Using Digital Storytelling as a Strategy for Enhancing EFL Writing Skills

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Abstract—The present study is aimed at analyzing the impact of digital storytelling on English as a Foreign Language (EFL) pre-service teachers' writing skills. The participants were 101 students, who were enrolled in four distance courses of the English Major at a private university in Ecuador. Their ages ranged between 19 and 22 years old. They were divided into one control (49) and one experimental (52) group since this study used a quasi-experimental approach combined with a mixed-method design. The instruments included a pre-questionnaire, a pre-test, a post-questionnaire, and a post-test. The main findings show that there was a significant improvement in students' writing skills, particularly in aspects related to grammar and vocabulary. In addition, digital storytelling using Storybird was perceived as a useful strategy to develop the participants' EFL writing skills since they were more engaged in activities that allowed them to demonstrate their knowledge when designing narrative projects.

1   Introduction

English as a foreign language writing plays a substantial role in language instruction since it requires students' permanent effort and constant practice to develop a certain proficiency level [1], [2]. Considering the significance of writing, the use of effective teaching strategies is necessary for helping students to improve this language skill [3]. For this reason, teachers need to know how to facilitate the writing process by implementing a variety of strategies in the classroom [4].

One of the strategies used by EFL teachers to improve their students' writing skills is digital storytelling. According to [5], it is an effective instructional strategy that helps students strengthen their ideas, organization, word choice, and sentence fluency in terms of writing quality. In addition, digital storytelling allows students to develop their creative writing skills, use vocabulary and grammar accurately, and write sentences correctly [6].

Digital storytelling involves the use of software tools that allow teachers to implement this strategy for promoting EFL writing. One of these tools is Storybird, which engages students to work collaboratively, gain more ideas, and choose appropriate vocabulary to write narrative texts [7]. In addition, [8] explain that Storybird is effective to enhance students' creativity because they are more interested in learning and pay more attention when writing English texts. Furthermore, Storybird plays an important role in stimulating students' English writing skills so that learners can recognize their weaknesses and try to improve them by means of doing writing activities with this tool [9]. Likewise, [10] state that Storybird improves students' English writing skills for building sentences since they are more motivated to learn in a fun and creative manner.

Taking into consideration all of the aforementioned aspects, this research focuses on the use of digital storytelling because it is a strategy that allows enhancing learners' writing skills [11], [12] and fosters students' motivation, self-confidence, and narrative skills [13]. The tool chosen for doing the storytelling activities was Storybird because of the features mentioned above. The advantages of this popular tool for promoting writing skills include a good user experience, adaptability to language level and skills, diversity of content, social interaction, user safety and data security [14].

Nevertheless, many teachers in our country still do not take advantage of the digital storytelling strategy or do not even know about its use and benefits. Therefore, this study constitutes a contribution to shed light on the use of digital storytelling by means of Storybird and the possibilities that it offers for teaching and learning EFL writing in our region and country. Thus, this study attempts to answer the following research questions:

What is the impact of digital storytelling for enhancing EFL writing skills? What are the students' perceptions on the use of digital storytelling for strengthening EFL writing skills?

2 Literature Review

2.1 English as a foreign language writing

Writing is one of the four language skills and it is an essential aspect in language classes [15]. Nowadays, writing plays a significant role in the field of foreign language teaching since it demands great effort and commitment [1], [16]. In fact, there is an increasing need to train learners for academic success, so writing is considered a fundamental skill in a globalized world that is driven by text [17]. In this regard, [18] states that writing is recognized as an important skill in language learning because it is a mental process that reinforces language use by giving students time to think about and reflect on proper language rules.

Even though writing is essential in EFL learning, it is often regarded as one of the most difficult abilities that learners should master [19]. One reason why writing is considered a challenging skill is because it needs a huge effort to be learned. Besides, it involves mastery of some aspects such as paragraph organization, language use, and

mechanics [20], which allow learners to transform their ideas into organized written texts. However, learners at different levels usually face some difficulties when writing in the target language such as the use of prepositions, grammar tenses, spelling, punctuation, among others [21].

Based on the aforementioned issues, it is necessary to emphasize the important role that grammar, vocabulary, organization, and mechanics play in the process of teaching EFL writing. In this respect, knowledge of grammar is relevant in developing writing because a significant number of grammar mistakes reduces the quality of ideas in a written text [22]. As for vocabulary, [23] assert that it is an essential component in writing development. The reasoning behind this statement is that students with a larger productive vocabulary can write more sophisticated texts [24]. Furthermore, organization (the ability to structure a text with appropriate transitions and a strong beginning, middle, and end) and mechanics (the ability to use pertinent punctuation, capitalization, and spelling) are important aspects in writing performance [23], [25].

2.2 Approaches and strategies for teaching EFL writing

The purpose of teaching writing in an EFL environment can vary from simple activities such as filling a form to more complex tasks that include writing letters or stories, so writing is an important part of the planning process in English teaching [26]. The approaches to teach writing are typically focused on process and product, but sometimes teachers might find it difficult to select the appropriate approach to teach writing [27].

In the case of the process approach, it comprises the different stages of writing (e.g., pre-writing, editing, redrafting, and writing the final version). This approach may include strategies such as freewriting, planning, creating ideas, discovering meaning, group or pair work, revising, drafting, and proofreading [28].

Conversely, the product approach focuses on the goal of an activity and the end product. This approach reflects an educational philosophy that includes careful reading and analysis of literature, as well as imitating and transforming models provided by textbooks or teachers [29]. Some strategies related to the product approach can include following teachers' rules and feedback, writing without planning, following outlines, focusing on organization, constant editing of grammar, using correct vocabulary and punctuation, avoiding sentence fragments, among others [28].

One strategy that is common to the two aforementioned approaches is feedback, which plays a fundamental role in teaching EFL writing because research has demonstrated that it can be useful to help students correct their errors while learning the target language [30]. According to [31], this strategy includes direct non-metalinguistic written correction, direct and indirect metalinguistic written correction, indirect written correction, and reformulation; furthermore, feedback can be implemented traditionally or by using Information and Communication Technologies (ICT).

2.3 Technology for teaching EFL writing

Today, it is known that technology has a positive effect on the teaching-learning process [32][33], including teaching a second or foreign language. In this respect, EFL teachers can make use of several resources to teach English. As one of the abilities taught is writing, technology also plays a fundamental role when teaching this complex skill to students. Some advantages of using ICT in writing include attracting students' attention, enhancing the teaching-learning process, and improving students' skills. On the other hand, some disadvantages include students' distraction and tendency to use short forms in their written production, as well as teachers' problems when managing the class and planning activities with ICTs [34]. Some examples that we can mention of ICTs to teach writing skills are wikis [35], weblogs [36], social networks such as Facebook [34], and digital storytelling tools [11].

2.4 Digital storytelling for enhancing EFL writing skills

According to [11], digital storytelling helps EFL learners improve their narrative writing skills. They also remark that using digital stories enables students to display their writing skills in using compound sentences, ideas, and opinions. In this same regard, [37] believe that there are some reasons for using digital stories in the classroom; for example, to motivate and involve students in the writing process. Another benefit of using digital stories to improve writing performance is that they engage all students in meaningful writing activities [12]. Likewise, [37] point out that story writing motivates and engages students in the process of creating digital stories. Similarly, [38]emphasize that engaging learners in the process of writing through digital storytelling makes their learning experience more attractive and motivational since they can communicate their thoughts and experiences freely.

On the other hand, [39] claim that digital storytelling offers learners opportunities to write creatively and organize ideas coherently since they may design and produce genuine tasks. They also reveal that digital storytelling not only improves students' writing skills, but also their critical thinking and media literacy. Moreover, [40]conclude that students were more engaged in digital storytelling and paid more attention to revising their writing when creating a story, thus improving their writing skills. In this context, there are some software tools that allow teachers to implement digital storytelling in their classrooms; one of them is Storybird.

2.5 Storybird for enhancing EFL writing skills

Storybird is a Web 2.0 tool that supports collaborative storytelling by means of using art galleries that motivate the public to create stories. In addition, Storybird is a social media service that allows collaborative storytelling in which people can create stories that may be shared everywhere. Stories may be produced individually, in pairs, or in groups using words and pictures; then, the authors can display them with their network. Stories can be printed, watched on screen, or played back and forth. Storybird provides many images so that students have to decide which pictures to choose

and how to order them [41]. In this regard, [42] points out that the artwork inspires students to create stories and helps them to develop their deep thinking and discernment ability.

Furthermore, [41]believes that the use of Storybird is recommended as a tool for teaching creative or narrative writing since it can maximize learning opportunities so that students are significantly more involved in the writing process. In this same regard, [7] claim that using this tool in narrative writing engages students to complete the writing tasks; it also helps them improve their writing abilities since they are able to read stories that other learners publish. In addition, [41] manifests that students not only get benefit in improving the writing skill but also get more acquainted with the target language by reading the stories created by other authors.

Finally, Storybird helps students to write narrative passages creatively so that learners' production of stories increases. This tool also activates collaborative writing, students' awareness of using complex language patterns, and improves their vocabulary when writing texts [43]. Hence, Storybird is very beneficial to be used in teaching EFL writing.

2.6 Previous studies

Some research has been conducted in the field of digital storytelling around the world. This section describes some studies related to the use of digital storytelling and the Storybird tool for educational purposes.

A study conducted by [43] explains how the use of Collaborative Writing (CW) through Storybird led learners to improve certain specific aspects of their writing skills. The participants were twenty-five students registered in an English course in which they were exposed to 8 weekly face-to-face hours of instruction and 2 or 3 hours of online work. In this process, learners worked collaboratively with another partner and every week they chose a different student to work with. The data gathered from pre and post-tests, focus groups, surveys, and reflective journals was analyzed qualitatively. The results showed that CW supported by Storybird encouraged students to create narrative texts, and increased their positive attitude towards the production of stories.

In a study by [6], the influence of digital storytelling on 76 pre-service teachers' creative writing skills was analyzed. The participants were divided into control and experimental groups (38 of them in each group). Pre-tests and post-tests were administered. Moreover, a creative writing rubric was used considering eight sub-dimensions (originality of the ideas, fluency and flexibility of the thoughts, richness of vocabulary, sentence structure, organization, genre and style, and correct use of grammar). The intervention included delivering content through the use of digital storytelling (experimental group) and PowerPoint presentations (control group); these stories were presented and discussed in class. Findings show that digital storytelling contributed to the development of the experimental group learners' creative writing skills. It was observed that digital storytelling helped participants develop original ideas, enhance thinking fluency and flexibility, use words and grammar accurately, improve sentence structure and organization, and apply styles correctly.

The effectiveness of using the Storybird platform for improving students' writing skills was investigated by [44]. The design used in this study was the quasi-experimental one, and the participants were selected by using non-random sampling. Ten students in the tenth grade of senior high school were divided into two groups (5 for the experimental and 5 for the control group). Both groups had the same material to work with during the treatment process; however, the control group was taught by the conventional method and the experimental group was taught by using the Storybird platform as a technological resource to enhance students' writing skills. The data for this study was obtained by gathering information from two instruments: writing tests and a questionnaire. The first one was administered to assess students' writing abilities in both groups, while the second instrument allowed to know the students' perception of the Storybird platform. Based on the analysed data, the results indicated that the use of this platform was effective to improve writing skills.

A study was carried out by [7] to identify ESL students' experiences in using the Storybird tool for writing narrative texts. The researchers used semi-structured interviews and observations to gather data from 15 university students in Malaysia. They had mixed proficiency levels that were determined through the Malaysian Certificate of Education. Semi-structured interviews were conducted in English; then, they were transcribed and analysed using thematic coding. Furthermore, the researchers analysed their observational notes to have an in-depth understanding of students' insights. The results revealed that most of the participants had a positive experience when using Storybird as a digital storytelling tool. They enjoyed working collaboratively as they were highly engaged in discussion, especially during the pre-writing stage. It was also evident that Storybird helped them to improve their writing skills by reading online stories shared by other Storybird users.

The effects of offline and online digital storytelling on the development of Iranian students' reading and writing in an EFL context were analysed by [38]. The participants included 42 lower-intermediate language learners who were divided into experimental and control groups. Both groups took the Reading-Writing section of a standard English Test before and after the intervention. The participants received process-oriented writing instruction with two different types of multimedia-making software for five months. The experimental group was trained to undertake the process of writing through an online platform, while the control group worked offline. The findings evidenced a significant improvement of the students in the experimental group in terms of their literacy skills. It was also evident that those learners who spent more time working with computers showed greater development in their reading and writing skills.

An action-research study was carried out by [5] with the purpose of analysing the effects of digital storytelling on the students' writing skills in a rural primary school. Twenty-six third graders (16 female and 10 male students) participated in this study in which they worked in groups, pairs, and individuals to create digital stories. In the story-making process, the students had to follow steps such as preparing, drafting, revising, editing, storyboarding, gathering multimedia resources, producing, and sharing. The data gathered through observation and field notes, interviews, audio and video recordings, student diaries and documents, and student products was qualita-

tively analysed. The findings revealed that digital storytelling had a positive impact on students' writing skills because it helped them improve their ideas, organization, word choice, sentence fluency, and conventions in terms of writing quality. Besides, digital storytelling allowed students to enhance their technology, information and visual literacies.

3 Method

3.1 Participants

This study included 101 participants who were divided into a control (49) and an experimental (52) group. Their ages ranged between 19 and 22 years old with A2 proficiency level according to the Common European Framework of Reference for Languages (CEFR). These students were enrolled in four English Language courses (which shared the same syllabi) of the English Major at a private university in Ecuador.

3.2 Instruments

- A pre-questionnaire that included mostly closed questions about students' perceptions of their technological skills and previous experience concerning storytelling for enhancing writing skills.
- A pre-test that consisted of a writing task in which students had to write about their last weekend.
- A post-questionnaire to know about students' perceptions on the use of storytelling for enhancing writing skills.
- A post-test that consisted of a writing task in which students had to write about what they did on their last vacation.

It is important to remark that the questionnaires were piloted with 30 students in order to validate them. Thus, they fulfilled the reliability requirements, obtaining a Cronbach's alpha of 0.73.

3.3 Procedure

This study applied a quasi-experimental approach in which both experimental and control groups were purposefully selected. A mixed-method design was used to analyse the data collected from the instruments. Before the intervention, a pre-questionnaire and a pre-test were administered to both groups. After learning about the students' technological skills and their EFL writing weaknesses, we had a basis for designing storytelling activities. Thus, the Storybird tool was used with the experimental group while the students in the control group worked using Storytelling from a traditional perspective.

During the intervention, both groups familiarized themselves with the Storytelling strategy. They designed their Storytelling projects based on their teachers' guidelines. Students created their own stories using the past tense and vocabulary related to places, vacation, travel and adventure, past habits, and childhood memories. Students followed a process approach which was permanently monitored by the teacher. This process included the writing stages (pre-writing, writing, and post-writing) in which feedback was provided. For assessing the students' writing production, a rubric was used in order to ensure a standard procedure for scoring; this rubric included the elements of organization (coherence and cohesion), grammar, vocabulary, and mechanics. Then, students presented their storytelling projects. Students in the experimental group shared their projects using the Storybird tool while the students in the control group handed in hard copies of their stories. The stories were shown to the class either through the digital tool (experimental group) or an oral account of the story (control group).

After the intervention, a post-test was administered to both groups to know the extent of its impact. Finally, a post-questionnaire was applied to the experimental group in order to identify the students' perceptions of the use of digital Storytelling.

The data gathered from the questionnaires, pre-tests, and post-tests were compared, contrasted, and statistically analysed using descriptive and inferential statistics, with a confidence level of 95%.

4   Results and Discussion

When analysing the results of the pre-tests, we obtained a p-value of 0.39, which means that the difference between the control and the experimental group was not statistically significant. Therefore, these two groups were comparable. With respect to the post-test results, Table 1 evidences a statistically significant difference between the experimental and control group after the intervention.

Table 1. Results of the post-tests in the experimental and control group

Post-test		
Group	*Experimental*	*Control*
Mean	7.45	5.51
SD	1.43	1.38
p value < 0.0001		

These results suggest that the intervention with digital storytelling had a positive impact on students' EFL writing skills, namely the aspects of grammar and vocabulary, which was evidenced in the scores of the rubric. Regarding these aspects, students improved the use of the past tense and increased their vocabulary related to vacation, travel and adventure, and places. Thus, they included their favourite pictures and images about the topics of this vocabulary through the Storybird tool. These findings address the first research question of our study.

As observed, there was a clear improvement in the scores of the post-test in students' writing skills after applying digital storytelling, which means that this strategy helped them develop their language skills. These findings are similar to the ones by [38], who reveal that the use of digital storytelling was effective to enhance writing, especially when students worked collaboratively using an online platform.

Regarding the second research question about the participants' perceptions of the use of digital storytelling for enhancing EFL writing skills, Table 2 below shows the results in terms of aspects that include motivation, participation, creativity, involvement, among others.

Table 2. Students' perceptions of the use of digital games to enhance grammar and vocabulary knowledge

No	Statements	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
1	Digital storytelling was useful to develop my competencies in the course.	38.10	45.24	14.29	0	2.37
2	Digital storytelling allowed me to get directly involved in writing activities.	42.86	45.24	9.52	2.38	0
3	My interest and motivation in the course increased through the use of digital storytelling.	28.57	35.71	30.96	2.38	2.38
4	Using digital storytelling encouraged me to participate in the activities of the course.	35.71	33.33	28.58	2.38	0
5	Digital storytelling allowed me to be creative through writing and narration.	52.38	30.95	14.29	2.38	0
6	Digital storytelling allowed me to demonstrate the knowledge acquired in the course through narrative projects.	42.86	40.48	16.66	0	0
7	Digital storytelling allowed me to present my projects in an innovative and dynamic way.	47.62	38.10	11.90	0	2.38
8	Digital storytelling allowed me to improve my technological skills for academic purposes.	45.24	42.86	9.52	2.38	0

As shown in the table above, digital storytelling, through the use of Storybird, was perceived as useful to develop the participants' competencies in the course. Thus, 83.34% of them strongly agreed and agreed with this statement, and 14.29% neither agreed nor disagreed. In this respect, [45]asserts that digital storytelling has a positive impact on students' language skills; furthermore, learners can develop linguistic competence while describing context-rich visual situations [46].

Regarding students' participation in writing activities, most of them (88.1%) strongly agreed and agreed that digital storytelling allowed them to get directly involved in writing activities. These findings are consistent with the research conducted by [47] and [48], which revealed that digital storytelling promoted a significant improvement in students' writing skills; moreover, digital storytelling favours a learner-centred approach that increases students' autonomy, self-confidence, and active learning [46].

With respect to students' motivation through the use of digital storytelling, 69.04% of them strongly agreed and agreed with this statement, while 30.96% was neutral. These findings are in line with [49], who found out that the use of digital storytelling has the potential to engage students by promoting their motivation and interest in the English learning process.

Concerning the participants' perceptions about the use of digital storytelling as a strategy that encouraged them to participate in the course activities, 69.04% of them strongly agreed and agreed with this statement, and 28.58% was neutral at this point. These results are aligned with the findings of [50], who suggest that the use of digital storytelling not only improves students' language performance but also their participation in class activities.

Students also believed that digital storytelling allowed them to be creative through writing and narration since 83.33% of them strongly agreed and agreed with this statement. In this respect, it is claimed that digital storytelling contributes to students' creativity and imagination [51][52].

It can also be seen that digital storytelling allowed students to demonstrate the knowledge acquired in the course through narrative projects; in fact, 83.34% of them strongly agreed and agreed with this aspect. Thus, it could be asserted that digital storytelling is an effective strategy to enhance linguistic skills and knowledge when learning a foreign language [53].

Concerning the use of digital storytelling to present projects, the majority of students (85.72%) strongly agreed and agreed that Storybird allows them to present their projects in an innovative and dynamic way. In this regard, [54] affirm that digital storytelling is a practice that allows students to work collaboratively, design innovative and creative digital works, and demonstrate their understanding of the content.

In regards to the last statement, students were asked if their technological skills improved for academic purposes. Learners perceived that their abilities were in fact better after they used storytelling since 88.1% of them strongly agreed and agreed with this statement. This is aligned with what was found by [55], who stated that digital storytelling is effective in developing academic skills in students, and it also provides a real way to effectively apply technology inside and outside the classroom.

5   Conclusion

Digital storytelling had a positive impact on EFL higher education students' writing skills since the participants in the experimental group showed a significant improvement in grammar and vocabulary. Indeed, storytelling enhanced students' knowledge of the past tense and vocabulary for writing narrative projects about vacation, travel and adventure, and places.

Students perceived that digital storytelling was a useful strategy to develop their EFL writing skills since they were more engaged in pertinent activities that allowed them to demonstrate their knowledge when designing narrative projects with Storybird. Likewise, there was a positive impact on students' motivation as they believe

that this strategy encouraged them to participate in the activities related to the writing course.

Digital storytelling by using the Storybird tool allowed learners to be creative while writing narrative activities so that they could present their projects in an innovative and dynamic way. In addition, this tool favoured the improvement of students' technological skills for academic purposes and gave them the opportunity to do genuine writing tasks by means of multiple art options provided by Storybird.

Based on the results of this study, we recommend instructors to select suitable digital strategies along with adequate materials and a pedagogically sound methodology that inspire students' creativity and motivation for promoting EFL writing skills through the use of technology. Furthermore, future research might consider the use of digital tools like Storybird for enhancing not only writing but also other language skills.

6 Acknowledgement

7 References

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