Effectiveness Of Learning Through The Application Of Technology Of Education In The Digital Era

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Abstract

In this research, the problem that is being researched is the use of learning in the digital age. The center of the study focuses on teachers' use of information technology in learning. ai The aim of this research is to: understand the application of IT and the application of IT to the effectiveness of learning in MTs Se-Kabupaten Musi Banyuasin. This research method is a quantitative descriptive method for 5 MTs with a sample of 120 teachers in the Musi Banyuasin district. Personal Product Moment Correlation is the correlation analysis method used. The results of research in MTs in Musi Banyuasin district showed that: the variable implementation of information technology promotes the effectiveness of learning positively and significantly Supports learning potential in the MTs Se-Kabupaten Musi Banyuasin.

Keywords : *performance, learning, data technology*

INTRODUCTION

The key component of the teaching and learning benchmark, both the formal education pathway and the informal education pathway, is for educators. In line with that, any attempt to enhance the nature of the education of the nation can not be isolated from the various items found by the presence of teachers. Maximum and practical student learning performance is an example of science and information communication technology (ICT) enhancement, where ICT has changed the world view from ordinary (conventional) educators focusing on teachers to technology-driven learning (Schooling Based Technology) focusing on students. Information and Communication Technology (ICT), depending on the learning content, each student may obtain different information.

[1] said that learning to take advantage of multiple senses (sight and hearing) will enable students to learn more, where about 90% of one's learning outcomes are obtained through the sense of sight, 5% are obtained through hearing and 5% through other senses again, Considering that teachers who were originally a source of knowledge and data have now changed circumstances to become facilitators who need to have the opportunity to relate technical enhancement to student learning.

It can therefore be understood that this poses an important problem for research on the application of information technology to improve the efficacy of learning in MTs in the Musi Banyuasin Regency, based on the aforementioned reasoning.

METHOD

A quantitative descriptive methodology via a survey approach as a review strategy is the method used by researchers in this analysis. Analysis that focuses statistical knowledge is quantitative research. [2]. Survey research was used from the stated sample, [3] In 5 (five) MTs Se- Musi Banyuasin Regency, the population of this study was the entire teaching force. For this analysis, a saturated sampling procedure was used to assess the sample from the study, in which all individuals from the population were part of the research sample. The results were collected as research respondents by 129 teachers. In this research, data collection strategies centered on the efficacy of implementation learning and the application of information communication technology (ICT) to learning through three types of methods, namely interviews, surveys (questionnaires), and documentation. The instruments used

have been validated through Constructive Validity Testing, and validity and reliability testing (Calibration). The validity test uses the item analysis technique, namely using the correlation formula Product-Moment:

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$$\text{rxy} = \frac{n\sum xy - \sum (x)(y)}{\sqrt{\{n\sum_X {}^2 - (\sum x)^2\}\{n\sum_y {}^2 - (\sum y)^2\}}}$$

(N. Kesumawati and Ichwan Aridanu, 2018)

Then by [7] using the cronbanch alpha formula, the approach used to calculate reliability is. For tools which use graded responses, this formula is used. Reliability has been evaluated in this analysis using the alpha formula, namely:

$$\text{R1} = \left[\frac{k}{(k-1)}\right]\left\{1 - \frac{\sum S_i}{Si}\right\}$$

RESULTS
Application of the technology of information communication (ICT)

The research measurement of the information communication technology (ICT) application instrument is the score obtained by [5]each respondent from the instrument distributed to the respondent. Six metrics were taken from the Implementation of Information Communication Technology (ICT) component, namely the dimensions of the provision of information technology access at home and at school, [6]The availability and experience of the use of information technology, the desires and attitudes of teachers towards information technology, the ability of teachers to perform simple computer operations, the ability of teachers to use the internet, and the use of IT for learning.
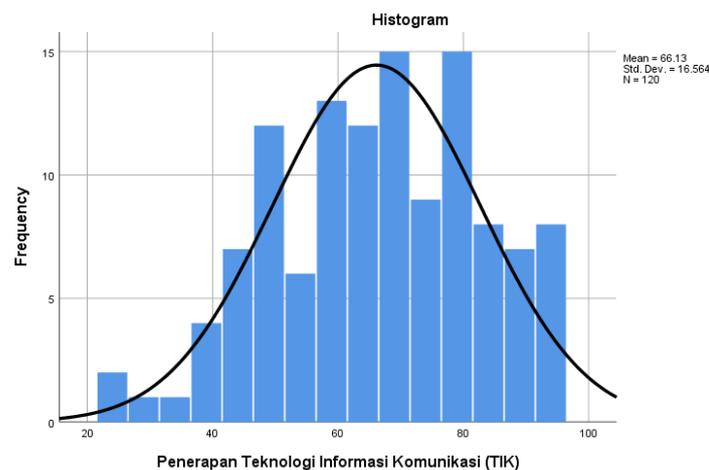

Figure 1. Descriptive Data Statistic of Information Technology Implementation

It can be shown, based on Figure 3.1, that the variable distribution of the ICT application is natural since the curve is symmetrical.

Learning Effectiveness

[7] The learning effectiveness variable draws six indicators, namely: Availability of access to Information Technology at home and at school, Availability and Experience of Using Information Technology, [8] Teacher's interests and attitudes towards Information Technology, Teacher competence in basic computer operations, [9] Teacher competence in utilizing the internet, and Utilization information technology for learning.

The learning effectiveness data were processed using SPSS version 25.00 for Windows, the highest score was 96 and the lowest score was 24. The analysis showed the

mean price was 66.13, the median was 67.50, mode 62 and standard deviation was 16.56. Meanwhile, the calculation results show that the skewness value is -.640 and the Std. Error of Skewness 0.221. Then the value of the ratio skewness = skewness / Std. Error of Skewness (-0,640 / 0,221) = -2,895 and kurtosis value 0,450 Std. Error of Kurtosis 0.438 (kurtosis ratio value 0.450 / 0.438 = - 1.027 means that the skewness ratio value and kurtosis value are located in the area between -2 to +2 so it can be said that the distribution of the learning effectiveness data sample is normally distributed.

After the prerequisite analysis test was carried out, consists of data normality test, linearity test, classic assumption test (autocorrelation test, multicollinearity test), then calculations can be done to test the hypothesis, using Peason's Product Moment correlation test, partial test, and simple linear regression

Correlation Test

Results The calculation of the variable application of information communication technology with the effectiveness of learning, obtained a correlation coefficient value () of 0.783, meaning that the correlation is strong.The sign of correlation is + (positive), meaning that if the value of the application of information communication technology (ICT) increases, the effectiveness of learning also increases and vice versa. Effective Application of Information Communication Technology (ICT) itas Learning has a sig value. 0.000 <0.05, then Ho is rejected. The decision has a correlation.

T- test

The calculation of the correlation between the variables of the application of information communication technology and the effectiveness of learning, it can be seen that $rx2y = 0.783$, is included in the strong category, then consulted with the rtabel price at the 5% significance level, namely $rx2y = 0,783 > rtabel = 0.179$, then Ho is rejected and Ha is accepted, meaning that there is a significant correlation (influence) between the application of Information and Communication Technology (ICT) on the effectiveness of learning in MTs throughout Musi Banyuasin Regency**.**

Simple regression

Test Hypothesis testing in this study was conducted using simple regression techniques, which are shown in the following:

Table 1. Regression Test Output (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783[a]	.613	.610	6880

a. Predictors: (Constant), Application of Information Communication Technology (ICT)

Table 1 explains the value of the correlation / relationship (R) which is equal to 0.783 and explains the percentage of the influence of the independent variable on the dependent variable which is called the coefficient of determination which is the result of squaring R.From this output, the coefficient of determination ($R2$) is 0.613, which implies that the effect of the independent variable (Application of Information Communication Technology (ICT)) on the dependent variable (learning effectiveness) is 61.3%, while the remaining 38.7% is influenced by other variables. In table 2, the Constant (a) is 35.745, while the value

of the Application of Information Communication Technology (ICT) (b) is 0.521, so the regression equation can be written:

$$Y = a + bX = 35.745 + 0.521 X$$

The constant is 35.745, it states that if there is no application of Information Communication Technology (ICT), then the effectiveness of learning is 35,745. The X regression coefficient of 0.521 states that for every addition of 1 value to the Application of Information Communication Technology (ICT), the learning effectiveness value will be 0.521.

CONCLUSION

The following findings are the results of the discussion, namely: Based on the results of research obtained from processing and analyzing data using simple regression analysis and multiple regression with SPSS 25.0 tools, the discussion continues about the effectiveness of learning through the application of information technology in MTs Se- In Musi Banyuasin Regency, it was concluded that in [10] accordance with the formulation of the problem in the study, namely the application of information communication technology partially and significantly contributed positively to the improvement of the effectiveness of learning in MTs throughout Musi Banyuasin Regency.

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