

CHAPTER IV FINDINGS AND DISCUSSION

4.1 Research Findings

4.1.1 Description of the Data

The researcher obtained the data result of student's present continuous tense comprehension through pre-test and post-test in both classes. The test assessments were performed in control and experimental classes.

Below is a descriptive statistics table that describes the maximum value, minimum value, average value, and standard deviation of the pre-test and post-test of the experimental and control class.

Table 4.1

Descriptive Statistics of Pre-Test and Post-test of Experimental Class and Control Class

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experimental Class	22	45	70	58.18	6.084
Post-Test Experimental Class	22	60	90	72.95	8.544
Pre-Test Control Class	22	40	70	57.95	8.261
Post-Test Control Class	22	50	75	58.86	7.060
Valid N (listwise)	22				

Furthermore, the test results will be discussed in the part that follows to see if there is any effect on student's present continuous tense comprehension by using wordwall.net.

4.1.1.1 The Score of Pre-Test and Post Test of Experimental Class

The researcher used class X-MIPA 1 of SMA Swasta Budisatrya Medan as an experimental class. This class consisted of 22 students, 13 female students and

9 male students. At first, the researcher shared Pre-Test directly in paper form to measure how far the student's present continuous tense mastery. After that, this class thought about some sentences of present continuous tense. However, the researcher stimulated their comprehension in experimental class by using word missing games, which were made in wordwall.net website. When the teaching-learning processes were over, the researcher shared Post-Test in link form, which made in wordwall.net website in Group WhatsApp to remeasure their present continuous tense mastery. Table 4.2 shows the outcomes of the experimental class's pre-test and post-test.

Table 4.2
The Score of Pre-Test and Post-Test of
Experimental Class

No.	Student	Hasil Pre-test	Hasil Post-test
1	S1	70	60
2	S2	60	60
3	S3	55	60
4	S4	55	65
5	S5	50	65
6	S6	55	65
7	S7	60	70
8	S8	50	70
9	S9	65	70
10	S10	60	70
11	S11	60	70
12	S12	55	75
13	S13	65	75
14	S14	60	75
15	S15	60	75
16	S16	65	80
17	S17	60	80
18	S18	65	80
19	S19	60	80
20	S20	45	85
21	S21	55	85
22	S22	50	90

Total	1280	1605
Minimum Score	45	60
Maximum Score	70	90
Mean	58.18	72.95

According to Table 4.2, the lowest pre-test score in the experimental class was 45, and the highest pre-test score in the experimental class was 70. While in the experimental class, the lowest post-test score was 60 and the highest post-test score was 90. Looking at the mean score of the experimental class for pre-test 58,18 and post-test 72,95, it was found that using the wordwall.net website had no significant effect on teaching present continuous tense.

4.1.1.2 The Score of Pre-Test and Post-Test of Control Class

In this research, the researcher used class X-MIPA 2 of SMA Swasta Budisatrya Medan as a control class. This class also consisted of 22 students, 13 female students and 9 male students. At first, the researcher shared Pre-Test directly in paper form to measure how far the student's present continuous tense mastery. After that, this class thought about some sentences of present continuous tense. However, the researcher stimulated their comprehension in experimental class by using some basic exercises. When the teaching-learning processes were over, the researcher shared Post-Test also in paper form to remeasure their present continuous tense mastery. Table 4.3 showed the outcomes of the control class's pre-test and post-test.

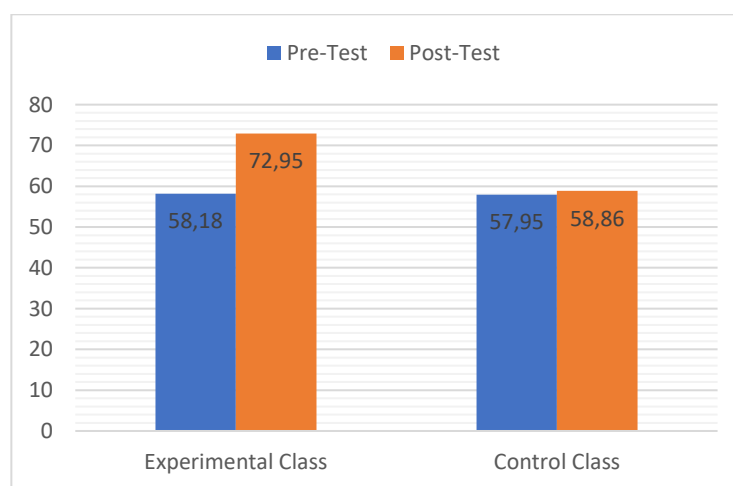
Table 4.3
The Score of Pre-Test and Post-Test of Control Class

No.	Student	Hasil Pre-test	Hasil Post-test
1	S1	55	75
2	S2	40	50
3	S3	50	55
4	S4	45	50
5	S5	60	65
6	S6	60	65
7	S7	65	60
8	S8	65	60
9	S9	70	60
10	S10	55	55
11	S11	65	55
12	S12	50	50
13	S13	65	65
14	S14	65	70
15	S15	65	60
16	S16	60	65
17	S17	55	55
18	S18	70	65
19	S19	45	50
20	S20	60	60
21	S21	55	50
22	S22	55	55
Total		1275	1295
Minimum Score		40	50
Maximum Score		70	75
Mean		57.95	58.86

According to Table 4.3, the lowest pre-test score in the experimental class was 40 and the highest pre-test score in the experimental class was 70. While the lowest post-test score in the experimental class was 50, the highest post-test score in the experimental class was 75. Looking at the mean score of the experimental class for pre-test 57.95 and post-test 58.86, it was found that there is a significant effect on teaching present continuous tense, but not a significant one, when the wordwall.net website was not used.

A diagram representing the progress of both the control and experimental class will be given in addition chart score:

Figure 4.1
The Difference between Students' Mean Score in
Experimental Class and Control Class



Students in experimental class had higher mean scores than in control class, as seen in Tables 4.2 and 4.3. In experimental class, students were treated by using wordwall.net as website based of discussions and exercises, while in control class, students were treated by using text paper as conventional based of discussions and exercises. To summarize, wordwall.net has a significant effect in teaching present continuous tense.

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4.1.2 Analysis of the Data

This research was analyzed by using T-test in IBM SPSS software version 22. However, the data should be analyzed the normality and homogeneity first, it became the requirement before analyzing T-test. Both tests, pre-test and post-test, in both classes, experimental and controlled class, will determine whether the data transmitted normally and homogeneously. The result of data analysis can be viewed as follow:

4.1.2.1 Normality Test

Table 4.4
The Normality Test of Pre-Test in Experimental and Controlled Class
Tests of Normality

	Class	Shapiro-Wilk		
		Statistic	Df	Sig.
Learning outcomes	Pre-test Experimental	.942	22	.221
	Pre-test Control	.935	22	.156

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on Table 4.4, the significance value of Shapiro-Wilk in experimental class was 0.221, while in controlled class was 0.156. Both significant values were higher than 0.05, which experimental class 0.221 and controlled class 0.156. Because of the significance value higher or equal than 0.05, it can be said that the data of pretest in experimental and controlled class distributed normal.

Table 4.5
The Normality Test of Post-Test in Experimental and Control
Tests of Normality

	Class	Shapiro-Wilk		
		Statistic	Df	Sig.
Learning outcomes	Post-test Experimental	.953	22	.364
	Post-test Control	.918	22	.070

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

According to Table 4.5, the significance value of Shapiro-Wilk for experimental class was 0.364 and for controlled class was 0.070. Significance values in experimental class was greater than 0.05, also the significance in controlled class was greater than 0.05. Because of the significance value higher than 0.05, it can be said that the data of post-test in experimental and controlled class distributed normal.

4.1.2.2 Homogeneity Test

After calculating normality test, the data will be processed in homogeneity test to know whether the pre-test and post-test in both classes, experimental and controlled class, were similar or not. To analyze the homogeneity test, the researcher used Levene Statistic in IBM SPSS software version 22. The analysis can be viewed as follow:

Table 4.6
The Homogeneity Test of Pre-Test
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Students' Learning Outcomes	Based on Mean	2.466	1	42	.124
	Based on Median	2.004	1	42	.164
	Based on Median and with adjusted df	2.004	1	40.679	.165
	Based on trimmed mean	2.384	1	42	.130

From Table 4.6, the result study from pre-test in experimental and controlled class based on mean in significance was 0.124. This data proved that the pretest score is homogeneous, because the significance value was more than significance α (significance level) = 0.05. It means the pretest data in the experimental and controlled class was homogeneous, because its significance value is $0.124 > 0.05$.

Table 4.7
The Homogeneity Test of Post-Test
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Students' Learning Outcomes	Based on Mean	.977	1	42	.329
	Based on Median	1.060	1	42	.309
	Based on Median and with adjusted df	1.060	1	41.588	.309
	Based on trimmed mean	.930	1	42	.340

In table 4.7, the significance value of based on mean was 0.329. Otherwise, the study result of post-test in experimental and controlled class was higher than the significance α 0.05. It implies that data of post-test in experimental and controlled class was homogeneous because its significance value is $0.329 > 0.05$.

4.1.2.3 T-Test

The next step is calculating the t-test of the result study to test the hypothesis after knowing the data normality and homogeneity distributed. This measurement intended to ensure a significant difference in using wordwall.net to teach student's present continuous tense. Like the previous calculations, the researcher also used IBM SPSS version 22 to calculate t-test.

Table 4.8
The Result of T-Test Calculation

	Class	N	Mean	Std. Deviation	Std. Error Mean

Learning Outcomes	Post-Test of Experimental Class	22	72.95	8.544	1.822
	Post-Test of Control Class	22	58.86	7.060	1.505

Table 4.8 showed the differences in the results of post-test from experimental class and controlled class. With the same participants in both class, 22 students, experimental class got 72.95 as the mean score of post-test, while controlled class got 58.86 as the mean score of post-test. Comparing the mean value, experimental class has higher score than controlled class. Furthermore, detail calculation of t-test will be explained as follow:

Table 4.9

The Result of Independent Sample T-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Learning Outcomes	Equal variances assumed	.977	.329	5.963	42	.000	14.091	2.363	9.322	18.859
	Equal variances not assumed			5.963	40.558	.000	14.091	2.363	9.317	18.865

The researcher presented the result of independent sample test in table 4.8 above. Because of the post-test data were homogeneity, researcher focused to result in row equal variances assumed and referred to the significant value of sig $\alpha = 0.05$ (5%). Table 4.8 showed the effect of the independent sample t-test in p-value or sig.

value 2-tailed was 0.000, which is lower than 0.05. So, it can be concluded that the null hypothesis (H_0) was rejected, and the alternative hypothesis (H_a) was accepted. The conclusion took because the value of sig. (2-tailed) less than the value of sig α , $0.000 < 0.05$. Therefore, it can be said that there is significance effect of using wordwal.net in teaching present continuous tense.

4.2 Discussion

Based on the analysis data above, there is a significant results of present continuous tense mastery, especially in memorizing that have been achieved by students after learning by using Wordwall.net platform as ICT learning media. The test data was separated into two parts: pre-test and post-test. Students in the experimental class who learnt using the Wordwall.net platform as their learning material outperformed students in the control class who did not learn using the Wordwall.net platform. Before the Wordwall.net platform was used as an ICT learning media, the students' pre-test mean score of experimental class was 58.18 and after Wordwall.net platform was applied in experimental class the students' mean score was 72.95. Meanwhile, in control class that did not apply Wordwall.net platform, the students' pre-test mean score was 57.95 and students' post-test mean score was 58.86. besides that, the result of independent sample test measurement presented in Table 4.8. It found that the value of Sig. (2-tailed) was 0.000, which lower than the significance value, 0.05. It meant $p < \alpha$, ($0.000 < 0.05$), indicating that null hypothesis (H_0) was rejected, and alternative hypothesis (H_a) was accepted. So, it can be said, there is any significance effect of using wordwall.net in teaching present continuous tense. Based on this explanation, it can be proved that by using Wordwall.net platform as an ICT learning media can improve present continuous tense comprehension especially in the realm of memory. Unfortunately, in this study, the researcher only focused on applying the Wordwall.net platform to present continuous learning in the realm of memory. and this was proven to be effective in the realm of memory, and has not been measured in the productive skill, such as writing and speaking.

According to the calculations above, utilizing wordwall.net had a significant influence on teaching present continuous tense, particularly in the field of memory. Wordwall.net, as an online website platform, allowed students to study while having

fun by playing online games on their own devices. Looking at the age of the students that participated in this study, both experimental and control groups, they were in their early adolescence, about 15 years old. Students of those ages are easily drawn to online video games since digital environment technologies have grown in their daily lives since they were born (Tootell et al., 2014, p. 82). As a result, students who participated in this study were interested in learning English using the Wordwall.net platform, because they were familiar with it and had become used to it.

In addition, since this study focuses on the realm of memory only which is of course related to vocabulary, Wordwall.net is a very appropriate platform to use, it is in line with Lewis (2017) said, that Wordwall.net introduces vocabulary games and reviews to the internet age, making them accessible to teachers as well as learners. If we want to include new digital technologies into our classroom instruction, this is an excellent place to start. While certain elements may help in other parts of language acquisition, Wordwall.net appears to be especially useful for vocabulary revision. According to research, exposing students to vocabulary at 'spaced' intervals improves their learning, and this is much more useful if there is a task, such as grouping words or typing them properly. Wordwall can assist with this. In relation to Lewis's (2017) statement, this is the same as this study which only focuses on the memory realm and it is proven that there is an effect.

In addition, students' significance in learning present continuous tense also resulted from their efforts by doing the exercises earnestly. Although the students found the game difficult at first, the students continued pushing themselves to complete and win the game. Student motivation is one of the reasons why wordwall.net may increase students' knowledge of the present continuous tense, since it can deepen students' learning through online games (Malone & Lepper, 1987, p. 229). Malone and Lepper classified student motivation into two types: intrinsic (intrinsic) motivation and extrinsic (interpersonal). Individual motivation, also known as intrinsic motivation, stems from the students themselves, whereas interpersonal motivation, also known as extrinsic motivation, stems from the students' surroundings. These two elements are included in the wordwall.net platform to boost students' enthusiasm to study English.

Individual motives were classified by Malone and Lepper (1987) as challenge, curiosity, control, and fantasy. Almost all of the games on the wordwall.net platform have elements of difficulty, curiosity, control, and imagination. The first feature is challenge, which is an important aspect of the game. This challenge has an objective and an unknown consequence. Goals are essential elements that must be included clearly before completing a computer game. The purpose of Wordwall.net games is to earn a high score by finishing the game as rapidly as possible. All games on wordwall.net strive for a greater score than others; so, players must complete the game correctly by following the instructions and completing it promptly. This relates to the amount of difficulty and information hidden in each game for unclear results. The researcher utilized the missing word template on wordwall.net, and in this game, students are required to insert the proper response choice in the column supplied, all while learning about the present continuous tense.

Curiosity, the most direct intrinsic incentive for learning, is the second attribute of individual motivation. It is made up of sensory curiosity, which is the appeal of seeing the relationship between light, sound, and other sensory inputs in the environment. Because there is a theme area to establish the look of the game when the game maker produces the game, the Wordwall.net platform may drive kids to study through its imagery. Classic, cloud, woodland, space, elementary school, cork board, wild west, eerie, wooden table, blackboard, newsroom, TV game show, chalkboard, neon, and nighttime are among the possible themes. For example, if the game has a cloud theme, the backdrop will feature clouds in blue and white. The topics on wordwall.net can boost students' motivation to study English by stimulating students' sensory interest during the learning process.

Furthermore, control is the third attribute of individual motivation. Digital games provide players a sense of control over the gaming process, for example, by allowing them to create their own avatars based on their preferences. Avatars may be customized in terms of color, form, and appearance. But in wordwall.net there are no avatars; the control is in the end result of the game. Students can control the final outcome of the game as it depends on the responses given throughout the game. Each student has the possibility to get different results according to their feedback. After the learner completes the game, the feedback feature displays the answer key by

autocorrecting a second later. Through this function, wordwall.net helps students understand their strengths and shortcomings since the feedback provided demonstrates the student's aptitude in a topic. As a consequence, wordwall.net might motivate students to achieve the proper response in order to control superior ultimate outcomes.

Last, fantasy is the fourth factor of individual motivation. Fantasy is important to discuss when talking about digital activities such as computer games, television and drama. In wordwall.net fantasy is played out in game templates while skills are played out in game content. Wordwall.net has many game templates for this type of fantasy; one example is the missing word. In this game, students have to put the correct answer into the box provided. When the student puts the answer into the wrong box, then the student will lose the game. The collaboration between the game template and the skill to be learned plays an important role to build students' fantasy which is also beneficial to increase students' motivation in learning English using the wordwall.net platform.

However, improving students' grasp of the present continuous tense is impacted not just by inner motivation, but also by extrinsic motivation. Extrinsic motivation, as defined by Malone and Lepper, is interpersonal motivation, which involves cooperation, competition, and recognition. Cooperation is an activity in which students work together to assist one another. Competition, on the other hand, is the activity of comparing final results. It sounds worse than the notion of collaboration because there will be victors and losers in competition. Meanwhile, acknowledgment is other people's appreciation. Competition is the sole extrinsic incentive component that exists in the wordwall.net platform. As a result, collaboration and recognition are unnecessary.

According to Lewis (2017), this is the ideal instrument to consider if we are short on time and are not particularly competent with technology. We only require a computer or tablet that is linked to the internet, and after making an account (which is simple), you can instantly begin producing interactive activities or printed worksheets. The idea is straightforward: utilize the templates to construct well-known activity kinds like multiple choice, grouping, or matching, as well as more complicated games and quizzes. You may use a limited number of templates for free,

and because Wordwall is web-based, you can construct activities fast and easily in a couple of minutes with a good connection. Once you've created an activity, you may share it in in different ways.

Previously, Alpatikah (2022) conducted a study named "the effect of using wordwall.net on student's vocabulary mastery (a quasi-experimental study on first-grade students at MTs Negeri 10 Jakarta academic year 2021/2022)". The data analysis results prove that there was no change in the mean pre-test score between the experimental (54.00) and controlled (62.80) classes. Meanwhile, the post-test mean score for the control group was 77.33, whereas the experimental group got 86.45. The independent sample t-test of IBM SPSS software version 26 was used to measure the effectiveness of wordwall.net in the experimental class. It proved that using wordwall.net in Sig. value 2-tailed was $0.020 < 0.050$. The alternative hypothesis (H_a) was accepted, whereas the null hypothesis (H_0) was rejected. As a result, using wordwall.net has an effect on students' vocabulary knowledge. Furthermore, wordwall.net's features such as game templates, theme, feedback area, and leaderboard might increase students' enthusiasm to learn a new language.

Purwitasari (2022) conducted a similar study named "the effectiveness of wordwall application in improving students' vocabulary mastery at Mtsn 4 Magetan". The researcher utilized pre-test and post-test tes to collect data. The independent sample t-test approach was then performed by the researcher to see whether there was a significant difference between students who were taught using the wordwall application and those who were not. The data analysis found that the mean pre-test score for the experimental group is 66.09 and the post-test score is 84.13, whereas the mean pre-test score for the control group is 61.54 and the post-test score is 75.19. According to the data, the experimental group's mean post-test score is greater than the control group's mean post-test score. Therefore, it is reasonable to conclude that the wordwall,net can improve seventh-grade students' vocabulary knowledge at MTsN 4 Magetan.

The next similar study did by Dewi (2022) entitled "implementasi game wordwall untuk meningkatkan hasil belajar bahasa inggris di kelas x Smk Muhammadiyah 1 Kota Sukabumi". From the results of the quiz activity on perfect present tense and simple past tense using the media it has been effective, from 14

students, 13 students get a complete score with a percentage of 92.85%, 1 person for an incomplete score with a percentage of 7.15%. In the use of Wordwall media the results of the respondent's value of 31.7% with very effective criteria. From the implementation of using the Wordwall game application during teaching and learning activities, it has a positive effect and really helps teachers in carrying out learning.

Pradikasari (2016) did the similar study at junior high school, titled "the effect of using word wall on the eighth-grade students' vocabulary achievement at Smpn 1 Jember In 2015/2016 Academic Year." The aim of this experimental study was to see if using a word wall had any influence on eighth-grade students' vocabulary performance at SMPN 1 Jember during the 2015/2016 academic year. The findings of the vocabulary pre-test and post-test were utilized to collect research data. To calculate the mean difference between the experimental and control groups, the difference between the pre-test and post-test data was statistically evaluated using the t-test approach. At a significant level of 5% and a degree of freedom of 70, the t-test result was 5.6850, which was more than the t-table value of 1.994.

Jannah (2022) conducted similar research, "EFL students' perspectives on the use of wordwall.net as vocabulary learning media." The purpose of this study was to examine students' opinions of Wordwall.net, a less well-known and investigated game-based web application, in their vocabulary acquisition. This study was carried out since there is currently a scarcity of research in Indonesia that examines students' perceptions of utilizing Wordwall.net for English vocabulary acquisition. This survey investigation was conducted with a sample of 29 8th-grade students from one of Bengkulu Tengah's Junior High Schools. A closed-ended questionnaire was used to obtain the data. It was quantitatively analysed using the Likert scale. The findings of this study revealed that the majority of students had a favourable opinion of the use of Wordwall.net in their vocabulary acquisition. Their enthusiasm for Wordwall.net was palpable. They enjoyed the collaboration and competition, and they saw Wordwall.net as an exciting, interesting motivating, and enjoyable web tool for learning vocabulary. Wordwall.net was a type of awaited learning material for the students based on their perceived consequences of utilizing it. Furthermore,

Wordwall.net influenced students' involvement with the web application and in the classroom. It showed that the students were more focused on the learning process.

Overall, the result confirmed the previous related studies, who investigated the wordwall.net a learning website platform; it has significance effect in teaching present continuous tense. It was also similar with this research finding that concluded the effectiveness of teaching present continuous tense after using of wordwall.net. The differences between the previous studies are in the variable, samples, material, place, time, the circumstance of learning and the result. Also compared to the previous studies, this study focus on student's present continuous tense comprehension. Even many students still struggle in learning present continuous tense, the result somehow prove that wordwall.net has significant effect to improve student's present continuous tense comprehension. It also emphasized by the T-test. This research value of Sig. (2-tailed) was 0.000, which lower than the significance value, 0.05. It meant $p < \alpha$, ($0.000 < 0.05$), indicating that null hypothesis (H_0) was rejected, and alternative hypothesis (H_a) was accepted. So, it can be said, there is any significance effect of using wordwall.net in teaching present continuous tense.