observations, semi-structured interviews with teachers during offline and online learning and supported by documentation, the data is obtained in Table 1.

**Table 1** Data Analysis Results

Categories	Analysis Results
Offline Learning (off)	<p>Teachers use print-based teaching materials, such as worksheets, textbooks, and storybooks.</p> <p>Students are assigned to copy the writings from the LKS or the blackboard.</p> <p>Students are assigned to write the results of the teacher’s dictation.</p> <p>Teachers are fixated on delivering teaching materials from books provided by the government.</p> <p>Students tend to be passive in learning.</p> <p>Learning to write is a tedious activity for students.</p> <p>The difficulty of teachers in developing innovative teaching materials.</p>
Online Learning (on)	<p>teacher sends video teaching materials from YouTube or pictures via Whatsapp groups and each student’s handbook.</p> <p>Students are assigned to copy the writings from the LKS.</p> <p>Students are assigned to write the results of the dictation of their parents/companion.</p> <p>Teachers are fixated on delivering teaching materials from books provided by the government.</p> <p>Students tend to be passive in learning.</p> <p>Learning to write is a tedious activity for students.</p> <p>The difficulty of teachers in developing innovative teaching materials.</p>

Based on the results of the data analysis, the use of teaching materials in offline and online learning is similar to the use of media and teaching materials. This fact illustrates that offline and online learning requires innovation from an educator so that the learning process can run well and be enjoyable for students so that learning objectives can be achieved.

The digital storytelling application used by students makes students feel happier and want to wait to change lessons. For this case study, the researcher included additional pictograms/pictures with vocabulary related to the cards used by the children. The idea is to see if children know this vocabulary and, if not, teach it by showing appropriate word signs; then, they are asked to link each word to a particular story card (scene). From now on, the teacher begins teaching literacy from stories created by students and selected vocabulary based on the child’s current knowledge and age of literacy (Flórez-Aristizábal et al., 2019).

Writing is one of the most complex cognitive activities and involves many cognitive components (Olive, 2004). Individuals find the thoughts and ideas they want to express in their stories through the writing process (Miller, 2010). With digital storytelling, students can learn the art of writing good stories, how text and art can be integrated, and how technology can be used creatively (Miller, 2010). In addition, when students are fully involved in the writing process, they compose stories and create digital stories more effectively by developing good scenarios (Xu et al., 2011).

Previous research has shown that digital storytelling develops students’ writing skills and can be used as a practical learning tool, especially in computer-assisted language acquisition (Abdollahpour, 2018). Teachers are encouraged to improve digital literacy further so they can innovate, especially in compiling, planning, implementing, and assessing the story-writing skills of elementary school students. Learning to tell stories still focuses on the use of reading books or only on the activities of the teacher telling stories and students listening. This condition further encourages students to become unmotivated, unmotivated, less challenging, and in the end, tends to make storytelling boring for students (Ampartzaki, Kalogiannakis, & Papadakis, 2021). Based on the needs analysis, it is necessary to make changes in storytelling learning. The primary need is to use digital media to answer students’ needs, interests and learning motivations.

## 4 Conclusion

The use of digital storytelling is vital, both in offline learning and online learning. The use of digital storytelling is urgently needed to answer the need to increase the interest, process, and learning outcomes of story writing for elementary school students. Teachers experience difficulties in improving learning outcomes in writing stories, so innovation is needed to help teachers improve the quality of learning in elementary schools.

## List of abbreviations

ICT: Information, communication, and technology

UNESCO: United Nations Educational, Scientific, and Cultural Organization

Worksheet: Student Worksheet

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## Conflicts of interest

The authors declare that they have no conflict of interest.

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