Gamification in Teaching Vocabulary

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Abstract. The objective of this research is to find out whether the use of Gamification in teaching Vocabulary is effective to increase students' English Vocabulary. This research is aquasi experimental research and it employed a purposes sampling technique sampling. The population of this research were all students of SD Negeri 12 Parepare as many as 287 Students, while the sample was class VA as an experimental class and class VB as a control class. The data were collected after pretest, treatment, and posttest. . The data analysis technique is the Independent Sample T-tests. Based on the results of inferential statistical analysis shows Sig (2-tailed) = 0.014 < 0.05, so H0 is rejected and H1 is accepted. Thus, it can be concluded that gamification can increasing student's English vocabulary in V grade of SD Negeri 12 Kota Parepare.

Keywords: Gamification, English Vocabulary, teaching

1   Introduction

English covers four skills namely listening, speaking, reading, and writing that we need to complete our communication. There are also three elements of language such as grammar, vocabulary, and pronunciation. But in this research the writer would like to focus on vocabulary because vocabulary is one of the important elements in building up English. Using the element, someone can communicate his or her ideas, emotions, feeling and desire. It is hard to people to express their ideas in English to other people without words.

Vocabulary is the most important thing to be learned. Learning a language will never be successful without learning and understanding the vocabulary. Having good knowledge of vocabulary supports students to master English. Vocabulary is one of the important aspects in learning a foreign language. A limited vocabulary has also a limited understanding in terms of listening, speaking, reading and writing. It is true that it might be impossible to learn a language without mastering vocabulary. Many students cannot read and understand a text which is written in English because they do not have a good command of vocabulary, or they doubt to express their idea in English because they have limited vocabulary in their mind.

Wilkin in Thornbury, (2007) stated that without grammar very little can be conveyed, without vocabulary nothing can be conveyed. This means that even if someone has

good grammar but will-if they don't know much vocabulary. Apart from that, supported by Ur, (1996) that vocabulary is one of the important things to be taught in learning foreign languages because it will be impossible to speak up without a variety of words. The various types of vocabulary mastery according to Yulia Elviza, (2013) are: (1) Active-productive mastery, including speaking and writing skills or also called encoding, namely the process of trying to communicate ideas, thoughts, feelings, through linguistic forms which means mastery verbally or speaking and writing; (2) Passive-receptive mastery, including listening and reading skills or also called decoding, which can be interpreted as understanding only found in the thought process. Without sufficient vocabulary, people cannot communicate and express their feelings both in oral and written form effectively. The more people master vocabulary the more they can speak, write, read and listen as they wish.

According to Djiwandono, (2011), indicators of active-productive mastery of vocabulary are shown in the form of the ability to name words according to the requested meaning, mention other words that have the same or similar meaning (synonyms) as a word, mention other words that have the opposite meaning (antonyms), and write the words according to the correct spelling. Furthermore, indicators of passive-receptive mastery of vocabulary are shown in the form of the ability to point out objects, choose words according to the meaning given from a number of words provided, choose words that have the same or similar meaning to a word (synonyms), and choose words that has the opposite meaning to a word (antonym).

The aspects needed in learning vocabulary according to Harmer, (2005) are, 1 Meaning, namely connecting words with appropriate objects or contexts. 2 Usage, namely knowledge of the use of the vocabulary. 3 Word formations, namely the ability to spell and pronounce words correctly, and 4 Grammar, namely using them in a grammatical form appropriate to the context. Suyanto (2015) stated that in order to communicate well and clearly, the ability to differentiate between language sounds is required.

English learning methods in elementary schools should be based on a communicative approach that involves students in daily English interactions. This method focuses on using language in real contexts, by integrating playing, singing, discussion and role-playing activities in the learning process, according to Dellar H and Hocking D, Innovation, LTP: "If you spend most of your time studying grammar, language Your English won't improve much. You will see the greatest improvement if you learn more words and expressions. You can only say a few things with grammar, but you can say almost anything with words." Thornbury, (2007)

A method that is increasingly popular in teaching is a gamification. Nick Pelling first used the term gamification in 2002 in a presentation at the TED (Technology, Entertainment, Design) event, Yusuf, (2016). Gamification incorporates game elements such as points, levels, challenges, and rewards into the learning context to increase student engagement and motivation. According to Millis,(2017) the Interest in

gamification in education and game-based learning has increased world-wide. Gamification has attracted the attention of numerous educators and scholars because it increases student engagement and motivation during the learning process. Learning English as a second language (ESL) through games was reported to be more effective than nongame learning, (Sailer, M,(2017). According to Pappas, (2013),gamification fundamentally changes the framework of assessment and evaluation, since in a gamified classroom environment the learning process becomes rather competitive, individualised and trackable.

In recent years, the use of gamification in learning has become a focus of research and development. Based on a search in the Eric, Sage, Science Direct and Google Scholar journal databases using the keywords gamification, game-based learning, educational games, and serious games, it was found that gamification in the Eric database was 60 articles, Sage 276 articles, Science Direct 648 articles and Google Scholar as many as 29,000 articles (Alsawaier, 2017). The same research results were found by Rosina Zahara, (2023) using the Hearzing Perish Journal search engine with the keyword "Global Educational Technology" taken from 2020-2023 from the results of 50 journal searches which showed that one trend was applied in various scopes. in the world of education is the topic of Gamification which gets a percentage of 31% or there are 10 journals related to this topic.

According to Kapp, (2012) that gamification is a set of principles and methods borrowed from games and applied to the non-game part of life. In principle, any process or activity can be gamified, but today it is mostly used in business, marketing, and education. Point accumulation schemes, frequent flyer schemes, prize draws all contain some form of motivational elements used in the game (points, gifts, feedback). According to Kapp K. , (2013)there are 2 (Two) types of gamification, namely a) Structural gamification is gamification that applies game elements in a series of online/digital learning materials to encourage students to access all learning materials without changing the form of presentation of learning materials itself. b) Content gamification is the use of game elements and game thinking patterns in learning material, this aims to ensure that the presentation of learning material resembles a game display.

The elements of gamification in learning according to S. Deterding, (2011) are Challenges and Missions, Point and Score System, Rewards and Prizes, Skill Levels and Progression, Ranking and Leaderboard, Time Mechanisms, Story or Narrative, Character or Avatar, Customization and Choice, Instant Feedback, Collaboration and Socialization, Adversarial Challenges, Repetitive Learning Experiences. From that finding this research examines the impact of using gamification on increasing the English vocabulary of elementary school students using gamification

2 Methods

This research uses Quantitative with a Quasi Experimental design in the form of a Nonequivalent Control Group Design. According to Isnawan, (2020), the two sample classes required for this research are the experimental class and the control class. The experimental class will receive treatment, while the control class usually does not receive treatment and uses a conventional approach. In this research, initial tests (O1 and O3) were carried out on both classes, namely the experimental class and the control class, before teaching to determine the students' initial scores. The final tests (O2 and O4) were carried out after teaching by applying Gamification (X1) in the experimental class and conventional models (X2) in the control class, to find out the students' final achievement. Then data analysis was carried out to conclude the research results. The research design according to Gay, (2018) is:

	Pretest	Treatment	Posttest
Experiment Group	O_1	X_1	O_2
Control Group	O_3	X_2	O_4

The populations in this research were all students at SD Negeri 12, Parepare City, totaling 287 students. The samples in this study were classes Va (22 students) and Vb (19 students) with a total of 41 students. The sampling technique was carried out using purposive sampling. According to Sugiyono., (2019) Purposive sampling is a sampling technique used to determine samples for certain reasons or considerations. This research was conducted in three stages: Pretest, Treatment, and Posttest. Tests and documentation are the data collection methods used. Data analysis used SPSS version 26, with descriptive statistical analysis techniques, as a data analysis method including calculating the N-Gain Score to determine the level of effectiveness of implementing Gamification and inferential statistical analysis, namely the Independent Sample T-Test.

3 Results and Discussion

3.1 Descriptive Statistical Analysis

Sugiyono (2019) states that descriptive statistics are used to analyze data by describing the data that has been collected as it is without intending to make general conclusions or generalizations. Based on the results of descriptive statistical analysis, a comparison of the average scores of the initial test and final test for the experimental class and control class was obtained.
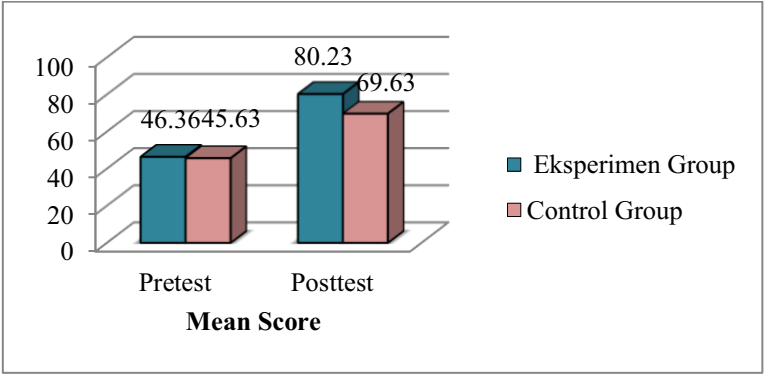
Based on the picture above, there are differences in the learning achievement of class V students at SD Negeri 12 Parepare City before and after being taught by applying Gamification in the experimental class and conventional models in the control class. The average student learning achievement in the experimental class for the initial test score were 46.36 and the final test score was 80.23. Meanwhile, in the control class the average student learning achievement for the initial test score was 45.63 and the final test score was 69.63. The results of the descriptive analysis show that students obtained better learning achievement in the experimental class compared to the control class.

To determine the level of effectiveness of Gamification in the experimental class and the conventional model in the control class, an N-Gain test was carried out. Based on the calculation of the N-gain Score test results on the pretest and posttest scores in the experimental class and control class, namely:

Group	Kriteria	Frekuensi
	High	8
Experiment	Medium	13
	Low	1
	High	3
control	Medium	11
	Low	5

Based on the table above, in the experimental class 8 students obtained N-Gain scores with high criteria, 13 students with medium criteria and 1 student with low criteria. Meanwhile, in the control class, 3 students obtained N-Gain scores with high criteria, 11 students with medium criteria and 5 students with low criteria. Thus, the experimental class got the most scores with high criteria and the control class got the most scores with low criteria. This proves that the applying of Gamification influences increasing the English vocabulary in class V SD 12 Parepare City. These data are consistent with research results from Benjamin Panmei, (2023) suggests that integrating gamification with English vocabulary learning can improve better than without the use of gamification for students in Thailand.

3.2 Inferential Statistical Analysis

According to Siyoto, (2015) explain that inferential analysis techniques are data processing methods that make it possible to make conclusions about research on a larger population based on the results of several samples. The results of inferential statistical analysis aim to answer the research hypothesis. Before carrying out inferential statistical analysis, prerequisite tests, namely normality and homogeneity tests, have been carried out. The data normality test is used to determine whether the data has a normal distribution according to the test criteria. If the significance obtained is > 0.05, then the data is normally distributed, and if the significance obtained is < 0.05, then the data is considered not normal. Normality test data for the experimental class and control class were obtained based on the results of data analysis using SPSS version 26 as follows:

Eksperimen		Control	
Pretest	*Posttest*	*Pretest*	*Posttest*
ρ-Value > α	ρ-Value > α	ρ-Value > α	ρ-Value > α
0.088 > 0.05	0.056 > 0.05	0.200 > 0.05	0.200 > 0.05

Based on the table above, the value obtained is greater than the significance level of 0.05, the results of data analysis using SPSS version 26 above show that the sample is normally distributed. Next, a data homogeneity test was carried out to determine whether the experimental class and control class were homogeneous. With the test criteria, data is considered homogeneous if the significance obtained is > 0.05, and not homogeneous if the significance obtained is < 0.05. Homogeneity test data for the experimental class and control class were obtained, as shown by the results of data analysis using SPSS version 26:

Kelas V α (0.05)
ρ-Value > α
0.242 > 0.05

Based on the table above, the value obtained is greater than the significance level of 0.05, the results of data analysis using SPSS version 26 above show that the sample is homogeneous. After the prerequisite tests are completed, hypothesis testing is carried out. In this research, the Independent Sample T-Test was used to test the hypothesis. The results of hypothesis testing carried out using the Independent Sample T-Test show that the significance (2-tailed) < 0.05, namely (0.014 < 0.05). Then the count value > t-table value (2,580 > 2,022). Based on these two criteria, it can be concluded that H0 is rejected and H1 is accepted, which means there is a significant difference between the average value of learning achievement of students taught with Gamification, namely the experimental class, and students who are not taught with Gamification, namely the control class, so Using Gamification in teaching vocabulary has a significant influence on increasing students' English vocabulary.

4   Conclusion

The results of the research and discussion show that the use of gamification in teaching English vocabulary can increase students' English vocabulary compared to using conventional methods using textbooks. This is indicated by the learning achievement of experimental class students being higher than those in the control class. The suggestions that can be considered are based on research that has been conducted. English teachers use Gamification as an alternative strategy in teaching vocabulary for students to increase students' English vocabulary.

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