Improving Academic Achievement for Islamic Religious Education Students through Lecturer Competence and Digital Learning Media

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Abstract
This study aims to determine the quality improvement of Islamic religious education students at XYZ Islamic University through lecturer competence and digital learning media. The method used is a quantitative method with a survey approach. The data was obtained by giving questionnaires to 63 respondents in this study. The questionnaire given to the respondents tested the validity and reliability so that the questionnaire was declared valid and had a level of reliability. The data obtained were tested using classical assumptions and analyzed using multiple linear regression. The results obtained in testing the hypothesis show that partially and simultaneously, the lecturer competence and digital learning media on the quality of Islamic religious education students have a positive and significant influence. This result is indicated by an Adjusted R Square of 0.247, which means that for every increase in the variable of lecturer competence and digital learning media by one, the student's quality also increased by 24.7%, assuming that other variables were considered constant.

Keywords: Digital Learning Media, Graduates Quality, Teacher Competence.

Abstrak

Kata kunci: Kualitas Lulusan, Kompetensi Guru, Media Pembelajaran Digital.

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Introduction
Information and communication technologies are rapidly spreading worldwide in this digital age, making it easy for people to access information from various media. People can quickly and efficiently access data from the internet using devices such as Android mobile phones, PC laptops, and Internet networks. We know that to enhance knowledge, particularly in Indonesia, when COVID-19 became an epidemic, the internet as information management is becoming a food item for all ages, from children to adults. One of the many benefits of advanced learning media is accessibility, making it easier for students to access learning material anywhere and anytime.

There are several problems in implementing digital learning media in schools. First, it's unavailable at elementary and secondary school levels, even at the upper level. Four of the five topics in the Informatics subject discuss more about technical aspects only and more so at the high school level, the dimension of "creation" taught is still limited to making devices such as computer programs and applications. It indicates the need to increase teacher competency at all levels of education, including university teachers. Thus, the concept of competency involves teachers and university teachers (lecturers).

Teacher competence is quoted from Detik News. Out of 3.9 million teachers, around 25% still do not meet the academic qualification requirements, and 52% do not have teacher certification. The teacher's professional competence consists of a combination of individual, technical, societal, and spiritual skills that generally constitute standard teaching competencies regarding mastery of the material, knowledge...

of pupils, learning how to deal with students, education training, practical development and professional achievement.\(^6\) Meanwhile, the competencies teachers must possess are based on Law Number 14 of 2005 on Teachers and Lecturers in Chapter IV Article 10 (paragraph 91), which stipulates that "teacher competencies include: pedagogic competence, personal competence, social competence and professional competence acquired through professional education."\(^7\)

Digital learning media are intended to stimulate the development of critical reasoning and problem-solving through collaboration and communication, enabling students to learn how to adapt their skills according to a given situation by activating them with digital learning.\(^8\) The characteristics of digital learning, as written by Husamah, are learning that combines various delivery methods, learning methods, and various technology-based learning media. 2) Modifying conventional or face-to-face, independent, and online learning (e-learning). 3) Learning is supported by an effective combination of delivery and teaching methods, learning models, and learning methods. 4) Educators and parents of students have an equally important role: educators as facilitators and parents as supporters.\(^9\)

Research conducted by Masluhah Videoscibe is an animated learning medium consisting of a series of photographs arranged in an entire video. Videoscibe has the advantage of combining images, sounds, and attractive designs.\(^10\) Lubis et al. revealed that Islamic Religious Education was to continue learning During the Covid-19 Emergency Period but carried out with a remote system based on an internet network.\(^11\)

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Angriani et al. research shows that developing digital book learning media using the Flip PDF app can increase students' theoretical understanding and interest, especially in junior high school-level algebra material.12

The purpose of this study was to determine the effect of digital learning media on the quality of XYZ University PAI graduate students, to determine the impact of teacher competence on the quality of XYZ University PAI graduate students, and to determine the effect of digital learning media and teacher competence on the quality of XYZ campus PAI student graduates.

According to the objectives of this study, it is believed that teachers' competence plays a significant role in positively affecting the quality of vocational training for Muslim religious students. Secondly, digital learning media significantly impacts the quality of Islamic religious education students. Third, teacher competence and digital learning media affect the quality of religious education students at XYZ University.

Method

This research was conducted at the XYZ campus of the Islamic Religious Education Study Program, using quantitative research and survey techniques, where the data were obtained directly from the respondents, hereafter referred to as primary data. The population is the entire research object, while the sample is part of the population.13 The sampling technique uses probability sampling; all populations have the same opportunity to be sampled.14 The sample for this research was 63 people, which means taking the entire population; henceforth, this method is called the census method.

To gather data, questionnaires or questionnaires targeted to the XYZ teachers were used employing the Likert scale with check box form in this study, where each question has the option of strongly agree (5), agree (4), Doubtful (3), Disagree (2) and strongly disagree (1). The validity test is carried out. In this case, a validity test will be carried out to assess the validity of the research instrument, which is an examination questionnaire. The instrument validity in this study was construction validity because the notes instrument used to measure attitudes is sufficient to fulfill construction

validity. The Moment Product Correlation Formula is used to calculate the validity of
the questionnaire, according to Sugiyono.

\[ r_{xy} = \frac{n \Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{(n \Sigma x^2 - (\Sigma x)^2)(n \Sigma y^2 - (\Sigma y)^2)}} \]

Information:
\( r_{xy} \): Correlation Coefficient
\( x \): Independent Variable
\( y \): Bound Variable
\( n \): Number of samples/respondents

After carrying out the validity test, a reliability test is then carried out, which
aims to measure the reliability of an instrument and whether the data obtained is
consistent from time to time, namely by comparing the Cronbach alpha value. The
reliability test formula is as follows:

\[ r_{11} = \left[ \frac{k}{k-1} \right] \left[ 1 - \frac{\sum \sigma_i^2}{\sigma_i^2} \right] \]

To test this hypothesis, data analysis techniques in the present study have used
multiple linear regression. The previously used data were subjected to classical
assumption tests containing normality, linearity, heteroscedasticity, and
multicollinearity tests. Multiple Linear Regression tests were conducted in an attempt to
test the hypothesis. The multiple linear regression equation is mathematically
expressed in the form of the regression equation:

\[ Y = a + b_1X_1 + b_2X_2 \]

\( Y \): dependent Variable (variable value to be predicted)
\( a \): constant
\( b_1,b_2,…, b_n \): regression coefficient values
\( X_1,X_2,…, X_n \): independent variables.

Results and Discussion

Result

The validity test shall be carried out using the r product moment table to
determine whether it is valid; \( df = n-2 \), namely 63-2 = 61 with sig. \( \alpha = 0.05 \), then a two-
sided r table is 0.254. The condition is that if the r count is greater than the r table, the

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item statement is valid, and the validity test result of lecturer competence can be seen in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>R-count</th>
<th>R-table</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1.1</td>
<td>0.326</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.2</td>
<td>0.276</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.3</td>
<td>0.383</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.4</td>
<td>0.472</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.5</td>
<td>0.397</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.6</td>
<td>0.655</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.7</td>
<td>0.734</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.8</td>
<td>0.67</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.9</td>
<td>0.485</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.10</td>
<td>0.534</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.11</td>
<td>0.531</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.12</td>
<td>0.6</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.13</td>
<td>0.621</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.14</td>
<td>0.565</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.15</td>
<td>0.715</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.16</td>
<td>0.709</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.17</td>
<td>0.668</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.18</td>
<td>0.701</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.19</td>
<td>0.627</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X1.20</td>
<td>0.658</td>
<td>0.254</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Source: Primary data processed, 2023.

Based on the table above, all question items in this study are considered valid or tested for truth because the overall calculated R-value is greater than the R table value.

Testing the validity of digital learning media is obtained using the r product moment table, then determining df = n-2, namely 63-2 = 61 with sig. α = 0.05, then a two-sided r table of 0.254 is obtained. The condition is that the item statement is valid when the r count exceeds the r table. Table 2 shows the results of tests on digital learning media's validity.

<table>
<thead>
<tr>
<th>Variable</th>
<th>R-count</th>
<th>R-table</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2.1</td>
<td>0.509</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X2.2</td>
<td>0.647</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X2.3</td>
<td>0.554</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X2.4</td>
<td>0.57</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X2.5</td>
<td>0.654</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X2.6</td>
<td>0.641</td>
<td>0.254</td>
<td>Valid</td>
</tr>
<tr>
<td>X2.7</td>
<td>0.539</td>
<td>0.254</td>
<td>Valid</td>
</tr>
</tbody>
</table>
Based on the table above, all question items on digital learning media in this study are said to be valid or tested for truth because the overall calculated R-value is greater than the R table value.

Testing the validity of the quality of Islamic religious education students is obtained by using the r product moment table, then determining df = n-2, namely 63-2 = 61 with sig. α = 0.05, then a two-sided r table of 0.254 is obtained. The item statement must be true if R counts are higher than the r table. Table 3 summarises the results of the quality tests on religious school students.
Based on Table 3, all of the question items in this study are said to be valid or verified because the overall calculated R-value is greater than the R table value. After the validity test results, the reliability test was carried out, as shown in Table 4 below.

### Table 4. Reliability Test Results

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Cronbach Alpha &gt; 0.60</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Teacher Competency</td>
<td>0.892</td>
<td>Reliable</td>
</tr>
<tr>
<td>2.</td>
<td>Digital learning media</td>
<td>0.905</td>
<td>Reliable</td>
</tr>
<tr>
<td>3.</td>
<td>Emotional Intelligence</td>
<td>0.903</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

Source: Primary data processed, 2023

In the reliability test, the decision is based on the following factors: if Cronbach's Alpha value is 0.60, the questionnaire shall be declared reliable or consistent, and if the Cronbach's Alpha value is 0.60, the questionnaire shall be declared unreliable or inconsistent. Cronbach's alpha is more significant than 0.60. The reliability test results for the instruments used in the study showed that any research instrument item could be reliable as long as it fulfills the reliability testing criteria applicable to those items. The data normality test requires that the regression model achieves the normality assumption if the data spreads around the diagonal line. A regression model shall not be consistent with the normality assumption if data moves from a diagonal line or does not follow that horizontal line. The normality test results are illustrated in the following order.

![Normal P-P Plot](image)

**Figure 1. Normal P-P Plot**

The normal distribution of the data from each variable can be concluded on the basis of the data normality test. More details can be found in the Data Normalisation.
Test. It is also shown in Figure 1 that points formed are spread along both diagonal and normal lines with good data. The objective of the heteroscedasticity test is to determine whether the variance of the regression model from one residual observation to another is unequal. Figure 2 shows the results of heteroscedasticity testing conducted on a scatter graph.

![Figure 2. Scatterplot](image.png)

To determine the existence of heteroscedasticity, it is also helpful to look at a plotgraph between the predicted value of an independent variable (ZPRED) and its residual (SPRESID). It may be beneficial to look for a specific pattern in a SPRESID and ZPRED scatterplot graph with the Y-axis forecast to identify the presence or absence of heteroscedasticity. The X axis is a residual prediction studied, namely Y. On the Y axis, Figure 2 shows that the dots are randomly distributed and scattered above and below the number 0; there is no specific regular pattern. Therefore, this regression model cannot be considered to have heteroscedasticity.

A Multiple Linear Regression Analysis determined the impact of the hypothetical variables observed in this study. There are two independent variables in this model, lecturer competence (X1) and digital learning media (X2.) and one dependent variable, namely the quality of PAI students (Y). Table 5 below summarises the data processing results, which have become a basis for developing this research model.
Table 5. Multiple Regression Test Results

<table>
<thead>
<tr>
<th>Coefficients *</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>37,241</td>
<td>5,923</td>
<td>5,933</td>
<td>.000</td>
</tr>
<tr>
<td>TotalX1</td>
<td>,385</td>
<td>,113</td>
<td>,365</td>
<td>2,885</td>
</tr>
<tr>
<td>TotalX2</td>
<td>,361</td>
<td>,126</td>
<td>,161</td>
<td>1,275</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Totally

Source: Primary data processed, 2023

The model can be written in the multiple linear regression equation: \(Y = 37.141 + 0.385X1 + 0.361X2 + e\). Based on the equation above, it can be explained that the regression coefficient of the lecturer competency variable (X1) is \(\beta_1 = 0.385\). Because the sig value is below 0.05, which is equal to \(= 0.005\), which means that H1 is acceptable, it means that there is an effect of lecturer competence on the quality of PAI students and the regression coefficient of the digital learning media variable (X2) is \(\beta_2 = 0.361\). Because the sig value is below 0.05, which is \(= 0.001\), H2 is accepted, meaning that digital learning media influences the quality of PAI students. To see the effect of lecturer competence and the principal's leadership style on students' emotional intelligence, see Table 6 below:

Table 6. Simultaneous T-Test Results

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>.278 a</td>
<td>.077</td>
<td>.247</td>
<td>8.45915</td>
<td>1.982</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), TotalX2, X1Tot
b. Dependent Variable: YTOTAL

Source: Primary data processed, 2023.

Testing the influence of lecturer competence variables and digital learning media on the education quality of PAI students obtained simultaneously Adjusted R Square 0.247, which means that with every increase in the lecturer competence variable and digital learning media by 1, the quality of PAI student education will increase by 24.7% assuming that other variables are considered fixed. The conclusion is that the variable lecturer competence and digital learning media simultaneously (together) affect the quality of education of PAI students by 24.7%. The remaining 75.3% is influenced by other variables not tested in this study.
Discussion

The Effect of Lecturer Competence on the PAI Student's Quality

Competence means that a teacher must be able to carry out his duties as an educator. Competence is crucial because the achievement of an excellent educational outcome is determined by teacher competence, especially professional competence. Partially, teacher competence positively and significantly influences the quality of students. Teacher competence includes pedagogic, professional, personal, and social competence. These results indicate that respondents tend to strongly agree that the XYZ school teachers have teachers who have quality teachers.

The teacher's professional competence impacts students' emotional intelligence because professional competence that actively checks workers or records and student completeness can foster student responsibility from their students. In addition, competent teachers can be motivators for their students because teachers can motivate students who lack concentration in lessons and guide students in determining learning concepts. Qualified pedagogical competencies possessed by teachers by providing innovation and new things in learning can make students interested in participating in the learning process. Teachers can improve students' quality through good communication between teachers and students in the learning process.

Teaching in front of the class embodies interaction in the communication process. Meanwhile, a teacher's social competence is one of the teacher's powers or skills to prepare students for becoming good citizens and education and community work. In addition, teachers can create comfortable learning conditions. It can be concluded that teachers must have social competence concerning implementing the learning process. Teachers must know how they communicate and interact with students when approaching them.

This research aligns with previous research, where teacher competency significantly impacts student quality and achievement. Recent studies have shown that

improving the quality of Islamic Religious Education students is highly dependent on the competence of teachers.\(^{18}\)

**The Influence of Digital Learning Media on the PAI Student's Quality**

In some respects, the quality of Islamic religious education (PAI) students is negatively and significantly affected by digital learning media. The PAI learning media are anything that can serve as a means of disseminating messages from senders to the recipients for stimulating students' thinking, emotions, interests, and sense of loyalty so that their teaching and educational process takes place to reach the objectives of PAI.

Media use in learning Islamic religious education at XYZ campus has been digital-based. Digital media is translated into a format that can be seen, heard, and stored on a computer. Computers have information in binary form.\(^{19}\)

The learning media is expected to stimulate students so that they always want to continue learning and developing what they have learned in the learning process they have lived. In addition, learning media is an intermediary in conveying works produced by someone related to learning material as an illustration and a means to students in the learning process. Learning media increases children's absorption and retention of learning material because learning success is determined by two main factors, namely methods and media. These two components are interrelated and cannot be separated.

Learning media, as a tool in the learning process, has several benefits, including:

1. Teaching attracts more students' attention to foster learning motivation.
2. Teachers' materials will be of more precise meaning so that they are comprehensible to students and enable them to reach their teaching objectives.
3. The learning method differs from verbal communication through the teacher's oral language to students not being bored and teachers not being exhausted.

The results of this study align with what Amanullah revealed in his research, which outlines that digital-based learning is a bright and exciting solution.\(^{20}\) In addition,
Zumaroh's investigation has shown the possibility of applying internet media in Islamic Religious Education activities to improve educational quality regarding materials needs so that education is operated effectively.\(^{21}\)

**The Effect of Lecturer Competence and Digital Learning Media on the PAI Student's Quality**

The hypothesis test results show that lecturer competency and digital learning media simultaneously positively affect the quality of PAI students. This result is indicated by an Adjusted R Square of 0.247, which means that for every increase in the variable of lecturer competence and digital learning media by one, the student's quality increases by 24.7\%, assuming that other variables are considered constant.

In light of all this debate about students' quality at XYZ University, using results from multiple regression analyses in which teacher competence factors have increased more significantly and are followed by digital learning media, it is possible to improve student education systematically and gradually.

**Conclusion**

The results of this study show that digital learning media have significantly influenced PAI XYZ students' quality. Faculty's expertise remarkably and positively impacts the quality of the PAI school XYZ graduating students; digital learning media and lecturer competence jointly affect the quality of graduates. It is hoped that the research will be able to contribute in practical and academic terms. Practically, we can apply or implement that the quality of learning media in education must continue to be improved because it is the lowest factor in this study. Academically, it is hoped that it can add to the wealth of scientific treasures in the field of learning media and become a reference for future researchers. This study has a deficiency in the relatively small number of respondents, so that it can increase the number of population and samples in the future. In addition, the relatively short research time made the research results less than optimal, especially when assisting in filling out questionnaires.

References


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