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# The Effectiveness of Puzzle Games as a Learning Media for Teaching Simple Present Tense in a Junior High School

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## ABSTRACT

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#### Keywords:

Puzzle Games, Learning Media, Grammar, Simple Present Tense This study aims to determine whether there is a significant difference in students' understanding of the simple present tense between those taught using puzzle games and those who are not. This quasi-experiment involved a sample of 60 eighth-grade students divided into control and experimental groups, each consisting of 30 students. Data were collected from pre-test and post-test scores administered to both groups. After analyzing the data, the researcher found it was not normally distributed, necessitating a non-parametric statistical test, the Mann-Whitney test, for hypothesis testing. The results indicated that the significance of the Mann-Whitney test was greater than 0.05, suggesting no significant difference in the understanding of the simple present tense between students taught with puzzle games and those not. The researcher hypothesizes that the scope of the material, insufficient vocabulary knowledge, and poor understanding of parts of speech may contribute to the ineffectiveness of puzzle games in teaching the simple present tense.

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## 1. INTRODUCTION

Grammar is quite essential to learn as learners are learning a language. It plays an important role in how the sentence acts. Roza and Yanuarius (2020) stated that grammar is considered an important part of learning a foreign language for students to build good communication. The more people know the core of the language, the better their communication will be. This means that the students need to understand how the sentence works in small groups to be able to visualize the workflow of each word, which will lead them to build good communication skills.

According to Thornbury (1999), he said that grammar is the aspect of language that is least understood. Teaching grammar to EFL Students (especially Indonesians) is difficult, and many students do not like grammar because of its overwhelming formula or pattern. It is not as overwhelming as many students might think. It is because they do not have a basic understanding of each word being put in a sentence. By visualizing words, students can better understand each word in a sentence. Every language is built on its basic elements as a building made of bricks (Ahmad, 2022).

In some ways, teaching grammar can be complicated. That is why we need teaching media to help teachers and students to understand the material better. Musfiqon and Nurdyansyah (2014) even stated that teaching media should be used as a main tool to understand students how they learn the material.

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One way to teach grammar is through games; Avinash and Samson (2016) stated that games can help effectively learn language and technical skills. Games are very entertaining and interesting. Students are more encouraged to play games because they are interactive, so students feel more connected to what they do. Puzzles are one of the genres of games that may be used as a learning medium to help students get a better understanding of grammar, especially simple present tense.

#### 2. LITERATURE REVIEW

## A. Grammar

### 1. The Nature of Grammar

Grammar is the system or the rules and the exceptions of those rules of a language, so it reveals and structures the meaning of the language. It comprises syntax and morphology, where syntax is the structure and the sequence of words in a sentence, while morphology is the concept of the nature of words (Eunson, 2020).

To learn grammar, students need to know about Parts of Speech. It is simply a word class. Each class has its function. There are eight of these classes.

- 1. Nouns
- 2. Verbs
- 3. Pronouns
- 4. Adjectives
- 5. Adverbs
- 6. Prepositions
- 7. Conjunctions
- 8. Interjections

These eight categories are not exclusive; some words may be in two classes, and it is determined by how they function in the sentence (Eunson, 2020).

#### 2. Simple Present Tense

Simple present tense represents some kind of state. It can indicate a regular or habitual activity, general truth, repeated action, express feelings/emotions, the scheduled event, or command/instruction (Pyle & Munoz, 1991). The formula is:

(+) Subject + V1 (es) .....

(-) Subject + do/does not + V1  $\dots$ 

(?) do/does + Subject + V1?

(?) (WH) + do/does + Subject + V1?

If the subject is singular, the verb will have" s/es" for the suffix. While in a negative and interrogative form, the singular subject has to be "does" and the plural subject is "do". WH Question word can also be used before "do/does" if not then the sentence will become a ves/no question.

The sentence doesn't always contain a verb, so the formula will be:

be as a verb:

(+) Subject + be + complement....

(-) Subject + be not + complement ....

(?) be + Subject + complement?

(?) (WH) + be + Subject + complement?

"Be" is a linking word connecting subject and predicate (Pauzan, 2021). The form "be" depends on the subject. The subject "I" will have "am" as the form of be, the singular subject will have "is", and the plural subject will have "are".

Simple present tense can also be an active sentence and a passive sentence. Active sentence is when the subject is doing the actions, while passive is when the subject becomes an object or is being done by the object(relatively). For example:

Active: I eat some bananas in the morning.

Passive: Some bananas are eaten by me in the morning.

The subject "I" in an active sentence is converted to an object in a passive sentence. Therefore, the pronoun changes. The object "Some bananas" is converted to be a subject.

#### **Grammar Teaching Stages** 3.

Some teaching methods can be used to teach grammar. ESA is one of them. ESA stands for Engage, Study, Activate. This teaching method is based on Jeremy Harmer's "How to Teach English" book. Another example is the PPP teaching method, which stands for presentation, practice, and production. According to Ur (1988), grammar teaching has four stages. They are:

1. Presentation

Usually, students perceive a structure and meaning by reading text given by the teachers. In this stage, the students see the structure and the meaning of taking it into short-term memory.

In this stage, Ur (1988) also mentioned that there are six techniques to teach grammar.

1. Using Text

- 2. Using TPR (Total Physical Response)
- 3. Using Picture
- 4. Using Objects
- 5. Using Games
- 6. Using Song
- 2. Isolation and Explanation

At this stage, students need to understand these various aspects of structure, their function, what they mean, and what rules them. It may take a long time for students to understand. In some classes, teachers may need to use their native language to explain the structure in order to get a better understanding.

3. Practice

The practice stage is a series of activities done by students to absorb the material and transfer their short-term memory knowledge to long-term. This can be done by doing assignments in the classroom or at home. 4. Test

Students do tests to demonstrate how well they master the material they have been learning. The main objective of the test is to get feedback.

#### **B.** Puzzle Games

Nowadays, games are not only for entertainment purposes. Games are now reaching all societal levels from children to adulthood. It indicates that now games play a role in our lives. Games have entered into the field of education in the second half of the twentieth century and are considered as one of the valuable techniques for teachers to use in their teaching (Hajji & Kim, 2019).

Puzzles are games that involve the player's intelligence and knowledge to be able to solve or finish the game. Puzzle games have many variations, such as jigsaw, crossword, and mechanical puzzles.

There are various ways of playing puzzle games. Some puzzles, like jigsaw puzzles, are to reform a piece of puzzle into a complete set of pieces. Another puzzle, like a crossword puzzle, is making a set of words by filling in some letters in a blank box on the board. How Puzzle games are played can be adjusted depending on the needs of the creator and player.

There are also disadvantages to using puzzle games. Puzzle games are quite complicated for some people to make relatively without the skill needed to make them. In some complicated puzzle games, the player is relatively limited, meaning that only those with enough skill/experience can solve the puzzle well.

The puzzle game that the researcher used for this experiment is some kind of shape-matching puzzle that was created by the researcher himself. Picture 2.1 shows there is a board with blank spots in certain shapes.



Picture 1. Puzzle board

Those blank spots must be placed with a correct piece in a certain shape. The pieces contain a word, and a certain shape indicates the word class. Students need to place a certain piece in the blank spot on the board. The piece should match the shape with what is on the board. Picture 2.2 shows an example of a puzzle game that has been finished.



Picture 2 Puzzle board

A previous study by Hakami and Abdelrahman (2019) concluded that there are significant differences in students' grammar performance when using games. Similarly, research by Yolageldili and Arikan (2011) on grammar teachers' perspectives found that while teachers believe games are effective for teaching grammar, they do not frequently use them in their teaching process. One type of game that can be used in the teaching process is puzzle games. Shephard (1977) stated that puzzles can be used in the classroom as a teaching aid to introduce students to binary notation, mathematical induction, congruences, and group theory concepts. Since grammar involves structural patterns similar to group theory concepts, it is closely related to puzzle games. Puzzle games are commonly implemented in learning environments.

Asmawati (2023) conducted a study on digital puzzles and found differences in children's learning outcomes before and after using puzzle games. Similarly, Wijaksono and Siddik (2022) demonstrated a significant difference in students' vocabulary mastery before and after using crossword puzzle games. These studies suggest that puzzle games positively impact the learning process and outcomes.

In conclusion, research by Hakami and Abdelrahman (2019) found significant improvements in students' grammar performance with the use of games, while Yolageldili and Arikan (2011) reported that teachers believe in the effectiveness of games for teaching grammar, despite their infrequent use. Shephard (1977) highlighted the value of puzzles for introducing various mathematical and theoretical concepts, suggesting their potential utility in educational settings. Studies by Asmawati (2023) and Wijaksono and Siddik (2022) further demonstrated significant improvements in learning outcomes using puzzle games. However, this research suggests that the complexity of grammar, insufficient vocabulary mastery, and poor knowledge of parts of speech may hinder the effectiveness of puzzle games in teaching the simple present tense.

#### 3. RESEARCH METHODOLOGY

This study is conducted as experimental research. The Quasi Experiment was chosen because the research aims to find out cause and effect related to real-life events where control of change is hard or impossible to do (Masyhuri and Zainuddin, 2008).

For this research, the population consisted of eighth-grade students from a state school in Cilacap. There are nine classes in it, numbered class A through class I which every class consists of 30 students. Using a lottery, the researcher selected two classes at random. Class A and B were chosen as the samples following a lottery. The samples were divided into two groups: the Control Group and the Experimental Group. A lottery was used to randomly determine which class would be the Experimental Group and which would be the Control Group. Next, class A was designated as the Experimental Group and class B as the Control Group.

The researcher conducted a scoring test through pre-test and post-test to collect data. Both groups (Experiment and Control) were given multiple-choice tests about Simple Present Tense. After two meeting treatments, both groups conducted a post-test. They were given multiple-choice tests about Simple Present Tense. The pattern of collecting data is shown below:

E	0,	Х	0 2
К	03		0.4

Figure 3. Pattern of Data Collection

Description: E: Experiment Group K: Control Group 0: Test X: Treatment

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Data will be analyzed with the steps as follows:

a. Mean

Mean is to find out the average value of data collected. The researcher calculated the mean of the post-test score of the experimental and control groups to find out how much the difference is between the experimental and control groups.

b. Normality Test

The normality test is to find out whether or not the data is distributed normally. Normality tests were analyzed using the SPSS application. If the significance score is more than 0.05, it is considered that the data is normally distributed.

c. Hypothesis Test

Data were analyzed in SPSS application in Windows. If the data is normal, an Independent Sample T-test will be used to find out the significance between variables. If the data is not normal, then data will be analyzed using the Mann-Whitney Test.

The post-test scores were analyzed to find out the influence of the treatment. If the sig value is less than 0.05, it is considered that there is a significant influence and would show which group is higher.

#### 4. RESULT AND DISCUSSION

The following section presents the results and findings of the study. It provides a detailed analysis of the data collected from pre-tests and post-tests administered to both the control and experimental groups.

## 1. Normality Test

Normality Test is used to determine whether the data is distributed normally. The result is shown in table below: One-Sample Kolmogorov-Smirnov Test

Post-test Score			
		60	
Normal Parameters <sup>a,b</sup>	Mean	44.20	
	Std. Deviation	13.038	
Most Extreme Differences	Absolute	.173	
	Positive	.173	
	Negative	108	
Test Statistic	.173		
Asymp. Sig. (2-tailed)		.000 <sup>c</sup>	

It is shown that the sig. value is less than 0.05, meaning that the data is not normally distributed. Therefore, a non-parametric test (Mann-Whitney test) is used for the next step.

#### 2. Hypothesis Test

The next step is the Hypothesis test. Mann-Whitney Test is used because the data is not distributed normally. Test Statistics<sup>a</sup>

Post-test Score			
Mann-Whitney U	446.500		
Wilcoxon W	911.500		
Z	052		
Asymp. Sig. (2-tailed)	.958		

The table above shows us the result of Mann-Whitney Test, and it is shown that the sig. value is more than 0.05, meaning that the hypothesis is rejected.

The test result indicated a significance value greater than 0.05, suggesting no significant difference. This implies that the use of puzzle games did not significantly impact the students' understanding of the simple present

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tense, leading to the rejection of the hypothesis. The researcher posits several reasons for the rejection of the hypothesis:

## 1. Scope of Material

The simple present tense material encompasses positive, negative, and interrogative sentences, each involving different pronouns or word classes. This complexity necessitates at least four to five instructional sessions. However, in the syllabus, the simple present tense is not taught in dedicated sessions but is integrated into descriptive and report writing tasks. This lack of organized instruction leads to student confusion, as the material is not systematically taught from the beginning to the end. Furthermore, a fundamental understanding of vocabulary is crucial for mastering this material.

#### 2. Insufficient Vocabulary Mastery

Mastery of vocabulary is essential for learning the grammar of a language. Learners need to have a basic vocabulary foundation to grasp grammatical concepts. According to Ramli and Rivaldi (2021), vocabulary mastery is the first step in language learning. The researcher assumed that eighth-grade students in Indonesia had already mastered basic vocabulary. However, in practice, many students lacked knowledge of basic words such as "eat," "grass," and "meat." Intani (2023) noted that high school students in Indonesia struggle with grammar due to their limited vocabulary knowledge.

## 3. Poor Knowledge of Parts of Speech

Understanding parts of speech is fundamental to learning English grammar, as it involves classifying words based on their functions. Students need this foundational knowledge to learn grammar effectively. Confusion arises when students are unable to correctly identify the part of speech of a word. Ramadhani and Ovilia (2022) found that many students incorrectly classified words when constructing sentences, concluding that a solid understanding of parts of speech is necessary for accurate sentence construction.

The results reveal there is no significant difference between the groups. The Mann-Whitney test yielded a significance value greater than 0.05, confirming no significant difference between the experimental and control groups. This indicates no significant difference in students' understanding of the simple present tense between those taught using puzzle games and those who were not. Consequently, it can be concluded that puzzle games are not an effective learning medium for teaching the simple present tense.

Several factors may contribute to the ineffectiveness of puzzle games for teaching the simple present tense. First, the scope of the material is broad, and the syllabus allocates only two sessions for it, whereas ideally, four to five sessions are needed. Second, the students lack sufficient vocabulary, making it challenging to understand grammar. Third, the students have a poor understanding of parts of speech, which is a crucial foundation for learning grammar.

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