The Effect of Using Powtoon on Students’ Learning Outcomes

Umar Razi
SMAI Haruniyah Pontianak
Indonesia
umarrazi44@gmail.com

Abstract
This study aims to determine the effect of students’ learning outcomes using the Powtoon learning media. This research was a quasi-experimental design. The subjects in this study were social tenth grade students of SMAI Haruniyah Pontianak, which consisted of two classes, namely first social tenth grade, which amounted to 29 students as the experimental group, and second social tenth grade, totaling 30 students as the control group. The data collection techniques used were direct observation techniques, measurement techniques, and documentary study techniques. Data collection tools were observation sheets, documentation worksheets, learning outcomes tests in pretest and posttest. Based on the data analysis, the results of the normality test state that the results of the residual value were normally distributed with a significance value of 0.085 > 0.05. Meanwhile, the results of the hypothesis test state that Ho is rejected and Ha is accepted based on the sig value. (2-tailed) on the posttest value of the experimental group and the posttest control group with a value of 0.026, which means less than 0.05. From the hypothesis testing, it is stated that there is an influence on students’ learning outcomes after the use of Powtoon learning media with an average post-test score of the experimental group of 81.72 and an average post-test score of the control group of 82.24. So with the use of this Powtoon learning media, it influences the learning outcomes of students in economics subjects in social tenth grade SMAI Haruniyah Pontianak.

Keywords: Learning Outcomes, Powtoon Media, Quasi-Experimental Design

INTRODUCTION
The development of science and technology is currently growing rapidly. It is because the flow of information is limitless so that the development of the times is increasing from day today. Developments follow this development in the line of life. The development of science and technology, if handled wisely, will increasingly encourage reform and improvement efforts in the utilization of technological or scientific results related to the learning process.

Talking about technological developments, it is undeniable that they will lead to changes in education. Technological developments will have a positive impact on the field of education if used wisely. Therefore, efforts to develop good educational technology are needed to deliver the future
Indonesian nation through the younger generation, namely students. A good and decent education that is future-oriented will help students realize their dreams to the fullest. Education that is held formally in schools will significantly affect the continuity of quality education.

In general, progress in education can be seen from the learning process in Indonesia that occurs from students' internal and external environment. In the external environment of students, education usually occurs in the learning process in formal schools. The level of formal education in Indonesia consists of elementary school, junior high school, and high school. This study is more focused on the level of high school education.

The teaching and learning process in high school occurs through interaction between teachers and students. Teachers as facilitators in channeling diverse knowledge in a way that is certainly effective and requires learning tools that can assist in the teaching and learning process so that students can get maximum learning outcomes. In the current era, of course, use a lot of learning media to make it easier for teachers to deliver the subject matter in class so that learning objectives can be achieved. Anita (2012) stated that media can create conditions for students to receive knowledge, skills, and attitudes. The media can function to shape student learning activities, and this is in line with the opinion of Arsyad (2016), which said that the function of the media is for instructional purposes where the information contained in the media must involve students both in mind or mental or in the form of real activities so that learning can occur.

Sudjana and Rivai (2013) have conveyed several benefits of learning media in the learning process of students, one of which is that students can do more learning activities because they do not only listen to teacher descriptions, but also other activities such as observing, doing, demonstrating, acting, and so on.” Learning media is an intermediary tool that is useful for facilitating the teaching and learning process to streamline communication between teachers and students. It is beneficial for teachers in teaching and makes it easier for students to accept and understand lessons. For this reason, learning media is very necessary for the learning process so that students easily accept and understand the knowledge and subject matter presented by the teacher.

Teachers' use of learning media has different variations because there are many types of learning media developed in the teaching and learning process in the classroom. However, not all media can be applied in the learning process. Therefore, a teacher must also choose and sort out the suitable media used in the learning process.

In this study, the author uses the type of audiovisual media. One of the audiovisual media used in learning is Powtoon. According to Saputri (2018), Powtoon is an online service for creating a presentation with very interesting animation features, including handwritten animation, animated cartoons, livelier transition effects, and very young Timeline settings. From this understanding, it can be interpreted that Powtoon is an online service-based animation software that allows users to create animated presentations quickly and easily by manipulating objects, inserting images, inserting music, and can also include voice recordings of users.

The presentation of the display that has been mentioned makes it easier for students to understand learning by using the Powtoon media. This learning media is believed to be able to improve student learning outcomes. It is in accordance with the theory of Arsyad (2016), which states, the quality of learning outcomes can be improved if the integration of words and images as learning media can communicate elements of knowledge in a well-organized, specific, and clear way.

Based on observations made by researchers at SMAI Haruniyah Pontianak, where the social majors in tenth amounted to two classes, namely first social tenth grade and second social tenth grade. During the learning process in social tenth grade SMAI Haruniyah Pontianak, it was seen that the teacher's condition was still present, learning in a simple and conventional form without any renewal in a better direction to support a more effective learning process. Moreover, with the number of students totaling 29-30 students per class in each class, social tenth grade of SMAI Haruniyah Pontianak, which is quite crowded in the classroom. Even with such conditions, teachers are still too fixated on using blackboard media to support the learning process in class without paying too much attention to and conditioning the students they teach. In addition, when the teacher uses projector media to help facilitate the learning process in the classroom, the teacher only displays written subject
matter without providing something that attracts the attention of students. These problems can ultimately make students bored and bored because they are too rigid, and the lack creativity of a teacher in turning on the atmosphere of the teaching and learning process in learning so that it impacts learning outcomes that are less than optimal. It is evidenced by the average daily test results obtained are still below the maximum standard of completeness set by the school, which is 75. The values are as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Class</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X Social I</td>
<td>62.8</td>
</tr>
<tr>
<td>2</td>
<td>X Social II</td>
<td>68.7</td>
</tr>
</tbody>
</table>

Based on the data above, if the teacher uses a variety of learning media in the classroom, it will help make it easier for students to understand the lesson and make them interested in the material presented, such as when the author applies Powtoon learning media, namely learning media to facilitate the delivery of economic material with an attractive appearance. The hope is that when students participate in the learning process, they look more focused, active, and enthusiastic and give better results.

So, in this case, the teacher can see the development and changes of students in the learning process, where students are easy to accept or not the subject matter delivered by the teacher. According to Susanto (2013), "learning outcomes are changes that occur in students, both concerning cognitive, affective and psychomotor aspects as a result of learning activities. Furthermore, Annurahman (2012) states, "learning outcomes are marked by behavior change. Changes in behavior in most cases are something that can be observed ". For this reason, learning outcomes are essential in seeing student development and whether or not learning objectives are achieved.

The description above encourages researchers to conduct research entitled "The Effect of Using Powtoon Learning Media on Student Learning Outcomes in Economics Subject in social tenth grade at SMAI Haruniyah Pontianak." This research was conducted on the economics subject of social tenth grade at SMAI Haruniyah Pontianak with the Basic Competence of the Material, namely "Explaining the concept of demand and supply of money."

**METHOD**

So the experimental method in this study is the method used by researchers to solve the problem of Powtoon learning media for improving participant learning outcomes educated in economics social tenth grade at SMAI Haruniyah Pontianak.

The form of the method used and considered appropriate in this study is a form of quasi-experimental design. According to Sugiyono (2016: 116), "quasi-experimental design has a control group, but cannot function fully to control external variables that affect the implementation of the experiment."

Meanwhile, according to Nawawi's view (2015: 89) that "a pretend experiment (quasi-experiment) is not a real experiment, but an experiment that pretends (quasi)." So the design of the implementation of this experimental method is that the researcher designs the material to be delivered using the Powtoon learning media. The method used was the experimental group and the control group. The experimental group will be given treatment using Powtoon-based learning media. At the same time, the control group is not given treatment, namely without using the Powtoon learning media.

The design used in this study was a post-test-only control design. The post-test-only control design uses two class groups, namely the experimental group and the control group. The experimental group was given treatment using Powtoon learning media. In contrast, the control group was not given treatment, namely without using the Powtoon learning media. The research design is described in the table below.
Table 2. Post-test Control Only Design

<table>
<thead>
<tr>
<th>Class</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>$X_1$</td>
<td>$O_1$</td>
</tr>
<tr>
<td>Control</td>
<td>$X_2$</td>
<td>$O_2$</td>
</tr>
</tbody>
</table>

Information:
$X_1$ = experimental group treatment, namely the teaching and learning process using Powtoon learning media
$X_2$ = control group treatment, namely the teaching and learning process does not use Powtoon learning media
$O_1$ = Post-Test in the experimental group
$O_2$ = Post-Test in the control group.

(Sugiyono, 2016: 76)

In the control and experimental groups, the pretest will still be applied first before the enactment post-test. The aim is to determine the basic abilities of each student before the teaching and learning process takes place and as a basic reference to compare with the results after the teaching and learning process.

RESULTS AND DISCUSSIONS

Results
Use of Powtoon Media in Economics Class X

In carrying out the learning process in classes using Powtoon learning media (experimental group), researchers who directly lead the teaching and learning process on economic subjects with money material and use Powtoon-based learning media and the method used is the lecture method, question and answer and assignment in the form of pretest and posttest in the process before and after the delivery of the material using Powtoon-based learning media. While the economics subject teacher for social tenth grade at SMAI Haruniyah Pontianak acts as an observer. In general, the learning process in the experimental group went smoothly because almost all students were very enthusiastic in learning follow the learning seen from the activity participant educated in ask, answer questions, and do the post-test given by the researcher.

Learning Outcomes of Students Using Powtoon

There are differences in student learning outcomes before and after the material is applied to Powtoon media. It can be seen from the average pretest and post-test scores and the percentage of completeness. The average score of the pretest score was 61.38, with the lowest score was 45 and the highest was 75. After learning the treatment using Powtoon media with the concept of money supply and demand, it ends with a posttest, with an average posttest score was 82.24. Thus, it can be concluded that the learning outcomes of the posttest scores are higher than the pretest scores. Learning outcomes data can be seen in the table below.

| Table 3. Student Learning Outcomes Data Pretest Score and Posttest Experimental Group |
|-------------------------------------|-------------------------------------|-----------------|
| Complete                           | Not Complete                        | Average         |
| The number of students             | Percentage (%)                       | The number of students | Percentage (%) |                |
| Pre-test                           | 25                                   | 86.2%           | 4              | 13.8%          | 61.38          |
| Post-test                          | 1                                    | 3%              | 28             | 97%            | 82.24          |

Learning Outcomes of Students Who Don’t Use Powtoon Media

There are differences in student learning outcomes before and after the material is applied without Powtoon media. It can be seen from the average pretest and post-test scores and the percentage of completeness. The average score of the pretest score was 64.48, with the lowest score was 45 and the highest was 75. After being treated with conventional learning with the concept of money supply and demand, it ends with a posttest, with an average score was 81.72. Thus, it can
be concluded that the learning outcomes of the posttest scores are higher than the pretest scores. Learning outcomes data can be seen in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Complete</th>
<th>Not Complete</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of students</td>
<td>24</td>
<td>6</td>
<td>64.48</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>80%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>The number of students</td>
<td>10</td>
<td>27</td>
<td>81.72</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>10%</td>
<td>90%</td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Student Learning Outcomes Data Pretest Score and Posttest Control Group

Effect of Using Powtoon Media Against Learning Outcomes

Determining the effect of using Powtoon learning media on student learning outcomes is mainly seen from the differences in learning outcomes of the experimental group and control hypothesis. The difference in student learning outcomes in the experimental and control groups can be seen from the difference in the value of the learning outcomes of the two classes. From the control group table, data can be seen for students’ learning outcomes. In the class that did not apply the Powtoon learning media (control group), the number of students was 30. Six students completed the pretest score, and 24 students did not complete, with an average pretest score of 64.48.

Meanwhile, in the posttest score, 27 students completed, and three did not complete, with an average posttest score of 81.72. On average, student learning outcomes pretest and posttest scores can be seen changes in student learning outcomes. From the known average, the percentage increase in student learning outcomes is 70%.

The experimental group data can be seen that for the learning outcomes of students in classes that have applied the Powtoon learning media (experimental group) with the Minimum Learning Completeness Standard (SKBM) for economic subjects that the subject teacher deliberations have determined at SMAI Haruniyah Pontianak, namely 75, from the number of students in the class is 30, in the pretest score four students completed and 25 students who did not complete with an average pretest score of 61.38. Meanwhile, in the posttest score, 28 students completed, and one student did not complete with an average posttest score of 82.24. On average, student learning outcomes, pretest, and posttest scores can be seen changes in student learning outcomes. From the known mean obtained, the percentage increase in student learning outcomes is 83.2%.

After knowing the posttest scores in each experimental group and control group, hypothesis testing was conducted to see significant differences in student learning outcomes by applying audiovisual media. The test carried out is using the test class as well as through the normality test and t-test. After testing the normality on the learning outcomes of the experimental and control groups, a significance value of 0.085 > 0.05 was obtained, meaning that the residual value was normally distributed. Then a t-test was carried out to see a significant difference in the learning outcomes of students in the control group and the experimental group using the SPSS version 20 application. The value is smaller than 0.05, which means a significant difference in student learning outcomes by applying Powtoon media. There is a difference in the experimental and control group post-test results, then H0 is rejected, and Ha is accepted. The post-test results in the experimental group were higher than in the control group, and the experimental group used Powtoon-based learning media. In contrast, the control group used the lecture method. So the use of Powtoon-based learning media influences student learning outcomes in economics social tenth grade at SMAI Haruniyah Pontianak.

Hypothesis Testing

Normality Test

To determine whether the post-test result data in the experimental group and the control group were normally distributed or not, the researchers calculated the data using a computerized version of the SPSS application with Kolmogorov Smirnov. The following is the test procedure:
Table 5. Kolmogorov Smirnov Posttest . Normality Test Data

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>29</td>
</tr>
<tr>
<td>Normal Parameters</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Most Differences</td>
<td>Absolute</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td></td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td>a. Test distribution is Normal.</td>
<td></td>
</tr>
<tr>
<td>b. Calculated from data.</td>
<td></td>
</tr>
</tbody>
</table>

Then the normality test results are known to have a significant value of 0.085 > 0.05, so it can be concluded that the residual values are normally distributed.

**Homogeneity Test**

To find out whether or not the data on learning outcomes of students in the experimental group and control group are homogeneous, the following table presents the homogeneity of the variance values in the table

Table 6. Homogeneity of Variances

<table>
<thead>
<tr>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.568</td>
<td>1</td>
<td>57</td>
<td>.115</td>
</tr>
</tbody>
</table>

The significance value obtained is 0.115, so it can be concluded that students’ learning outcomes in the experimental and control groups are homogeneous (0.115 > 0.05).

**t-test**

After the normality test, it was proven that the data in this study were normally distributed. In this study, two hypotheses were formulated, namely the null hypothesis (Ho) and the alternative hypothesis (Ha). After testing the analysis prerequisites, then testing the hypothesis because the data is normally distributed, proceed with parametric statistical tests with t-tests with decision-making criteria if the value is significant or sig. (2-tailed) < 0.05, then Ho is rejected, and Ha is accepted.

**Basic Concepts of Paired Sample T-Test**

Paired sample t-test is a statistical test tool used to test the comparative hypothesis of two samples if the data is on an interval or ratio scale. The t-test aims to compare whether the average values in the experimental group and control group have a significant comparison or not. The basis for decision making is if the value of sig. (2-tailed) < 0.05, then there is a significant difference between the experimental group’s learning outcomes (post-test) and the control group if the sig value. (2-tailed) > 0.05, then there is no difference which significant among results study on (posttest) experimental group and control group.

Table 7. Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>79.14</td>
<td>29</td>
<td>5.357</td>
<td>.695</td>
</tr>
<tr>
<td>Eksperi</td>
<td>82.24</td>
<td>29</td>
<td>7.145</td>
<td>1.327</td>
</tr>
</tbody>
</table>

After calculating the t-test using the SPSS version 20 application, it can be seen that the value of sig. (2-tailed) on the posttest values, namely 0.026, which means the value is less than 0.05. It can be concluded that Ho is rejected, and Ha is accepted, meaning that there is an influence of Powtoon
Discussions
Use of Powtoon Learning Media in Economics Subject Social tenth grade SMAI Haruniyah Pontianak

The learning process in the experimental group ran smoothly because all students were very enthusiastic in participating in learning, seen from the activeness of students in asking questions, answering questions, and doing post-tests given by researchers with the learning process using Powtoon media. It is in line with the opinion of Arsyad (2016) "Learning media are everything that can be used to convey messages or information in the teaching and learning process to stimulate students' attention and interest in learning." And according to Suhana opinion (2014) stated "Learning media are all forms of stimulants and tools provided by the teacher to encourage students to learn quickly, precisely, easily, correctly and without verbalism."

Powtoon media, a tool in the learning process in social tenth grade at SMAI Haruniyah Pontianak, is very well used to help liven up the class atmosphere and activate students to follow the lesson well and get the expected result.

Learning Outcomes of Students Using Powtoon Learning Media in Economics Subject Social tenth grade SMAI Haruniyah Pontianak

There is difference in student learning outcomes before and after learning using Powtoon learning media. It can be seen from the average pretest and post-test scores and the percentage of completeness. The average score of the pretest score was 61.38, with the lowest score was 45 and the highest was 75. After learning the treatment using Powtoon learning media with the concept of money supply and demand, it ends with a posttest, with an average posttest score was 82.24. Thus, it can be concluded that the learning outcomes of the posttest scores are higher than the pretest scores. From the known mean obtained, the percentage increase in student learning outcomes is 83.2%.

From the explanation of learning outcomes above, there has been a change towards improving learning outcomes for each student. So that the value has increased in a better direction, that is, it has reached and above the Minimum Learning Completeness Standard (SKBM) set by the deliberations of subject teachers at Haruniyah Islamic High School Pontianak.

This change in learning outcomes is in line with Susanto's opinion (2013), "learning outcomes are changes that occur in students, both concerning cognitive, affective and psychomotor aspects resulting from learning activities."

Learning Outcomes of Students Who Did Not Use Powtoon Learning Media in Economics Subject Social tenth grade SMAI Haruniyah Pontianak

There is differences in student learning outcomes before and after learning without Powtoon learning media. It can be seen from the average pretest and post-test scores and the percentage of completeness. The average score of the pretest score was 64.48, with the lowest score was 45 and the highest was 75. After being treated with conventional learning with the concept of money supply and demand, it ends with a posttest, with an average score was 81.72. Thus, it can be concluded that the learning outcomes of the posttest scores are higher than the pretest scores.

On average, student learning outcomes pretest and posttest scores can be seen changes in student learning outcomes. From the known average, the percentage increase in student learning outcomes is 70%. There has been a change in learning outcomes for each student from the results described above. So that the value has increased in a better direction, that is, it has reached and above the Minimum Learning Completeness Standard (SKBM) set by the deliberations of subject teachers at Haruniyah Islamic High School Pontianak. This change in learning outcomes is in line with the opinion of Jihad and Haris (2013), stated "the learning outcomes of achieving a form of
behavior change that tend to persist from the cognitive, affective, and psychomotor domains of the learning process carried out within a specific time.

**The Effect of Using Powtoon Learning Media on Student Learning Outcomes**

The difference in student learning outcomes in groups that use Powtoon learning media and classes that did not use Powtoon learning media can be seen from the score difference of learning outcomes from both groups. After finding out the posttest scores in each experimental class and control class, hypothesis testing was carried out to see significant differences in student learning outcomes by applying Powtoon media. The test was carried out with a t-test to see significant differences in the learning outcomes of students in the control group and the experimental group.

In measurements using the SPSS version 20 application, it can be seen that the value of sig. (2-tailed) in the posttest values of the experimental group and the control group, which is 0.026, which means this value is smaller than 0.05, it means that there is a significant difference in student learning outcomes using Powtoon learning media in economics subjects in social tenth grade SMA Islamic Haruniyah Pontianak.

This significant difference in results is relevant to Fajar's research (2017) which stated, "there are significant differences in student learning outcomes in cognitive domains between students who study using Powtoon media." The results showed that the given class treatment with Powtoon media got a more significant increase in learning outcomes than the class not given treatment.

With regard to the research results conducted by researchers who refer to the theory of previous research, it can be seen that the Powtoon learning media can influence and improve learning outcomes for students. This explanation proves that the Powtoon learning media can be applied as a variety of learning media at SMAI Haruniyah Pontianak for Economics Social tenth grade subjects.

**CONCLUSIONS AND SUGGESTIONS**

**Conclusions**

Based on the results of data processing and discussion of the answers to the problem formulation, it can be seen that the Effect of Using Powtoon Learning Media on Student Learning Outcomes in Economics Subject in social tenth grade at SMAI Haruniyah Pontianak, in general, can be concluded several things. (1) The results of research observations carried out by researchers, the use of Powtoon-based learning media runs smoothly. The researcher conducted a Powtoon-based learning media in the experimental group. Overall, students are very enthusiastic in participating in learning, as seen from students' activeness in asking questions, answering questions, and doing post-tests given by researchers. (2) The learning outcomes of students in the experimental group who were taught using Powtoon-based learning media showed the lowest pretest score was 45, the highest score was 75, and the average score was 61.38. The lowest posttest score was 70, and the highest score was 100, with an average value was 82.24. From the known average, the percentage increase in student learning outcomes was 83.2%. (3) The learning outcomes of students in the control group who were taught using conventional methods without using Powtoon-based learning media showed an average pretest score was 64.48, with the lowest score was 45, the highest was 75. The lowest post-test score was 70, and the highest score was 90, with an average value was 81.72. From the average score, the percentage of increment in student learning outcomes was 70%. (4) The difference in the learning outcomes of students in the control group and the experimental group on measurements using the SPSS version 20 application can be seen that the value of sig. (2-tailed) on the posttest values of the experimental group and control group, namely 0.026, which means the value is smaller than 0.05, it means that there is a significant effect on student learning outcomes by applying Powtoon media.

**Suggestions**

Suggestions in this study are (1) That the Powtoon learning media is a tool that facilitates the delivery of the learning process so that it must be more balanced for class management so that students can absorb learning well; (2) In the learning process, especially when the learning media
is being applied, the teacher strives to pay more attention to the condition of the students sitting behind whether they can see clearly or not with the material provided; (3) Efforts are made so that students pay more attention to the media presented and listen to the teacher's explanation so that in obtaining learning outcomes, they can reach the minimum completeness criteria standard (SKKM) of 75 or exceed this value; and (4) Based on the research results, learning that uses powtoon media can be applied in economics learning in social tenth grade, especially on the concept of money supply and demand because it can improve student learning outcomes.

REFERENCES