

# The Student Role Improvement In The Learning Process Through The E-Learning Model In Associate Degree Of Midwifery, Megarezky University

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## **ABSTRACT**

*The world of education today is rapidly and significantly developed. The development of education can be seen from the increase of diverse learning methods used in the teaching and learning process. The method applied utilises various media to improve the quality of learning outcomes influenced by technological advances, including the e-learning method. This study aimed to improve students' role in e-learning methods, particularly the Indonesia Kuliah Online application used in the Midwifery Department of Megarezky University, Makassar in 2020. This research was an experimental study with a quasi-experimental design and total sampling technique. The results showed that based on statistical tests using the paired t-test, the p-value = 0.000 <math>\alpha = 0.05</math> indicated an increase in students' role in the e-learning method. It was suggested that students could increase their knowledge of using e-learning methods in the learning process. The educational institutions should begin to implement e-learning methods in their learning process. The increase in technological advances makes it easier for students in the learning process without constraining time and distance.*

**Keywords:** Student Role, Learning Methods, E-Learning Model, Indonesia Kuliah Online application

## 1. INTRODUCTION

Education is an essential need of every human being, meaning that it will be challenging to develop and even be underdeveloped without human education. Thus education must be directed to produce quality and competitive human beings.

Education in Indonesia is experiencing rapid and significant development. Education development can be seen from the increasingly diverse learning methods used in the teaching and learning process. The method used uses a lot of various media to improve the quality of learning outcomes. Increasingly rapid technological advances influence the development of this learning media.

According to etymologically, technology's terminology comes from the words 'techne' and 'logos/logia', which means science. Techne is the ability to create or work on something with a good understanding of the principles. In its later development, Techne was known as technique (English = Technic, French = la technique). The words techne and logos then form the word technology. Technology can be defined as a science of correctly and adequately applying theories and principles to create something as a solution to problems(I made, 2016). Education is a conscious and planned effort to create a learning atmosphere and the learning process. So, students actively develop their potential to have religious, spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, the nation and the state(Abriana, 2017).

Educational technology or instructional technology, in general, can be defined as the application of technology, especially communication technology, for educational or teaching activities (Switri, 2019).

The impact of technology on technology development education, especially in education, can advance student motivation to be superior and more advanced in technology use. Motivation in education can also influence the use of technology in the ongoing learning process. Motivation is useful for encouraging students who give up hope in the technological advances that occur. In facing technological developments, students are required to be more creative in utilising developing technology. Not only are students required to be more creative, but teachers are also required to understand better everything that exists. Even now, the internet has become something that is widely used in the learning process(Syafri, 2019).

One example of technological advances in distance education is e-learning. The E-learning is a virtual environment method based on educational content conditions using the internet and multimedia. Many application tools in educational content that learners access depends on their needs and their learning styles for walking habits. It depends on individualised training and self-taught learners to build their knowledge. The e-learning environment is the ideal use of modern information technology, effective integration, and a curriculum that must be realised.

There are two types of conceptualisation and measurement of learning management systems (LMS) in educational organisations: web-based learning systems for e-learning and support tools for mixed learning environments. The conceptual e-learning assessment model, suggests a multi-dimensional approach to LMS evaluation through six dimensions; (1) quality system, (2) service quality, (3) quality content, (4) student perspective, (5) instructor attitude, and (6) supporting issues(Ramadani, 2019).

E-learning is also widely used in health education, including midwifery education. Midwifery is a science formed from a synthesis of various disciplines or multi-disciplines related to midwifery services. The services include medicine, nursing, social science, behavioural science, cultural science, public health. The management science also provides midwifery services to mothers in pre-empire, such as conception, pregnancy, childbirth, postpartum, and newborns. These midwifery services include detecting abnormal conditions in mothers and children, conducting counselling and health education for individuals, families and communities(Gita, 2018).

The use of telecommunication technology for learning activities at universities in Indonesia is increasing. It is conducive with the issuance of the Decree of the Minister of National Education Departement in 2001 which encourages conventional universities to organise distance education (dual mode). Several universities have made various preparations, such as assigning lecturers to (a) attend training on the development of electronic learning materials, (b) identify various available electronic learning platforms, and (c) conduct experiments on using specific electronic learning platforms to present lecture materials.

Several universities that have implemented learning methods through e-learning media include Jakarta State University. Following the research conducted at the State University of Jakarta in implementing e-learning to conduct an analysis first. One of the analyses carried out is to consider the feasibility and needs of e-learning. The results of the trial analysis show that the State University of Jakarta is following its technical aspects. However, some notes must be considered, namely the learning culture in electronic lectures and students' low independent learning culture. Apart from analysing students' needs, a feasibility analysis is also carried out by considering the facilities and infrastructure in carrying out the feasibility test, such as considering the number of students with class conditions. It is also necessary to test the network, hardware and software to support e-learning courses. From a scientific perspective, conducting a series of studies on platforms (software) and materials based on scientific scope also needs to be considered. The results of trials that have been carried out are indeed about time for e-learning to be applied in tertiary institutions(Maudiarti, 2018).

Another study regarding the e-learning method was carried out by Muharto. He analysed and hypothesised the differences in student learning outcomes using e-learning in learning microprocessor material at the Wiratama Polytechnic of Science and Technology in North Maluku. The research begins with giving a pre-test to determine the research sample's initial conditions. Then, it followed by applying to learn using e-learning in the experimental group and applying learning without e-learning in the control group. Then proceed with the post-test to find out the final result of the lesson. The study results proved that there were differences in learning outcomes between the experimental and control groups(Mustakini, 2019).

Several studies on e-learning showed an improvement in student learning outcomes. Thus, this study focused on improving the student role in the learning process through the e-learning model at Associate Degree of Midwifery.

## 2. MATERIALS AND METHODS

### *Research Location and Design*

This research was conducted in the Midwifery Department of Megarezky University Makassar. This type of research was the experimental research method, using a quasi-experimental design.

### *Population and Sample*

The population was all students in level 1 and 2 majoring in midwifery, Megarezky University, Makassar. The sample consisted of 59 people taken by total sampling, involving 24 students of level 1 and 35 students of level 2 who were willing to participate in this study by signing informed consent.

### *Data Collection*

The data was collected by researchers using pre-test and post-test questionnaires. The data provided to informants was data with open and closed answers; the types of questions exist, the types of questions needed in the research report. The data collected involved computer equipment ownership, the availability of adequate network access, and how long students have used the e-learning model of learning method. Data was also collected in the form of an increase in students' role in the e-learning learning method, especially in the Indonesian online college application.

### *Data Analysis*

The data collected and considered error-free would be analysed using computer software, the Statistical Package for Social Science (SPSS) for windows program. The analysis was consisting of univariate analysis and bivariate analysis. Univariate data in the form: ownership of computer equipment, availability of adequate network access, and how long students have been using e-learning model learning methods. After processing, the univariate analysis was presented in the form of a frequency distribution table. The bivariate analysis consisted of data on the student role improvement in the e-learning model of learning methods.

## 3. RESULT

### **Univariate Analysis**

#### *Ownership of computer devices*

Table 1. Frequency distribution of respondents based on ownership of computer access at Megarezky University Makassar in 2020

Computer devices	Frequency	Percentage
Yes	58	98.3 %
No	1	1.7 %
Total	59	100 %

(Source: Primary data)

Table 1 shows the data of students who have computer devices to access the internet. In 59 respondents, it was found that one respondent (1.7%) did not have a computer and 58 respondents (98.3%) owned the computer devices.

**Availability of network access**

Table 2. Frequency distribution of respondents based on adequate network access

Adequate Network Access	Frequency	Percentage (%)
Yes	57	96.6%
No	2	3.4%
Total	59	100

(Source: Primary data)

Table 2 shows the data on students who had adequate network access. In 59 respondents, two respondents (3.4%) did not have adequate network access, and 57 respondents (96.6%) had adequate network access.

**The duration of using e-learning method**

Table 3. Frequency distribution of respondents based on the length of time using/recognising the e-learning learning method

Duration	Frequency	Percentage
< 1 years	41	69.5%
1 - 2 years	18	30.5%
Total	59	100

(Source: primary data)

Table 3 shows how long it has been for students to use the e-learning method. In 59 respondents it was known that there were 41 respondents (69.5%) had known/used the e-learning method <1 year and 18 respondents (30.5%) had known/used the e-learning method about 1–2 years

**Bivariate Analysis**

Table 4. The improvement of the role of students before and after using the e-learning method (*Indonesia Kuliah Online* Application) at Megarezky University, Makassar

E-Learning	Mean	Std. D	Differences	Std.D	P-Value
Pre-test	34.8	8.348	-10.95	8.709	0.000
Post-test	45.7	2.616			

(source: paired t-test)

Table 4 shows a data analysis using a paired t-test. It determined the significant increase in students' role between before and after training the *Indonesia Kuliah Online (IKO)* / Indonesian online college applications. The average use of the e-learning method before and after this application's training was 34.8 and 45.7%. The statistical tests results showed a

significant improvement before and after the *Indonesia Kuliah Online* training with a P-value of 0.000 ( $\alpha > 0.05$ ).

#### 4. DISCUSSION

E-learning is a learning method in a virtual environment based on educational content conditions using the internet and multimedia. Many application tools in educational content that learners access depends on their needs and their learning styles for walking habits. It depends on individualised training and self-taught learners to build their knowledge. The e-learning environment is the ideal use of modern information technology, effective integration, and a curriculum that must be realised. E-learning is also the process and activities of implementing web-based learning, computer-based learning, virtual classes, and digital classes. Learning materials in e-learning activities are delivered using internet media, internet audio, videotapes, satellite broadcasting, interactive TV, and cd-room. This definition also states that e-learning definitions can vary depending on the provider in delivering and the purpose of its use (Fauzi, 2020).

There are two types of conceptualisation and measurement of learning management systems (LMS) in educational organisations: web-based learning systems for e-learning and support tools for mixed learning environments. The conceptual e-learning assessment model, suggests a multi-dimensional approach to LMS evaluation through six dimensions; (1) quality system, (2) service quality, (3) quality content, (4) student perspective, (5) instructor attitude, and (6) supporting issues (Ramadiani, 2019).

Increasing the students' role in using e-learning methods based on the paired sample test results obtained a p-value of 0.000 ( $\alpha = 0.05$ ). The mean value before and after the *Indonesia Kuliah Online* application training was valued of 34.8 and 45.7. The difference between before and after treatment was -10.95. It indicated an increase in students' role in the e-learning method before and after the application training.

In previous studies, several universities that have implemented learning methods through e-learning media include Jakarta State University. Following the research conducted at the Jakarta State University in implementing e-learning to conduct an analysis first. One of the analyses carried out is to consider the feasibility and needs of e-learning. The results of the trial analysis show that the Jakarta State University is under its technical aspects. Unfortunately, some notes must be considered, such as the learning culture in electronic lectures and student learning independence which is still low. Apart from analysing students' needs, the feasibility analysis is also carried out by considering the facilities and infrastructure in carrying out the feasibility test, such as considering the number of students with class conditions. It is also necessary to test the network, hardware, and software to support e-learning courses in terms of facilities. From a scientific perspective, conducting a series of studies on platforms (software) and material based on scientific scope also needs to be considered. The trials' results are indeed about time for e-learning to be applied in tertiary institutions (Maudiarti, 2018).

Another study regarding the e-learning method was carried out by Muharto. He analysed and hypothesised the differences in student learning outcomes using e-learning in learning microprocessor material at the Wiratama Polytechnic Science and Technology in North Maluku. The research begins with giving a pre-test to determine the research sample's initial

conditions, followed by applying e-learning in the experimental group and without e-learning in the control group. Then proceed with the post-test to find out the final result of the lesson. The study results proved that there were differences in learning outcomes between the experimental and control groups (Mustakini, 2019).

The results showed an increase in students' role in using e-learning methods based on the paired sample test results, and the p-value was 0.000 ( $\alpha = 0.05$ ).

## 5. CONCLUSIONS AND SUGGESTIONS

Based on the results of the study, it was known that the mean value before the *Indonesia Kuliah Online* application training with a mean value of 34.8 and the average after training was valued 45.7. The difference before and after treatment was -10.95. Based on the paired sample test results, the p-value was 0.000 ( $\alpha = 0.05$ ). It indicated an increase in students' role in the e-learning method before and after the *Indonesia Kuliah Online* application training. It is suggested that students can increase their knowledge of using e-learning methods in the learning process. Also, educational institutions may begin to implement e-learning methods in their learning process. The increasingly rapid technological advances facilitate students in the learning process without constrained by time and distance.

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