



## Digital Storytelling Skills of Teacher Education Students

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### ABSTRACT

Digital storytelling is regarded as a pedagogical tool that can engage students in meaningful learning. As a result, the importance of digital storytelling has become more necessary among teachers to make learning more meaningful even in the online setup. This study was conducted to assess the digital storytelling skills of the 3<sup>rd</sup> year Teacher Education students of a Catholic University in Northern Philippines. A quantitative research design employing a descriptive method was used to assess the digital storytelling skills of the participants. The results of the study revealed that there is no significant difference in the digital storytelling skills of the participants, whether they are grouped according to major or field of specialization, in which participants gained low scores, implying that they need improvement in their digital storytelling skills.

## **INTRODUCTION**

At the height of this global fiasco, modern technology has been very helpful in aiding the quality and reliability of online education. In particular, students of this era have been said to be more engaged in studying when technology is used (Raja & Nagasubramani, 2018). Therefore, pre-service teachers during this time should be trained to demonstrate digital literacy and key digital competencies so that they can provide learning opportunities that can successfully facilitate knowledge construction in this networked world in which we live (Banzato, 2014).

Pre-service teachers of this new generation have different learning profiles than previous generations, necessitating the use of diverse and innovative instructional resources to support their abilities and motivation for teaching (Lazar et al., 2020). Digital competence is a multidimensional skill set made up of various knowledge domains. Thus, pre-service teachers should be given the opportunity to learn how to improve their digital competence and use technology in their teaching to facilitate new teaching and learning possibilities, thereby contributing to the advancement of new learning strategies (Instefjord & Munthe, 2015). One of the potential tools that can be used towards improving one's digital literacy and competencies in the 21<sup>st</sup> century is digital storytelling (Churchill, 2020). Çetin (2021) revealed that the teaching and learning processes could be improved by digital storytelling, yet pre-service teachers experience many difficulties in the digital story creation process.

Digital storytelling is regarded as a pedagogical tool that can engage students in meaningful learning (Barber, 2016; Chigona, 2012; Hill & Grinnell, 2014; Tan, Lee, & Hung, 2014). Digital storytelling is used in a lot of fields in order to improve narrative shaping and delivery. It can also be of great help to teachers in maintaining the interests of students in listening to lectures. Storytelling abilities are handy in facilitating a classroom set-up, be it virtual or actual (Smeda et al., 2013). There are many educational benefits that teachers and students could get from digital storytelling, yet digital storytelling is a hard skill to master. In fact, research conducted by Ozadogru & Cakir (2020) and Gürer et al., (2020) showed that students had difficulty with digital storytelling as they lacked the ability to use technology effectively and it necessitated a much more in-depth knowledge of grammar and vocabulary and the ability to apply this knowledge in real time.

Digital storytelling has emerged as a powerful tool for better teaching and learning. Yet, until today, there were only minimal studies on the theoretical framework that could be employed to assess the competence of students in digital storytelling and further the effectiveness of technology as a tool in the educational environment, as well as a lack of systematic review to inform how it has been applied and what has been achieved in the field (Wu & Chen, 2020; Robin, 2008).

With the literature gaps being presented, the researchers chose this path in the hopes of assisting fellow educator aspirants in developing a successful

teaching style and gaining increased confidence in reforming an even better way of educating in the new normal using advanced technology.

## **LITERATURE REVIEW**

### ***Teachers as Effective and Good Storytellers***

Education students that are good at digital storytelling can create a connection between the storyteller and the listener. Above all, they build familiarity and trust among learners. In addition, it allows the listener to enter and to connect with the story – something that relates to him/her, which makes a door open for new learning. Great storytelling can be sensible and/or fruitful (Boris, 2017).

Boris (2017) discovered that 40% of the population is predominantly visual learners, basing their knowledge on videos, illustrations, and diagrams. 40% are auditory, adaptable in discussions and lectures. The 20% remaining shows that they are kinesthetic learners, which means they are adaptable to experiences, doings, and feelings. The point is that digital storytelling works for 3 types of based-learning. Visual learners have an appreciation for the mental picture storytelling evokes; auditory learners focus on the words and the voice; and kinesthetic learners take away the emotions they feel and remember them even after the story.

A study claims that in the past few years, advanced technologies have become the dominant tools for the educational system. It concluded that education in the context of technology has resulted in positive effects encompassing knowledge, skills, and improving educational standards and the environment. The study proved that achievement and motivation are mostly derived from the integration of technologies (Smeda, Dakich & Sharda, 2014).

### ***Digital Storytelling for Enhancing Student Academic Achievement, Critical Thinking, and Learning Motivation***

In a school set up, the English language is said to be the most feared to be learnt. The tendency to feel stupid because of mispronouncing a word is very rampant in this scenario, especially when it will be done through digital tools. Many research studies have come up with observations that learning the English language is most effectively learned when emotional barriers are eliminated. In fact, these barriers are also called "affective filters" and inhibit the drive to learn (Helfrich et al., 2011).

However, there are now lots of ways and tools to improve the quality of teachers produced in the country – most especially the use of technology. One being the practice of digital storytelling in the field. Digital storytelling (DST) has recently emerged as a new tool in instructional environments. DST involves the combination of media and technology with traditional storytelling to help students learn (Kocaman-Karoglu, 2016). DS helps to develop digital, global, technological, visual, and knowledge literacy (Cetin, 2021), critical thinking and problem-solving skills (Chen & Chuang, 2020), communication skills (Karakoyun & Kuzu, 2016; Al-amri, 2020), creativity and critical thinking (Anggeraini, 2020). DS has gained worldwide acclaim after studies revealed

that it aids in the development of advanced skills. DS assists students in developing their uniqueness, multitasking skills such as cooperation, peer evaluation, and 21st-century skills, thereby contributing to education by providing learners with the ability to obtain these skills (Towndrow & Kogut, 2020). Furthermore, digital storytelling makes it easier to capture classroom moments for preservice teachers to reflect on and revise practice, as well as to develop a teaching consciousness. It is a fruitful way to connect with students while also testing the mastery of both the learner and the teacher. Digital storytelling is an activity that allows for the spread of digital literacy and the development of strategic skills for 21st century education. It enables the development of new modes of learning, aided by the use of technologies that improve teachers' abilities to communicate and teach effectively in the classroom (Banzato, 2014).

Rather than just reading about a teaching performance, students can see and hear it through digital storytelling. Preservice teachers must be aware of the complexity as well as the multiplicity of actual classroom practice. The use of technology to teach learners has increased significantly in recent decades, and educators have viewed it as a novel alternative to traditional pedagogy (Pardo, 2014). Without dismissing the goal of improving teaching quality, digital storytelling has been demonstrated to be a successful instructional tool for teaching learners because it can combine the benefits and success of traditional storytelling with the advancements of new technologies to teach a foreign language (Reinders, 2011). Thus, storytelling improves learning by allowing students to associate meaning and emotions with words. Students also learn when and where to use specific words and phrases (Mokhtar et al., 2011). Indeed, digital storytelling can help with English achievement, critical thinking, and learning motivation. It is important for both students and teachers because it has been shown to improve students' understanding of the lesson, willingness to learn and explore, and ability to think critically. All these factors are critical in preparing students to thrive and stand out in the ever-changing twenty-first century (Yang & Wu, 2012).

### ***Digital Storytelling Difficulties among Pre-service Teachers***

Teachers must guide students through personalized learning paths, identify relevant learning resources, facilitate collaborative learning opportunities, and provide insight and support. The modern teacher is not only confined to the classroom, but also acts as a change agent in an ever-changing society. (Sharma et al., 2017). As a result, teachers must stay informed about transformational shifts in knowledge production. As a result, instructors' roles have shifted from simple to complex. Teachers must be able to engage students in all elements of instructional practices to address societal developments (Okojie, 2011). Educators play a vital role in enhancing students' learning and academic performance of the students. As a result, it is critical to comprehend language learners' perceptions of competent English language teachers from the perspective of students for a variety of reasons. To begin, teachers' beliefs in their own efficacy influence their classroom decision-making as well as their

professional practice, and thus affect their students' learning (Ghasemi & Hashemi, 2011). More importantly, becoming an effective educator necessitates becoming an expert in the field of storytelling in which one works. It has been discovered that teachers' feelings of efficacy influence their actions as well as the outcomes of their students. As a result, it is critical that they have access to an education that is both elaborative and indulgent (Kaplan, 2019).

Digital storytelling is regarded as a pedagogical strategy that can engage students in the learning process learning (Barber, 2016; Chigona, 2012; Hill & Grinnell, 2014; Esmeda et al., 2014). One of the difficulties teachers face when using the storytelling method is changing the pitch and tone of voice when narrating the examples. Students cannot expand their vocabulary by repeating words. They necessitate a significant amount of practice. Furthermore, it is difficult to come up with unique, engaging stories that will hold students' attention and aid their learning (Satriani, 2019). Furthermore, the study also discovered that the downsides of DS, according to pre-service instructors, included the time required to construct digital stories and the technological knowledge requirements. According to Gürer (2020), pre-service instructors faced a variety of hurdles, including copyright issues, time limits, teamwork issues, and technological incompetence, among others. Students who live in a technology-driven information age are expected to easily embrace DS in the post-industrial information society. Yet, the difficulties they will face include a lack of technological resources. Pre-service instructors had trouble dubbing and generating storylines while designing a digital story, according to Aktaş & Yurt (2017). Despite this, there were some issues with the language and dubbing of the application, as well as significant delays brought about by technological barriers and a number of time-consuming processes (Ozudogru & Cakir, 2020). Furthermore, Gürer et al. (2020) discovered that students struggled with digital storytelling because they lacked the ability to use technology effectively, which required a much more in-depth knowledge of the language and vocabulary as well as the ability to apply this knowledge in real time.

### ***Benefits of Technology Integration in the Educational Contexts***

The influence of technology on educational contexts has been overwhelmingly positive, as new technologies have supported educators to improve their knowledge and skills, thus elevating academic standards (Hanmolu, 2018). The increasing prevalence of Web 2.0 and modern devices has enabled the use of innovative approaches in language teaching, such as digital storytelling. (Have, 2019). Integrating such technologies, according to researchers, improves students' engagement, attainment, and enthusiasm. According to Hung and Chou (2015), instructors should do five things: (1) create a learning-oriented infrastructure that includes syllabi, calendars, communication tools, and instructional resources; (2) model various strategies for effective participation, collaboration, and learning; (3) monitor and assess students' learning and provide feedback, remediation, and grades; and (4) troubleshoot and resolve instructional, interpersonal, and behavioral problems. By using a social constructivist approach to teaching and learning, teachers can

use new technology to make learning more interactive and collaborative. This entails establishing a student-centered approach in which the teacher serves as a facilitator and students engage in peer learning (Maor, 2010). Online learning has become a popular method of delivering education at the graduate and undergraduate levels. Despite being a continuation of distant learning, the medium necessitates new presentation and interaction styles. Wallace (2010). Arslan et al. (2016) conducted in-depth phenomenological interviews, observations, and focus group interview methods after the teachers attended the digital storytelling workshop, and the results show that there is an emphasis on certain essential points to assist teachers in utilizing technological tools in their learning environments. The findings will have long-term implications for educators, curricula, and research.

## **METHODOLOGY**

This study utilized a quantitative type of research employing a descriptive method, to determine the digital storytelling skills of the Teacher Education students. The participants of the study were the 3<sup>rd</sup>-year Teacher Education students enrolled at a Catholic University in Northern Philippines for the second semester of school year 2021–2022. 24 of them enrolled in the Learning Management System (LMS) and answered the oral tests. There were eleven English majors, one Math major, three Social Sciences majors, three BEED majors, and six BPED majors who participated in the study.

### ***Research Instruments***

#### **Oral Test**

The researchers made use of an oral test developed by SoHee Kim (2014). The participants were asked to watch the video clip entitled "The Story of Your Life: Motivational Video" (Dare to do, 2019), which is three minutes long. After watching the movie clip, the participants were asked to create a one-minute story, which they recorded and uploaded to the LMS. The test was equivalent to 30 points.

#### **Rubric**

The researchers followed the instrument developed by SoHee Kim (2014). There were five dimensions assessed, which are discourse, vocabulary, grammar, pronunciation, and sentence complexity. The researchers added technicalities as a dimension since the oral test was done with the use of technology.

#### ***Data Analysis***

The data were analyzed by experts using the following statistical tools:

Frequency and percentage were used to describe the profile of the Teacher Education students.

Mean score was used to determine the digital storytelling skills of the Teacher Education students using the following scores and qualitative descriptions:

Table 1. Data Analysis

Mean Score	Qualitative Description
28-30	Outstanding
25-27	Very satisfactory
21-24	Satisfactory
16-20	Needs Improvement
0-15	Failed

Independent sample T-test and one-way analysis of variance were used to determine the significant difference in the digital storytelling skills of the Teacher Education students when grouped according to their profile.

## RESEARCH RESULT

Table 2. Profile of the Students according to Major and Field of Specialization

Major	Frequency	Percentage
English	11	45.80
Mathematics	1	4.20
Social Science	3	12.50
BEED	3	12.50
BPED	6	25.0
Specialization	Frequency	Percentage
BSED	16	66.7
BEED	3	12.5
BPED	5	20.8
TOTAL	24	100.0

Table 2 shows the profile of the students according to major and field of specialization. The table implies that most of the participants were English majors, followed by the BPED majors. Social Science and BEED majors tied at third with three participants, while the Math major only had one participant.

Table 3. Digital Storytelling Skills of Teacher Education Students

Scores	Frequency	Percentage	Qualitative Description
28-30	0	0	Outstanding
25-27	0	0	Very Satisfactory
21-24	4	16.7	Satisfactory
16-20	18	75.0	Needs Improvement
0-15	2	8.30	Failed
Mean Score		18.21	Needs Improvement

Table 3 shows the digital storytelling skills of the Teacher Education students. It shows that most of the participants need improvement, some are at a failed level, while no one attained a very satisfactory or outstanding level. This means that students have a low command of grammar, vocabulary, discourse, and digital use, which are the required competencies in effective digital storytelling.

Table 4. Significant Difference in the Digital Storytelling Skills of the Teacher Education Students when grouped according to Major

Major	Mean Score	df	F-value	P-value	Decision
English	18.45	4	1.368	.280	Accepted
Math	17.10				
Social Science	20.67				
BEED	16.67				
BPED	17.50				

Table 4 shows the significant difference in the digital storytelling skills of the teacher education students when grouped according to major. It shows that there is no significant difference in the digital storytelling skills of the Teacher Education students when grouped according to major. Hence, the null hypothesis is accepted. This means that participants from the different majors have the same level of skills in digital storytelling skills.

Table 5. Significant Difference in the Digital Storytelling Skills of Teacher Education Students when grouped according to Field of Specialization

Field of Specialization	Mean Score	df	F-value	P-value	Decision
BSED	18.63	2	.901	.421	Accepted
BEED	16.67				
BPED	17.80				

Table 5 shows the significant difference in the digital storytelling skills of the Teacher Education students when grouped according to fields of specialization. It shows that there is no significant difference in the digital

storytelling skills of the Teacher Education students when grouped according to profile variables. Hence, the null hypothesis is accepted. This means that participants from the different fields of specialization have the same level of skills in digital storytelling skills.

Table 6. PROJECT CLASS: A Strategy Enhancing the Digital Storytelling Skills of the Teacher Education Students

<b>The Project CLASS: A Strategy Enhancing the Digital Storytelling Skills of Teacher Education Students</b>
<p>Project CLASS stands for Careful Listening and Short Storytelling Sessions. This project is an intervention program which aims to help aspiring educators develop their storytelling capabilities through listening and practicing digital storytelling during this time of pandemic. This is an intervention that can be done online since the majority of students are enrolled in an online modality. Project CLASS will be of great benefit to the students because it will allow them to develop their digital storytelling abilities and relish in it at the same time, just like how they love telling stories with their friends, families, and loved ones.</p> <p>Mechanics:</p> <ol style="list-style-type: none"><li>1. The researchers will ask a cooperating teacher to guide the implementation of the intervention. The cooperating teacher will be responsible for conducting the pre-test and post-test as well as scoring the outputs of the participants.</li><li>2. The researchers will administer a 30-point oral pre-test before Project CLASS will be implemented to measure the students' digital storytelling skills. The pre-test will be done using Google-meet, wherein only one student can join the meeting at a time. The test will be done within the duration of 1 hour and 30 minutes.</li><li>3. The researchers will do a 3-minute digital story using picture depiction as a strategy. In this strategy, the researchers will make use of a series of pictures and come up with a wholesome story based on the pictures.</li><li>4. The researchers will take videos of themselves doing the proposed strategy.</li><li>5. The researchers will upload their videos they to the LMS, into which the participants will be enrolled.</li><li>6. The participants will be asked to watch the uploaded videos every day. Every 4 days, the participants will be asked to complete a task where they need to answer a series of questions given by the researchers. This task will be administered to monitor the progress of the participants.</li><li>7. After 14 days, the researchers will administer a 30-point oral test. This is to assess the effectiveness of the intervention.</li></ol>

The table shows the proposed strategy for the enhancement of the Teacher Education students' digital storytelling skills and its mechanics. The table shows the background of the project and the seven mechanics to be carried out in the realization of the strategy.

## **DISCUSSION**

Educators can use digital storytelling as a motivational tool to attract attention and guide their students. Hence, it is expected to be used in all areas of the educational environment (Çetin, 2021). However, the results revealed that the teacher education students at a private educational institution in the Northern Philippines have poor digital storytelling skills. The study revealed that the oral test scores of the participants were low, which is equivalent to 'Needs Improvement'. The result signifies that Teacher Education students have poor digital storytelling skills. This implies that the instructional strategies used may have been insufficient to support the development of their digital storytelling skills. This is consistent with the previous findings of Pasicolan et al., (2021) that effective teaching cannot take place in the classroom if basic instructional materials and strategies are lacking. The low scores of the students are also due to technical impediments and incompetence, time delays and constraints, and the difficulty of creating interesting stories in real time. Digital storytelling is a hard task because it requires the ability to tell stories and the ability to incorporate technology as well (Ahmad & Yamat, 2020; Ozudogru & Cakir, 2020; Satriani, 2019).

The study's findings revealed that students from different majors and fields of specialization have the same level of digital storytelling skills as they gained a mark of need improvement in their oral test. The results imply that teacher education students, regardless of the profile variables, struggled with digital storytelling because they lacked the capacity to use technology successfully and it required a far more in-depth understanding of grammar and vocabulary, as well as the ability to apply this knowledge in real time. This is in consonance with the result of a previous study that found the art of digital storytelling is a challenging task because it demands a thorough understanding of grammar and vocabulary, as well as the capacity to apply this knowledge practically (Ozudogru & Cakir, 2020; Gürer et al., 2020).

As a result of the study, the researchers hereby propose a strategy named Project CLASS: A Strategy Enhancing the Digital Storytelling Skills of Teacher Education Students. Project CLASS stands for Careful Listening and Short Storytelling Sessions. This project is an intervention program which aims to help aspiring educators develop their storytelling capabilities through listening and practicing digital storytelling during this time of pandemic. This is an intervention that can be done online utilizing technology since most students are enrolled in an online modality. The effectiveness of this proposed strategy is supported by the study of Ahmad et al. (2017) that shows the incorporation of multimedia into the teaching and learning process serves the interests of the students, implying that video teaching is important and beneficial. This proposed intervention is also consistent with previous research indicating that students can better engage in online educational materials (videos/vlogs) when ICT is used (Choi, 2018). Multimedia and other web-based resources can significantly and effectively improve the students' achievement and motivation in addressing the linguistic competence of students, such as digital storytelling,

because such strategies are suitable for their learning styles. (Pasicolan et al., 2018; Alismail, 2015; Ziden & Rahman, 2013).

## CONCLUSIONS AND RECOMMENDATIONS

The study concludes that the Teacher Education students have low digital storytelling skills. Participants when grouped according to profile variables have the same level of digital storytelling skills. The participants' competence in grammar, vocabulary, discourse, and digital use, which are essential for good and effective digital storytelling are not evident among the Teacher Education students.

It is recommended that teachers in Education Department may think of other ways to help teacher education students with low digital storytelling skills. In addition, teachers should incorporate digital storytelling into their teaching practices. In addition, they can use an intervention to improve the digital storytelling abilities of teacher education students. The school, with the assistance of pre-service teachers, may offer instructional sessions to help teacher education students improve their digital storytelling skills. Furthermore, students will be more likely to participate if their classes are centered on a topic that is directly related to digital storytelling skills. During this time of pandemic, students must participate in research-based programs, as most of their learning takes place through online delivery of instructions. And finally, the school may conduct a service-learning program that focuses on conducting webinars or seminars on digital storytelling abilities to promote appropriate digital knowledge and skills.

## ADVANCED RESEARCH

Future researchers may conduct additional research on digital storytelling skills and other variables not addressed in this research work. They can also expand the number of respondents and plan over a longer period of time in order to get more valuable information regarding the digital storytelling skills of students.

## REFERENCES

- A.S., A., M., M., M., H., & Yacoub, H. (2021). The effect of using digital storytelling on developing active listening and creative thinking skills. *European Journal of Educational Research*, 10(1), 13-21. <https://doi.org/10.12973/eu-jer.10.1.13>
- Ahmad, W. I., & Yamat, H. (2020). Students' perception on learning English language through conventional and digital storytelling. *International Journal of Academic Research in Business and Social Sciences*, 10(2). <https://doi.org/10.6007/ijarbss/v10-i2/6945>
- Aktas, E., & Yurt, S. U. (2017). Effects of digital story on academic achievement, learning motivation and retention among University

- students. *International Journal of Higher Education*, 6(1), 180. <https://doi.org/10.5430/ijhe.v6n1p180>
- Alismail, H. A. (2015). Integrate digital storytelling in education. *Journal of Education and Practice*, 6(9), 126-129.
- Banzato, M. (2014). Digital storytelling and key skills: Problems and opportunities. *Key Competencies in ICT and Informatics. Implications and Issues for Educational Professionals and Management*, 233-246. [https://doi.org/10.1007/978-3-662-45770-2\\_20](https://doi.org/10.1007/978-3-662-45770-2_20)
- Barber, J. F. (2016). Digital storytelling: New opportunities for humanities scholarship and pedagogy. *Cogent Arts & Humanities*, 3(1), 1181037. <https://doi.org/10.1080/23311983.2016.1181037>
- Bolton, K. (2008). English in Asia, Asian Englishes, and the issue of proficiency. *English Today*, 24(2), 3-12. <https://doi.org/10.1017/s026607840800014x>
- Boris, V. (2019, February 4). *What makes storytelling so effective for learning?* Harvard Business Publishing. Retrieved June 4, 2022, from <https://www.harvardbusiness.org/what-makes-storytelling-so-effective-for-learning/>
- Çetin, E. (2021). Digital storytelling in teacher education and its effect on the digital literacy of pre-service teachers. *Thinking Skills and Creativity*, 39, 100760. <https://doi.org/10.1016/j.tsc.2020.100760>
- Chen, H., & Chuang, Y. (2020). The effects of digital storytelling games on high school students' critical thinking skills. *Journal of Computer Assisted Learning*, 37(1), 265-274. <https://doi.org/10.1111/jcal.12487>
- Choi, G. Y. (2018). Learning through digital storytelling: Exploring entertainment techniques in lecture video. *Educational Media International*, 55(1), 49-63. <https://doi.org/10.1080/09523987.2018.1439710>
- Churchill, N. (2020). Development of students' digital literacy skills through digital storytelling with mobile devices. *Educational Media International*, 57(3), 271-284. <https://doi.org/10.1080/09523987.2020.1833680>
- Ennie, E., Ahmad, A., Mahzan Awang, M., & Razaq Ahmad, A. (2019). Instilling literacy through sing-along teaching technique for enhancing English vocabulary development for marginalized community. *Proceedings of the THE 2ND INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT & MULTI-ETHNIC SOCIETY - ICOSH2 2019*. <https://doi.org/10.32698/gcs.0185>

- ERBAŞ, Y. H. (2021). Sınıf Öğretmeni Adaylarının Türkçe Öğretimi Yeterliklerinin Çeşitli Değişkenler Açısından Analizi. *Cumhuriyet International Journal of Education*. <https://doi.org/10.30703/cije.804935>
- Ghasemi, B., & Hashemi, M. (2011). The study of the characteristics of successful English language teachers from the view point of the English language students of Islamic Azad University, Hamedan branch. *Procedia - Social and Behavioral Sciences*, 28, 411-415. <https://doi.org/10.1016/j.sbspro.2011.11.078>
- Gürer, M. D. (2020). Pre-service language teachers' experiences in the digital storytelling process. *IT Issues in Higher Education*, 87-112. <https://doi.org/10.4018/978-1-7998-1029-2.ch005>
- Gürsoy, G. (2021). Digital storytelling: Developing 21st century skills in science education. *European Journal of Educational Research*, 10(1), 97-113. <https://doi.org/10.12973/eu-jer.10.1.97>
- Hanımoğlu, E. (2018). Deviant behavior in school setting. *Journal of Education and Training Studies*, 6(10), 133. <https://doi.org/10.11114/jets.v6i10.3418>
- Hava, K. (2019). Exploring the role of digital storytelling in student motivation and satisfaction in EFL education. *Computer Assisted Language Learning*, 34(7), 958-978. <https://doi.org/10.1080/09588221.2019.1650071>
- Helfrich, S. R., & Bosh, A. J. (2011). Teaching English language learners: Strategies for overcoming barriers. *The Educational Forum*, 75(3), 260-270. <https://doi.org/10.1080/00131725.2011.578459>
- Hill, S., & Grinnell, C. (2014). Using digital storytelling with infographics in STEM professional writing pedagogy. *2014 IEEE International Professional Communication Conference (IPCC)*. <https://doi.org/10.1109/ipcc.2014.7020367>
- Hung, M., & Chou, C. (2015). Students' perceptions of instructors' roles in blended and online learning environments: A comparative study. *Computers & Education*, 81, 315-325. <https://doi.org/10.1016/j.compedu.2014.10.022>
- Instefjord, E., & Munthe, E. (2015). Preparing pre-service teachers to integrate technology: An analysis of the emphasis on digital competence in teacher education curricula. *European Journal of Teacher Education*, 39(1), 77-93. <https://doi.org/10.1080/02619768.2015.1100602>

- Kaplan, E. (2019, April 12). 6 Essential Strategies for Teaching English Language Learners. <https://www.edutopia.org/article/6-essential-strategies-teaching-english-language-learners>.
- Karakoyun, F., & Kuzu, A. (2016). The investigation of Preservice teachers' and primary school students' views about online digital storytelling. *European Journal of Contemporary Education*, 15(1). <https://doi.org/10.13187/ejced.2016.15.51>
- Kocaman-Karoglu, A. (2014). Personal voices in higher education: A digital storytelling experience for pre-service teachers. *Education and Information Technologies*, 21(5), 1153-1168. <https://doi.org/10.1007/s10639-014-9373-1>
- Lazar, I., Panisoara, G., & Panisoara, I. (2020). Adoption of digital storytelling tool natural sciences and technology education by pre-service teachers using technology acceptance model. *Journal of Baltic Science Education*, 19(3), 429-453. <https://doi.org/10.33225/jbse/20.19.429>
- Maharaj-Sharma, R., Sharma, A., & Sharma, A. (2017). Using ICT-based instructional technologies to teach science: Perspectives from teachers in Trinidad and Tobago. *Australian Journal of Teacher Education*, 42(10), 23-35. <https://doi.org/10.14221/ajte.2017v42n10.2>
- Maor, D. (2010). The teacher's role in developing interaction and reflection in an online learning community. *Educational Media International*, 40(1-2), 127-138. <https://doi.org/10.1080/0952398032000092170>
- Mohammed Al-Amri, H. (2020). Digital storytelling as a communicative language teaching based method in EFL classrooms. *Arab World English Journal*, 11(1), 270-281. <https://doi.org/10.24093/awej/vol11no1.20>
- Mokhtar, N. H., Halim, M. F., & Kamarulzaman, S. Z. (2011). The effectiveness of storytelling in enhancing communicative skills. *Procedia - Social and Behavioral Sciences*, 18, 163-169. <https://doi.org/10.1016/j.sbspro.2011.05.024>
- Nassim, S. (2018). Digital storytelling: An active learning tool for improving students' language skills. *PUPIL: International Journal of Teaching, Education and Learning*, 4(1), 14-29. <https://doi.org/10.20319/pijtel.2018.21.1429>
- Okojie, M. C. (2011). The changing roles of teachers in a technology learning setting. *International Journal of Instructional Media*, 38(1), 17-26.
- Ozudogru, G., & Cakir, H. (2020). An investigation into the opinions of pre-service teachers toward uses of digital storytelling in literacy

- education. *Participatory Educational Research*, 7(1), 242-256. <https://doi.org/10.17275/per.20.14.7.1>
- Pardo, B. S. (2014). Digital storytelling: A case study of the creation, and narration of a story by EFL learners. *Digital Education Review*, 74-84.
- Pasicolan, J. M. F., Banera, R. T., Catabay, M. J. A., & Tindowen, D. J. C. (2021). Enhancing Students' English Language Vocabulary Skills Through An Online Remediation Program. *Journal of Language and Linguistics in Society (JLLS) ISSN 2815-0961*, 1(01), 1-12.
- Raja, R., & Nagasubramani, P. C. (2018). Impact of modern technology in education. *Journal of Applied and Advanced Research*, S33-S35. <https://doi.org/10.21839/jaar.2018.v3is1.165>
- Reinders, H. (2010). Digital storytelling in the foreign language classroom.
- Robin, B. R. (2015). The effective uses of digital storytelling as a teaching and learning tool. *Handbook of research on teaching literacy through the communicative and visual arts*, 2, 429-440.
- Satriani, I. (2019). Storytelling in teaching literacy: Benefits and challenges. *English Review: Journal of English Education*, 8(1), 113. <https://doi.org/10.25134/erjee.v8i1.1924>
- Smeda, N., Dakich, E., & Sharda, N. (2014). The effectiveness of digital storytelling in the classrooms: A comprehensive study. *Smart Learning Environments*, 1(1). <https://doi.org/10.1186/s40561-014-0006-3>
- SoHee Kim. (2014). The effects of using storytelling with a Charlie Chaplin silent movie clip on oral proficiency development. *STEM Journal*, 15(1), 1-20. <https://doi.org/10.16875/stem.2014.15.1.1>
- Tan, M., Lee, S., & Hung, D. W. (2013). Digital storytelling and the nature of knowledge. *Education and Information Technologies*, 19(3), 623-635. <https://doi.org/10.1007/s10639-013-9280-x>
- Tiba, C. A., Condy, J., Chigona, A., & Tunjera, N. (2015). Digital storytelling as a tool for teaching: Perceptions of pre-service teachers. *The Journal for Transdisciplinary Research in Southern Africa*, 11(3). <https://doi.org/10.4102/td.v11i3.68>
- Towndrow, P. A., & Kogut, G. (2020). Conclusion. Digital storytelling in classrooms. *Studies in Singapore Education: Research, Innovation & Practice*, 147-168. [https://doi.org/10.1007/978-981-15-8727-6\\_14](https://doi.org/10.1007/978-981-15-8727-6_14)

- WALLACE, R. M. (2003). Online learning in higher education: A review of research on interactions among teachers and students. *Education, Communication & Information*, 3(2), 241-280. <https://doi.org/10.1080/14636310303143>
- What makes storytelling so effective for learning?* (2019, February 4). Harvard Business Publishing. <https://www.harvardbusiness.org/what-makes-storytelling-so-effective-for-learning/>
- Wu, J., & Chen, D. V. (2020). A systematic review of educational digital storytelling. *Computers & Education*, 147, 103786. <https://doi.org/10.1016/j.compedu.2019.103786>
- Yang, Y. C., & Wu, W. 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. <https://doi.org/10.1016/j.compedu.2011.12.012>
- Yentri Anggeraini. (2020). An investigation of the Students` opinion on the use of digital storytelling in learning English. *ELT-Lectura*, 7(1), 47-51. <https://doi.org/10.31849/elt-lectura.v7i1.3645>
- Yuksel-Arslan, P., Yildirim, S., & Robin, B. R. (2016). A phenomenological study: Teachers' experiences of using digital storytelling in early childhood education. *Educational Studies*, 42(5), 427-445. <https://doi.org/10.1080/03055698.2016.1195717>
- Ziden, A. A., & Rahman, M. F. (2013). The Effectiveness of Web-Based Multimedia Applications Simulation in Teaching and Learning. *International Journal of Instruction*, 6(2). <https://dergipark.org.tr/en/pub/eiji/issue/5137/70010>