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Digital Storytelling as a Meaningful Learning Strategy in Online Learning

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Abstract

The purpose of this study was to ascertain students' perceptions of the use of digital storytelling as a meaningful learning strategy in an online environment at a senior high school in Indonesia. The case study method was used in this study, which included twenty-eleventh-grade students as participants. The data analyzed in this study come from a student questionnaire, a semi-structured interview, and five-week classroom observation. This qualitative study indicated that students viewed digital storytelling as an instructional method capable of involving them in an active, authentic, and purposeful learning environment. Additionally, digital storytelling enhances students' exposure to a variety of skills and collaborative work portfolios. The study's practical implications for teachers implementing digital storytelling are to allow additional time for content acquisition and comprehensive learning reflection.

Kata kunci:
studi kasus
digital storytelling
pembelajaran bermakna
moda daring
persepsi siswa

Abstrak

Penelitian ini bertujuan untuk mengkaji persepsi siswa tentang implementasi digital storytelling sebagai strategi pembelajaran bermakna secara online di sebuah sekolah menengah atas di Indonesia. Penelitian ini menerapkan metode studi kasus yang melibatkan dua puluh siswa kelas sebelas sebagai partisipan. Data yang dianalisis dalam penelitian ini berasal dari kuesioner siswa, wawancara semi terstruktur dan observasi kelas yang dilaksanakan selama lima minggu. Hasil penelitian mengungkapkan bahwa para siswa mempersepsikan digital storytelling sebagai instruksi pembelajaran yang bisa melibatkan mereka dalam atmosfer pembelajaran yang aktif, authentik dan intensional. Digital storytelling juga memperkaya pengalaman siswa dalam mengembangkan keterampilan multidimensional maupun portofolio kerja kolaboratif mereka. Implikasi dari penelitian ini untuk para guru adalah dalam mengimplementasikan pembelajaran digital storytelling kedepannya diharapkan untuk mengalokasikan waktu yang cukup untuk penguasaan materi dan refleksi pembelajaran yang mendalam.

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INTRODUCTION

During the Covid-19 pandemic period, a developing number of learning courses are occurring in online settings (Lake & Dusseault, 2020). Nonetheless, simultaneous with the rising predominance of online learning courses, there is great distress on students' academic achievement and their genuine interest in learning (Cárdenas-Robledo & Peña-Ayala, 2018). There is a stigma that online learning causes students to feel disaffected and disengaged (Dixson, 2015). In designing online instruction, teachers who have sufficient comprehension of student-centred learning immediately understood that the transition included substantially more than basically moving materials on the web. The challenges appeared that web-based learning is not a characteristically portrayed active situation and frequently takes place asynchronously. Therefore, learning strategies that require fully engaged students, which are key to meaningful learning circumstances, became progressively confounded and hard to achieve.

Since the recent classrooms have become more and more web-oriented, it requires 21st-century students not merely to utilize the provided content. It encouraged learners more to create their knowledge sources. Thus, students become active contributors and constructors of online knowledge sources (Greenhow et al., 2009). Digital storytelling, defined as a learning genre that incorporates technology application and telling a story, can be a meaningful learning experience for various content areas ranging from kindergarten to university levels (Lambert, 2018). Conceptually, the term of meaningful learning itself can be defined as a process in which learners actively relate new information to their own previous knowledge (Ausubel, 1963). In a further development, (Koh, 2013) designed a description and parameters of the five-point scale of each dimension in meaningful learning (active, constructive, authentic, intentional and cooperative) using the theoretical conceptions of TPACK for meaningful learning with ICT, which was adapted in this study.

Several types of digital storytelling video creation research depict that it has become progressively well-known in schooling throughout the most recent decade for a few factual reasons (Hathaway & Norton, 2012). The first reason is that digital storytelling is proven that it doesn't need students' high ICT mastery and should be possible moderately. It also engages students learning with a relevant, public viewer, as digital stories can be published in a broader range. Moreover, digital storytelling enables students to explore their creativity on ideas, pictures and stories, verifying their learning through an innovative method. It facilitates students' passionate connection with complex ideas that can be arranged locally or around the world. And it also fosters rich and customized learning concerning themes, building knowledge and significance from circumstances that are applicable to individual interests, inspirations, and existing earlier information.

Digital storytelling is considered an attempt to integrate technology in classrooms that concern more on the user's active contributions in its process. It is supposed to assist teachers in solving their problems and barriers dealing with technology application in the classroom. The aforementioned studies of digital storytelling creation show that it is a meaningful learning methodology in K–13 settings (Dreon, Kerper, and Landis, 2011; Hung, Hwang, and Huang, 2012; Yoon, 2013). Digital storytelling is proven a powerful learning strategy in advanced education (Lowenthal & Dunlap, 2010). Moreover, it is effective with educator instruction (Kearney, 2011). However, it is indicated that there was a lack of research that explored the students' perception of the practice of digital storytelling as a meaningful learning strategy, mainly in an online setting. In addition, the implementation of digital storytelling in Indonesian high schools remains limited. Thus, the novelty of this study is that it focuses on the students' perception of the implementation of digital storytelling at the high school level through an online learning setting with meaningful learning conception as the main framework. Therefore, this study aimed to investigate the students' perception of the digital storytelling project as a meaningful learning strategy in an online setting.

METHODS

The current research was conducted in an EFL class at a senior high school in Indonesia for five weeks. The researchers selected the school as the teacher to facilitate a digital storytelling project through several online environments. She also has adequate experience and comprehension to apply digital storytelling. The present study aimed to convey the students' perception of digital storytelling as a meaningful learning strategy in the online environment during the covid 19 pandemic. The researcher has carried out a descriptive case study research. A case study is on a present phenomenon within a real-life framework (Yin, 2017). In the study, the participants were 20 students from the eleventh grade. There are six male and 14 female students. They were about 16 years old. The participants were purposively selected based on the consideration that they have sufficient experience in practising digital storytelling in their EFL classroom.

The researchers observed the online class to portray the implementation of digital storytelling. Field notes were written for the purpose of gaining a well-defined description during the online learning process, the real situation in the class, and the activities done by the students during the project. Besides, a questionnaire consisting of twelve items was distributed to draw out students' perceptions of the implementation of digital storytelling. The questionnaire was constructed based on Koh's (2013) conception of meaningful learning with ICT with some revision and adaptation before it was employed. The questionnaire endeavoured to scrutinise students' responses during the implementaton of digital storytelling in EFL classroom. The questionnaire was divided into five segments based on the five dimensions of meaningful learning with ICT. The questionnaire was depicted in Indonesian for convenience reasons. A total of twenty responses were collected, all the participants completed the questionnaire.

Moreover, a semi-structured interview was carried out to generate a comprehensive understanding of students' voices of digital storytelling projects and reasoning. The interview guideline was adapted from (Koh, 2013) and was revised before use. Due to the limited time allotment, only six students, two male students and four female students, participated in the interview session. The interview was organized using Indonesian in order to facilitate the students in conveying their meaning and deeper information. In analyzing the data, this study applied a (Miles et al., 2014) model. This model comprises four stages, i.e. data collection, data condensation, data display, and drawing and verifying the conclusion. After the data from the observation and interviews were acquired, the data then were classified into two categories, i.e. the practice of digital storytelling project and students' perception of digital storytelling as a meaningful learning strategy. Those classified data then were categorized according to sub-themes based on five dimensions of meaningful learning.

FINDINGS AND DISCUSSION

This paper section begins by examining questionnaires' results related to the participants' perception during the implementation of digital storytelling. Also, to gather more information on the key participant's thoughts and experiences in the implementation of digital storytelling as a meaningful learning strategy, a semi-structured interview was conducted. Their responses are categorized according to five dimensions of meaningful learning.

Table 1. Students' perception of the implementation of digital storytelling as a meaningful learning strategy (n=20)

Dimension	Indicators	Yes	No
Active	I focused on paying attention to teacher's explanations and instructions during this digital storytelling.	15	5
	I did my assignments and tried to be productive during this digital storytelling.	17	3
	I actively utilized technology during this digital storytelling.	16	4
Constructive	The activities in this digital storytelling project increase my knowledge.	17	3
	I am constantly reflecting on the learning process.	10	10
	I am able to assess and criticise my peers' ideas critically and constructively.	10	10
Authentic	I can relate the learning process with my experience and environment.	18	2
	I can apply my new knowledge to my real-life situation.	16	4
Intentional	I set my own learning goal in this digital storytelling project.	12	8
	I can identify my difficulty and problem in learning process.	13	7
Cooperative	I am excited to express my opinion and join my group discussion during this learning process.	18	2
	This digital storytelling enriches my experience in collaborating with my peers.	17	3

As portrayed in Table 1, from the data analysis on the questionnaire, we can conclude that none of the five dimensions was without any score. The findings denoted that all of the five dimensions were obtainable. Though, the percentage diverged from the lowest score of 50% to the elevated score of 90%. In particular, the findings specified that all five dimensions of meaningful learning were obtained in the study, although they arose in divergent degrees. Thus, we can infer that through the online learning context, digital storytelling could be implemented in a meaningful learning environment where students set their own learning goals, plan their learning pathway, relate their gained knowledge to their real-life situations and overcome their own learning problem. It is in accordance with the previous study's result that claimed digital storytelling production is an applicable project-based learning strategy to pursue meaningful learning (Yoon, 2013).

Active dimension: engaging students in an active learning situation

In the active dimension, the majority of the students (75%) stated that they focused on paying attention to the teacher's explanation and instructions. Most of them (85%) also did their assignments and tried to be productive during the learning process. Some prefered to explain, for instance:

> *"The teacher gives us clear instructions and explanations so we don't have any confusion about what we should do. Moreover, the media is very interesting and*

> *in accordance with my hobby, which is editing. I can express my ideas in any form, it makes me enthusiastic about giving the best result in this project."(int.P3)*
>
> *"In this project we have a big sense of responsibility. Where working as a team here is very much needed, so we do it seriously in order to achieve maximum results" (int.P2)*

From the interview result, we can conclude that the students were actively engaged in learning process because of two reasons. The first reason is that the teacher's instruction enabled students to be active in learning situations despite it being delivered through an online context. Well-structured and comprehensible instructions assisted them in accomplishing the required assignments. This phenomenon is in line with the previous study that stated in order to really engage students in an online context. The teacher needs to invite students to take action through several well-defined instructions, as active learning should not be limited by the barriers of the classroom or the confines of a computer screen (Kiernan, 2020).

The second notion is that students experience digital storytelling as a fun and challenging learning method. Those elements encouraged them to possess a high level of engagement and commitment to hard work during the learning process as (Niemi & Multisilta, 2016) said that digital storytelling comprises a powerful influence on students' motivation and enthusiasm. The use of ICT tools and application itself offered both challenge and excitement for the students. Those familiar enough with ICT tools and applications found it fascinating and motivated to create the remarkable result. Meanwhile, students who applied the application for their first experience considered it as a new challenge. Moreover, during digital story production, the students worked in collaborative work. This fact reinforced students' sense of responsibility to give an active contribution to their own group.

Furthermore, the data portrayed that 80% of the participants actively utilized technology during the implementation of digital storytelling. One of the participants said:

> *"I use DSLR camera to capture the photograph to get good quality pictures. But, to record the sound I think the voice recorder in my cellphone is still tolerable. I apply at least five applications in this project. First, I used Google classroom and Zoom to join in the learning process. Then I used Whatsapp to have a discussion with my group. My teacher recommended us to use Microsoft photo story 3 to create the digital story but I still need one more application to add some effects on the photographs. I chose Vsco. I want everything to be perfect"(int.P1)*

According to Koh (2013), the active dimension of using ICT tools possesses high or even the highest mean score in writing with ICT as ICT tools were crucial to support the progress of written expression during the production process. Both ICT tools and applications optimally functioned in this learning process. it was conducted through online learning. The use of video conference applications such as Zoom and Google classroom as LMS was inevitable. ICT tools and applications are highly required during pre-production up to distribution phases. Students used them to make drafts, capture images, translate words, edit text and video, and present digital stories.

Constructive dimension: improving students' multidimensional skills

Based on the perceived constructive dimension, the majority of the students (85%) agreed that this digital storytelling project gave them new knowledge and experience. Several participants explained:

> *"I was happy because I got a new experience to try and learn to edit using the Microsoft Photo Story application on a laptop where before I had never edited anything on a laptop. I thought it was complicated, but after trying this application, it turned out to be not as complicated as I imagined. It also increases*

> *my knowledge in using technology to create my own story." (int. P2)*
> *"It was the first time for me to experience creating a digital story. It was a new technique of storytelling that I didn't know before. I was excited to enrol in each phase of its production. My group members were also very helpful. Whenever I got difficulties, they were ready to help me." (int. P4)*

According to the study participants, digital storytelling was considered an innovative and constructive activity were as combined with the integration of technology. The present digital storytelling requires the students to get acquainted with computers, cameras, digital media applications, audio recording tools, and multi-literacy skills. Digital storytelling project sharpens students' multidimensional skills, which build up their language and improve their content knowledge and literacies (Widodo, 2016). During the implementation of digital storytelling, students constructed how to create a story in English and experienced how to improve their critical thinking through several group discussions. They performed as problem solvers of their learning difficulties through an interactive process of negotiation and sharing.

However, 50% of the participants still had difficulties reflecting what they experienced in the learning process and assessing their peer's ideas critically and constructively. One of the participant explained:

> *" Umm… actually I got difficulties when the teacher asked our group to evaluate the other groups' digital stories. Honestly, we didn't have any idea whether their stories right or wrong, good or bad. Well, I know that the teacher has already explained about the structure of the stories or something else in the early meeting, but we even didn't remember that when assessing the others' digital stories." (int. P5)*

Regarding his issue, the participant's statement above portrayed that the students' difficulties in reflecting and assessing their peers' digital stories were caused by several reasons. First, the implementation of digital storytelling conducted gradually in four phases, with the final phase is presenting the students' digital stories. It caused the students to focus more on completing the assignments rather than reflecting on the learning process. Another reason is that the students didn't acquire the transferred-conceptual content knowledge entirely because the teacher didn't provide sufficient time allotment to reflect every phase of learning. This fact contradicted Koh's study (2013) that stated the constructive dimension enacted high scores in the process of writing with ICT. However, the research result of (Chi, 2009) approved this study's finding that students' being active didn't imply that they were being constructive if they were not engaged inadequate reflection of content knowledge being taught.

Authentic dimension: relating to students' real-life experiences

In regards to the authentic dimension, it is clearly seen from the table that a substantial proportion (90%) commented they could relate the learning process with their own experience and environment. Besides, most of the students (80%) stated they could apply in a real-life situation. We found such evidence in these statements:

> *"I was not confident enough to make any kind of storytelling before, but after this experience, it shows me how we can express our thought and creativity through digital stories."(int. P3)*

> *"The predetermined topic itself makes us easily relate to our own daily life. The steps in digital story production can be carried out whenever we get a similar task in different subject matters."(int. P5)*

Their statement depicted that digital storytelling facilitated them to relate what they got in the learning process with their personal experiences and circumstances and can be applied in actual life settings. The participants discussed the topic and type of story they would create during

the pre-production phase since the teacher gave only the significant theme and several alternative stories. It was the starting point of digital story production.

The students also experienced selecting pictures that were such an intricate step. The pictures should be aligned with the story content, and they had to express their idea succinctly. Therefore, pictures influence the whole story presentation (Tobin, 2012). When students combine images and written stories, it facilitates a more powerful interpretation and depiction of their personal experience and knowledge. This fact conforms to what has been revealed in the former study that digital storytelling enables students to express their ideas and share and discuss their life experiences (Widodo, 2016). This learning process allowed each student's knowledge, idea, and impression to be captured. Thus, we can conclude that digital storytelling enables the students to produce multimodality digital stories through such self-ruled stages.

Intentional dimension: facilitating students to set their learning goals

Based on the intentional dimension, we can conclude that 60% of participants were able to set their own learning goals. Some of the prefered explained:

> *"At the very first meeting, our teacher has explained the purpose and the target of this learning process. It gave me a clue to set my own goal to gain the best result in our class. I thought that would not be too hard to achieve as I was familiar enough with video editing."(int. P4)*

> *" This was my first experience to create a digital story. So this was very exciting for me. It was just like a challenge to conquer. Maybe I couldn't create an impressive masterpiece, but I was sure I would make quite a satisfactory one." (int. P1)*

Besides, most of the participants (65%) can also identify their own problems and difficulties in the learning process. Most students indicated that they had difficulties in arranging effective sentences. Several students stated they also found difficulties in generating the idea, but the activities in this digital storytelling project guide them to solve their own problem-solving problems. For instance:

> *"I had difficulties in developing my sentences. One of my fellow group members was not confident enough with his editing skill. So we help each other to deal with our weaknesses. Futhermore, I think the activities in this project help us to stimulate our unpredictable ideas, so my learning problem can be solved"(int. P6)*

From the participants' interview, we can conclude that students perceived digital storytelling magnificently allow them to set their own learning goals. This fact has resulted from the students' conviction that the learning target was accessible. As the teacher has already described the general learning target, students could determine their personal learning goals according to their competence. Another insight we can wrap up from the interview was that students' excitement toward the learning process reinforced their intentional stance. This phenomenon aligned with Neo's former study (2010) that stated digital storytelling delivers an authentic learning process related to students' real-life experiences. Therefore they find it beneficial and significant. Thus, it can enhance their motivation and confidence during the learning process.

Cooperative dimension: enhancing students' collaborative experiences

The result of students' perception of the cooperative dimension shows a very high proportion. Obviously, well above four four-fifths (90%) of participants were excited to express their opinions and join discussion with their group members. One of the participants stated:

> *"Since it's in pandemic we have limited chance to interact with our friends. But this project makes us have more talks and discussions. Even we did it online. We were excited to do it. We really enjoyed the process."(int. P6)*

Furthermore, 85% of participants claimed that this digital storytelling enriches their experience in collaborating with their peers. The global pandemic outbreak didn't prevent the students from connecting with each other in completing this project. For instance:

> *"The activities in this digital storytelling enable us to have more interaction and discussion. Having a discussion helped us to complete each idea. Everyone participates in finishing the assignments. Although we couldn't meet face to face, we used social media to communicate. For example, by using Whatsapp video call or WA group chatting forum. Perhaps discussion didn't occur at its finest but technology really helped us a lot. It was an impressive experience to work in a group through an online meeting. "(int. P3)*

Regarding the topic of the cooperative dimension, the participants perceived that digital storytelling facilitates them to experience proper collaborative work with their peers. Even though this learning process occurs during the Covid-19 pandemic where the whole learning phase was conducted online, briefly, this finding is consistent with the result of a previous study conducted by Nam (2016) that digital storytelling is reasonably successful in enhancing students' social presence in the online collaborative learning environment. This fact resulted from more well-structured and synchronous instructions given by the teacher. Those instructional processes enabled the students to work collaboratively through several activities, such as determining the topic, selecting pictures, making story drafts, and editing the digital stories. The existence of social media as a means of communication itself, boosting students' motivation in having discussions and negotiations with their partners. They perceived it as a new challenging experience rather than a learning obstacle.

CONCLUSION

This study explored the students' perception of digital storytelling projects as a meaningful learning strategy in an online setting during the Covid-19 pandemic. The results indicate that the students perceived the implementation of digital storytelling facilitated them to experience an active, authentic and intentional learning atmosphere. However, it was delivered through an online setting. Moreover, this digital storytelling enriches students' experiences, enhancing their multidimensional skills and content knowledge. It also provides a wide space for students to improve their collaborative skills through sharing and discussion. Further study may consider adopting digital storytelling with a significant time allocation and effort to enhance content acquisition and supported with more in-depth reflection opportunities.

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