The effectiveness of BARUSIDA application on arabic learning outcomes of students at junior high school

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ABSTRACT

Technology is developing rapidly so that it affects teaching and learning activities. Technology developments can be used to support the ease of learning. One of them is the BARUSIDA application, this application contains material on nahwu, sharaf and mufradat. The existence of the application is expected to provide an improvement in Arabic learning outcomes. This study used a quantitative approach with experimental research techniques with a one-group pretest-posttest design model. The analysis techniques used are simple regression analysis, correlation coefficient, determination coefficient and t-test hypothesis test. The population used in this study were 7th grade students of SMP Muhammadiyah 6 Jakarta with purposive sampling techniques. Based on the results of this study, it can be seen that any increase in the use of the BARUSIDA application will improve learning outcomes. So it can be concluded that the BARUSIDA application is effective as a learning medium that can significantly improve the Arabic learning outcomes of grade VII students of SMP Muhammadiyah 6 Jakarta.

Introduction

The development of technology is growing with the development of science. Technology is the result of science whose task is to solve practical problems (Andri, 2017). Technology is a collection Devices used to solve problems as well as achieve human goals (Alimuddin, Siman Juntak, Erni Jusnita, Murniawaty, &; Yunita Wono, 2023). Technology is a tool that functions to help humans achieve and complete certain tasks or goals individually or collectively (Rist &; Masoodian, 2019). Technology is a result of the research of scientists who can be useful for all groups without having to follow the stage of its maker (Salsabila, Lutfi, Hanifan, Mahmuda, &; Afif, 2023). In essence, technology is a tool that has value in creating products that have a value (Andriani, 2015). So it can be concluded that technology is a tool that is programmed using the system Coding to assist humans in completing daily tasks. As time goes by, technology far makes significant changes. Technology is created because of science and science can develop because of technology. An example of technology that can help science is when Indonesia was hit by the COVID-19 pandemic. This requires the Indonesian to carry out PPKM (Wahyudiyono, Eko, &; Trisnani, 2021) and PJJ (Megawanti, Megawati, &; Nurkhafifah, 2020)
Therefore, the teaching and learning process is carried out online (in the network). So with this it can be said that with technology we can learn more flexibly by doing it anytime and anywhere.

Technology does not only focus on science, but also in the fields of language such as Arabic. Many Muslim scientists wrote books in Arabic, not only in science or philosophy (Furaidah, 2020), but Arabic itself (Daulay, 2019). Apart from that, Muslims use Arabic to worship (Arifin & Sukandar, 2021). In addition, the endorsement of Arabic by the United Nations (Wahab, 2014) became an increasing attractiveness and preciousness of the Arabic. To understand and mastering Arabic, we must master in the four skills of learning Arabic (Liza & Fahmi, 2017) which consists of listening skills (maharah istima’) (Fathoni, 2018), speaking skills (maharah kalam) (Azmi & Puspita, 2019), reading skills (maharah qiraah) (Hasibuan & Sa’diyah, 2023) and writing skills (maharah kitabah) (Munawarah & Zulkiflih, 2020). The existence of technology makes it easier for us to master these skills with software in the form of supporting applications.

Education has coexisted with technology (Salsabila, Lestari, Habibah, & Dahlani, 2020). Even now elementary school students have been introduced to technology. Technology is developing rapidly so that we are required to be able to use technology well. This technology is like a knife (Suprapti, Gustin, & Kariadi, 2023), its usefulness depends on the user if used properly and correctly it will be useful and if it is abused, it will be harmful. The coexistence of technology with education makes the existence of educational technology. Educational technology is a systematic system that contains ways to achieve educational goals (Ramli, 2012). Educational technology is a set of theories and practices in the development, utilization, management, and evaluation of teaching material processes and sources (Haryanto, 2015). Educational technology is an ability of a teacher to use the abilities that they have in the teaching process so that they can achieve educational goals (Emilia, Azizah, & Rifky Azmi, 2023). Educational technology is a combination of machines, ideas and methods used to solve problems in the process of learning activities (Tompul, Sitompul, Meriana, Anneke Rantung, & Ibrahim Boiliu, 2023). So it can be concluded that educational technology is a collaboration of technology with educational science that produces a number of tools that can be used by teachers as learning media. If technology if used to make it easier to find knowledge, it will be very useful, for example is by downloading and installing applications related to lessons or supporting lessons, one of them is the BARUSIDA application that can support Arabic learning.

Free applications in circulation can be easily obtained so that selection is needed so by downloaded and installed applications are useful applications (Hamdani, 2023). The existence of these applications can have an influence on learning outcomes. Learning outcomes are abilities produced after carrying out learning activities (Rahman, 2021). Learning outcomes are the abilities possessed by students after experiencing the learning process (Komariyah & Laili, 2018). Learning outcomes are changes in a person's attitude and behavior after going through the process of teaching and learning activities (Yanto, 2015). So it can be concluded that learning outcomes are the abilities obtained by students after participating in teaching and learning activities which are characterized by changes in behavior influenced by increasing student knowledge.

In a study entitled "The Effectiveness of Arabic Language Learning Using Class VIII MTs Mixpad Media in New City" (Amrina, Mudinillah, & Sari, 2021) get the results that Mixpad media is effectively used in Arabic language learning. In a study entitled "The Use of Image Media to Improve Interest and Learning Outcomes of Arabic" (Rosikh, Sholah, Larasati, & Awalluddin, 2022) Obtained the result that the use of pictorial media provides an increase in learning outcomes. In a study entitled "The Influence of 'Clock Corner' Learning Media on Learning Outcomes in Arabic Language Learning for Class VII Students of Madrasah Tsanawiyah (MTs) Tegalrejo Magelang" (Rahmat Hidayat & Khofifah, 2022) The results found that the "Clock Corner" media is quite influential on student learning outcomes in Arabic lessons.

Based on several previous studies, the fundamental difference in this study is examines the effectiveness of the BARUSIDA application as an Arabic learning medium on the learning outcomes of Arabic of 7th grade students of SMP Muhammadiyah 6 Jakarta. When compared to previous research, this study is the first time that examines applications using the BARUSIDA application media with a research sample of 7th grade students of SMP Muhammadiyah 6 Jakarta.

Application is a program that has been designed in such a way that runs on a computer or mobile phone (Dewi, Irawan, Fitri, & Putra, 2021). An application is a collection of files that has a task of performing certain programs that are interrelated (Abdurrahman & Riswaya, 2014). Application is a system that is deliberately programmed to meet the needs of its users to complete a certain task (Huda & Priyatna, 2019). Application is the application of a system that has been designed using a programming language to process data (Tresnawati, Satria, & Adinugraha, 2016). Then it can be concluded that application is the result of a series of systems assembled in a program with Coding which aims to meet the needs and solve certain problems in a particular

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system. The collaboration between Arabic learning and technology has produced a learning tool in the form of software such as applications, one of them is the BARUSIDA application.

The BARUSIDA application (Bahasa Arab Seru, Asyik dan Mudah) is an application that supports learning Arabic. This application contains materials about Nahwu, Sharaf, and Mufradat (Arabic vocabulary). Nahwu are the rules used to determine the Arabic forms and their state are known when standing alone and in sentence structure (Dodi, 2013). While Sharaf is the study of the changing word forms from one word to another (Ahmad Fadhel Syakir Hidayat et al., 2022). This application can be used anywhere and anytime, making it easier for users to access the application. The rapid development and competition of technology makes it easier for students to get devices (Mutiwiyati, Syaban, Kurniasari, & Oktaviani, 2023) at an affordable price. Seeing the number of device users in students, it has a potential to be used as a learning tool, especially Arabic lessons that can facilitate learning activities. Researchers have a provisional answer in this study with the hypothesis $H_0 : R = 0$ : There is no influence of the BARUSIDA application on the Arabic learning outcomes of 7th grade students of SMP Muhammadiyah 6 Jakarta; $H_1 : R \neq 0$ : There is an influence of the BARUSIDA application on the Arabic learning outcomes of 7th grade students of SMP Muhammadiyah 6 Jakarta. The purpose of this study is to analyze whether the BARUSIDA application is effective as a learning medium that can improve Arabic learning outcomes.

Method

This type of research uses a quantitative approach with experimental research techniques. Quantitative research is research whose variables and parameters have been determined in advance before the research is carried out with a certain design (Firman, Masrun, & Yudha S, 2021). The experimental research technique uses a one-group pretest-posttest design model. The one-group pretest-posttest design model is a research design which researchers give pretests to objects before treatment and then posttest after which they are given posttests.

There are also data analysis techniques used, they are simple regression analysis, correlation coefficient, and determination coefficient and t-test hypothesis test with a significance level of 5%. This study used the Pearson correlation because the data was normally distributed (parametric) with a sample of 30 people.

This research was conducted at SMP Muhammadiyah 6 Jakarta for two months. The population in this study is 7th grade students of SMP Muhammadiyah 6 Jakarta. The sampling technique in this study uses purposive sampling, namely sampling with certain considerations. The consideration why this research taking 7th grade students at SMP Muhammadiyah 6 Jakarta as the samples is because 7th grade students are still considered beginner in Arabic. There are also sample criteria for the students who take the pretest and posttest. There are also criteria for students who take the pretest and posttest.

Results and Discussions

Learning media is something that is used to convey messages that can attract interest and attention so the learning process is more conducive and controlled (Nurrita, 2018). Learning media are means or tools used by teachers in the teaching and learning process to achieve learning objectives (Mahmudah, 2018). Learning media is something that is used to improve skills and increase knowledge (Aghni, 2018). Learning media is a tool that helps the teaching process that affects the learning climate, conditions and learning environment developed by the teachers (Trisiana, 2020). Learning media is an intermediary tool that helps to facilitate the running of teaching and learning activities (Rachmawati, 2022). So it can be concluded that learning media is a tool used to convey information and learning materials that function to help improve skills and increase knowledge which is adjusted to the applicable curriculum so that learning objectives can be achieved. One of the learning media that can be used in Arabic learning activities is the BARUSIDA application.

The BARUSIDA application is one of the android-based learning support media or tools that includes material related to Arabic learning which contains on nahwu, sharaf and also mufradat (Arabic vocabulary). This application is designed as attractive as possible so the users do not easily feel bored in learning and attract interest and attention in the learning process and can be used to improve skills and increase our knowledge.

The existence of this application has a positive impact on the results of learning Arabic. There is also an analysis as follows.

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**Simple regression analysis**

Simple regression analysis is the analysis of two variables consisting of an independent variable (variable X) and a dependent variable (variable Y). In this study, the independent variable (variable X) is the effectiveness of the BARUSIDA application and the dependent variable (variable Y) is the result of Arabic learning.

<table>
<thead>
<tr>
<th>Type</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>31.404</td>
<td>14.513</td>
<td>2.164</td>
</tr>
<tr>
<td></td>
<td>Pretest</td>
<td>.796</td>
<td>.253</td>
<td>.511</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Posttest

From the table 1, the value of the constant $\alpha = 31.404$ and the constant $\beta = 0.796$. There is a positive influence between the BARUSIDA application and the results of Arabic learning. So it can be interpreted that every increase in the use of the BARUSIDA application, there will be an increase in learning outcomes of 0.796.

**Correlation Coefficient**

The correlation coefficient is a coefficient that describes the degree of closeness of the linear relationship between two or more variables. This coefficient does not describe the causal relationship between the independent variable (X) and the dependent variable (Y), but describes the relationship between the independent variable (X) and the dependent variable (Y).

The Pearson correlation is a simple correlation involving only one dependent variable and one independent variable, this correlation is used to measure the linear relationship of two variables. Two variables can be said to be correlated if changes in the independent variable (X) affect the dependent variable (Y) regularly either positively (same direction) or negatively (opposite direction). The value of the correlation coefficient is closer to the value of 1, the stronger the correlation, the more the value of the correlation coefficient is close to 0, the lower the correlation, the value of the correlation coefficient that depends on the value of -1, the stronger the correlation. The value of the positive correlation coefficient shows that the higher the value of the independent variable (X), the higher the value of the dependent variable (Y) with regular increases in the same direction, while the value of the negative correlation coefficient indicates that the higher the value of the independent variable (X), the lower the value of the dependent variable (Y), the increase in the independent variable (X) results in a decrease in the dependent variable (Y) so it has the opposite direction. The data used in this analysis is normally distributed data and also has a linear relationship between the independent variable (X) and the dependent variable (Y).

Table 2 <Correlation Coefficient>

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>30</td>
</tr>
<tr>
<td>Posttest</td>
<td>Pearson Correlation</td>
<td>.511**</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>30</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (1-tailed).

From the table 2, it can be seen that the correlation value is $r = 0.511$. Thus, it can be interpreted that the BARUSIDA application has a high relationship with student's learning outcomes. This correlation value shows that the BARUSIDA application has an influence on Arabic learning outcomes. A positive correlation value shows that the BARUSIDA Application has a unidirectional relationship with the effectiveness of Arabic learning. The effectiveness of the BARUSIDA application on Arabic learning outcomes is 0.511 with a range of 0 – 1, namely 0 < 0.511 <1.

**Coefficient of Determination**

The Coefficient of Determination is a coefficient that shows the degree of influence between the independent variable (X) and the dependent variable (Y) (Sahir, 2021). The coefficient of determination is symbolized by R2. The smaller the value of the coefficient of determination, the smaller the influence of the variable (X) free on the
dependent variable (Y) and vice versa, the greater the value of the coefficient of determination, the greater the influence of the variable (X) free on the dependent variable (Y). The value of the coefficient of determination is greater the influence of the independent variable (X) on the dependent variable (Y) if the value of the coefficient of determination is closer to the value of 100%. The coefficient of determination is also formulated as follows.

\[ KP = R^2 \times 100\% \]

\( KP = \) value of the coefficient of determination

\( R = \) value of correlation coefficient

Table 3. Coefficient of Determination

<table>
<thead>
<tr>
<th>Type</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.511a</td>
<td>.261</td>
<td>.235</td>
<td>10.359</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Pretest

From the table 3, it can be seen that the R value is 0.551. If calculated manually to find the coefficient of determination is by multiplying the squared correlation value (R) by 100%, the result is 26.1121%. Meanwhile, if you use SPSS to find out the coefficient of determination is by multiplying the value of R Square by 100%, the result is 26.1%. So with the value of the coefficient of determination of 26.1%, it can be seen that the BARUSIDA application has an influence of 26.1% on Arabic learning outcomes and 73.9% is influenced by other factors.

**t-Test Hypothesis Test**

Partial test (t test) is a hypothesis test used in this study to test partial regression coefficients (Kurniawan & Pusitaningtyas, 2016). This study used a partial test because it has one independent variable (X) and one dependent variable (Y). This partial test is to determine the effect of one independent variable (X) on its dependent variable (Y). This t test is also to determine the level of significance of the independent variable to the partially dependent variable. The hypotheses used in this test are as follows.

\[ H_0: \ t_{count} \leq t_{table}, \] there is no influence between the independent variable (X) and the dependent variable (Y).

\[ H_1: \ t_{count} > t_{table}, \] there is an influence between the independent variable (X) and the dependent variable (Y).

Table 4. t-Test Hypothesis Test

<table>
<thead>
<tr>
<th>Type</th>
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<td>.253</td>
<td>.511</td>
</tr>
</tbody>
</table>

From the table 4, it can be seen that the calculated value is 3.146, while in the table it is 2.042; it means \( t_{count} > t_{table} \). Based on the hypothesis above, it can be concluded that H1 is accepted, then H0 is rejected, which means that the BARUSIDA application affects the results of Arabic learning outcomes. This application can make students more interested in understanding the Arabic material because of its attractive appearance and simple features and continuous use will increase the effectiveness of the BARUSIDA application on Arabic learning outcomes. Because the t value is positive, it can be concluded that the BARUSUDA application has a positive impact on Arabic learning outcomes, therefore the BARUSIDA application is effective in improving Arabic learning outcomes of 7th grade students at SMP Muhammadiyah 6 Jakarta.

**Conclusions**

The development of technology play an important role in the education world, so there is the term of educational technology. The existence of educational technology makes it easier for students to obtain information through learning media packaged in the form of software, one of them is an application. The BARUSIDA application (Bahasa Arab Seru, Asyik dan Mudah) is one of the android-based online applications that will provide benefits to users, especially for users who want to learn Arabic, students, or the general public by presenting nahwu, sharaf and mufradat materials. Based on the results of the study, researchers can conclude that the BARUSIDA application analyzed using simple regression analysis obtained the results that the BARUSIDA application has improved learning outcomes. From the calculation of the correlation coefficient for the BARUSIDA application, it was obtained that the BARUSIDA application has a high relationship with the effectiveness of improving the student’s learning outcomes of 7th grade students of SMP Muhammadiyah 6 Jakarta. Based on the calculation of the coefficient of determination, the BARUSIDA application has an influence on the results of Arabic learning outcomes.
learning. The hypothesis testing carried out with partial testing (t test), from the results of the t test it was obtained that BARUSIDA was effective in improving Arabic learning outcomes of 7th grade students at SMP Muhammadiyah 6 Jakarta.

References


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