

Reducing Writing Anxiety through Digital Storytelling: Insights from Junior High School EFL Learners

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Abstract

This study investigates the digital storytelling roles in lessening writing anxiety among junior high school students learning English as a foreign language (EFL). Writing anxiety is a common challenge that affects students' ability to express themselves effectively. The purpose of this research is to explore how digital storytelling, which combines multimedia elements like images, sound, and video, can alleviate anxiety and improve writing skills. The study used a mixed-method approach, involving both quantitative data from the Second Language Writing Anxiety Inventory (SLWAI) and qualitative insights from interviews. Findings reveal that before the intervention, students experienced moderate to high levels of anxiety. After using digital storytelling, anxiety levels significantly decreased, especially among male students, with reductions in cognitive and somatic anxiety, as well as avoidance behaviours. Qualitative data further supported these findings, showing that students felt more motivated, engaged, and confident in their writing. Digital storytelling helped students improve their writing skills, increase their error awareness, and foster a sense of ownership and creativity. The study suggests that digital storytelling can be a valuable pedagogical tool to create a less intimidating learning environment and enhance writing proficiency in EFL classrooms. However, further exploration is needed to understand the differing impacts on male and female students.

Keywords: Digital Storytelling; Writing Anxiety; Motivation in Writing; Educational Technology

INTRODUCTION

Writing is an essential skill that plays a critical role in communication, academic success, and personal expression. However, it is a skill that many students, especially those learning English as a Foreign Language (EFL), struggle to master. Among the challenges students face in writing, writing anxiety stands out as a significant barrier. This anxiety often stems from fear of judgment, lack of self-confidence, and the pressure to meet academic expectations, all of which can significantly hinder students' ability to effectively express their ideas in writing (Jia, 2024). In secondary EFL classrooms, writing anxiety not only affects students' writing performance but also their overall academic self-esteem (Cheng, 2004; Yuliawati, 2016). Traditional methods of teaching writing, which often emphasize grammar drills and rigid structures, frequently fail to address the emotional and psychological challenges students face. This neglect of the emotional aspects of writing leads many students to avoid writing tasks, which in turn perpetuates their anxiety and diminishes their motivation to engage in the writing process (Cheng, 2004; Quvanch & Kew, 2022). As such, there is an urgent need for instructional strategies that not only improve students' writing skills but also help alleviate the anxiety that hinders their ability to express themselves effectively.

Numerous studies have investigated writing anxiety and its effects on students' writing performance, particularly in EFL contexts. Writing anxiety is closely associated with cognitive, somatic, and avoidance behaviors, which significantly impede students' ability to complete writing tasks. Cognitive anxiety involves worries about performance and fear of making

mistakes, while somatic anxiety refers to physical symptoms such as nervousness or muscle tension (Mella et al., 2020). Avoidance behaviors, such as procrastination, are common among students who feel overwhelmed by writing tasks. Traditional writing instruction, which focuses on rigid grammar rules and structure, often exacerbates these forms of anxiety, leaving students with limited opportunities to express their creativity and engage fully in the writing process (Cheng, 2004). In recent years, there has been growing interest in integrating technology into the classroom to make learning more engaging and less intimidating for students. Digital storytelling, which combines conventional storytelling with multimedia elements like images, sound, and video, has emerged as a promising tool to address writing anxiety. This approach allows students to create stories using digital tools, providing a more interactive and creative way to engage with writing (Alismail, 2015; Palioura & Dimoulas, 2022). By integrating multimedia, digital storytelling offers a holistic approach that encourages creativity and self-expression, helping to reduce the pressure students typically feel when working on traditional writing tasks (Tarigan & Liana, 2018). Studies have shown that digital storytelling not only makes writing tasks more engaging but also helps students feel more confident in their abilities, thereby reducing anxiety and improving their writing skills (Moradi & Chen, 2019; Selvaraj, 2016). Despite these promising results, most studies on digital storytelling have focused on higher education settings or have examined its impact on general writing proficiency, without explicitly addressing its potential to reduce writing anxiety in junior high school students, particularly in EFL contexts (Kristiawan et al., 2022). According to Hsu (2022) digital storytelling not only enhances writing skills but also significantly reduces speaking anxiety, promoting creativity and allowing students to express themselves in various formats. This shows that digital storytelling can also reduce writing anxiety by offering students more control over their expression. This study aims to fill the gap by focusing on junior high school students, a demographic particularly vulnerable to writing anxiety due to their developmental stage and academic pressures (Haza' Al Rdaat & Gardner, 2017). Furthermore, the study incorporates constructivist theory, which emphasizes learning through interaction and experience. Digital storytelling aligns with this theory by encouraging active student participation and collaborative learning, helping students construct their own knowledge while reducing (Vygotsky & Cole, 1978).

The existing body of research suggests that digital storytelling has the potential to reduce writing anxiety and enhance students' writing skills. However, little attention has been paid to its specific role in addressing writing anxiety in junior high school students. Most studies have focused on older students or on general writing proficiency, leaving a gap in understanding how digital storytelling can benefit younger learners in EFL classrooms. Junior high school students are particularly vulnerable to writing anxiety due to their developmental stage and the increasing academic pressures they face. Thus, this study seeks to fill this gap by exploring how digital storytelling can be used to reduce writing anxiety in junior high school EFL students, providing both academic and emotional support to enhance their learning experience (Kristiawan et al., 2022; Yanti et al., 2019).

The main goals of this research are to examine the levels of writing anxiety among junior high school students when learning to write in English and to assess the impact of digital storytelling on reducing these anxiety levels. Specifically, the study aims to explore how digital storytelling can mitigate cognitive, somatic, and avoidance anxiety in students and to investigate students' perceptions of the effectiveness of digital storytelling in improving their confidence and motivation in writing tasks. By achieving these objectives, this research hopes to provide valuable insights into how digital storytelling can serve as an instructional tool to create a more supportive, engaging, and less anxiety-provoking writing environment in EFL classrooms. Additionally, this study aims to contribute to the broader literature by focusing specifically on

writing anxiety in junior high school students and the potential of digital storytelling to address this issue in EFL contexts (Alemi et al., 2022; Wulan et al., 2022).

METHOD

This part outlines the research methodology employed in this study. It includes the research design, research setting and participants, data collection methods, and data analysis procedures.

A. Research Design

This study employed a mixed-method research design, incorporating both quantitative and qualitative approaches. The quantitative method was used to measure students' writing anxiety levels before and after the intervention, while the qualitative method explored students' perceptions of digital storytelling in reducing writing anxiety (Creswell & Creswell, 2018). A survey research design was implemented for quantitative analysis using the SLWAI, Second Language Writing Anxiety Inventory (Cheng, 2004). Additionally, a quasi-experimental design was adopted, utilizing a pre-test and post-test approach to evaluate the impact of digital storytelling on students' anxiety levels. For qualitative analysis, semi-structured interviews were conducted to gain in-depth insights into students' experiences and perceptions. A thematic analysis approach was applied to identify key themes emerging from the qualitative data (Braun & Clarke, 2021).

B. Research Setting and Participants

This study was conducted from March to May 2024 in two junior high schools in Bekasi, Indonesia, namely SMP Negeri 1 Bojongmangu and SMP Negeri 2 Bojongmangu. The participants consisted of 71 seventh-grade students (aged 12-13), including 29 male and 42 female students. The schools are located in suburban areas bordering Karawang and Bogor. Additionally, three English teachers with at least five years of teaching experience participated in the study, providing instructional support and implementing digital storytelling techniques in their classrooms.

C. Data Collection

A validated Second Language Writing Anxiety Inventory (SLWAI) was used to assess students' writing anxiety. The questionnaire contained 22 items, categorized into three dimensions: cognitive anxiety, which involves worries about writing performance; somatic anxiety, which refers to physical reactions to writing tasks; and avoidance behavior, which reflects the tendency to avoid writing tasks (Horwitz, 2001). The questionnaire was administered twice, once before the introduction of digital storytelling (pre-test) and again after the intervention (post-test).

To gain a deeper understanding of students' perceptions, semi-structured interviews were conducted with ten selected students after the intervention. The interviews aimed to explore students' experiences with digital storytelling, identify perceived benefits and challenges, and examine how digital storytelling influenced their writing motivation and anxiety. The interviews followed an open-ended question format and were recorded for transcription and analysis (Creswell, 2013). In addition to individual interviews, a focus group discussion was held with selected students to gather diverse opinions.

D. Data Analysis

Descriptive statistical analysis was performed using SPSS software to compute mean, standard deviation, and frequency distribution of anxiety scores. Paired-sample t-tests were used to compare pre-test and post-test scores to determine the statistical significance of changes in

writing anxiety. For qualitative data, a thematic analysis approach (Braun & Clarke, 2021) was applied to identify patterns and themes in interview transcripts. The process involved transcription, where audio recordings were converted into text, followed by reading and coding to identify recurring themes in students' responses. These coded responses were then categorized into overarching themes before final interpretation to draw insights into students' experiences with digital storytelling. Key themes identified from the qualitative data included enhanced writing ability, where students felt digital storytelling improved their storytelling skills and idea organization. The second theme was error reduction, where the use of visual aids and technology helped students identify and correct mistakes. The final theme was increased motivation, as students expressed higher enthusiasm and engagement in writing tasks (Robin, 2008).

RESULTS AND DISCUSSION

Results

1. The Level of Anxiety Students Experience in Learning to Write in English.

Before the implementation of digital storytelling, students exhibited moderate to high levels of writing anxiety. The research utilized the Second Language Writing Anxiety Inventory (SLWAI) questionnaire to assess students' anxiety levels before and after the intervention.

Descriptive Statistical Analysis of Anxiety Levels

The pre-test data provided a detailed picture of the students' anxiety levels before the intervention.

Table 1. Descriptive Statistical Analysis (Anxiety Levels Before and After Intervention)

Category	Pre-Test (All Students)	Post-Test (All Students)	Pre-Test (Male Students)	Post-Test (Male Students)	Pre-Test (Female Students)	Post-Test (Female Students)
Mean	69.27	64.72	69.28	62.03	69.26	66.57
Maximum	94	97	94	78	92	97
Minimum	32	36	32	37	47	36
Ideal Score	22	22	22	22	22	22
Number of Sample	71	71	29	29	42	42

The average anxiety score among students before the intervention was 69.27, indicating a moderate level of anxiety. Both male and female students exhibited similar anxiety levels, suggesting that writing anxiety was a common issue across genders. However, the range of scores varied significantly, with some students experiencing very high levels of anxiety, highlighting the diverse impact of writing-related stress among the participants. After the implementation of digital storytelling, the overall anxiety levels decreased, with male students showing the most significant reduction.

Distribution of Anxiety Levels Before Digital Storytelling

The pre-test questionnaire categorized students into different anxiety levels.

Table 2. Distribution and Percentage of Anxiety Levels Before Intervention

Interval Category	Frequency (All Students)	Percentage (All Students)	Frequency (Male Students)	Percentage (Male Students)	Frequency (Female Students)	Percentage (Female Students)
Very Low (22-41)	1	1.41%	1	3.45%	0	0%

Low (42-61)	14	19.72%	2	6.90%	12	28.57%
Moderate (62-81)	49	69.01%	24	82.76%	25	59.52%
High (82-101)	7	9.86%	2	6.90%	5	11.90%
Very High (102-121)	0	0%	0	0%	0	0%

The data clearly shows that the majority of students, 69.01%, experienced moderate anxiety when it came to writing. A smaller but significant portion, 9.86%, suffered from high levels of anxiety, which could negatively affect their writing performance. In contrast, only 1.41% of students exhibited very low anxiety, indicating that severe writing anxiety was a prevalent issue among the students. These findings highlight the prevalence of writing anxiety in junior high school students, confirming the need for interventions like digital storytelling.

2. The Role of Digital Storytelling in Reducing Students' Writing Anxiety.

After the introduction of digital storytelling in writing instruction, students demonstrated a significant decrease in anxiety levels.

Distribution of Anxiety Levels After Digital Storytelling

The post-test results showed a marked shift, with more students moving to lower anxiety categories.

Table 3. Distribution and Percentage of Anxiety Levels After Intervention

Interval Category	Frequency (All Students)	Percentage (All Students)	Frequency (Male Students)	Percentage (Male Students)	Frequency (Female Students)	Percentage (Female Students)
Very Low (22-41)	5	7.04%	4	13.79%	1	2.38%
Low (42-61)	22	30.99%	8	27.59%	14	33.33%
Moderate (62-81)	41	57.75%	17	58.62%	24	57.14%
High (82-101)	3	4.23%	0	0%	3	7.14%
Very High (102-121)	0	0%	0	0%	0	0%

The results showed a positive shift in anxiety levels after the implementation of digital storytelling. The percentage of students with very low anxiety increased from 1.41% to 7.04%, indicating a reduction in writing-related stress. Additionally, the number of students experiencing high anxiety dropped from 9.86% to 4.23%, demonstrating a significant improvement. This reduction was particularly noticeable among male students, who showed a greater shift toward low and moderate anxiety levels, suggesting that digital storytelling was especially effective in easing their writing anxiety.

Statistical Significance of the Anxiety Reduction

To assess whether the reduction in anxiety was statistically significant, a paired-sample t-test was conducted.

Table 4. Statistic Test Result (t-test)

Group	Significance Value (p)	Result
All Students	0.001	Significant
Male Students	0.007	Significant
Female Students	0.115	Not Significant

The reduction in writing anxiety was statistically significant for all students and particularly for male students, with a p-value of less than 0.05, indicating that digital storytelling had a meaningful impact in lowering their anxiety levels. However, for female students, the reduction was not statistically significant, with a p-value of 0.115. This suggests that while digital storytelling was beneficial, additional strategies may be necessary to ensure that female students fully experience its anxiety-reducing effects.

3. Sure! Here’s a reworded version of the phrase with the same meaning:

"Junior High School Students' perceptions on Using Digital Storytelling to Address Writing Anxiety"

Qualitative Findings from Student Interviews

After completing the digital storytelling activities, students provided feedback on how the approach affected their writing experience.

1. Improvement in Writing Skills
2. Reduction in Writing Errors
3. Increased Motivation to Write

Table 5: Students' Perceptions of Digital Storytelling in Reducing Writing Anxiety

Theme	Key Observations from Students' Responses
1. Digital Storytelling Improves Writing Ability	<ol style="list-style-type: none"> a. <i>I am able to write stories about anything I like to do.</i> b. <i>It can express my feelings.</i> c. <i>Pictures really help me understand and remember words.</i> d. <i>I am happy when I learn English.</i> e. <i>It's cool and exciting."</i>
2. Digital Storytelling Helps Reduce Errors	<ol style="list-style-type: none"> a. <i>I became more aware of double letters in spelling.</i> b. <i>The system helps us identify errors while writing.</i> c. <i>We put more effort into spelling as we know others will watch our videos.</i> d. <i>We remind each other to write carefully.</i>
3. Digital Storytelling Motivates Students to Write	<ol style="list-style-type: none"> a. <i>It gave me ideas for writing my story.</i> b. <i>I can imagine the story more clearly.</i> c. <i>Seeing others' stories inspired me to write better.</i> d. <i>I find and use new words from internet dictionaries in my writing.</i> e. <i>My writing has become longer and more detailed.</i>

Digital storytelling proved to be an effective tool in enhancing students' writing skills by providing a structured and engaging way to organize their thoughts. Through the integration of multimedia elements, students found it easier to express their ideas, making the writing process more accessible and enjoyable. Additionally, digital storytelling fostered greater awareness of spelling and grammar errors, as the digital format allowed students to identify and correct mistakes in real time. This not only improved their technical writing accuracy but also encouraged them to be more meticulous in their work. Furthermore, the interactive and creative nature of digital storytelling significantly boosted students' confidence and motivation. By

actively participating in the storytelling process, they developed a sense of ownership over their work, leading to increased enthusiasm and a willingness to explore their ideas more deeply. Collectively, these factors contributed to a noticeable improvement in students' writing abilities while simultaneously reducing their anxiety about writing.

Discussion

The findings of this study provide valuable insights into the role of digital storytelling in B1 and SMPN 2 Bojongmangu exhibited moderate to high levels of writing anxiety in English, with an average pre-test score of 69.27. Male students scored slightly higher at 69.28, while female students scored 69.26. These results indicate that both groups experienced considerable anxiety, which aligns with previous research suggesting that EFL learners often struggle with writing anxiety due to linguistic limitations, fear of judgment, and lack of confidence (Cheng, 2004). After the implementation of digital storytelling, the post-test results revealed a decrease in anxiety levels, with the overall mean score dropping to 64.72. Male students showed a greater reduction in anxiety, from 69.28 to 62.03, compared to female students, whose scores decreased from 69.26 to 66.57. These results suggest that while digital storytelling was effective for both genders, male students experienced a more significant reduction in anxiety levels, a pattern that requires further exploration (Castillo-Cuesta et al., 2021). The statistical test confirmed the effectiveness of digital storytelling in alleviating students' writing anxiety. A significant reduction in anxiety was observed among all students, demonstrating a strong impact of the intervention. However, when analyzed separately, the impact was statistically significant for male students but not for female students. Several factors may explain why digital storytelling was particularly effective for male students. The interactive and visual nature of digital storytelling allowed them to organize their thoughts more easily, making writing less intimidating (Cheung, 2024). The multimodal approach shifted the emphasis away from grammatical accuracy and toward content creation, reducing the pressure associated with traditional writing assignments (Robin, 2008). The collaborative aspect of digital storytelling encouraged peer interaction, which helped create a more relaxed learning environment (Eroğlu & Okur, 2022). Female students, while benefiting from the intervention, did not experience as drastic a reduction in anxiety. This could be due to differences in cognitive processing styles or learning preferences. Future research could explore gender-specific adaptations of digital storytelling to maximize its effectiveness for all students (Kristiawan et al., 2022).

The qualitative data from focus group discussions and semi-structured interviews highlighted students' positive perceptions of digital storytelling. Thematic analysis identified three main themes: improvements in writing skills, increased awareness of errors, and enhanced motivation. Many students expressed that digital storytelling helped them write more freely and creatively. Some students stated that it allowed them to write stories about topics they enjoy, while others mentioned that it helped them express their feelings (Kim & Li, 2021). The visual elements in digital storytelling aided students in associating words with meaning, making the writing process easier and more engaging. Some students noted that working with images helped them generate ideas more effectively and retain vocabulary more efficiently (Nguyen et al., 2022). The process of creating digital stories made learning English feel more enjoyable and engaging, reducing the sense of pressure they previously felt when writing (Moradi & Chen, 2019). Students also reported that digital storytelling helped them become more attentive to spelling and grammatical accuracy. Several students acknowledged that they became more aware of spelling patterns, particularly with double letters, and that the digital tools provided immediate feedback on errors. Knowing that their stories would be shared with others encouraged them to put more effort into producing accurate and well-structured writing (Castillo-Cuesta et al., 2021). Collaboration played a key role, as students reminded one another

to write carefully and reviewed each other's work for mistakes (Alemi et al., 2022). These findings align with previous research suggesting that digital storytelling provides a meaningful context for students to refine their writing skills while reducing anxiety (Hava, 2019). Motivation to write increased as students found digital storytelling to be an enjoyable and stimulating activity. Many students mentioned that seeing their peers' stories inspired them to develop their own ideas more creatively. Others noted that they actively searched for new words using online dictionaries, which contributed to the expansion of their vocabulary (Saripudin et al., 2021). Several students observed that their sentences became longer and more structured as they gained confidence in their writing abilities (Wahyuni et al., 2022). The integration of technology in the learning process made writing feel less burdensome and more engaging, leading to greater enthusiasm for English writing assignments (Rizal, 2021). These findings align with previous studies demonstrating that digital storytelling is an effective tool for enhancing writing skills and reducing writing anxiety. The integration of visual, auditory, and textual elements in storytelling provides a supportive and less intimidating learning environment, encouraging students to actively participate in the writing process (Robin, 2008); Additionally, digital storytelling fosters self-expression and personalized learning experiences, making it a valuable tool for students with different learning preferences. The use of technology in writing instruction has also been found to increase engagement, motivation, and digital literacy skills, equipping students with essential competencies for academic and personal development (Wu & Chen, 2020). While the overall results confirm that digital storytelling is a powerful tool for reducing writing anxiety, the differences in effectiveness between male and female students suggest the need for further research. To optimize its benefits, teachers should consider personalized approaches that cater to different learning styles. Providing additional guidance and structured support for students who may require more assistance in using digital storytelling effectively could enhance its impact across diverse learner groups (Robin, 2008). By integrating digital storytelling into EFL writing curricula, educators can create more engaging, inclusive, and anxiety-free learning experiences that foster students' confidence and competence in writing (Ribeiro, 2015).

CONCLUSION

The study explored the role of digital storytelling in reducing writing anxiety among junior high school students, focusing on their experiences and perceptions. The findings indicate that digital storytelling significantly lowers students' anxiety levels, particularly among male students, while also improving their writing skills, motivation, and engagement. The interactive nature of digital storytelling provided a more structured and enjoyable learning environment, helping students express their thoughts more freely and confidently. The integration of visual, auditory, and textual elements made the writing process less intimidating and allowed students to focus more on creativity and content rather than the fear of making mistakes. The results suggest that digital storytelling is a valuable pedagogical tool for enhancing writing instruction, particularly in EFL contexts. It encourages students to take an active role in their learning, fosters collaboration, and helps them develop digital literacy skills alongside writing proficiency. Teachers can use digital storytelling to create a more engaging and anxiety-free classroom environment, making writing a more accessible and enjoyable activity. However, the study also highlights differences in effectiveness between male and female students, suggesting the need for tailored instructional strategies to maximize the benefits for all learners. Future research should explore the long-term effects of digital storytelling on students' writing development and investigate why the approach was more effective for male students. Additionally, examining different ways to integrate digital storytelling with other teaching strategies could

enhance its impact further. Educators should consider incorporating more individualized support and structured guidance to ensure that all students, regardless of gender or learning preference, can fully benefit from the approach. By leveraging digital storytelling as a key component of writing instruction, teachers can create more inclusive and effective learning experiences that help students overcome writing anxiety and build confidence in their writing abilities.

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