

Puzzle Games: An Adjective Word Introduction Media

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Abstract

The aim of this study was to investigate the application of puzzle games in teaching adjectives at Universitas Tama Jagakarsa. The research followed a quantitative descriptive approach, conducting a pre-experiment by administering a pre-test before introducing the puzzle game and a post-test after implementing the puzzle game in adjective instruction. The purpose was to assess the effectiveness of using puzzles in teaching adjectives. The collected data were analyzed using a T-test. The statistical calculations revealed that the obtained value of "t" was greater than the critical value "tt" at a significance level of 5%. This indicates a significant difference between the average scores of teaching adjectives using puzzles and teaching adjectives without puzzles. The analysis of the research results leads to the conclusion that teaching adjectives through the use of puzzles is more effective than traditional methods without puzzles. This implies that employing puzzle games in adjective instruction offers advantages and can enhance students' English proficiency, particularly in the area of adjectives.

Keywords: *Introduction Media, Teaching Adjective, Puzzle Games, TEFL*

INTRODUCTION

The use of language serves as a powerful tool to express concepts, thoughts, opinions, and emotions. It plays a vital role in communication within societies, acting not only as a lingua franca among individuals but also as the primary language used in areas such as law, government, education, business, and media (Sangiamchit, 2017). While English is widely recognized as an international communication language, it is important to note that there are other languages that hold international status as well. Nonetheless, English remains the most significant and popular language worldwide.

English also finds extensive application in various scientific fields, facilitating technological advancements and knowledge dissemination (De Wit-de Vries, E., *et al*, 2019). In many areas, the lack of proficiency in English hampers progress, be it in computer science, business, tourism, or educational technology. As such, English is instrumental in bridging gaps and

facilitating communication and understanding across different nations.

In Indonesia, English is the first foreign language taught in universities and is a compulsory subject. Its importance lies in its contribution to knowledge development, scientific advancements, cultural exchange, and international relationships (Hernandez-Nanclares & Jimenez-Munoz, 2017). Consequently, English is a core subject taught at all educational levels, from elementary university to university.

However, there are still challenges faced in the teaching of English within universities. Students often struggle with writing, speaking, listening, and reading skills, lacking exposure and opportunities to practice the language. Difficulties in using nouns, verbs, pronouns, adjectives, adverbs, and conjunctions correctly persist (Alhaysony & Alhaisoni, 2017). Among the language components taught in secondary universities, adjectives often pose a challenge for students. They constitute a dominant element in conversations and writing. Adjectives are

introduced to first-year students in vocational high universities during the second term. In the teaching and learning process, it is essential for teachers to possess a repertoire of effective methods and techniques.

Teaching methodology plays a pivotal role in achieving the desired outcomes. Teachers should possess the ability to combine various methods suited for teaching activities (Duarte & Günther-Van der Meij, 2018). Games, ranging from simple to complex, are valuable tools that can improve students' motivation, particularly in grammar teaching. Puzzles, in particular, are chosen as they have proven to be more effective and helpful in motivating students to learn language.

Building upon the aforementioned background, the focus of this research is on teaching degrees of comparison using puzzle games. The research aims to explore the effectiveness of teaching adjectives through puzzle games at Universitas Tama Jagakarsa. In doing so, the study seeks to evaluate student responses to this approach, as the benefits of teaching adjectives through puzzle games lie in motivating learners by providing a fun and unique learning experience. By incorporating puzzle games, students can enjoy the process of learning English, thus helping to sustain their interest and engagement. Games serve as a means to support and enhance students' learning experiences, fostering consistency and enjoyment in their educational journey.

METHOD

The purpose of this study was to employ a quantitative approach, involving two distinct classes: an experimental class and a control class. The primary aim was to ascertain whether there existed a notable disparity in student achievement in English adjectives when taught using puzzle games versus when taught without puzzle games (Akdogan, 2017). This research endeavor seeks to offer valuable insights not only to the author but also to other educators

specializing in English instruction. The study population encompassed 40 students hailing from Universitas Tama Jagakarsa, with a random sampling methodology employed to select 20 students for the experimental class, wherein puzzle games were utilized, and another 20 students for the control class, which relied on an explanation-based methodology. To assess student achievement in teaching adjectives, both a pre-test and a post-test were administered, with the former administered prior to the introduction of the study material and the latter conducted subsequent to the provision of said material and associated exercises (Dewi, *et al*, 2019). The test format was identical for both the experimental and control classes, encompassing 25 items categorized across three distinct types.

Two variables were at play within this research: the experimental class, involving the teaching of adjectives using puzzle games, and the control class, which focused on adjective instruction devoid of puzzle games. The research study unfolded across two classes, with the experimental class assigned as Class 1 and the control class designated as Class 2. Puzzle techniques were implemented exclusively in the experimental class, while the control class adhered to traditional teaching methods throughout the teaching and learning process. To gauge the efficacy of teaching adjectives through puzzle games, the author utilized the t-test formula to compare student scores between the experimental and control classes. To evaluate effectiveness, a pre-test was administered during the initial meeting, followed by a post-test during the eighth meeting, with instructional treatments implemented from the second through the seventh meetings, each session spanning 45 minutes.

The test results revealed a substantial discrepancy between the experimental and control classes, firmly establishing that teaching adjectives through puzzle games yielded superior

outcomes compared to traditional instruction. The author employed a comparative technique to analyze the data, meticulously comparing the post-test scores of both the experimental and control classes to ascertain statistically significant differences between the two variables—teaching adjectives with the integration of puzzle games and teaching adjectives without the incorporation of puzzle games.

FINDINGS AND DISCUSSION

Description of The Data

To know the result of the test, the writer makes the table of students score for each class as follow:

Tabel 1

The test score of the experimental class student

STUDENT	PRE-TEST SCORE	POST-TEST SCORE	GAINED SCORE
1	62	68	6
2	67	75	8
3	71	72	1
4	60	70	10
5	60	70	10
6	67	74	7
7	68	72	4
8	70	80	10
9	68	74	6
10	61	79	18
11	62	73	11
12	70	87	17
13	65	85	20
14	65	82	17
15	65	75	10
16	67	70	3
17	62	68	6
18	62	70	8
19	63	72	9
20	70	84	14
N=20	1305	1500	195

The writer finds the average of pre-test score

$$= \frac{\sum pre-test\ experimental}{N} = 65,25 \text{ and average of post-test score}$$

$$M1 = \frac{\sum post-test\ experimental}{N} = 75$$

Table 2

The test score of the control class student

STUDENT	PRE-TEST SCORE	POST-TEST SCORE	GAINED SCORE
1	50	60	10
2	66	70	4
3	63	68	5
4	65	70	5
5	59	68	9
6	61	65	4
7	64	70	6
8	66	71	5
9	72	73	1
10	56	60	4
11	60	65	5
12	78	78	0
13	66	70	4
14	57	65	8
15	64	65	1
16	61	64	3
17	72	72	0
18	65	72	7
19	70	73	3
20	68	71	3
N=20	1283	1370	87

The writer finds the average of pre-test score

$$= \frac{\sum pre-test\ control}{N} = 64,15 \text{ and average of post-test score}$$

$$M2 = \frac{\sum post-test\ control}{N} = 68,5$$

Table 3

The Result Calculation of Test Both Experimental Class and Control Class

STUDENT	X1	X2	X ₁	X ₂	X ₁ ²	X ₂ ²
1	68	60	7,00	8,5	49,00	72,25

2	75	70	0,0 0	1, 5	0,00	2,2 5
3	72	68	- 3,0 0	- 0, 5	9,00	0,2 5
4	70	70	- 5,0 0	1, 5	25,0 0	2,2 5
5	70	68	- 5,0 0	- 0, 5	25,0 0	0,2 5
6	74	65	- 1,0 0	- 3, 5	1,00	12, 25
7	72	70	- 3,0 0	1, 5	9,00	2,2 5
8	80	71	5,0 0	2, 5	25,0 0	6,2 5
9	74	73	- 1,0 0	4, 5	1,00	20, 25
10	79	60	4,0 0	- 8, 5	16,0 0	72, 25
11	73	65	- 2,0 0	- 3, 5	4,00	12, 25
12	87	78	12, 00	9, 5	144, 00	90, 25
13	85	70	10, 00	1, 5	100, 00	2,2 5
14	82	65	7,0 0	- 3, 5	49,0 0	12, 25
15	75	65	0,0 0	- 3, 5	0,00	12, 25
16	70	64	- 5,0 0	- 4, 5	25,0 0	20, 25
17	68	72	- 7,0 0	3, 5	49,0 0	12, 25
18	70	72	- 5,0 0	3, 5	25,0 0	12, 25
19	72	73	- 3,0 0	4, 5	9,00	20, 25
20	84	71	9,0 0	2, 5	81,0 0	6,2 5
N=20	15 00	13 70	0	0	646	391

$$t_o = \frac{75 - 68,5}{\sqrt{\frac{(391 + 646)(20 + 20)}{(20 + 20 - 2)(20,20)}}$$

$$t_o = \frac{6,5}{\sqrt{\frac{(1037)(40)}{(38)(400)}}$$

$$t_o = \frac{6,5}{\sqrt{(27,28)x(0,1)}}$$

$$t_o = \frac{6,5}{\sqrt{2,72}}$$

$$t_o = \frac{6,5}{1,64}$$

$$t_o = 3,96$$

Result of The Hypothesis Testing

The statistical hypothesis for this study consists of two statements. Firstly, the null hypothesis (H_0) posits that there is no significant difference between teaching adjectives using puzzle games and teaching adjectives without puzzle games for second-year students at Universitas Tama Jagakarsa. Conversely, the alternative hypothesis (H_a) suggests that there is a significant difference in the effectiveness of teaching adjectives through puzzle games compared to teaching adjectives without puzzle games for the same group of students.

Discussion

The data collected from the tests conducted in the experimental class, where puzzle games were employed, and the control class, where no puzzle games were used, indicated average scores of 75 and 68.5, respectively. Analyzing the results presented in Table 3, it becomes evident that teaching adjectives through puzzle games yielded higher success rates. The students who received puzzle-based instruction achieved higher scores

$$t_o = \frac{M_1 - M_2}{\sqrt{\frac{(\sum x_1^2 + x_2^2)(N_1 + N_2)}{(N_1 + N_2 - 2)(N_1 \cdot N_2)}}$$

compared to those who did not. These findings indicate that the use of puzzle games had a greater influence on teaching adjectives in the experimental class as opposed to the control class.

Further evidence supporting the success of teaching adjectives through puzzle games can be observed by examining the total scores attained by both the experimental and control classes. The experimental class obtained a score of 195, while the control class scored 87. These results lead to the conclusion that the utilization of puzzles significantly impacted the teaching of adjectives for second-year students at Universitas Tama Jagakarsa.

The hypothesis put forth by the writer states that there is a significant difference between teaching adjectives through puzzle games and teaching adjectives without puzzle games for second-year students at Universitas Tama Jagakarsa. The findings from this study provide support for this hypothesis, demonstrating the advantageous effects of incorporating puzzle games in the teaching of adjectives.

The statistic hypothesis states :

If $t_o > t_t$ significance = There is difference and H_a is accepted

If $t_o < t_t$ not significance = There is no difference or the same and H_a is rejected, and H_o is accepted.¹⁹

t_o = t observation

t_t = t test

$$\begin{aligned} df &= (N1 + N2) - 2 \\ &= (20 + 20) - 2 \\ &= 40 - 2 \\ &= 38 \end{aligned}$$

Finally, in the table not found df of 38, so we use the closed df is 40."²⁰, With df of 40, we got "the critic price (t) in the table is :

The writer gained t-table :

S.L. 5% = 2,02

S.L. 1% = 2,71

Comparing t_o with t_t :

$$5\% = t_o > t_t = 3,96 > 2,02$$

$$1\% = t_o > t_t = 3,96 > 2,71$$

The statistical calculation yielded a t-value of 3.96, with a degree of freedom (df) of 38, calculated from the formula $(N1 + N2 - 2)$ where $N1$ and $N2$ represent the sample sizes of 20 each. This paper considers two levels of significance, namely 5% and 1%. Referring to the significance table, the values corresponding to $df = 38$ and the 5% and 1% levels of significance are 2.02 and 2.71, respectively. By comparing the calculated t-value of 3.96 with these significance values, we find that $2.02 < 3.96 > 2.71$. Since the calculated t-value exceeds the critical t-value obtained from the table, the alternative hypothesis (H_a) is accepted, while the null hypothesis (H_o) is rejected.

Based on the calculated result, the alternative hypothesis (H_a) is accepted, leading to the rejection of the null hypothesis (H_o).

These findings indicate that the use of the puzzle technique in teaching adjectives had a more significant impact compared to teaching adjectives without puzzle games in the control class. Consequently, it can be concluded that the puzzle technique positively influenced the teaching of adjectives for second-year students at Universitas Tama Jagakarsa.

CONCLUSION

Based on the aforementioned data, it can be concluded that the utilization of puzzle games as a teaching tool has a positive influence on the acquisition of adjectives. This conclusion is supported by the observed difference in the average post-test scores between the experimental and control classes, with the experimental class achieving an average score of 75 compared to the control class's average score of 68.5. Additionally, the total score obtained by each class further strengthens this conclusion, as the experimental class obtained a score of 195, surpassing the control class's score of 87.

The research analysis results reveal a calculated t-value (to) of 3.96, which exceeds the critical t-value (tt) corresponding to a significance level of 5% and 1%. Specifically, the values of tt at the 5% and 1% significance levels were 2.02 and 2.71 respectively. This finding indicates a significant difference between the utilization of puzzle games and teaching adjectives without puzzle games.

In light of these conclusions, several suggestions can be made. Firstly, although the use of puzzle games as a teaching technique may not be widely familiar, it can be successfully applied in certain educational institutions. Secondly, it is crucial to recognize that students nowadays require engaging and unique approaches to foster motivation in the learning process. The utilization of puzzle games addresses this need and has proven effective in enhancing students' vocabulary, particularly in relation to adjectives. When incorporating puzzles into the classroom, teachers should possess the necessary knowledge on how to effectively implement puzzle games, select games that align with the targeted material, and consider the students' age and interests when choosing puzzles. While the results demonstrate the superiority of teaching adjectives through puzzle games, it is important for teachers to consider various factors such as the university environment, the specific material being taught, and the characteristics of the students themselves.

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