THE INFLUENCE OF CLUE & SEARCH CARD IN TISSUE PLANT'S LEARNING OUTCOMES

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ABSTRACT

Media is an important part that can engage students to learn. This research aims to determine This research aims to determine the effect of *the CSC (Clue & Search Card)* learning media on plant tissue material on the learning outcomes of class XI students at MAN 1 Makassar. This research method was Quasi Experimental using a Nonequivalent Control Group Design. The population of this study included all students in class XI MIPA at MAN 1 Makassar. Class XI MIPA 3 acted as the control class and XI MIPA 4 as an experimental class. Each class consisted of 35 people that were selected through the purposive sampling technique. The instruments used were an observation sheet and a 25-item learning outcomes test. The data analysis techniques used were descriptive and inferential analysis, including normality tests, homogeneity tests, and hypothesis tests. The results showed that the learning outcomes score in the experimental class had an average of 85.31, which was in the very good category, while the control class had an average of 57.37 in the sufficient category. Inferential statistical analysis showed a sig value. of 0.000, indicating that sig. $\alpha = 0.000 < 0.05$, so H0 is rejected and H1 is accepted. These results reveal that there is an influence of *CSC (Clue & Search Card)* learning media on plant tissue material on the learning outcomes of class XI students at MAN 1 Makassar.

Keywords: *CSC (Clue & Search Card)*, **Media, Plant tissue, Student Learning Outcomes**

1). INTRODUCTION

Education is a way that can be done to change a person's attitude or behavior by teaching and educating to become better. Providing guidance or educating by honing physical and spiritual potential is the goal of education (Hidayat and Abdullah, 2019). Education in Indonesia really considers attitudinal and social and religious development when implementing learning in schools (Sujana, 2019).

Learning is a process carried out by individuals to obtain a new change in behavior as a whole, as a result of the individual's own experience in interaction with their environment (Herliani et al, 2021). The learning process scheme that can be used to ensure it is carried out well is by creating an effective

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learning environment, paying attention to the suitability of the curriculum and delivering the material easily. This is intended so that students are able to understand well or in this case the role of an educator is really needed (Wulandari, 2016).

Based on the results of observations and interviews with Biology teaching staff at MAN 1 Makassar, the media used in the learning process are printed books, modules, LKPD, and Powerpoint. During the learning process, educators use the lecture method, which makes students feel bored because they just sit and listen to the teacher's explanation, not to mention the alternating use of LCDs in schools, making educators and students have to wait, causing a lot of wasted learning time. Teaching media in the form of cards has been applied in schools, but the material is different from what researchers will apply. Based on an interview with a biology teacher at the school, he stated that one of the materials that was considered difficult was plant tissue material because basically this material was dominated by many plant tissues whose differences were difficult to find.

A meaningful learning process is characterized by the existence of an educational correlation between educators and students as well as contributive references in the learning environment so that the expected results can be achieved (Pane and Dasopang, 2017). Learning media in the teaching and learning process can arouse new desires and interests, generate motivation and stimulation of learning activities and even bring a psychological connection to students (Nas and Akbar, 2018).

One learning media that can be applied to make it easier for students to deal with the problems above is card media. Card media is a simple medium that is very easy to use and does not require complicated equipment. This card media can also be combined with games, where games are a means of entertainment which can also be used as a learning medium which is usually referred to as an educational game. Apart from being entertainment, educational games also provide a touch of learning in them so that users not only play but can also learn in a more interactive, interesting way and increase interest in learning. Clue Card is a visual graphic media based on game cards, where this graphic media is a visual media that contains facts, thoughts and ideas through the presentation of words, sentences, numbers and images. This Clue & Search Card media uses Search cards to stimulate interest and hone students' analytical skills. Through search cards, students search, think and analyze for themselves the explanations they find so that they can improve their understanding of the material (Susilana and Riyana, 2009).

Previous research (Lili Cahyani, 2021) has similarities with researchers because the media used in this research is Clue & Search Card (CSC). Previous researchers have tested the validity, practicality and effectiveness of CSC (Clue & Search Card) learning media on cell material. So the CSC (Clue & Search Card) learning media is suitable for use because it meets the criteria of being valid, practical and effective. Meanwhile, new researchers will examine the effect of CSC (Clue & Search Card) learning media with plant tissue material on the learning outcomes of class XI students at MAN 1 Makassar. Based on the background of the existing problem, the researcher conducted a study which aimed to determine the learning outcomes of class student learning in classes taught using CSC (Clue & Search Card) learning media, plant tissue material on the learning outcomes of class XI at MAN 1 Makassar.

2) METHODS

The type of research that will be used is quantitative research with a quasi experiment method. The method used in this research is quasi-experiment or pseudo-experiment. Experimental research was carried out to determine whether or not there was an effect of certain treatments on changes in certain conditions (Masyhud, 2014). The research design used was Nonequivalent Control Group Design. This design is almost the same as the Pretest-posttest Control Group Design, but the subjects are not taken randomly, both for the experimental group and for the control class (Yusuf, 2014). The subjects in this research were all 35 students of class XI MIPA 3 (control class), all 35 students of class XI MIPA 4 (experimental class) and 1 Biology teacher at MAN 1 Makassar.

The instruments in this research are in the form of observation sheets, learning results tests, and documentation. Observation sheets are used to make it easier to make reports from the results of observations that have been observed regarding student behavior both spiritually and socially. This research uses a written test in the form of multiple choice questions consisting of 25 multiple choice questions related to plant tissue material which will be given before and after treatment using the same material. The first test is given before the treatment is applied (pretest) and the second test is given after the treatment is applied (posttest). Documentation is the act of recording, processing all information that has occurred and is recorded, for example work processes, events and knowledge gained. Next, the validity of the instrument is carried out. The validity of this instrument consists of

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learning results tests, Learning Tool Plans (RPP) and observation sheets that have been prepared by researchers which will be validated by 2 validators, namely two Biology lecturers at the State Islamic University (UIN) Alauddin Makassar and analyzed using the Aiken index.

Data were analyzed using the IBM SPSS (Statistical Product and Service Solution) version 22 statistical application. Descriptive statistical analysis is to find out the general picture, analyzing data by providing an overview or description of the data that has been obtained without intending to make a conclusion that applies generally. At this stage of analysis the researcher will use the minimum value, maximum value, average, variance value, and standard deviation and inferential statistical analysis can be used to draw conclusions by testing conjectures through the t-test, but before that normality and homogeneity must be tested.

The data normality test is carried out to determine whether the data on the variables are normally distributed or not. If sign > α then it can be concluded that the data is normally distributed and if sign < α then the data is not normally distributed.

The homogeneity test is carried out to show whether the data from the sample that has been taken comes from a population that has the same variation, in other words whether the data set has the same characteristics or vice versa. The criteria for drawing conclusions for the homogeneity test are if the sign value > α then the population data has a homogeneous variance and if the sign value < α then the population data has a non-homogeneous variance.

Hypothesis testing is carried out to determine temporary assumptions using a two-party test. Test the hypothesis of this research using the t-test on an independent table (independent sample t-test). The hypothesis is:

$$H_0: \mu_1 = \mu_2$$

$$H_1: \mu_1 \neq \mu_2$$

Information:

H_0 : There is no effect of using CSC (Clue & Search Card) media on plant tissue material on the learning outcomes of class XI students at MAN 1 Makassar.

H_1 : There is an influence of the use of CSC (Clue & Search Card) media on plant tissue material on the learning outcomes of class XI students at MAN 1 Makassar.

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3) RESULTS AND DISCUSSION

3 .1 Descriptive Analysis

a. Descriptive statistical analysis of student learning outcomes in classes that are not taught using learning media (Control Class)

Research that has been carried out at MAN 1 Makassar on class XI MIPA 3 students as a control class by collecting data from test instruments (pretest and posttest) on student learning outcomes, is as follows:

Table 1. Analysis of Pretest and Posttest Control Class XI MIPA 3

Parameter	*Pretest* Value	*Posttest* Value
Maximum Value	44	88
Minimum Value	20	32
Average	30,86	57,37
Standard Deviation	6,899	17, 217
Variance	47,597	296,417

Based on the results of the descriptive statistical analysis above, it can be seen that the average pretest score obtained by class XI MIPA 3 students was 30.86, with a maximum value of 44, a minimum value of 20, a standard deviation of 6,899 with a variance of 47,597, while the average posttest score obtained by class XI MIPA 3 students was 57.37 with a maximum value of 88, a minimum value of 32, a standard deviation of 17,217, with a variance of 296,417.

Table 2. Control Class Academic Proficiency Assessment Criteria

Value	Category	Pretest	Postest
81-100	Sangat Baik	0	2
61 – 80	Baik	0	10

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41 – 60	Cukup	3	16
21- 40	Kurang	29	7
≤ 20	Sangat Kurang	3	0

Based on the table above, the distribution of control class students' pretest scores can be obtained based on frequency distribution categories. There were 3 people in the sufficient category, 29 people in the poor category and 3 people in the very poor category. Meanwhile, the distribution of students' posttest scores was 2 people in the very good category, 10 people in the good category, 16 people in the fair category, and 7 people in the poor category.

b. Descriptive Descriptive statistical analysis of student learning outcomes in classes taught using CSC (Clue & Search Card) Learning Media (Experimental Class)

Research that has been carried out at MAN 1 Makassar on class XI MIPA 3 students as an experimental class by collecting data from test instruments (pretest and posttest) on student learning outcomes, is as follows:

Table 3. Analisis *Pretest* dan *Posttest* Kelas Kontrol XI MIPA 4

Parameter	*Pretest* Value	*Posttest* Value
Maximum Value	56	96
Minimum Value	20	72
Average	36,63	85,31
Standard Deviation	7,635	6, 489
Variance	58,299	42,104

Based on the results of the descriptive statistical analysis above, it can be seen that the average pretest score obtained by class XI MIPA 4 students was 36.63 with a maximum value of 56, a minimum value of 20, a standard deviation of 7,635 with a variance of 58,299, while the average

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posttest score obtained by class XI MIPA 4 students was 85.31 with a maximum value of 96, a minimum value of 72, a standard deviation of 6,489, with a variance of 42,104.

Table 4. Experimental Class Academic Proficiency Assessment Criteria

Value	Category	*Pretest*	*Postest*
81-100	Sangat Baik	0	24
61 – 80	Baik	0	11
41 – 60	Cukup	10	0
21- 40	Kurang	23	0
≤ 20	Sangat Kurang	2	0

(Widyoko, 2019)

Based on the table above, the distribution of control class students' pretest scores can be obtained based on frequency distribution categories. There were 10 people in the sufficient category, 23 people in the poor category and 2 people in the very poor category. Meanwhile, the distribution of students' posttest scores was 24 people in the very good category, and 11 people in the good category.

c. Description of Normalized Gain (N- Gain) or increase in Biology Learning Outcomes after being treated with Maze Board Games Learning Media

The results of the research on the pretest and posttest treatment will be calculated using the N-Gain formula so that it is known how much the learning outcomes of XI IPA 2 students at SMAN 11 Maros have increased. The results of the data processing that has been carried out show that the normalized gain or average normalized gain is 0.68.

Table 5. Description of Improvement in Biology Learning Outcomes After Implementing Maze Board Games Learning Media

Gain value	Category	requency
N-gain < 0,30	Low	
0, 30 < N-gain < 0,70	Currently	17
N-gain > 0,70	High	19

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Based on the table above, it can be seen that there are 19 students whose gain value is 0.70, which means the increase in learning outcomes is in the high category and 17 students whose gain value is in the interval 0.30 < N-gain < 0.70, which means an increase in results. His learning is in the Currently category.

3.2 Inferential Analysis

a. Normality test

The normality test is carried out to determine whether the data obtained from the results of student learning tests are normally distributed in both the control class, namely class XI MIPA 3 and the experimental class, namely class If sign > α then it can be concluded that the data is normally distributed and if sign < α then the data is not normally distributed. In this study the results of the normality test can be seen in the following table:

Table 5. Normality Test

Shapiro Wilk		
Class	Statistic	Information
Control Pretest	0,940	
Control Posttest	0,940	
Pretest Experiment	0,946	Normally distributed
Experiment Posttest	0,950	

b. Homogeneity Test

The homogeneity test is carried out to show whether the data from the sample that has been taken comes from a population that has the same variation, in other words whether the data set has the same characteristics or vice versa. The criteria for drawing conclusions for the homogeneity test are if the sign value > α then the population data has a homogeneous variance and if the sign value <

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α then the population data has a non-homogeneous variance. The homogeneity test results can be seen in the following table:

Table 6. Homogeneity Test Results for Control and Experimental Classes

Levene Statistic	Df1	Df2	Sign	Information
0,075	1	67,517	0.784	Homogen

Based on the data from the homogeneity test results in table 6 above using the Statistical Product and Service Solution (SPSS Version 22) software program, the sign value was obtained at 0.784, while the α value was 0.05, so the sign value > α. This means that the two groups come from a homogeneous population.

c. Hypothesis testing

Hypothesis testing is carried out to determine temporary assumptions using a two-party test. Test the hypothesis of this research using the t-test on an independent table (independent sample t-test).

Tabel 7 : Hypothesis Test Results Learning Outcome Data

	Levene's Test for Equility of Variances		t-test for Equality of Means		
	F	Sign	T	Df	Sign (2tailed)
Equal Variances Asssumed	28,404	0.000	8,985	68	0.000
Equal Variances non Asssumed			8,985	43,46	0.000

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Based on table 7, it can be seen that the significant value in hypothesis testing using the Statistical Product and Service Solution (SPSS Version 22) software program, obtained a Sign value (2-tailed) = 0.000. So the hypothesis in this study can be said to be proven because 0.000 < 0, 05 or by looking at tcount of 8.985 while ttable is 2.024, thus t count > t table. This means that there is a significant difference between the learning outcomes of students who are taught using CSC (Clue & Search Card) Learning Media and students who are not taught using CSC (Clue & Search Card) Learning Media. This shows that there is an influence of using CSC Learning Media (Clue & Search Card) Network Material in Plants on the Learning Outcomes of Class XI Students at MAN 1 Makassar.

4). CONCLUSIONS

Based on the research results and discussion of this research, the following conclusions were obtained: 1) The learning outcomes of class XI students who were taught using printed book learning media on plant tissue material on the learning outcomes of class The pretest result was 30.86 in the poor category and the average posttest score was 57.37 in the sufficient category. 2) The learning outcomes of class The posttest average was 85.31 in the very good category. 3) There is an influence of CSC (Clue & Search Card) learning media, plant tissue material on the learning outcomes of class This shows that there is an influence of CSC (Clue & Search Card) learning media on student learning outcomes.

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