

Assessing ESL Learners in Narrative Writing with Gamification through Storium: A Quantitative Study

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Abstract

The purpose of this study was to investigate the use of the gamification approach from Storium to improve the narrative writing abilities of students learning English as a Second Language (ESL). Learners generate an interest in both studying and playing. Also, the study investigates the evaluation and practicability of gamification for English as a Second Language (ESL) students. The present study employs quantitative research method to study the findings. They range in age from 17 to 20 years old and speak five different languages as their mother tongue respectively. There were 72 participants from B.Tech who took part in this study. In the study, both the content and mechanics of narrative writing skills were evaluated. The characteristics included are sentence structure, tale grammar, story cohesiveness, vocabulary, spelling, capitalization, and punctuation. Learning through games was demonstrated to be effective in improving students' narrative writing skills, as well as their ability to learn. The research also recommends in other areas to improve and enhance their subjects from the point of view of the learner.

Keywords: Gamification, quantitative method, ESL students, engineering students, storium, content, mechanics of writing

Introduction

Gamification, originally derived from the commercial sector, has been adopted and studied extensively in educational contexts, making it a prominent study area in recent years. For an extended period, it has been effectively utilized for commercial objectives. Game components, such as objectives, rivalry, incentives, narrative, and advancement, are employed in corporate environments to retain clients within the system. It is largely utilized as an instructional tool to promote learner engagement and accomplishment. Technology permeates several aspects of children's life, much like it does in many other sectors of society. One prominent impact of technology on children's lives is the influence of games. In recent times, games that involve physical exertion in larger outside areas have been substituted by the opportunities presented by the digital realm (Hazar, Tekkursun Demir & Dalkiran, 2017) [1].

The integration of digital games into education is unavoidable due to their broad appeal. Consequently, several research investigations have been undertaken to explore the utilization of digital games in the field of education. The aforementioned research has indicated that digital games enhance cognitive abilities (Homer, Raffaele, Ober, Plass & Ali, 2018) [2]. It has been shown that vocabulary instruction is made easier by the use of this tool (Chen, Tseng, & Hsiao, 2018) [3], and it also serves as a pre-organizer of significant importance (Denham, 2018) [4]. Digital games enhance problem-solving abilities (Rugoero & Green, 2017) [5] and promote collaborative learning (Sung &

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Hwang, 2018) [6]. Furthermore, digital games are commonly employed in the domains of gamification and game-based learning (Cózar-Gutiérrez & Sáez-López, 2016; Karagiorgas & Niemann, 2017) [7,8]; (Khan, Ahmad, & Malik, 2017; Nolan & McBride, 2013; Pesare et al., 2016) [9–11]. Despite their distinct characteristics, these two categories are frequently confused with each other (Prensky, 2007) [12].

The impact of gamification on the acquisition of foreign languages has been extensively studied (Flores, 2015; Lin, 2014) [13,14]; (Osipov, Nikulchev, Volinsky & Prasikova, 2015; Osipov, Volinsky, Nikulchev & Prasikova 2016) [15,16]. A multitude of academics have attempted to scrutinize the efficacy of gamification in the realm of language acquisition and pedagogy. Cahyani's (2016) [17] research demonstrates that gamification is an effective strategy for fostering learner engagement in language lessons. Furthermore, Shatz's (2015) [18] research demonstrates the importance of gamification in encouraging risk-taking during the language learning process. In recent years, experts have expressed worry about the correlation between gamification and writing skills. Lam, Hew, and Chiu (2018) [19] conducted a study to examine the impact of integrating gamification with blended learning on the argumentative writing abilities of learners. Their findings indicate that gamification has a substantial positive influence on learners' writing accomplishment.

Guasch et al. (2013) and Cook, Gremo, and Morgan (2017) [20,21] discovered a correlation between gamification and the teaching of one's native language. These studies are unrelated to the field of Turkish language teaching. There is a lack of research on the correlation between writing and gamification in Turkish language instruction. This is considered a significant drawback because writing skills are the final aspect of language arts and thus provide a challenging procedure for pupils (Demirel & Sahinel, 2006) [22]. Students acquire a negative disposition towards writing tasks due to the intricate and challenging nature of the writing process, which encompasses several writing abilities (Maltepe, 2006; Urgan, 2007) [23,24]. This challenge may be surmounted by providing students with material that is delivered with excitement and eagerness (Gocer, 2010) [25]. Tompkins (1982) [26] identifies enjoyment and encouragement as two of the seven reasons for writing. Additionally, Tompkins emphasizes the significance of motivation. Regarding this matter, educational settings that prioritize students' ability to articulate their thoughts and ideas rather than solely focusing on knowledge acquisition are Writing instruction is crucial (Gocer, 2014) [27]. According to Gogus (1978) [28], a writing method that focuses on students' emotions and personal experiences would enhance their drive to write.

Linking digital gamification to the writing process enhances creativity and fosters an engaging classroom atmosphere (Hibbard, 2015) [29]. It promotes a mindset that is receptive to new ideas and encourages students to embrace innovation (Cahyani, 2016). Additionally, it enhances problem-solving abilities (Gee, 2013; Kapp, 2012) [30,31]; (Kayalı & Yilmaz, 2017; Ozer, Kanbul, & Ozdamli, 2018; Urh, Vukovic, & Jereb, 2015) [32–34]. Furthermore, it facilitates collaborative learning (Buchinger & da SilvaHounsell, 2018; Halloluwa et al., 2018; Sánchez-Martín, Cañada-Cañadave, & Dávila-Acedo, 2017) [35–37]. Furthermore, the students exhibit a strong drive to engage in writing activities, as evidenced by the works of Gee (2008) [38], Kingsley and Grabner-Hagen (2015) [39], Lam, Hew, and Chiu (2018) [40], Olson (2010) [41], and Ozer, Kanbul, and Ozdamli (2018) [42].

RESEARCH OBJECTIVES

The following research objectives will help ESL students enhance their narrative writing skills through gamification:

- To assess the narrative writing skills of ESL students using gamification.
- To determine the feasibility of using gamification as a method for improving narrative writing abilities.

Research Questions

The following questions are to guide the study:

- Can the implementation of gamification techniques assist ESL students in improving their proficiency in narrative writing?
- To what extent is gamification viable for narrative writing?

Method

This study includes a quantitative method. Data were obtained from the test as scores and then statistically assessed to determine the narrative writing. The learners were given need analyses and later researcher found that the students were not strong in narrative writing. Later gamification was introduced to make students learn and write narratively with the help of this method. Pre-test and post-test were conducted and then analysed using the tool to know the result of the study.

Sample and Sample Size

The survey included 72 respondents who are now in their second semester as Bachelor of Technology (B.Tech) students. These individuals were mostly selected based on their intention to study English as a second language. Only a small number of the participants possessed a high level of proficiency in the English language, and they frequently exhibited errors in their written work. The participants were not familiar with the learning approaches employed in this study. The participants exhibited a lack of familiarity with the entire method. The age range of the learners was from 17 to 20, with the majority falling within the 18-year-old Figure 1.

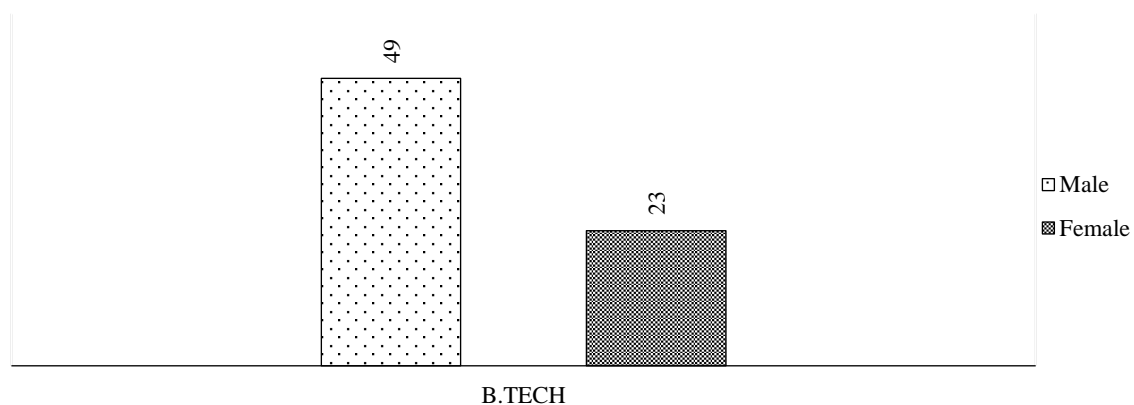


Figure 1. Participants from B.Tech.

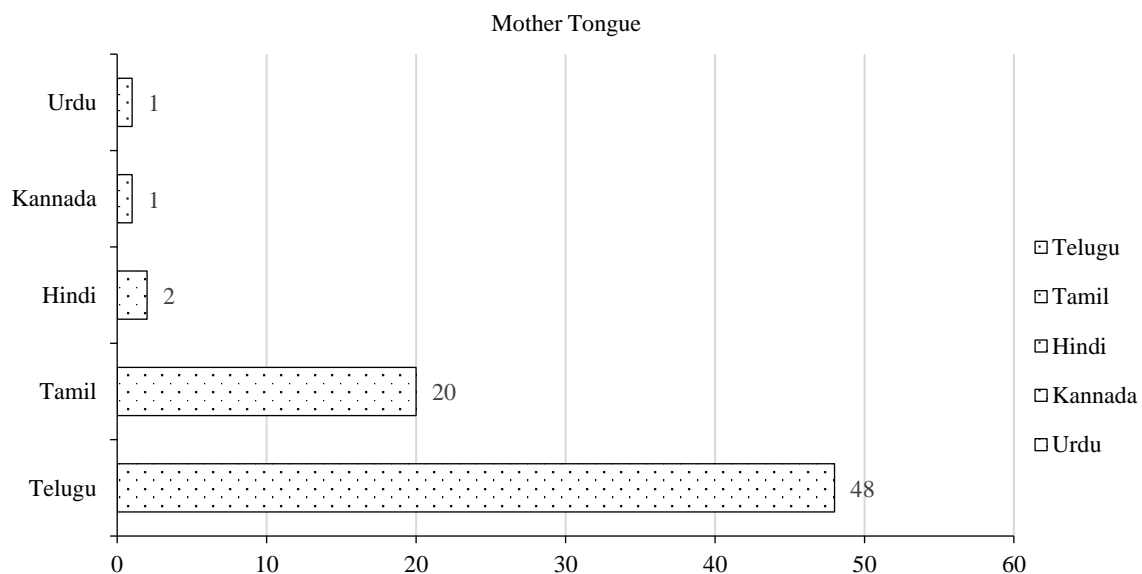


Figure 2. Multilingual participants.

This research employed the fundamental purposive sampling technique. A random sampling method was used to choose the whole population. Participants were directed to orally describe their written work by engaging in activities designed for practice. The researcher employed the Storium program to facilitate online learning using the gamification approach. A total of 72 individuals took part in this study, with 23 being female and 49 being male. The study involved individuals who were proficient in many languages. A total of 48 students reported Telugu as their mother tongue, followed by 20 students who reported Tamil as their mother tongue. Additionally, 2 students reported Hindi as their mother tongue, while 1 student reported Kannada and another reported Urdu as their mother tongue Figure 2.

Research Design and Procedure

The researcher presented a concise overview of the study's goal to the participants, and next directed their attention towards a task on storium aimed at enhancing their proficiency in narrative writing. Based on the findings, the researcher discovered that the learners had a deficiency in narrative writing skills. Subsequently, the researcher implemented the gamification technique as a means to augment their writing proficiency.

A description of Storium and its application in implementation is provided below: Game setup: First, users access the game via the "Game" option on the main page. Users pick an avatar and theme at this step. Two users are required to play the game. One user controls the game as the "narrator." Another user plays the game set up and led by the narrator as the "player". The storyteller creates a game by adding details in the "green room." In this phase, the storyteller can open the game to everybody. Users from across the world may now join the game using this app. Additionally, the narrator might restrict the game to specific participants. The game may send emails or add users using their usernames. In this research, the narrator creates the game and targets certain users. The narrator lists game obstacles and convenience cards. The storyteller enters players into the game. Game start: Currently, the narrator and players are ready to play. This process includes introduction, development, and outcomes. The narrator guides the entire procedure. Game begins with narrator's choice of narrative. Narrator writes tale introduction. The length of the paragraph is selected by the storyteller, with no fixed research limitations. After the tale begins, players take action. Each participant must complete the tale, which involves more than just writing. Digital gamification features are introduced at this level. The player must consider barriers before making a move after the narrator plays the game. Barrier is split. Barriers may include operational challenges, such as doing challenging tasks. The player must accomplish this step while moving. The figure who hinders movement is another hurdle. When making a move, consider the character's difficulties or desire. Players select the right difficulty level for their qualities before making movements. Players select a varying difficulty level. The narrator can simplify the players' task by providing "asset card." Placing the "target card" in the designated element informs the player of the next step. The player advances at the specified difficulty level with narrator assistance. Repeating the process. The narrator adds plot elements based on player actions. Thus, the process repeats. Game Ending: At the end of each episode, the narrator can assess player comprehension. Players were considered successful if they used their powerful traits to overcome obstacles and complete the tale as intended.

RESULTS AND DISCUSSION

The study's findings have been summarised below with the assistance of Excel to determine the progress made while the intervention was being carried out. The results of the test showed that the students were involved both in narration and playing a part to improve their narrative writing skills.

In pre-test, storium was introduced to the students and asked them to play the game in groups. The narration part was done by the researcher. In Pre-test students were not able to understand how to use storium to play and learn. They just started writing in the game. The first attempt they did in the storium was observed and the results were taken for pre-test. The researcher focused on content and mechanics in the narrative writing from the results.

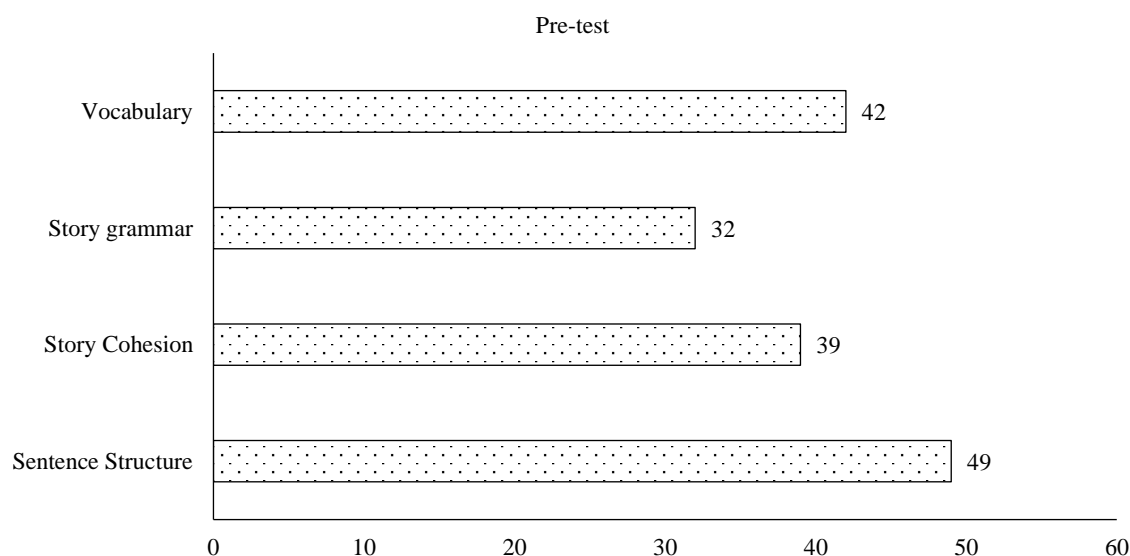


Figure 3. Pre-test results of Content from the Storium.

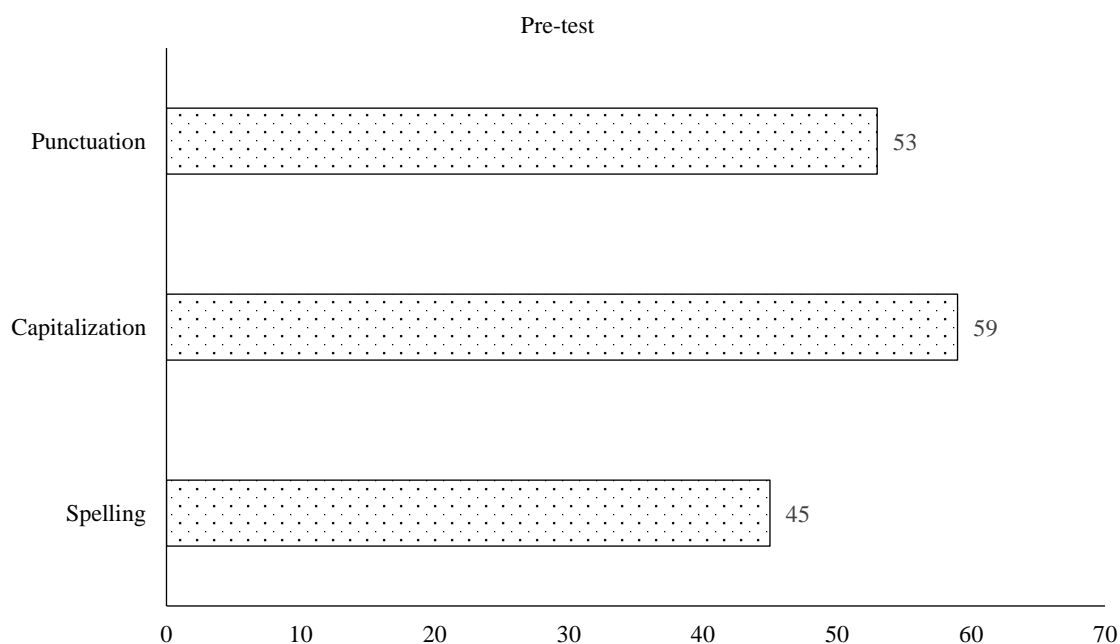


Figure 4. Pre-test results of Mechanics from the Storium.

The content and mechanics of narrative writing were assessed using data from the storium in Figure 3 and Figure 4. In this case, the students performed the least well in the content area, with 32 having good story grammar, 39 having story cohesion, and 42 being able to construct a coherent sentence structure while playing in the storium. In the mechanics area, 49 students wrote without making any spelling errors, 53 placing the correct punctuation when writing the story, and 59 capitalizing words where necessary.

Figure 5 and Figure 6 evaluated the proficiency of narrative writing by analyzing the data obtained from the storium. The pupils' writing proficiency was enhanced, as seen by the graphs. A total of 71 students successfully mastered sentence punctuation by engaging in interactive gameplay and practice sessions on Storium, a platform dedicated to the mechanics of narrative storytelling. 70 students began correctly arranging capital letters in their proper positions. A total of 59 pupils

demonstrated improvement in their spelling skills throughout the act of writing. During the evaluation, a total of 68 students demonstrated their ability to use diverse and novel terminology into the tale. A total of 57 students demonstrated improvement in their understanding and application of narrative grammar, while 69 students exhibited better proficiency in tale cohesiveness. A total of 66 pupils demonstrated proficiency in constructing their sentence structure with precision.

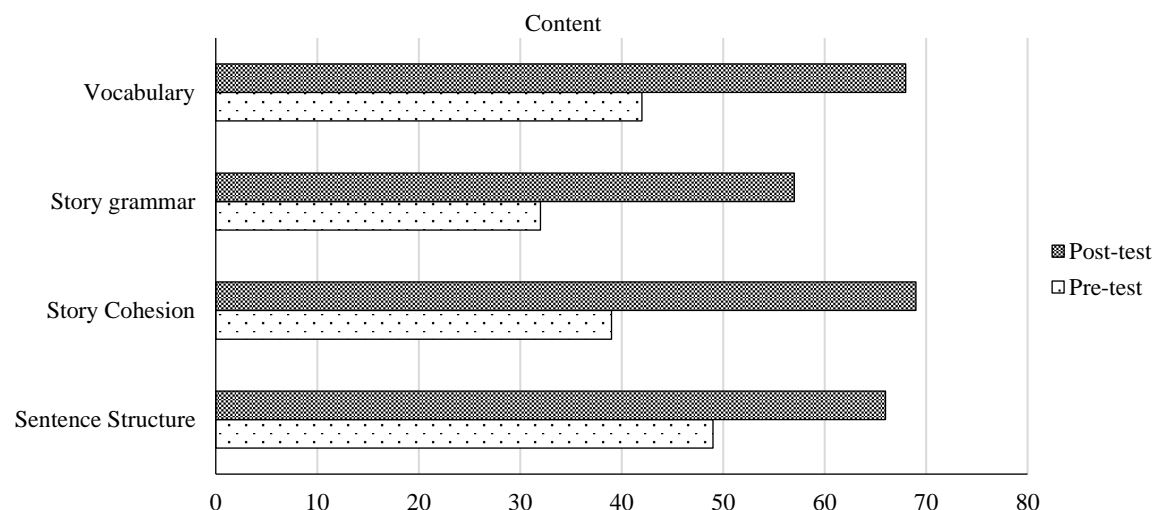


Figure 5. Pre-test and Post-test results of Content writing.

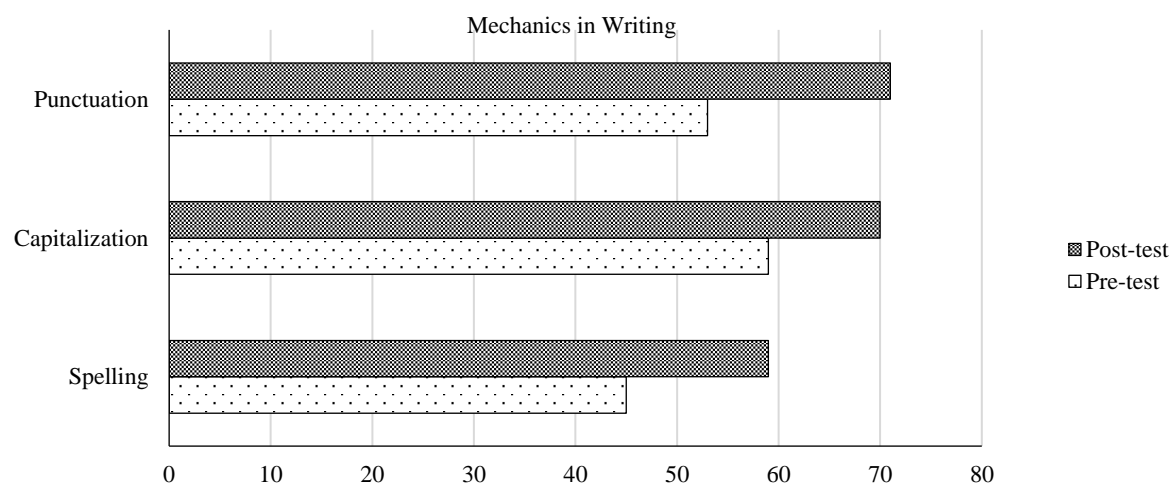


Figure 6. Pre-test and Post-test results of mechanics in writing.

When comparing to pre-test and post-test post-test results have improved better than in Pre-test. This finding demonstrates that gamification may be utilized to evaluate the narrative writing skills of ESL students. The incorporation of gamification significantly enhances students' engagement in both playing the game and writing the tale. Storium is a cost-free digital game that is accessible to individuals worldwide. This gamification approach is highly practical for both educators and students to enhance their writing abilities, foster connections among their peers, and enhance their vocabulary. It is a simple task to both narrate and play, so much so that even kids may engage in these activities and write together with their peers. Storium is a tool that utilizes gamification to improve the narrative writing skills of B.Tech students.

CONCLUSION

The main aim of this study is to evaluate the feasibility of using gamification, specifically the Storium application, for narrative writing. The study employed quantitative analysis to test the content and

mechanics of narrative writing before and after the implementation of gamification. The results indicate a significant improvement in students' writing skills through the use of gamification. However, it is important to note that this study had limitations, such as the small sample size of 72 ESL students. Future studies should aim to increase the number of participants and utilize parametric statistics to enhance various writing skills in different languages.

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