Indonesian Junior High School Students' Perceptions of Using Digital Storytelling Media in Learning to Write Fantasy Stories

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Abstract. Using digital storytelling media in Indonesian schools is a new method that helps students with written work, including the writing of fantasy story texts. This study explores and describes the perceptions of junior high school students in Indonesia toward using digital storytelling media (YouTube and Spotify) to write fantasy story texts. This research employed a mixed-methods approach with a case study design. The participants consisted of 132 students from three junior high schools in Banyumas, Indonesia. The sampling technique used was cluster sampling to select schools with equivalent qualifications, followed by random sampling to choose two of the seven classes in each school. The data collection techniques included questionnaires with Likert scales and in-depth interviews. The results of this study demonstrated that most students agreed that digital storytelling media could help them get ideas for writing fantasy story texts; they were flexible, easy to operate, and not boring. Hence, the students wanted to use them again. The researchers' recommendations include that students should improve their digital literacy and teachers and students need to receive training in using digital storytelling. In addition, digital storytelling media developers need to develop more interesting features.

Keywords: digital storytelling; fantasy story; digital learning

1. Introduction

Technology is developing very rapidly and the developments are increasingly being used in various aspects of life and have a considerable impact (Larsson et al., 2024). One form of technological advancement can be seen in the increasing application of technology in education (Gruenhagen et al., 2024; Jiang et al., 2024). The role of technology in education includes media and learning methods. One

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medium that has become a trend in learning in Indonesia is digital storytelling (Purnama et al., 2022). It is implemented by combining audio, video, images, and other digital media to tell stories (Zhussupova & Shadiev, 2023). Learning using digital storytelling has been shown to be more supportive than learning based on oral storytelling (Choo et al., 2020). This is because digital storytelling media can provide visual images and presentations that attract more students' interest in learning and developing story ideas. Learning through digital storytelling using multimedia has been proven to enhance students' skills, memory, and vocabulary mastery (Masuram & Sripada, 2020). A strong vocabulary is crucial for improving students' writing quality. Therefore, digital storytelling is highly effective for writing instruction. This aligns with the research by Zarei and Navidinia (2024), which found that digital storytelling improves students' writing abilities and linguistic competence.

Various studies have discovered digital storytelling's contribution to learning which can improve students' higher-order thinking skills. For instance, students can identify and predict what will happen next in the story when the teacher pauses the video, and they can also analyze the strengths and weaknesses of the characters (Setiawati & Setyarini, 2020). Likewise, research conducted by Ghaithi et al. (2023) and Yang et al. (2022) found that digital storytelling effectively develops creative thinking and enriches vocabulary in language learning. Digital storytelling is commonly used to learn how to write. This is reinforced by research conducted by Demïrbaş and Şahïn (2023), which found that digital storytelling improves the quality of students' creative writing.

Writing is a physical act, whether on paper or by typing, that engages cognitive, metacognitive, and affective abilities (Wilson et al., 2024). Writing skills are essential in a curriculum and need to be developed through learning (Millán et al., 2024). Writing skills are regarded as higher-order thinking skills, which entail critical thinking and articulating ideas clearly, accurately, and pertinently. Therefore, these skills are essential to academic success (Guo et al., 2023). Writing skills are divided into fiction, non-fiction, and poetry (Dewi & Siregar, 2022). One of the many fiction writing skills that students must master is writing fantasy story texts, which convert creative and imaginary ideas into written form by considering the use of language structures (Wikanengsih & Silviani, 2021). Writing fantasy story texts is one of the language lessons found in the first grade of Indonesian junior high schools (Sumiyadi, 2023).

Writing fantasy story texts requires imaginative skills, subjectivity, and writing talent (Harshini, 2020). It offers various benefits, including developing students' imagination, inspiring students to overcome obstacles, accepting different points of view, and helping students formulate their personal goals (Saputri et al., 2021). However, the problems of learning to write fantasy story texts in Indonesian schools still occur, including using learning media that are less engaging and teachers who still have difficulty presenting material for writing fantasy story texts (Balqis et al., 2021). Another study found that the problem of learning to write fantasy story texts was caused by monotonous learning and the use of inappropriate methods. The research by Wikanengsih and Silviani (2021) found

that applying inappropriate teaching methods could affect the quality of students' imaginative ideas in writing fantasy stories. These concerns have caused the quality of fantasy story writing instruction in Indonesian schools to be less than optimal.

The application of digital storytelling in learning to write fantasy story texts is still not widely implemented in Indonesian schools. The use of digital technology in education has not achieved significant progress due to the low ability of teachers to operate technology (Salim et al., 2022) therefore, teachers' mastery of digital technology in the 21st century is crucial (Blume, 2020). In the context of the present study, some schools have implemented digital storytelling learning, including the three junior high schools sampled in Banyumas Regency, Central Java. Therefore, research on students' perceptions of implementing digital storytelling needs to be conducted.

Many studies have proven the effectiveness of digital storytelling through experiments and measuring perceptions of its use. However, previous studies, such as the research by Paramita and Utami (2021), focused solely on one school and one grade level, using only qualitative methods. Hence, the novelty of the present study lies in the research subjects, namely students in three junior high schools in the Banyumas region, Central Java, Indonesia. In addition, the variable under study was also considered a novelty, namely writing ability, especially in writing fantasy story texts in the first semester of the first grade of junior high school. This research employed a mixed-methods approach with the analytical framework of the Technology Acceptance Model (TAM) theory, which set this study apart from previous research. The mapping of this research used the theory of Davis (1989), which emphasizes technology acceptance, especially in terms of ease, usefulness, and attitude toward use.

Research conducted by Lim et al. (2022) recommends studying student perceptions using questionnaires and interview data on digital storytelling in learning. Accordingly, this study aimed to determine students' perceptions of using digital storytelling media in learning to write fantasy story texts. Besides, it was expected to contribute to enhancing students' self-directed learning by using digital storytelling media and enriching their understanding of digital literacy. The formulation of this research problem was as follows:

1. What are the students' perceptions of the usefulness of digital storytelling media in learning to write fantasy story texts?
2. What are the students' perceptions of the ease of using digital storytelling media in learning to write fantasy story texts?
3. What are the students' attitudes toward using digital storytelling media in learning to write fantasy story text?
4. What are the students' behavior associated with using digital storytelling media in learning to write fantasy story text?

2. Literature Review

2.1 Digital Storytelling in Language Learning
Digital storytelling represents a pedagogical approach to integrating digital technology into the learning process. The method of storytelling in question was first formulated by Lambert in the 1990s (Ribeiro, 2015; Shin, 2016). Digital storytelling is characterized by the use of computer devices or digital innovations that combine various media, including websites, animations, audio, graphics, and video (Chatterjee et al., 2019). Examples of digital media that can be used in learning include YouTube and Spotify. Digital storytelling is a prevalent approach in language learning. According to Syahriati (2023), digital technology-based education is essential for facilitating collaboration between teachers and students in language learning.

Language learning is a teaching and learning process that imparts language skills to students. In the Indonesian school context, these skills include listening, speaking, reading, and writing, which are interconnected (Quddus, 2023). Language skills in Indonesian language learning, particularly reading and writing, are aspects that need to be studied more deeply (Juanda & Afandi, 2024). This is because reading and writing are the main gateways to acquiring knowledge. Writing skills are the most complex compared to the other three language skills (Gebremariam & Hiluf, 2023). One of the essential writing skills that must be mastered in Indonesian language learning at schools is the skill of writing stories (Hastuti et al., 2023). Therefore, in its implementation, appropriate teaching methods and media are necessary to ensure that students can understand the material well.

Research by Shi and Cheung (2024) found that students' learning experiences in digital storytelling can produce more meaningful stories in English language learning, especially in expanding the learning of the four language skills , such as listening, speaking, reading and writing. Another study by Elahi et al. (2015) discovered that digital storytelling allows students to create and share digital stories. This can be done by combining storytelling with the use of technology (Karapakdee & Wannapiroon, 2023). Digital storytelling can enhance critical thinking skills in secondary school students when taking exams because it involves collaborative activities that stimulate the development of their critical thinking skills (Chen & Chuang, 2021). The application of digital storytelling in learning offers many benefits, such as attracting students' interest in learning and improving digital skills (Dimova et al., 2018).

2.2 Learning to Write Fantasy Story Texts Through Digital Storytelling
One of the learning materials in the first grade of junior high school using the Indonesian language curriculum is fantasy story texts which are written based on imagination beyond human reason, such as miracles, magic, or sorcery (Balqis et al., 2021). These texts contain elements such as characters, dialogue, setting, plot, and conflict (Dewi & Siregar, 2022). The characteristics of fantasy story texts include being imaginative, unreal, and speculative (Dezcz-Tryhubczak, 2020). The skill of writing fantasy story texts can develop students' creative ideas and critical thinking (Wikanengsih & Silviani, 2021). The creative ideas developed by students

involve varied and expressive language. The learning of fantasy story texts can be conducted through digital storytelling.

The implementation of digital storytelling in teaching fantasy text writing involves several stages. According to Brenner (2014), the stages include the teacher's introduction of stories using digital storytelling media, the provision of guidelines for creating digital stories, the production phase, and the evaluation phase. In the present study context, students used digital storytelling platforms, such as YouTube and Spotify, to observe fantasy stories in a digital format. It positively impacts writing ability because the use of various media makes students more interested in engaging in the learning process (Chaisriya et al., 2023). Moreover, digital storytelling has also been proven to enhance students' writing skills in creative writing (Demïrbaş & Şahïn, 2023).

3. Methodology
3.1 Research Design
This research employed a mixed-methods approach with a case study design. In mixed methods, researcher use both quantitative and qualitative data (Creswell & Creswell, 2018). A mixed-method approach will result in more comprehensive research than a single-method study. In the present study context, the quantitative method was used to obtain data on students' perceptions while the qualitative method was incorporated to gather data on why and how students perceived the application of digital storytelling.

This study focused on students' perceptions of the use of digital storytelling media in the writing learning of fantasy story texts. The media used were Spotify and YouTube, featuring fantasy stories with folklore themes. The reason for choosing these platforms was that they were considered familiar to the students. The stories accessed by the students had characteristics of easily understood plots, contained elements of magic, and were fictional.

In developing the student perception instrument, this research employed Davis's (1989) TAM. The instrument was used to determine students' perceptions of using digital storytelling media. The TAM model is divided into several parts, as shown in Figure 1.
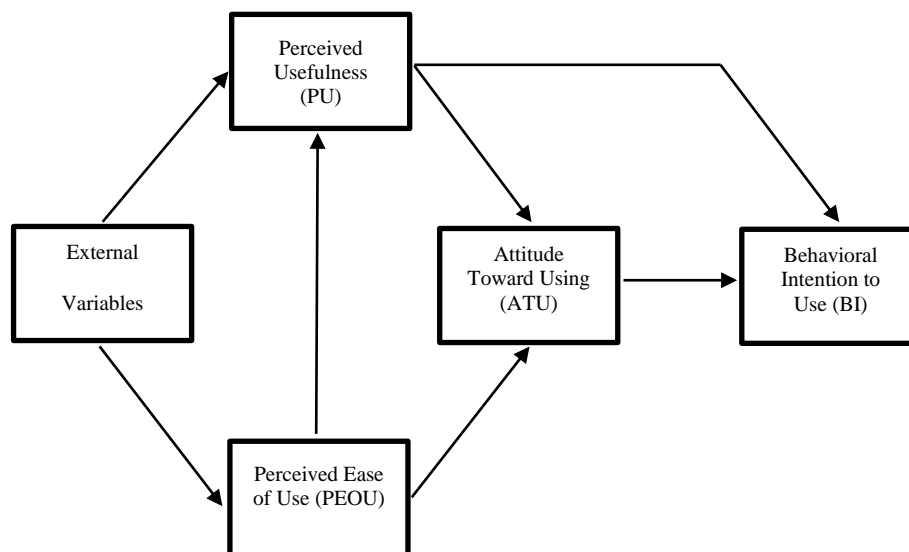
Figure 1: TAM Model

The indicator of perceived usefulness represented students' perceptions of using digital storytelling media to improve their ability to write fantasy story texts. Meanwhile, the perceived ease of use denoted students' perceptions of the ease of operating digital storytelling media. The attitude toward using described students' attitudinal responses to the use of digital storytelling media. The behavioral intention to use conveyed students' intention to use digital storytelling media in the future.

3.2 Participants

This research was conducted at three junior high schools in Central Java, Indonesia, specifically in the Banyumas Regency. The researchers selected these schools based on cluster sampling, considering those with equivalent qualifications that have implemented digital storytelling media in learning. There were nine state junior high schools in the Banyumas Regency with equivalent qualifications. The researchers selected three of these nine schools as the research samples. The participants in this study were seventh-grade students, with two classes selected from each school through a random sampling technique. Each class had 30 students, bringing the total number of participants to 180. Out of these 180 students, 132 completed and returned the questionnaires. Among the respondents, there were 52 male students (39.4%) and 80 female students (60.6%). Subsequently, the researchers interviewed 10 participants from each school, comprising a total of 30 students as interview sources. These 10 participants were chosen to ensure a balanced representation of the three schools based on their cooperative and communicative abilities. Female participants were coded as "F," and male participants as "M." Gender differences are used to see gender preferences in the use of digital storytelling media. After removing duplicate data, the final number of participants was 26.

3.3 Instruments and Data Collection

The data collection process involved the use of questionnaires and in-depth interviews. This combination was administered to enhance the depth and breadth

of the research (Wasti et al., 2022). The researchers collected data using a questionnaire which was analyzed quantitatively, followed by interview data which was analyzed qualitatively. The questionnaire was distributed using Google Forms. These items were developed based on the theory by Davis (1989). A total of 17 questionnaire items were created and tested using product-moment construct validity. This resulted in 14 valid items, with the criterion that the Sig. (2-tailed) value was less than 0.05, and the Pearson correlation was positive. The reliability test used was split-half with a value of 0.93, indicating that the data was reliable because the value was above 0.70 (Hair et al., 2020). The questionnaire operated a 4-point Likert scale: strongly agree = 4, agree = 3, disagree = 2, and strongly disagree = 1. This scale was chosen to avoid responses concentrating on neutral options.

4. Results

4.1 Students' Perceptions of the Usefulness of Digital Storytelling Media

The aspects of usefulness focused on (1) ease of generating writing ideas, (2) enriching vocabulary, (3) helping to structure conflicts, and (4) improving the quality of writing. The results of students' responses to the usefulness of digital storytelling media are shown in Table 1.

Table 1: Students' responses to the usefulness of digital storytelling media

Statements	Responses (%)				Average
	SA	**A**	**D**	**SD**	
Digital storytelling media makes it easier for me to generate writing ideas.	20	72	7	1	3.09
Digital storytelling media is useful for enriching vocabulary.	25	65	10	0	2.99
Digital storytelling media helps me structure conflicts in writing.	19	65	14	2	2.70
Digital storytelling media improves the quality of my writing.	9	62	20	9	3.09

Notes: SA: Strongly Agree; A: Agree; D: Disagree; SD: Strongly Disagree

A total of 92% of students had a positive response to the statement that digital storytelling media makes it easier for them to generate writing ideas, with an average score of 3.09. Based on in-depth interviews, digital storytelling media could provide the students with easy-to-understand story representations owing to animations and audio which give the story a more detailed depiction, helping to realize the story and other creative ideas. The following were student responses:

> *"Digital storytelling media, like YouTube, presents stories that can be seen and heard, making it easier for me to grasp the meaning of the story, especially with good animations that attract my interest."* (School 1-F)

> *"The fantasy storylines on YouTube appear more detailed and interesting, making it easier for me to generate non-monotonous writing ideas."* (School 2-F)

"Media like YouTube and Spotify that feature fantasy stories not only make it easier to generate writing ideas but also help develop ideas and inspiration for creating interesting digital stories." (School 3-M)

Students' perceptions of the usefulness of digital storytelling media for enriching vocabulary had an average score of 3.15, with 90% responding positively. They stated that digital storytelling media could provide many new words that are not found in non-digital stories:

"Fantasy stories on YouTube and Spotify contain many references to new vocabulary." (School 1-M)

"Fantasy stories on YouTube have visual representations that prompt me to learn vocabulary appropriate to the depicted situation." (School 3-F)

The statement that digital storytelling media helps students in structuring conflicts had an average score of 2.99, with 84% giving a positive response. According to interviews, most students agreed based on the sequential depiction of conflicts in fantasy stories on YouTube and Spotify. In addition, these platforms provided many accessible references, giving students a considerable amount of ideas for structuring story conflicts:

"Fantasy stories on YouTube and Spotify are easily accessible, so I have plenty of ideas for structuring story conflicts." (School 3-M)

"There are many references to fantasy stories on YouTube and Spotify, making me trained to realize story conflicts in digital storytelling media." (School 2-F)

The statement of disagreement, accounting for 16%, was based on responses that YouTube and Spotify did not significantly help in structuring conflicts because they could only be structured by the writer's original ideas. The following was a response expressing this view:

"In my opinion, the presentation of fantasy stories on YouTube and Spotify does not significantly help me structure story conflicts. This is because conflict structuring can only be developed by the writer's own ideas." (School 3-M)

Students' responses to the statement of whether digital storytelling media helps improve the quality of their writing had an average score of 2.7, with 71% giving a positive response. It indicated that fantasy stories on YouTube and Spotify could provide many new ideas and interesting story delivery and encourage students to write as well as possible, supported by components like audio, images, and video:

"YouTube and Spotify have many interesting features, such as the command to search for the fantasy stories I want, allowing me to explore my imagination and ideas in writing." (School 1-M)

"The many interesting story references make it easy for me to develop ideas and realize them in the form of digital stories, which helps improve the quality of my writing." (School 2-F)

Based on the responses in the questionnaires and interviews, the use of digital storytelling media, namely YouTube and Spotify, could help students generate writing ideas, enrich vocabulary, structure conflicts, and improve the quality of writing overall because these mediums had interesting features that encouraged them to develop ideas and enhance writing quality.

4.2 Students' Perceptions of the Ease of Using Digital Storytelling Media
The aspects of ease of use focused on (1) ease of operation, (2) flexibility, and (3) ease of mastery. The students' responses to the ease of using digital storytelling media can be seen in Table 2.

Table 2: Students' responses to the ease of using digital storytelling media

Statements	Responses (%)				Average
	SA	A	D	SD	
Digital storytelling media is easy to operate.	29	59	10	2	3.13
Digital storytelling media is flexible.	23	66	10	1	3.10
Digital storytelling media is easy to master.	23	64	11	2	3.07

Notes: SA: Strongly Agree; A: Agree; D: Disagree; SD: Strongly Disagree

A total of 88% of students had a positive response to the statement that YouTube and Spotify are easy to operate. They stated that YouTube and Spotify were not complicated to operate. The following were student responses regarding this view:

> *"Operating YouTube and Spotify is very easy because there are instructions or labels for each available feature."* (School 1-F)

> *"The operation of YouTube and Spotify is easy and uncomplicated because I am already accustomed to using them in everyday life."* (School 2-M)

The statement mentioning that access to YouTube and Spotify is flexible received a positive response of 89%, with an average score of 3.10. This response was supported by interviews arguing that YouTube and Spotify could be accessed anytime and anywhere:

> *"I can access fantasy stories on YouTube and Spotify anytime and anywhere."* (School 2-M)

> *"As a user, I have broad and unrestricted access in terms of space and time."* (School 3-F)

The statement regarding the ease of mastering digital storytelling media had a positive response of 87%, with an average score of 3.07. The students stated that YouTube and Spotify were not new mediums for the younger generation. Hence, this familiarity led to a high level of mastery in using these two platforms.

> *"The use of YouTube and Spotify is not unfamiliar to me. I use these media in everyday life."* (School 3-F)

Based on the questionnaire and interview data, students generally stated that YouTube and Spotify digital storytelling mediums were easy to use. This condition was due to students' familiarity with using YouTube and Spotify in their daily lives.

4.3 Students' Attitudes Toward Using Digital Storytelling Media
Students' attitudes toward using digital storytelling media in learning writing skills focused on (1) enjoyment, (2) interest, (3) boredom, and (4) comfort. The students' responses are shown in Table 3.

Table 3: Students' attitudes toward using digital storytelling media

Statements	Responses (%)				Average
	SA	A	D	SD	
I enjoy using digital storytelling media in learning.	28	60	10	2	3.13
I am interested in using digital storytelling media in learning.	24	61	13	2	3.06
Digital storytelling media makes me less likely to get bored while learning.	27	55	14	4	3.03
I feel comfortable using digital storytelling media in learning.	13	74	12	1	3

Notes: SA: Strongly Agree; A: Agree; D: Disagree; SD: Strongly Disagree

Eight-eight percent of students responded positively regarding their enjoyment of using digital storytelling media, with an average score of 3.13. They stated that YouTube and Spotify's digital storytelling features were interesting and could enhance learning exploration. The following is representation of the interview responses:

> *"The fantasy stories on YouTube and Spotify are very interesting, allowing me to explore further and get many story references for writing."* (School 3-F)

Students' interest in digital storytelling media demonstrated a positive response of 85%, with an average score of 3.06. The students were interested in using YouTube and Spotify because the fantasy stories presented had many supporting components, such as audio and animation:

> *"The fantasy stories on YouTube and Spotify have many interesting supporting components like audio and animation. So, I feel like I'm playing while learning."* (School 1-F)

Students' responses to feeling less bored while learning using YouTube and Spotify had an average score of 3.03, with 82% giving a positive response. This was because YouTube and Spotify had many features, so they were not monotonous:

"YouTube and Spotify are not boring because of their interesting features, and they include supporting animations and audio." (School 1-F)

"Yes! I don't get bored easily when learning using YouTube and Spotify because I feel entertained by the animations and audio provided." (School 2-F)

However, students' responses regarding boredom while using digital storytelling media occurred when the stories presented were long. The following was a student response related to this condition:

"I will feel bored when the duration of fantasy stories on YouTube or Spotify is very long." (School 2-M)

Students' responses regarding feeling comfortable using YouTube and Spotify had a positive response of 87%, with an average score of 3.00. This condition occurred because these two platforms were considered easy to operate:

"Operating YouTube and Spotify is easy, and accessing them does not take much time, which makes me feel comfortable." (School 1-F)

Based on the above data, students generally stated they enjoyed using YouTube and Spotify digital storytelling mediums because of the interesting supporting components. They also did not get bored easily when using YouTube and Spotify because these mediums had many interesting features and were easy to access.

4.4 Students' Behavior Toward Using Digital Storytelling Media
Students' behavior toward using digital storytelling media focused on (1) the desire to continue using it, (2) the desire to use it frequently, and (3) the desire to use it again. The students' responses are depicted in Table 4.

Table 4: Students' behavior toward using digital storytelling media

Statements	Responses (%)				Average
	SA	A	D	SD	
I want to continue using digital storytelling media.	16	43	37	4	2.71
I will frequently use digital storytelling media.	11	55	29	5	2.71
I want to use digital storytelling media again.	11	74	15	0	2.95

Notes: SA: Strongly Agree; A: Agree; D: Disagree; SD: Strongly Disagree

The statement regarding the desire to continue using YouTube and Spotify as digital storytelling media received a positive response of 59%, with an average score of 2.71. It was influenced by the absence of boredom, the comfort of usage, and the ease of access. The following was the result of an interview with a student:

"I don't get bored, and instead feel comfortable using YouTube and Spotify. I also find it easy to access fantasy stories on these media, so I want to continue using them." (School 1-M)

Students' responses regarding the lack of desire to continue using YouTube and Spotify as digital storytelling media, which amounted to 41%, were influenced by the urge to use other educational media:

"I enjoy using YouTube and Spotify in learning to write fantasy stories, but I also want to try using other interactive media." (School 3-F)

Students' responses regarding the desire to frequently use YouTube and Spotify as digital storytelling media amounted to 66%, with an average score of 2.71. This was due to the ease of use and frequent use in everyday life. The following was a student's response:

"I agree; I will frequently use YouTube and Spotify because they are easy to use. Additionally, I often use these media in everyday life." (School 2-M)

The following interview result portrayed a student's response regarding the lack of desire to use YouTube and Spotify as digital storytelling media frequently:

"I might use digital storytelling media like YouTube or Spotify again, but I will alternate their use with other media." (School 1-F)

The statement regarding the desire to use YouTube and Spotify as digital storytelling media again received a positive response of 85%, with an average score of 2.95. This was because YouTube and Spotify were considered not boring, had many interesting features, and helped inspire writing ideas:

"I want to use YouTube and Spotify again because these media have many interesting features that make me less likely to get bored, and they can inspire me to come up with writing ideas." (School 2-F)

Based on the results of the questionnaires and interviews, most students responded positively to the use of YouTube and Spotify as digital storytelling media. Overall, they expressed a desire to continue using, frequently use, and use YouTube and Spotify media again. This condition was due to their interesting features, lack of boredom, and frequent use in everyday life.

5. Discussion

This study found that the use of digital storytelling media, such as YouTube and Spotify, in teaching fantasy story writing generally received positive responses from students. This is evident based on indicators such as perceived usefulness, perceived ease of use, attitude toward usage, and behavioral intention to use. Regarding the indicator of perceived usefulness, 89% of female students and 75.5% of male students agreed that digital storytelling media like YouTube and Spotify made it easier to generate writing ideas, enrich vocabulary, and improve the quality of writing. However, based on interviews, the students revealed that

the development of conflict in their stories was not greatly influenced by other factors but rather was developed by the writers themselves. Therefore, teachers need to provide guidance and direction on how to appropriately structure conflicts. This condition aligns with the research by Huang et al. (2024) and Jia and Cheng (2024) which discovered that teacher involvement as a learning mentor positively affected students' motivation to understand the material, their enthusiasm for learning and progress in language learning. This finding is supported by research conducted by Oyetade et al. (2023), which found that the use of technology-based learning media could enhance students' learning motivation. In addition, teacher guidance in learning could also enhance students' conceptual understanding (Ingulfsen et al., 2023).

The study conducted by Chhachhar et al. (2022) found that YouTube was an effective medium for learning because it could provide complex illustrations, offer free access, and facilitate the exchange of information. Based on the indicator of perceived ease of use, 89.2% of female and 86.5% of male students agreed that the operation of digital storytelling media, such as YouTube and Spotify, was flexible. This was consistent with the research by Mansfield et al. (2024), which found that digital storytelling media was convenient, did not require much time to access, and could be used anywhere. Moreover, digital storytelling media like YouTube and Spotify were already familiar to students, but most of them did not fully understand how to create engaging digital stories. Correspondingly, teachers and students needed professional training to use and create digital storytelling media so that they could collaboratively produce digital stories that support learning (Shemy, 2023). This was consistent with the research conducted by Girmen et al. (2019), Çetin (2021), and Türkben and Alptekİn (2023), which revealed that technology training in digital storytelling for teachers relevant to their fields was necessary for effective digital storytelling learning.

Based on the analysis of the attitude toward usage indicator, 87.5% of female students and 81.7% of male students stated that the features, animations, audio, and other supplements in digital storytelling media like YouTube and Spotify were very attractive and not boring. However, overly long stories caused students to become easily bored. Therefore, the presentation of fantasy stories using digital storytelling media should be balanced with shorter story durations. This aligned with the research by Jaisankar and Justin (2019), which suggested that teachers should balance students' interest in using technology because it could promote practicality and help achieve learning objectives. Student participation in voicing what they liked and disliked in learning was also important to make them feel valued (Amdal & Endresen-Maharaj, 2023). Based on the analysis involving the behavioral intention to use indicator, 69.6% of female students and 55.8% of male students agreed to use digital storytelling media like YouTube and Spotify again. Learning using these digital storytelling media was indeed engaging. However, students also expressed a desire to use other learning media to make the learning experience more varied and flexible. According to the research by Zhao et al. (2023), flexible learning could stimulate student involvement in collaborative learning. It also triggered interactive learning, which could develop critical thinking skills (Song & Cai, 2024).

Overall, most students agreed that using digital storytelling media like YouTube and Spotify in teaching fantasy story writing skills could enhance vocabulary mastery, facilitate idea generation, and improve their writing quality. This was consistent with the research by Karakuş et al. (2020), which found that digital storytelling could improve students' creative writing skills. In addition, digital storytelling learning could also increase learning motivation, digital literacy, vocabulary mastery, and grammar (Çetin, 2021; Castillo-Cuesta et al., 2022; Ghaithi et al., 2023). Based on the overall research findings, the use of digital storytelling media in teaching fantasy writing still needs improvement. Students must enhance their digital literacy to boost their critical thinking skills. Digital literacy is closely related to critical thinking because it emphasizes the ability to write, read, comprehend, evaluate, communicate, and use information in various formats (Dewi et al., 2021). As students' understanding of digital literacy and critical thinking skills improve, they will be better equipped to process information from the digital storytelling media they use. Moreover, teachers also need training in using digital media so they can present digital storytelling in a way that is engaging and not monotonous. This aligns with the research of Cabero-Almenara et al. (2022), which highlighted the necessity of training teachers to operate digital media to achieve high-quality educational outcomes. Qing and Jing's (2024) study similarly emphasized that teachers needed digital technology training to enhance the efficiency of technology-based learning. Hence, providing teachers with technology training is expected to improve their quality of teaching by using digital storytelling media.

6. Conclusion and Recommendations

Based on the results and discussions, most of the students in the three Indonesian schools agreed that using digital storytelling media like YouTube and Spotify helped in learning fantasy story writing, particularly in terms of generating ideas and structuring conflict. The attractive display of digital fantasy stories and the animations increased the students' inspiration to come up with ideas so that they felt the media helped them in developing ideas to write fantasy stories. Many references to fantasy stories in digital storytelling media also helped students acquire new vocabulary and made it easier for students to write fantasy stories. Apart from that, students also stated that digital storytelling media is flexible and easy to operate. They were interested and felt comfortable using digital storytelling media. They also stated that using digital storytelling media in learning was not boring as long as the duration was not too long. Therefore, most students agreed that they wanted to use digital storytelling media again. However, teachers must continue to provide guidance and use more varied learning media to prevent students from becoming easily bored. This study reinforced the findings that learning through digital storytelling media could boost both students' motivation and learning outcomes.

Correspondingly, the researchers make the following recommendations. *First*, future researchers could apply this research instrument to a larger sample. *Second*, students should work on improving their digital literacy skills. *Third*, students should maximize their use of digital storytelling media. *Fourth*, educational

authorities should provide technology training to teachers on how to operate digital storytelling media. *Fifth*, teachers should offer guidance to students on how to use digital storytelling media to create digital stories. *Finally*, developers of digital storytelling media should enhance features to make them more engaging and provide clear, detailed instructions for use.

7. References

Amdal, I. I., & Endresen-Maharaj, K. (2023). How do pre-service teachers understand and experience participation in teacher education? *Nordisk Tidsskrift for Utdanning Og Praksis*, *17*(2), 34–52. https://doi.org/10.23865/up.v17.5191

Balqis, K., Purnomo, M. E., & Oktarina, S. (2021). Learning media for writing fantasy story text based on scientific plus using adobe flash. *Jurnal Ilmiah Sekolah Dasar*, *5*(3), 387. https://doi.org/10.23887/jisd.v5i3.35635

Blume, C. (2020). German teachers' digital habitus and their pandemic pedagogy. *Postdigital Science and Education*, *2*(3), 879–905. https://doi.org/10.1007/s42438-020-00174-9

Brenner, K. (2014). Digital stories: A 21st-century communication tool for the English language classroom. *English Teaching Forum*, *52*(1), 22–29. http://eric.ed.gov/?q=storytelling&id=EJ1029170

Cabero-Almenara, J., Guillén-Gámez, F. D., Ruiz-Palmero, J., & Palacios-Rodríguez, A. (2022). Teachers' digital competence to assist students with functional diversity: Identification of factors through logistic regression methods. *British Journal of Educational Technology*, *53*(1), 41–57. https://doi.org/10.1111/bjet.13151

Castillo-Cuesta, L., Quinonez-Beltran, A., Cabrera-Solano, P., Ochoa-Cueva, C., & Gonzalez-Torres, P. (2021). Using digital storytelling as a strategy for enhancing EFL writing skills. *International Journal of Emerging Technologies in Learning*, *16*(13), 142–156. https://doi.org/10.3991/ijet.v16i13.22187

Çetin, E. (2021). Digital storytelling in teacher education and its effect on the digital literacy of pre-service teachers. *Thinking Skills and Creativity*, *39* (September 2020), 100760. https://doi.org/10.1016/j.tsc.2020.100760

Chaisriya, K., Kaeophanuek, S., & Gilbert, L. (2023). The effects of integrating digital storytelling with metacognition strategies (DSTMC) learning model to enhance communication abilities. *Contemporary Educational Technology*, *15*(2). https://doi.org/10.30935/cedtech/12986

Chatterjee, P., Mishra, D., Padhi, L. K., Ojha, J., & Al-absi, A. A. (2019). Digital story-telling: A methodology of web based learning of teaching of folklore studies. *2019 21st International Conference on Advanced Communication Technology (ICACT)*, 573–578. https://doi.org/10.23919/ICACT.2019.8702047

Chen, H. L., & Chuang, Y. C. (2021). 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

Chhachhar, A. R., Chachar, A. A., & Arbab, N. F. (2022). Usage of YouTube for academic purpose among university students in time of COVID-19. *International Journal of Media and Information Literacy*, *7*(1), 38–47. https://doi.org/10.13187/ijmil.2022.1.38

Choo, Y. B., Abdullah, T., & Nawi, A. M. (2020). Digital storytelling vs. oral storytelling: An analysis of the art of telling stories now and then. *Universal Journal of Educational Research*, *8*(5 A), 46–50. https://doi.org/10.13189/ujer.2020.081907

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE. https://doi.org/10.7591/9781501721144-016

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of

information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/https://doi.org/10.2307/249008

Demïrbaş, İ., & Şahïn, A. (2023). The effect of digital stories on primary school students' creative writing skills. *Education and Information Technologies*, *28*(7), 7997–8025. https://doi.org/10.1007/s10639-022-11440-7

Deszcz-Tryhubczak, J. (2020). Reading about solidarity and collective action: social minds in radical fantasy fiction. *Children's Literature in Education*, *51*(2), 144–159. https://doi.org/10.1007/s10583-018-9379-1

Dewi, C. A., Pahriah, P., & Purmadi, A. (2021). The urgency of digital literacy for generation Z students in chemistry learning. *International Journal of Emerging Technologies in Learning*, *16*(11), 88–103. https://doi.org/10.3991/ijet.v16i11.19871

Dewi, U., & Siregar, F. R. (2022). Exploring students' interests and challenges in writing fiction in creative writing class. *IJEE (Indonesian Journal of English Education)*, *9*(2), 358–371. https://doi.org/10.15408/ijee.v9i2.28372

Dimova, M., Slavova-Petkova, S., & Luchev, D. (2018). Models of digital book trailers and applications of digital storytelling approach for educational purposes. *Digital Presentation and Preservation of Cultural and Scientific Heritage. Conference Proceedings*, *8*, 197–206. https://doi.org/https://doi.org/10.55630/dipp.2018.8.19

Elahi, A. N., Mahmood, Z., Shazadi, M., & Jamshed, S. (2015). Digital storytelling: A powerful educational tool for primary school students. *International Conference on Information and Communication Technologies (ICICT)*. https://doi.org/10.1109/ICICT.2015.7469583

Gebremariam, H. T., & Hiluf, B. (2023). Using need-based writing instruction through self-reflection to improve students' writing difficulties: A counterbalanced design. *International Journal of Educational Research Open*. https://doi.org/10.1016/j.ijedro.2023.100293

Ghaithi, A., Behforouz, B., & Al Balushi, A. K. (2023). Exploring the effects of digital storytelling in Omani EFL students' self-directed learning, motivation, and vocabulary improvements. *SiSal Journal*, *14*(4), 415–437. https://doi.org/10.37237/140402

Girmen, P., Özkanal, Ü., & Dayan, G. (2019). Digital storytelling in the language arts classroom. *Universal Journal of Educational Research*, *7*(1), 55–65. https://doi.org/10.13189/ujer.2019.070108

Gruenhagen, J. H., Sinclair, P. M., Carroll, J. A., Baker, P. R. A., Wilson, A., & Demant, D. (2024). The rapid rise of generative AI and its implications for academic integrity: students' perceptions and use of chatbots for assistance with assessments. *Computers and Education: Artificial Intelligence*. https://doi.org/10.1016/j.caeai.2024.100273

Guo, K., Zhong, Y., Zainuddin, Z., & Chu, S. K. W. (2023). Applying game-related methods in the writing classroom: A scoping review. *Education and Information Technologies*, *29*(4), 4481–4504. https://doi.org/10.1007/s10639-023-11998-w

Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2019.11.069

Harshini, P. (2020). Creative writing and its influence in the generation of language skills - A creative approach. *Journal of Critical Reviews*, *7*(4), 186–188. https://doi.org/10.31838/jcr.07.04.32

Hastuti, S., Slamet, Sumarwati, & Rakhmawati, A. (2023). Short story writing learning based on local wisdom with digital book media for university students. *International Journal of Instruction*, *16*(1), 821–832. https://doi.org/10.29333/iji.2023.16146a

Huang, L., Al-Rashidi, A. H., & Bayat, S. (2024). Teacher support in language learning: a picture of the effects on language progress, academic immunity, and academic

enjoyment. *BMC Psychology*, *12*(1), 1–8. https://doi.org/10.1186/s40359-024-01602-2

Ingulfsen, L., Furberg, A., & Knain, E. (2023). The role of teacher support in students' engagement with representational construction. *Cultural Studies of Science Education*, *18*(4). https://doi.org/10.1007/s11422-023-10193-0

Jaisankar, D., & Justin, Z. (2019). Motivating the tertiary level students to utilize technology for enhancing communication skills. *International Journal of Innovative Technology and Exploring Engineering*, *8*(12), 1324–1326. https://doi.org/10.35940/ijitee.L3920.1081219

Jia, M., & Cheng, J. (2024). Effect of teacher social support on students' emotions and learning engagement: A U.S.-Chinese classroom investigation. *Humanities and Social Sciences Communications*, *11*(1), 1–9. https://doi.org/10.1057/s41599-024-02634-0

Jiang, L., Liang, F., & Wu, D. (2024). Effects of technology-aided teaching mode on the development of CT skills of EFL students in higher vocational colleges: A case study of english argumentative writing. *Thinking Skills and Creativity*, *In Press* (November 2023), 101594. https://doi.org/10.1016/j.tsc.2024.101594

Juanda, & Afandi, I. (2024). Assessing text comprehension proficiency: Indonesian higher education students vs ChatGPT. *XLinguae*, *17*(1), 49–68. https://doi.org/10.18355/XL.2024.17.01.04

Karakuş, M., Türkkan, B. T., & Namlı, N. A. (2020). Investigation of the effect of digital storytelling on cultural awareness and creative thinking. *Egitim ve Bilim*, *45*(203), 309–326. https://doi.org/10.15390/EB.2020.8576

Karapakdee, J., & Wannapiroon, P. (2023). Immersive digital storytelling learning experience with a metaverse gamification game platform to enhance game developer competency. *International Journal of Information and Education Technology*, *13*(6), 890–898. https://doi.org/10.18178/ijiet.2023.13.6.1884

Larsson, A., Fälton, E., & Stolpe, K. (2024). The discourse on technological literacy: exploring visual representations enabled by the visual cultures of four Swedish vocational education and training programmes. *Empirical Research in Vocational Education and Training*, *16*(1). https://doi.org/10.1186/s40461-024-00167-z

Lim, N. Z. L., Zakaria, A., & Aryadoust, V. (2022). A systematic review of digital storytelling in language learning in adolescents and adults. *Education and Information Technologies,* *27*(5). https://doi.org/10.1007/s10639-021-10861-0

Mansfield, E., Jalal, N., Sanderson, R., Shetty, G., Hylton, A., & D'Silva, C. (2024). Digital storytelling online: A case report exploring virtual design, implementation opportunities and challenges. *Research Involvement and Engagement*, *10*(1), 1–9. https://doi.org/10.1186/s40900-024-00570-6

Masuram, J., & Sripada, P. N. (2020). Digital stories to enhance cognitive abilities among learners. *11th International Conference on Advances in Computing, Control, and Telecommunication Technologies, ACT 2020*, 255–259.

Millán, E., Alvarado Vargas, C., Cabello, P., & Arriagada, S. (2024). Searching for a middle ground: Teachers' identities and perceptions on the teaching and learning of writing. *Teaching and Teacher Education*, *138*(2), 1–10. https://doi.org/10.1016/j.tate.2023.104383

Oyetade, K., Harmse, A., & Zuva, T. (2023). Factors influencing students' use of e-learning technologies. *International Journal of Learning, Teaching and Educational Research*, *22*(9), 617–632. https://doi.org/10.26803/ijlter.22.9.33

Paramita, A., & Utami, P. P. (2021). Students' perception: digital storytelling as a media for students junior high school in learning speaking. *Jurnal Pendidikan Tambusai*, *5*(2), 5282–5286. https://doi.org/https://doi.org/10.31004/jptam.v5i2.1821

Purnama, S., Ulfah, M., Ramadani, L., Rahmatullah, B., & Ahmad, I. F. (2022). Digital

storytelling trends in early childhood education in Indonesia: A systematic literature review. *JPUD - Jurnal Pendidikan Usia Dini*, *16*(1), 17–31. https://doi.org/10.21009/jpud.161.02

Qing, X., & Jing, G. (2024). Digital literacy in a global context: constructing models for international Chinese teachers across regions and countries. *International Journal of Learning, Teaching and Educational Research*, *23*(7), 539–561. https://doi.org/10.26803/ijlter.23.7.27

Quddus, I. M. (2023). Analysis description writing skills by using rumpang techniques with pictures media at fifth grade. *PrimaryEdu: Journal of Elementary Education*, *7*(1), 132–141. https://e-journal.stkipsiliwangi.ac.id/index.php/primaryedu/article/view/3331/1596

Ribeiro, S. (2015). Digital storytelling: An integrated approach to language learning for the 21st century student. *Teaching English with Technology*, *15*(2), 39–53. https://tewtjournal.org/download/4-digital-storytelling-an-integrated-approach-to-language-learning-for-the-21st-century-student-by-sandra-ribeiro/

Salim, H., Waterworth, P. G., Daud, A., & Dahnilsyah, M. H. (2022). The integration of digital technologies into practicum classrooms by smartphone-savvy pre-service teachers in Indonesia. *European Journal of Educational Research*, *11*(2), 859–872. https://doi.org/https://doi.org/10.12973/eu-jer.12.2.593

Saputri, S. L., Priyatni, E. T., & Widiati, N. (2021). Teaching material on writing fantasy story incorporating the local culture. *KnE Social Sciences*, *2021*, 365–371. https://doi.org/10.18502/kss.v5i3.8558

Setiawati, D., & Setyarini, S. (2020). Promoting EFL young learners' higher order thinking skills (HOTs) through interactive digital storytelling. *ACM International Conference Proceeding Series*, 57–61. https://doi.org/10.1145/3436756.3437021

Shemy, N. S. (2023). The power of digital storytelling: Students' perceptions about its utilization in developing practical understanding in an instructional technology context. *International Journal of Information and Education Technology*, *13*(9), 1439–1444. https://doi.org/10.18178/ijiet.2023.13.9.1947

Shi, H., & Cheung, L. M. E. (2024). Storytelling for understanding: a case study of an English-language digital storytelling service-learning subject for refugee children in Hong Kong. *Journal for Multicultural Education*. https://doi.org/10.1108/JME-10-2023-0116

Shin, E. (2016). *Constructivist learning environments in digital storytelling workshops: An interview with Joseph Lambert*. https://digitalcommons.pepperdine.edu/etd/658

Song, H., & Cai, L. (2024). Interactive learning environment as a source of critical thinking skills for college students. *BMC Medical Education*, *24*(1), 1–9. https://doi.org/10.1186/s12909-024-05247-y

Sumiyadi. (2023). Research expansion : emphasizing fantasy story text in Indonesian language learning. *European Online Journal of Natural and Social Sciences*, *12*(1), 108–120. https://european-science.com/eojnss/article/view/6645

Syahriati, S. (2023). Challenges and opportunities in Indonesian language education in the digital era. *Riwayat: Educational Journal of History and Humanities*, *6*(3), 1405–1411. https://doi.org/https://doi.org/10.24815/jr.v6i3.33874

Türkben, T., & Alptekİn, E. (2023). Turkish teachers' competence in creating digital stories with Web 2.0 tools. *Milli Egitim*, *52*(238), 909–932. https://doi.org/10.37669/milliegitim.1090534

Wasti, S. P., Simkhada, P., van Teijlingen, E., Sathian, B., & Banerjee, I. (2022). The growing importance of mixed-methods research in health. *Nepal Journal of Epidemiology*, *12*(1), 1175–1178. https://doi.org/10.3126/nje.v12i1.43633

Wikanengsih., & Silviani, I. (2021). Improving the ability to write fantasy stories and

motivation of junior high school students in writing fantasy stories by using the discovery learning method assisted by animated films. *Proceedings of the 2nd Annual Conference on Education and Social Science (ACCESS 2020)*, *556*(Access 2020), 476–480. https://doi.org/10.2991/assehr.k.210525.131

Wilson, J., Zhang, F., Palermo, C., Cordero, T. C., Myers, M. C., Eacker, H., Potter, A., & Coles, J. (2024). Predictors of middle school students' perceptions of automated writing evaluation. *Computers & Education*, *211*(December 2023), 104985. https://doi.org/10.1016/j.compedu.2023.104985

Yang, Y. T. C., Chen, Y. C., & Hung, H. T. (2022). Digital storytelling as an interdisciplinary project to improve students' English speaking and creative thinking. *Computer Assisted Language Learning*, *35*(4), 840–862. https://doi.org/10.1080/09588221.2020.1750431

Zarei, M. J., & Navidinia, H. (2024). Improving EFL students' writing skills through digital storytelling. *Call-Ej*, *25*(1), 108–128.

Zhao, Y., Kleinknecht, M., Ko, Y. J. (2023). Dialogic interactions in higher vocational learning environments in mainland China: evidence relating to the effectiveness of varied teaching strategies and students' learning engagement. In *Effective teaching around the world: Theoretical, empirical, methodological and practical insights* (pp. 207–224). Springer. https://doi.org/10.1007/978-3-031-31678-4

Zhussupova, R., & Shadiev, R. (2023). Digital storytelling to facilitate academic public speaking skills: Case study in culturally diverse multilingual classroom. *Journal of Computers in Education*, *10*(3), 499–526. https://doi.org/10.1007/s40692-023-00259-x