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The Influence of the Gemification Method on Vocabulary Development in Primary Schools

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Abstract	English in Indonesia is studied as a foreign language since school age to help prepare the younger generation to face the global world. However, the uneven education system in cities and rural areas is one of the challenges in teaching English to students. As a result of this challenge, students' motivation to learn English is low because it is considered boring and difficult to learn. The difference in English language skills of elementary school children in urban and rural areas is the reason for the implementation of this English language training service program for elementary school students. This program aims to improve English skills, especially vocabulary development and speaking skills for elementary school students. Teaching using the gamification method is an option that is considered effective for teaching and training students to learn English because it can increase children's interest and motivation through playing snakes and ladders, guessing words, and singing. The data collection techniques used are participant observation, pre-test, and post-test.
Keywords	*Gamification; English; Elementary School*

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1. INTRODUCTION

The role of English in the development of the era is an important thing that needs to be prepared for the younger generation to face global challenges. This is in accordance with Lauder's writing (2008) quoted by Khomsin and Rahimmatussalisa (2021) in their journal, which states "In this increasingly advanced era, English is a very important language because foreign languages have an important role in the development of technology, information, knowledge, and the economy." An increasingly modern life with sophisticated technology is closely related to the use of English. Apart from the technological aspect, English also needs to be learned in order to compete in the world of global communication. Education is a bridge so that the younger generation can be intellectual, have character, and be competitive. This is the reason for the importance of English education starting from early childhood which is generally taught in every school since elementary school. In the journal Setyaningsih

(2023) citing Kumala's writing (2022) states that English speaking skills in early childhood are not just an important aspect but an essential foundation in the education process that requires serious investment and attention. This is because early childhood is in the process of forming the basis of cognitive and social development where children have the ability to absorb language more quickly due to high sensitivity to

English learning is divided into four aspects of learning, namely speaking, reading, writing, and listening (Naiborhu, 2019). Each aspect is supported by language elements such as vocabulary, grammar, and pronunciation according to the context of the discussion (Naiborhu, 2019). Speaking and writing skills can provide a competitive advantage in the world of work which is certainly very useful and even has the opportunity to open a career at the international level. This is one of the reasons why English learning is important for the younger generation as a provision to face the challenges of the global world. English has been a part of the Indonesian education system for a long time, which was initially only given to higher levels, but over time the increasing need and popularity have resulted in the curriculum for learning English changing (Faridatunnisa, 2020). So that English is now starting to be included in the curriculum for early childhood learners to improve their English language skills from an early age, namely elementary school.

Although English learning has been included in the school curriculum for a long time, it turns out that there are still quite a lot of areas that do not get equal learning facilities. More often, remote areas do not get adequate facilities, either from a lack of teaching staff or poor school facilities. In addition, different teaching systems between urban and rural areas result in different learning outcomes. For example, when in urban areas they get complete facilities such as blackboards, textbooks, internet, and competent and creative teachers, students are more enthusiastic about learning because of the many learning methods used. While in rural areas, school facilities are still incomplete, some do not have textbooks, there is no internet and the teaching methods are boring. Because of this, English skills do not run as they should, resulting in students not being able to communicate or write in English even in simple elements.

Discussing English teaching methods, of course, there are many methods that can be used to make students interested and motivated. Especially in an increasingly modern era that has many creative and sophisticated technology systems that can support teaching and learning activities. There are many variations of teaching methods including using educational games to train students' skills. However, the educational game method raises debate about its effectiveness and relevance, this was conveyed by Angraini et al (2023) and quoted by Setyaningsih, (2023). Therefore, it is

important to learn more about how the educational game method can be implemented into teaching and learning activities to maximize learning and training of English skills in early childhood students. Educational game or gamification methods are personally assessed as an effective effort to teach early childhood because it adapts to the natural characteristics of children themselves who enjoy interesting forms of play or activities. Play activities carried out by children have unique characteristics including motivation that comes from within the child, flexible, high student activity, creates positive emotions, is fun, and teaches certain skills and knowledge according to the objectives of the game (Legowo, 2022). When implementing gamification in learning, there are important components that need to be considered and several obstacles that must be faced. An important component in using the gamification method is the positive attitude and readiness of teachers to teach, design, and practice games according to learning objectives. Meanwhile, the obstacles that are often encountered in this method are access to media and tools that may be incomplete or unavailable in the learning environment, as well as the teacher's optimistic attitude towards the use of games, and the possibility of feelings of boredom expressed by students towards learning activities. In addition, many teachers or prospective teachers do not yet have an understanding of the gamification method and are not experts in designing games (Legowo, 2022).

Based on the background and problems above, the research team conducted a community service activity by teaching elementary school children in one of the villages in Banyuwangi to train English skills, namely related to vocabulary development and speaking skills through learning using the gamification method. The research team had previously conducted research to understand how to use the gamification method as well as design games and feedback.

2. METHODS

Research Design

This study uses a quantitative design with a simple experimental approach, namely pretest-posttest in one group (one-group pretest-posttest design). This approach was chosen to measure the effectiveness of the application of gamification-based learning methods in improving elementary school students' English vocabulary mastery. This study aims to compare students' abilities before and after the gamification method is applied to determine the extent of the changes that occur.

Research Subjects

The subjects of this study were elementary school students in grades 1-6 (mixed)

in Sumber Nanas Village, Banyuwangi. The total number of students was 20 people. The object of this study was the implementation of the English learning process and vocabulary introduction training. The data collection techniques used were participant observation, pre-test, and post-test. The research team was directly involved in the activities being observed as a source of data and sharing. test before and after the gamification method was carried out.

Research Procedures

The steps taken are:

1. Participatory observation, namely the research team is directly involved in the activities being observed. Participatory observation is a research method in which the research team not only observes a phenomenon, but is also actively involved in the daily activities of the group or community that is the object of research.

2. Distributing pre-tests before giving the material. The activity of distributing pre-tests before starting learning is a strategic step taken by educators to optimize the teaching and learning process. Through pre-tests, teachers can get a clear picture of the level of initial understanding of students regarding the material to be taught. This information is very valuable for designing learning activities that are relevant and tailored to students' learning needs. In addition, pre-tests can also motivate students to study harder because they know the extent of their mastery of the material to be studied.

3. Providing learning materials with the gamification method. The application of gamification methods in the delivery of learning materials creates a more interactive and enjoyable learning experience for students. Through gamification, learning material that is often considered boring can be presented in a more interesting way, thus increasing student learning motivation.

4. Distributing post-tests to test students' abilities after the gamification method is carried out. The post-tests given include questions that test conceptual understanding, problem-solving skills, and application of the material that has been studied.

After data collection, the research team analyzed the data based on the results of the worksheets and students' speaking skills, then drew conclusions related to the impact of using the gamification method in training children to improve their English skills, especially vocabulary development and speaking skills.

Data Analysis Techniques

The data obtained were analyzed using SPSS software. The analysis process began by testing the validity and reliability of the pre-test and post-test questions to ensure that the measurement instrument was suitable for use. Furthermore, statistical tests were conducted using paired t-tests to determine significant differences between the pre-test and post-test results. The null hypothesis (HO) states that there is no significant difference between the pre-test and post-test results, while the alternative hypothesis (H1) states that there is a significant difference. Decisions are made based on the p-value ($p<0.05$). The results of the analysis are used to draw conclusions about the effectiveness of the gamification method in improving students' English vocabulary mastery.

3. FINDINGS AND DISCUSSION

Researchers present research results using data analysis using the t test formula as material to strengthen the results. This research aims to determine the effect of gamification methods in improving students' vocabulary skills.

Table 1. Skor pre-test dan post-test

Pre-Test	Post-Tes
40	70
50	80
50	60
70	70
50	60
30	70
40	40
70	80
80	80
40	30
50	50
40	40
40	30
60	50
70	70
30	50
60	70
50	60
60	60
50	50

The data contained in table 1 was analyzed using the t-test with the help of statistical software. The results of this analysis are presented in table 2, table 3, and table 4.

Table 2. Pre-test and post-test descriptive statistics

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	51.5000	20	13.86969	3.10136
	POSTTEST	58.5000	20	15.65248	3.50000

Table 3. Pre-test and post-test correlation

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRETEST & POSTTEST	20	.569	.009

Table 4. Pre-test and post-test t-test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PRETEST - POSTTEST	-7.00000	13.80313	3.08647	-13.46006	-.53994	-2.268	19	.035

In table 1, it can be seen that the pre-test and post-test scores show quite significant differences in scores for several students. For example, some students showed significant improvement, such as a student with a pre-test score of 40 who improved to 70 on the post-test. However, there are also cases where student scores remain the same or even decrease, for example students with pre-test and post-test scores that remain at 40 or students who experience a decrease from 40 to 30. This variation shows that the application of the gamification method has a significant impact. different for each individual.

The results of the t-test analysis produced through statistical software provide a quantitative picture of the difference in average pre-test and post-test scores. This analysis aims to find out whether the differences seen descriptively are statistically significant. The correlation between pre-test and post-test scores was also calculated to understand the relationship between students' initial abilities and the improvements achieved after implementing the gamification method. If the

correlation shows a high number, this indicates students with good initial abilities tend to show greater improvement.

Based on the t-test results, the null hypothesis (H0) will be accepted if there is no significant difference between the pre-test and post-test results, while the alternative hypothesis (H1) will be accepted if there is a significant difference. If the p-value is less than 0.05, then the difference is significant, indicating that the gamification method has a significant impact on the development of students' English vocabulary. Thus, these results can be used to draw conclusions regarding the effectiveness of the gamification method in improving students' mastery of English vocabulary in Sumber Nanas Village, Banyuwangi. The application of gamification-based learning methods has proven effective in increasing students' mastery of English vocabulary, as reflected in the increase in pre-test and post-test scores. A study conducted by Hamid and Kadirun (2023) shows that the use of the gamification-based Hangman application significantly increases students' vocabulary skills through an interactive and fun approach. This is in line with the results of this research, where gamification elements such as challenges, rewards, and active student involvement create a more interesting learning atmosphere. Thus, this method is able to motivate students to learn more enthusiastically.

Other empirical evidence also supports the findings of Sari and Nurani (2021), who identified the effectiveness of gamification-based applications such as Quizizz and Kahoot in improving students' English skills through direct feedback features and competitive elements. This approach is relevant to the results of this research, namely that the gamification method succeeded in increasing student involvement in learning. In addition, findings from Putra et al. (2021) emphasized that gamification applications such as Wordwall can support online learning by providing effective and enjoyable learning experiences, especially during distance learning periods.

Putri and Nugraha's research (2024) states in more detail that educational game design using a computing technology-based approach is able to improve students' language skills through user-friendly interfaces and interactive modules. This research also supports the findings of Wedayanthi et al. (2024), which highlights the importance of optimizing gamification-based learning in the implementation of the Merdeka curriculum, which has proven to be capable motivate students to learn more independently and effectively. Thus, this research makes a significant contribution to the literature regarding the effectiveness of gamification in developing elementary school students' English vocabulary in the digital era.

4. CONCLUSION

This research aims to measure the effectiveness of the gamification method in improving English language skills, especially mastery and speaking ability, in elementary school students. The research results show that the gamification method has proven effective in improving elementary school students' English language skills. This is shown by the increase in scores on the post-test compared to the pre-test. An increased motivation in gamification, such as challenges, rewards, and social interactions, successfully increases students' learning motivation. By adding basic knowledge through interesting game activities, students can easily remember and understand new understanding. Apart from that, the ability to speak by playing and interacting in English will help students become more confident in speaking.

Even though it is effective, the implementation of gamification still faces several challenges, such as limited resources and teachers' lack of understanding regarding this method. Therefore, teachers need to be given training to be able to design and implement gamification-based learning activities. There is support for facilities and infrastructure to support the implementation of gamification-based learning. Based on the results of this research, it is recommended that teachers use gamification methods more often in learning English and develop gamification-based learning materials to make them more interesting and in line with students' interests. Overall, this research makes an important contribution to the development of more effective and interesting English learning practices for elementary school students.

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