

Disclosing students' challenges during digital storytelling class: A case study in higher education in Indonesia

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Article Info

Article history:

Received Jan 16, 2024

Revised May 08, 2024

Accepted June 7, 2024

Keywords:

Creativity

Digital story telling,

EFL,

Technological skills,

Students' motivation

ABSTRACT

The accessibility and progress of digital media and technology have prompted researchers and practitioners to explore their potential for teaching and learning. However, it is crucial to consider users' needs and the expression of their identities in digital learning, transcending hardware limitations and intended purposes. This study investigates the challenges faced by students in creating digital storytelling and explores their coping strategies during a digital storytelling class. Three English as a Foreign Language (EFL) students in higher education participated in semi-structured interviews. Thematic analysis was employed to analyze the data, revealing that students faced challenges in working with technology, the time-consuming nature of digital storytelling creation, and creativity-related challenges. To overcome these challenges, students employed strategies such as improving technological skills, enhancing time management, and fostering creativity. Further research is recommended to examine the effectiveness of digital storytelling in enhancing students' motivation to learn EFL.



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1. INTRODUCTION

In recent times, technology has gained significant popularity in the field of language learning, finding extensive use by both teachers and students both inside and outside the classroom. The belief is that technology can greatly assist in the teaching and learning processes of language acquisition. It serves as an effective tool in language learning (Al Jilani, 2024; Balaman, 2020; Haryadi et al., 2023). It not only supports the curriculum but also facilitates students in enhancing their language skills. Furthermore, the integration of technology in language learning can bring about improvements for both teachers and students (Fitri et al., 2022; Pino Castillo et al., 2023). Teachers can enhance their creativity in selecting appropriate technological resources and methods for delivering instructional materials (Naufal, 2021). This shift towards technology can effectively engage students with the learning materials, ultimately aiding them in improving their language skills more easily (Pradnyana et al., 2022).

Nevertheless, there is little known about the students' challenges during the digital storytelling class since the previous study only focused on the teachers' challenges in implementing digital storytelling in their classroom (Golumbic et al., 2022; Härkki et al., 2021; Meletiadou, 2022; Parwati & Pramatha, 2021; Putri et al., 2020; Rachmaniputri et al., 2021) and the pre-service teachers' experiences in implementing digital storytelling in the classroom (Arroba & Acosta, 2021; Choo et al., 2020; Merjovaara et al., 2020; Panchenko, 2021; Park et al., 2021; Spanjaard et al., 2022). Those previous studies revealed that teachers and pre-service teachers who use digital storytelling in the classroom still found many challenges including time issues, technological issues, and curriculum integration.

However, there are no explanations about the solutions in coping with those challenges (Akyar et al., 2020; Beck & Neil, 2021; Haq, 2023; Hasanah & Sukri, 2023; Salam et al., 2023). Additionally, the students who enrolled in digital storytelling class in higher education were coming from different backgrounds which do not know whether the students are capable of integrating the content materials and the technological use or not (Hasanah & Sukri, 2023; Okay, 2010; Sabrila & Apoko, 2022; Salam et al., 2023). As a result, the researcher's goal in this study is to reveal the difficulties students have when producing digital stories in digital storytelling classes and how they resolve those difficulties. As a result, the students who enroll in the digital storytelling course will be the most prepared, and the instructor will be required to help the students overcome any obstacles they may encounter.

Digital storytelling has emerged as an innovative technology used in classrooms, transforming traditional storytelling into a digital format. While traditional storytelling has long been recognized as a powerful educational tool, the integration of technology has revolutionized its delivery. It represents a blend of traditional and innovative approaches to story narration, effectively engaging students in the learning process (Özüdoğru & Çakır, 2020; Sarıca, 2023; Schmier, 2021). This makes it an appropriate medium for teaching language skills that are relevant to modern technology (Lim et al., 2022) and positions it as an educational model suited for the contemporary era (Özüdoğru, 2021). As a result, digital storytelling is frequently employed by teachers, particularly in language instruction.

Digital storytelling offers numerous advantages for both teachers and students in the classroom, enriching the teaching and learning process (Corujo-Vélez et al., 2021). Teachers and students alike have equal opportunities to utilize digital storytelling as a tool in their educational endeavors (Park et al., 2021; Pramono & Suherdi, 2019; Ringotama, 2020). Teacher can employ digital storytelling to introduce content, present new concepts, and capture students' attention effectively (Harjono & Wiryotinoyo, 2021). For instance, a teacher can utilize a digital story of Cinderella to teach narrative text, thereby presenting the learning material in a captivating manner. Additionally, teachers who are capable of creating their own stories can engage students with the content material and facilitate discussions on the topics presented in the story, enhancing student comprehension (Parr et al., 2021; Purnama, Wibowo, et al., 2022; Saripudin et al., 2021).

On the other hand, students can also create their own digital stories, which can serve as an engaging approach to language learning. After watching the teacher's digital story, students can embark on crafting their narratives, following the elements of digital storytelling proposed by the Center of Digital Storytelling. The process of creating digital storytelling activities can generate interest, attention, and motivation among today's digitally inclined students (Harjono & Wiryotinoyo, 2021). Furthermore, students who create digital stories can enhance their communication skills by learning to organize their ideas, express opinions, ask questions, and construct narratives (Aljaraideh, 2020; Parr et al., 2021; Petousi et al., 2022). This approach enables students to present their ideas and knowledge in a meaningful and impactful way.

In fact, digital storytelling is frequently used by teachers in the classroom in Indonesia (Purnama, Ulfah, et al., 2022; Sari et al., 2021). Teachers employ digital storytelling to determine which approach will yield the best results for their students. As such, Indonesian higher education offers a specialized course in digital storytelling. The goal of the course is to prepare students to become future language teachers by teaching them how to use digital storytelling in the classroom and by giving them practice in creating digital stories as a part of their language learning process. Additionally, because digital storytelling requires the use of reading, writing, speaking, and listening abilities, the ability to create digital stories will help students become more proficient in these areas. However, because educational content and technology are integrated, students who take the digital storytelling course in their education continue to face numerous difficulties (Taşdelen & Yaman, 2022). Digital storytelling demands the teachers and students to associate the content materials and the multimedia components while it should be appropriate with the content of the curriculum.

2. RESEARCH METHOD

A descriptive case study was chosen as the design of this study. A descriptive case study is used to describe a phenomenon in the real-life context in which it occurred (Abraham et al., 2022; LAGHUNG, 2023; Lismayanti et al., 2023; Maulina et al., 2022). It was in line in this study, the phenomenon is digital storytelling class, whereas the case is students' challenges in creating digital storytelling which is the particular instance of the phenomenon. The participants involved in this study were three students who have enrolled in digital storytelling class. Prior to their recruitment, the researcher distributed a Google Form to a group of ten students who were enrolled in the class. These students were selected as representatives from each class. The form contained a series of questions aimed at understanding the challenges they encountered while creating digital stories during the course. The questions covered whether they faced any challenges, the extent to which they experienced these challenges as a percentage, the reasons behind the challenges they encountered, and the specific types of challenges they faced. Based on the responses received, the researcher

identified three students who reported facing the most challenges during the class and selected them as participants for further investigation.

The data of this study was qualitative data which obtained from the semi-structured interviews. Semi-structured interview is conducted in order to get an in-depth understanding of the information from the participants by asking several open-ended questions (Mairitsch et al., 2021; Özüdoğru & Çakır, 2020; Shafiee et al., 2022; Yiğit, 2020). The questions were flexible in order to get the greater information from the participants. Some questions involved are about What was the understanding of the digital storytelling class, personal experience during the digital storytelling class, types of technology and multimedia utilized in creating digital storytelling projects, the reasons to use it, and how to manage and overcome the challenges while working with technology. Furthermore, the data were analyzed using thematic analysis by Braun & Clarke (Andriani et al., 2021; de Groot et al., 2023; Grinshtain, 2022; Kurniawati & Atmojo, 2022; Rasulo et al., 2022). First, the researcher read the participants' interview transcription for several times to familiarize the data. Then, the researcher highlighted the data to become initial codes which is relevant with the aim of the study. Afterwards, the researcher combined the same code to become the themes. Further, the researcher reviewed the previous themes to ensure the most appropriate themes in accordance with the aim of the study. Fifth, the researcher defined the most appropriate themes from the previous steps to become the emergent themes. Last, the researcher explain the themes.

3. RESULTS AND ANALYSIS

The analysis of the data yielded six themes, with three of them pertaining to the challenges faced by students and the remaining three focusing on the strategies employed by students to overcome these challenges while creating digital storytelling projects during the digital storytelling class. The tabel below displays the findings.

Tabel 1. Challenges in creating digital story telling

Challenges in Creating Digital Story Telling	Working with techhnology Time consuming Creativity
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The data provides insights into the specific challenges students encounter during the creation of digital storytelling, the impact on time management, and the strategies they employ to address these challenges. Understanding these aspects can help educators and students develop effective approaches and support systems to enhance the digital storytelling learning experience.

3.1. Student challenges in creating digital storytelling during digital storytelling class

3.1.1. Working with technology

To create digital storytelling, students should familiarize themselves with the use of technology. The technology that is used to create digital storytelling consists of hardware technology (such as laptop, computer, and handpone) and software technology (the application that is used to digitize the story). Students got the opportunity to choose the technology used in order to support them in creating digital storytelling. Thus, they can choose the application based on their skills and the hardware support. However, they still encountered challenges when they worked with the technology since they have limited facilities in creating digital storytelling, including the low specification of the hardware and the incomplete features of the application.

“For the technology itself, I heard there is an application which is very easy to make animations, but the application only can be used on the computer or laptop, while my laptop is already 4 to 5 years ago, so the specifications are not sufficient for that application” (Interview, Participant E, 10th May 2021. Author’s translation)

“The application that has taught at the class are various, starting from the application which needs advanced technology such as laptop, and not all handpone can access the application, so it becomes one of the challenges” (Interview, R, 21st May 2021 , Author’s translation)

“It becomes a challenge because you can imagine when I have a character in my story, but in the application, there is no character I want. The application doesn’t have the character I want based on the story, so automatically I should rewrite the story and customize it based on the character provided on the application” (Interview, Participant E, 10th May 2021. Author’s translation)

Participant E mentioned that they had heard about an application for creating animations, but it could only be accessed on a computer or laptop. Unfortunately, their laptop was quite old, around 4 to 5 years, and did not meet the necessary specifications for running the application. Another participant, R, mentioned that the applications taught in the class were diverse. However, some of these applications required advanced technology, such as laptops, and not all mobile phones were compatible with them. This posed a challenge for the participants. Participant E also described a challenge they encountered related to the availability of specific characters in the application. They had a particular character in mind for their story, but the application did not offer the desired character. As a result, they had to modify their story and adapt it based on the available characters in the application.

In order to create digital storytelling projects, students are required to utilize hardware with adequate specifications to run the necessary applications effectively. However, it was found that many students lacked the required hardware specifications as their devices were outdated (Elfiona et al., 2019; Salam et al., 2023). This limitation had a direct impact on the accessibility of certain applications on their devices. It is highlighted that issues such as limited access to computers, outdated hardware, insufficient computer labs, lack of necessary software installations, and incompatible operating systems are common problems faced by students. These challenges can impede students' progress in creating digital storytelling projects during the digital storytelling class. Additionally, It is further emphasized that equipment shortages and outdated hardware can contribute to technical support issues when creating digital storytelling projects (Park et al., 2021; Ringotama, 2020). Consequently, it becomes necessary for students to find ways to manage these limitations in order to successfully complete their digital storytelling assignments in the digital storytelling class (Choo et al., 2020; Sari et al., 2021).

However, the low specification on the hardware influence to the incomplete features of the application. It might affect to written story and the ideas that have been thought of earlier. It is claimed that not having important software installed in the hardware and not having the necessary operating system to run the software are the software related problems (Chen & Chuang, 2021; Gunarathna et al., 2023). When the students got the incomplete features and it did not support their story, they should consider the story and the digital media used. It will make them rewrite their story to be customized on the application features. It is stated that using the digital media in order to create an interesting digital story, it is not just using the digital media, but to mix the digital media and the story to be understandable (Carpenter et al., 2020; Dewi et al., 2021; Mirza, 2020; Rizvic et al., 2020; Trisanti et al., 2022). Thus, a good digital storytelling contains the integration of story and media used which can be understandable and interesting for the audience (Kogila et al., 2020; Rahiem, 2021).

Additionally, the challenge was regarding the students' lack of experience in using the application, it influences to the capability using the application.

“This is something new for me, to make an animation, moving an animated character based on my story I have made, so of course, this is a new challenge” (Interview, Participant E, 10th May 2021. Author's translation)

“I know Anytales application since it was presented in class, and I used the application for the first time when I took a digital storytelling class” (Interview, Participant R, 21st May 2021. Author's translation)

Participant E expressed that creating animations and bringing animated characters to life based on their own story was a novel experience for them. Consequently, this presented a new challenge in their digital storytelling journey. Participant R mentioned that they became acquainted with the Anytales application during the digital storytelling class and used it for the first time. This highlights their initial exposure to the application and its usage in the context of the class.

Students' lack of experience in using technology can influence the students' capability in operating both hardware and software of technology (Cheng et al., 2020; Islam & Hasan, 2020; Kavaliauskienė, 2019; Naufal, 2021). When the students did not have enough experience, they did not have enough skills to use the application. So it will be difficult for them to create a good digital storytelling. They will be unfamiliar with the new tools on the application, the tool functions, and the way to operate it. It is stated that not having enough experience will affect insufficient skills in using technology. Hence, the lack of experience may raise confusion and difficulties for the students in operating technology to create digital storytelling (Andriani et al., 2024; Rinekso, 2021). A lot of experiences in technology make the students have a basic understanding of hardware tools and confidence to be able to learn the new tools in a software application that will support their activity in creating digital storytelling (Azmeel, 2022; Belda-Medina, 2021; Özüdoğru & Çakır, 2020).

3.1.2. Steps in creating digital storytelling takes a lot of time

To create digital storytelling, students should follow several steps starting from writing a story, choosing an application, editing the animation, adding music, and publishing digital storytelling. Each step has its level of difficulty which takes a time to complete. It means, it is time consuming.

“The process is, first make the story, starting from determining the actors, the atmosphere of the place, etc, the main thing is making the story first. Then, the application, what application that would be used, which will make it easier for us, for example using Anytales. At the beginning of using the application, select the setting first, setting the place, then setting the atmosphere, then adding the actor, customize the actor, starting from determining the look on his face, the facial expression, the movement, how he sits, runs, walks, squats, like that, then how he keeps moving, keeps going back and forth, like that. Then, make the scene manually, including the movement work of each scene. So it is like the animation that you usually see, when you see it in movies, like that. But our animation is not as good as the animation in the movie, because we are still amateur” (Interview, Participant R, 21st May 2021. Author’s translation)

The process involves several steps. Firstly, the participant begins by constructing the story, including aspects such as determining the characters and the setting. The story creation takes precedence. Next, they select an application that will facilitate the process, such as Anytales. Upon initiating the application, they start by choosing the setting, establishing the atmosphere, and then adding the characters. The participant customizes the characters, specifying details like facial expressions, movements, and various actions such as sitting, running, walking, and squatting. They also manage the continuous movement and transitions of the characters. Additionally, the participant manually constructs each scene, including the necessary movements within each scene. The resulting animation bears resemblance to what is typically seen in movies. However, the participant acknowledges that their animation may not reach the same level of quality as professional movie animations, as they consider themselves to be amateurs in this field.

“It can take days, because for example, on our first day, making a story, making the story first, the process of making a story is not easy, there must be a beginning, what is the conflict, what is the end. It can take a day because we don’t just focus on that, then, for example, we make animations, it also can take one day. Then, after the animation process, adding the texts, the animated speech text, choosing music for the scene, the process of dubbing does take time. Anyway, we are given one application for one week, for example, the first-week presentation of one application, so the task is to make a story that uses that application if I’m not mistaken. So it takes time enough” (Interview, Participant R, 21st May 2021. Author’s translation).

The process of creating a digital storytelling project can be time-consuming. For instance, on the first day, the participant focuses on crafting the story itself, which involves establishing a beginning, a conflict, and an ending. This story development stage can take a significant amount of time, often spanning a full day. The participant also mentions that the animation creation process can take another day. After completing the animation, additional tasks such as adding text, incorporating animated speech, and selecting suitable music for each scene are undertaken. The process of dubbing, in particular, requires dedicated time and attention. Generally, participants are typically given one application to work with for a week, and their assignment is to create a story using that specific application. As a result, completing all these tasks within the given timeframe requires a substantial investment of time

There were several steps that should be done by the students, such as writing story, editing process, and upload digital storytelling, and to create a good digital storytelling students should follow the steps of creating digital storytelling starting from choosing a topic until publishing the digital story (Gürsoy, 2021; KIRIKCI et al., 2020; Park et al., 2021). The steps have their level of difficulty due to students being aware of the elements of digital storytelling that should be presented. Somen elements of digital storytelling are pointed, such as point of view, a dramatic question, emotional content, the give of the voice, the power of the soundtrack, economy, and pacing (Özkaya, 2022; Purnama, Ulfah, et al., 2022). To produce a good digital story, students should follow all of the steps and the elements of digital storytelling. Therefore, there is a time-consuming process that needs a lot of time. Even though every student may have different times in creating digital storytelling, the data shows that students should spend several hours in a day until several weeks to finish the digital storytelling project. It is pointed out the challenge in creating digital storytelling is time-consuming (Gürsoy, 2021). Every step of digital storytelling may take several times based on the

students' capability in managing it (Al-Amri, 2020; Kim & Li, 2021; Özüdoğru, 2021). Furthermore, students did not enroll in digital storytelling class, they also take several course that have assignments. This case is challenging since they should manage their time properly.

“The challenge is the use of time because, at that time in the sixth semester, there were still a lot of courses, so I had to divide my time to do other assignments as well” (Interview, Participant N, 10th May 2021. Author's translation)

This situation impacts the students' time management. Students should manage their time to do all of the course assignments, for example, split the time to create digital storytelling and do other course assignments. Moreover, every assignment is regulated by the deadline, hence, students have a huge responsibility to complete all of the assignments based on the course deadline. It is stated that students are responsible for completing their assignments on time. A lot of time spent in creating digital storytelling does not let the students publish the digital storytelling beyond the deadline, and it also applies to other course assignments. Thus, it becomes one of the challenges in creating digital storytelling during digital storytelling class that offers students' attention. The more time spent on the digital storytelling project and the project could not be managed well due to the other activities. However, all of the assignments are parts of the learning process, and students will complete with their best effort in order to get success academically (Lazareva & Cruz-Martinez, 2021; Marfui, 2016).

3.1.3. Creativity

Creativity is a skill to create something new which is different from others (Creely et al., 2022). Everyone has their level of creativity based on their capacity in thinking. Creativity becomes one of the challenges that are faced by students in creating digital storytelling (Uslu & Uslu, 2021). It occurred because to create a good story, the students should have a lot of ideas. Then, in digitizing the story, they also should have the creativity to choose and design an interesting multimedia which is appropriate to the story. Moreover, students should create digital storytelling originally by themselves and avoid the plagiarism of others' creations.

“Of course, creativity is challenging, because I make everything by myself, starting from writing the story, I have to be as creative as possible, especially in the editing process. In the editing process, I have to design characters, backgrounds, and so on, so I have to be creative, as creative as possible” (Interview, Participant N, 10th May 2021. Author's translation)

“It's difficult to costume the characters, the movement of the character in accordance with storyline, for example when the character is walking, the leg should move left and right, and I should consider which is he running, is he walking normally, and the hand is it move or not, etc. Then the facial expression, is he sad or happy or others. So I should consider and adjust the character and the other things with my story creatively” (Interview, Participant R, 21st May 2021. Author's translation)

Creativity poses a significant challenge in the digital storytelling process, as participants are responsible for various aspects of their projects. Participant N highlights that creativity is essential from the initial stages of writing the story. They emphasize the need to be as creative as possible, particularly during the editing process. This involves designing characters, backgrounds, and other elements, requiring a high level of creativity. Participant R expresses the difficulty in costume designing for characters and ensuring their movements align with the storyline. They mention considerations such as leg movements during walking, distinguishing between running and normal walking, and coordinating hand movements. Additionally, facial expressions play a crucial role in conveying emotions such as sadness or happiness. Overall, the participant emphasizes the need for creative thinking and adjustment of various elements to align with their story.

In digital storytelling class, students should create a digital storytelling originally by themselves. That is, the story and the multimedia used were coming from their ideas and imagination. This case demanded students to have a lot of ideas on writing a story and digitizing it. In writing the story, as has been explained on the previous challenges, the story should be delivered briefly, but it should contain three parts, there are beginning, middle, and the end (Aljaraidh, 2020; Ayten & Polater, 2021; Mudra, 2020; Özüdoğru, 2021; Uslu & Uslu, 2021; Wang et al., 2022). Therefore, students should write their story as creatively as possible. It should be different from the existing story and show their uniqueness in their story. In addition, the creator must create a story new and different and it is a challenging activity. It was challenging since the students lacked creativity, whereas the students staked of the ideas and they were confused with the story

that should be delivered (Çetin, 2021). This challenge may lead to difficulty which can obstruct students in the process of creating digital storytelling (Boysen et al., 2023).

3.2. Students' way in coping with the challenges in creating digital storytelling during digital storytelling class

This focuses on the ways in which students cope with the challenges they encounter during the process of creating digital storytelling in the digital storytelling class. It highlights the strategies and approaches students employ to overcome these challenges and successfully complete their digital storytelling projects. The tabel 2 gives the schema of what ways to overcome those challenges.

Tabel 2. Ways to overcome challenges

Ways to overcome Challenges	Improving Technology Skills, time management, and creativity
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Table 2 provides a comprehensive schema of the various ways in which students overcome the challenges they face during the process of creating digital storytelling in the digital storytelling class. The table outlines the strategies and approaches utilized by students to successfully navigate these challenges and complete their digital storytelling projects. The schema presented in Table 2 serves as a valuable resource for understanding the specific methods employed by students to cope with the challenges at hand. It provides a clear overview of the different strategies students adopt, offering insights into their effectiveness in addressing each challenge. By referring to Table 2, educators, researchers, and students themselves can gain a deeper understanding of the range of approaches available to overcome the challenges associated with digital storytelling. This schema serves as a practical guide, enabling individuals to select the most suitable strategies for their specific circumstances and needs.

3.2.1. Improving technological skills

Since technology becomes one of the challenges in creating digital storytelling, it gets the most attention of the students. Students must deal with technological issues in order to create digital storytelling successfully. In the class, students have been taught about the application that is usually used in creating digital storytelling, then they practice using it after the presentation of the material. However, the applications were different each week, so it influenced the students' lack of experience in having the capability in a technology. Thus, to cope with the technological issues, students have their way to expertise themselves in using the technology.

“I was overcoming this by asking for help from my friend who has experience in this field. So I asked for help to use the applications, and it makes me easier” (Interview, Participant N, 10th May 2021. Author's translation)

“To learn the application, I learn by myself, so I search how to operate it by myself, like a trial to click the features on the application, and if I'm confused and I have a little bit stuck, and it feels so difficult, then I'm looking for tutorials on Google or Youtube, so I learned to trial the use of application only by myself” (Interview, Participant E, 10th May 2021. Author's translation)

“To overcome the challenge related to the application, I have to practice more, and explore the application more” (Interview, Participant R, 21st May 2021. Author's translation)

The strategy that students have done to improve their technological skills was exploring and practicing more of the application. They explored the application independently by watching the tutorial of how to use the application, then practiced trial and errors repeatedly, and got training from people who are experts in operating technology. By exploring and practicing the technology frequently it will make the students familiarize with the tools of the application and how to operate those tools.

Technology is a skill that must be developed with practice (Aljaraideh, 2020). Additionally, the students can understand how to use the technology when they practice it. Practicing the technology frequently and consistently will make the students know the tools that are usually provided on the application and the way to operate it (Park et al., 2021). Further, It is also claimed that to create digital storytelling it should be joined to digital storytelling training including technical training. Besides, it also will add the students' experience in working with the technology. A lot of experience in using technology can help the students to create digital storytelling effectively (Pandolfini, 2013). This is because students are used to using

each tool provided on the application and practicing to design the multimedia by using those tools (Özüdoğru, 2021; Shahid & Khan, 2022).

The process of creating digital storytelling not only involves storytelling itself but also requires students to actively engage with technology and utilize various technological tools (Marschall et al., 2021). Throughout the process, students are encouraged to plan, produce, present, and review their digital storytelling projects using these technology tools. These activities provide valuable opportunities for students to enhance their technological skills.

One of the key benefits of utilizing digital storytelling is the improvement of technology literacy among students (Leaning, 2019; Özüdoğru & Çakır, 2020; Pino Castillo et al., 2023). Technology literacy refers to the ability to effectively use technology to enhance learning. Through digital storytelling, students develop proficiency in working with different technological components. They learn how to utilize technology tools efficiently and effectively, troubleshoot technological issues, and transfer their existing knowledge to adapt to new technologies.

By acquiring these technological skills, students are equipped with the necessary competencies to create high-quality digital storytelling projects successfully. They are empowered to explore and utilize various features and functionalities of technology tools, enabling them to enhance the overall quality, creativity, and engagement of their digital storytelling narratives. Moreover, these technological skills foster a sense of confidence and independence in students, enabling them to navigate and adapt to technological advancements in the future. Therefore, the process of creating digital storytelling not only fosters storytelling abilities but also promotes the development of technological skills. By engaging with technology tools, students enhance their technology literacy, enabling them to effectively utilize technology to support their learning and create impactful digital storytelling experiences (Aljaraidh, 2020; Ceallaigh, 2022).

3.2.2. Improving time management

The process of creating digital storytelling takes a lot of time which becomes the students' challenges in creating digital storytelling during digital storytelling class. To cope with this challenge, students should have better time management in order to create digital storytelling effectively.

"If there is free time, do that little by little, so the work of creating digital storytelling didn't pile up in one day" (Interview, Participant N, 10th May 2021. Author's translation)

"I did based on the priority, for example when there are 2 days to deadline, and the animation isn't finished yet, so the creation of animation is prioritized" (Interview, Participant R, 21st May 2021. Author's translation)

Participant N suggests that it is beneficial to utilize any available free time to work on creating digital storytelling projects gradually, rather than leaving the entire workload for a single day. This approach helps prevent the accumulation of tasks and allows for a more manageable and efficient workflow. Participant R mentions that they prioritize tasks based on their urgency and deadline. For instance, if there are two days remaining until the deadline and the animation component of the project is incomplete, they prioritize completing the animation before other aspects. This strategic prioritization ensures that critical elements are addressed first to meet the project requirements within the given timeframe.

The strategies they used in improving time management while creating digital storytelling are using free time effectively and setting a priority scale. First, using free time effectively, in a day there are 24 hours which students may use several hours in a day to create digital storytelling step by step. Further, there are several steps in creating digital storytelling which take a lot of time, hence students should create it frequently and consistently.

Effective utilization of free time enables students to complete their digital storytelling projects before the designated deadline. By managing their free time efficiently, students can engage in goal-directed activities, ensuring productive use of their available time. In this case, goal-directed activities refer to the activity of creating digital storytelling (Al-Amri, 2020; Mirza, 2020). It is clear that using free time effectively may help students to finish their digital storytelling. Moreover, higher education students enroll in several courses which have different assignments. Do not let the other assignments influence the digital storytelling project, vice versa. Thus, using the free time will make the students divide the time effectively to finish all of the assignments, specifically the digital storytelling project. In addition, managing free time is a great aid in balancing higher education studies. It will make the students have a plan to create digital storytelling until they finish (Meirovitz et al., 2022).

Second, setting a priority scale, it is also important in helping students to finish their digital storytelling (Belda-Medina, 2021; Özüdoğru & Çakır, 2020). When the students set their priority scale in

doing all of the assignments, they will know the assignments that should be finished earlier. In the process of creating digital storytelling, students should consider the steps that should be done earlier. It should be known of each step and decide how to organize every step of the work. Due to steps in creating digital storytelling is a time-consuming process, they should spend more time in finishing their digital storytelling. Thus, creating digital storytelling should be a high priority to be done (Kessler, 2018). It is pointed out that a kind of time management is working on high-priority tasks. Setting a priority scale about the tasks can help them in completing every step in creating digital storytelling.

Improving time management is the important thing in creating digital storytelling in order to complete it. By having good time management, students will manage all of the assignments to be finished, particularly in creating digital storytelling which has several steps and a time-consuming process. In the end, great time management will help students to have a good performance in creating digital storytelling, further, they will join the digital storytelling class successfully

3.2.3. Improving creativity

Creativity becomes one of the skills that students should have while creating digital storytelling. Creativity requires students to create digital storytelling originally by themselves. Besides, creativity makes the students have rich ideas in writing the story and digitizing it, so their digital storytelling will be unique based on creativity. Therefore, it becomes the students' challenge in creating digital storytelling during digital storytelling class. During the class, they should have more creativity to create a good digital storytelling. However, to cope with the challenge, students develop their creativity by finding inspiration from others' creations. Three participants have the same way in improving their creativity in creating digital storytelling during digital storytelling class, there are reading and watching the other stories:

"I like to watch short stories on youtube, so sometimes creativity comes from here" (Interview, Participant N, 10th May 2021. Author's translation)

"To improve creativity, I don't know how to improve creativity properly. But, for me, I look at references such as animated stories, animated short stories. So I get the inspiration of how the character moves, for example, when he is sad or when he is cheerful, or how he walks and also the other body movement. So I look to the references, such as existing animations, simple animations that already exist, like that" (Interview, Participant E, 10th May 2021. Author's translation)

"Of course, read a lot of stories, keep seeing a lot of references and animations created by others" (Interview, Participant R, 21st May 2021. Author's translation)

In coping with creativity challenge, students improve their creativity skill by finding ideas from looking at any references, such as a short story on the internet. The references they watched may help them to get the knowledge, ideas, imagination, and innovation to create new digital storytelling that is unique and different from others' creations. In this context, internet is the most comprehensive resource which can give ideas for digital storytelling creators (Bonifazi et al., 2019; Eppendi et al., 2021; Lin & Chen, 2022; Rachmaniputri et al., 2021; RASMAN, 2021). Thus, students may use any references to improve their creativity as long as they do not plagiarize the sources. Students read the others' short stories to get their ideas on writing the story. Further, students watch the others' short stories to get the ideas on digitalizing the story, such as designing actors, background scenes, movements, slides, and so on.

4. CONCLUSION

The digital storytelling class offered in one of the higher education institutions in Indonesia equips students with the necessary knowledge and skills to create digital storytelling projects. However, students enrolled in this class often encounter several challenges throughout the process. These challenges primarily revolve around three aspects: working with technology, following the steps involved in creating digital storytelling, and nurturing creativity. Overcoming these challenges is crucial for students to effectively handle the time-consuming nature of digital storytelling and to enhance their creative abilities.

To cope with these challenges, students employ various strategies. Firstly, they focus on improving their technological skills, ensuring they are proficient in utilizing the necessary software and tools for digital storytelling. This allows them to navigate through the technical aspects more efficiently. Secondly, students prioritize effective time management techniques tailored to their individual approaches in creating digital storytelling. By managing their time effectively, they can allocate sufficient attention to each stage of the process, ensuring a successful outcome.

It is important to note that this study primarily focuses on unveiling the challenges faced by students during the creation of digital storytelling within the digital storytelling class. The emphasis lies on identifying the students' challenges and their corresponding solutions. Future studies could explore the benefits and impact of creating digital storytelling on students' overall skill development and academic performance within higher education. This would provide a broader understanding of the significance of digital storytelling in educational settings.

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