

The Effect of Gamification of Four-Grade Students' Writing Competency

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ABSTRACT

This research aims to determine the effect of gamification on fourth grade students' writing competence. This study was an experimental study conducted at SD N 4 Banyuasri, Buleleng, Bali. Using pretest posttest design, this study involved four grade students as the sample of the study. Data collection in this research used several instruments, namely tests (pre-test and post-test), lesson plans, and rubric for analyzing writing. The results of the study found that the post-test score ($M=82.86$, $Std=7.507$) was higher than the pre-test ($M=42.32$, $Std=14.368$). The t test results also confirmed that there was a significant difference in the mean score between the pre-test and post-test ($Sig\leq 0.05$). During the learning process, students look active and motivated while participating in the learning process in class. This study also present an important discussions towards using gamification in creating motivating and engaging learning environment.

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1. INTRODUCTION

A standard developed by EF (English First) to assess English competence among users worldwide is the EPI (English Proficiency Index). According to Padri et al., (2020) language competency is mastery of the language as a whole, especially grammar and vocabulary, including various meanings and nuances as well as spelling and punctuation and word grouping. Indonesia still does poorly on its yearly EPI (EFI, 2019). This is demonstrated by the English Proficiency Index (EPI) from EF. In the Low Proficiency category, Indonesia is ranked 81st in 2023. Additionally, Indonesia considers English to be a foreign language, in contrast to developed nations like the Netherlands that do so. As a result, over the past ten years, Indonesia's EPI score has decreased by 65 points. Language is used by people to communicate their thoughts, feelings, and emotions. The four basic abilities that are acquired when learning a language, particularly English, are speaking, listening, reading, and writing. These skills are further reinforced by additional elements like grammar and vocabulary. However, of the four skills that are now in use, writing is seen as a fundamental and challenging talent that language learners must acquire (Pingmuang & Koraneekij, 2022)

Learning to write also has a long process of doing so, including the process of learning to read and speak. It has also been stated that writing is not an activity that can be done spontaneously, but rather, there needs to be a conscious effort to write by considering the way of communication and organization (Hadi & Athallah, 2020). According to Fajrina et al., (2021), writing is an activity to communicate in the form of delivering messages (information) in writing to other parties by using written language as a tool or media. Hasanudin et al., (2021) mentioned that as the 21st century moves forward, the field of teaching and learning English is becoming more technology-oriented.

The use of learning media in the teaching and learning process is an effort to increase the effectiveness and quality of the learning process which can improve the quality of student learning outcomes asserts Hadi & Athallah, (2020). Teachers must increasingly use technology which are innovative, relevant, and efficient ways to impart knowledge and writing skills. This is necessary to meet the demands and expectations of students, who are the center of learning. One example is the teacher can provide students with material and assignments through gamification (Lin, 2022). Gamification is a learning approach using the elements in games or video games with the aim of motivating students in the learning process and maximize feelings of enjoyment and engagement with the learning process (Samosa, et al., 2021). Furthermore, gamification proves versatile across various educational levels and can bolster students' language sub-skills (Permana, et al., 2024). Thus, the intended application of

gamification is the use of game media based on initial writing lessons which aims to attract students' interest in carrying out learning.

Studies had been carried out in identifying how gamification could enhance students' English skills. (Abusa'aleek & Baniabdelrahman, 2020; Marin-Pacurucu & Argudo-Garzón, 2022; Samosa et al., 2021; Tahir et al., 2022). However, there is still limited gamification research on writing skills carried out at the elementary school level. Gamification is deemed appropriate to be applied at the elementary school level considering the characteristics of students who are still considered young learners. Young learners will be motivated to learn if they are involved in the learning process while playing (Courtney & Graham, 2019). Therefore, to fill the existing gap, this research aims to identify the influence of gamification on students' writing abilities in elementary schools.

2. METHOD

This research used a quantitative research approach. with pretest-posttest design. The sample of the study were selected purposively. In conducting the study, students were given a writing performance test to get pretest scores. After obtaining the pretest score, students were given a treatment. The treatment of gamification was done by using the Sacil English language learning application. After being given the treatment, students were given a test to get posttest data.

In collecting the data, a writing test, rubric for analyzing writing and lesson plan were used. A descriptive and inferential statistics were done in analyzing the data. The researcher formulated the following hypothesis

H1: there is significant mean difference between pretest and posttest of students' writing score

3. RESULTS AND DISCUSSION

3.1 Results

After conducting pretest, treatment and posttest, students' writing score are calculated. Table 1 presents the data distribution of students pretest and posttest.

Table 1.
Data Distribution

Test	Score	Frequency	Percent
Pre-Test	20	2	7.1
	25	3	10.7
	30	3	10.7
	35	5	17.9
	45	6	21.4
	50	1	3.6
	55	3	10.7
	60	1	3.6
Post-Test	65	4	14.3
	75	10	35.7
	80	5	17.9
	85	3	10.7
	90	8	28.6
	95	1	3.6
	100	1	3.6

Based on the results of the pre-test table above, the minimum score is 20 with 7.1% from 2 students, and the highest score is 65 with 14.3% from 4 students. Meanwhile, for the post-test score, the means score is 75 with 35.7% of 10 students, and the highest score is 100 with 3.6% of 1 student. Based on the table above, it was found that 28 students had pre-test scores below the minimum (KKM) meanwhile no students had post-test scores below the minimum (KKM).

After identifying the data distribution, a descriptive analysis of pretest and posttest were conducted. Table 2 presents the summary of descriptive analysis.

Table 2.
Descriptive Analysis

	Minimum	Maximum	Mean	Std. Deviation
Pre-Test	20	65	42.32	14.368
Post-Test	75	100	82.86	7.507

The results of calculations using SPSS on pre-test data in the posttest showed a mean score of 42.32, a minimum score of 20, a maximum score of 65, and a standard deviation of 14.368. Meanwhile, in the pretest the mean score is 82.86, minimum score is 75, maximum score is 100, and standard deviation is 7.507. Based on the descriptive test, post-test score is higher than pretest score. To confirm if the mean difference is significant or not, a paired sample t test was conducted. First we assessed the normality distribution of the data as shown in Table 3.

Table 3.
Normality Test

Data	Shapiro-Wilk
Pre-Test	0.070
Post-Test	0.001

Based on the results of the pre-test and post-test normality test, it can be seen that the significance value for the Shapiro-Wilk test for pretest and posttest are > 0.05 these indicate that the data are normally distributed. Therefore, we continue to paired sample t test.

Table 4.
Paired Sample t Test

	Mean	Std. Deviation	t	df	Sig. (2-Tailed)
Pair 1 Pre- Test-Post-Test	-40.536	17.604	-12.185	27	.000

Based on the results of the t-test above, a significant value of $0.000 \leq 0.05$ is obtained, so the hypothesis is accepted. Therefore, gamification significantly influence students' writing competency.

3.2. Discussion

The research results show the mean score of pre-test score was 42.32, while in post-test 82.86. A paired sample t test confirmed that the mean difference between pretest and posttest are significant (Sig. 0.000). Several studies had also confirmed that gamification significantly influence students' English skills. In teaching writing skills using gamification can enhance the learning process, making it easier and more enjoyable for students to learn how to write, and can help construct their writing process (Mutholib et al., 2023). Zhihao and Zhonggen (2022) assert that gamification is able to promote students' writing and creating engaging writing activities.

Writing in English for elementary school children is not an easy thing. Children tend not to be able to carry out more complex tasks (Jefiza, 2016). Apart from that, issues such as limited vocabulary and differences in grammar rules between Indonesian and English will make the writing process more complicated. However, teachers need to realize that it is important for children to have writing skills as part of literacy and numeracy (Mudra, 2020). Gamification can be a bridge for teachers in teaching basic English writing skills. Gamification has also been researched to increase student learning motivation (Rahmani, 2020). Motivation to learn English, especially at elementary school level, is very important considering that English is often considered a difficult subject. Creating fun English learning from an early age is important so that students are no longer demotivated in learning English.

According to a study by Aljraiwi (2019), gamification has been proven to be successful in raising young learners critical thinking and academic abilities. When instructing young learners in English, educators must carefully consider the most effective teaching methods. Language instructors need to be aware that teaching English to adults differs from teaching it to children in terms of approaches and strategies (Taghizadeh & Hasani Yourdshahi, 2020). An unsuitable teaching style can provide a bad learning atmosphere and possibly damage students' perceptions of the subject matter. Because of its features that are appropriate for the cognitive growth of young learners, games are viewed as an active method of teaching (Godwin-Jones, 2014).

Gamification is a form of applying technological innovation in learning. However, teachers need to pay attention that the essence of gamification is to create a fun learning atmosphere supported by game elements (Deterding et al., 2011). Teachers need to ensure that students not only have fun playing but can gain language knowledge from the game. The results of this research show the importance of applying technology to learning. The presence of technology must be able to be utilized by teachers in supporting the language teaching and learning process. In order to be able to apply technology in accordance with learning objectives, teachers need to be supported by readiness, training and technical and non-technical support (Burston, 2014; Hsu, 2016).

4. CONCLUSION AND SUGGESTION

This study aimed at finding the effect of gamification towards students' writing competency at elementary school level. Through experimental design, this study found that students' posttest test of writing competency was higher than pretest. The results of paired sample t test confirmed the significant value of 0.000 which means that the hypothesis is accepted. This study concluded that gamification significantly effected students' writing competency. The current study is limited to the number of sample and the variables. Further study is encouraged to conduct similar study on larger samples and different variables. Further study is also encourage to identify how gamification could enhance students' language skills from the perspective of teachers and how they perceive the use of gamification in language teaching.

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