

# A Case Study of E-Learning Readiness in Referral School State Senior High School 1 Paringin

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**Abstract**— E-learning is a collaborated learning method between learning activity and technology. It provides an interactive learning activity, and various learning resources because it can be held in an online system. The Ministry of Education and Culture of Indonesia has held the referral school program, and, in those schools, e-learning should be applied. In the 2013 Curriculum, the learning should be based on information and communication technology. The State Senior High School Paringin 1 is the referral school in Balangan district since 2016. This research aims at knowing about e-learning readiness at this referral school. This research is descriptive research and uses the purposive non-random sampling technique. The instruments are interview guidance and questionnaire sheets. The data were analyzed using descriptive statistic. The component which investigated in this research were human resources, organization, technology, content, and finance. The result of the questionnaire was mapped based on e-learning readiness index referring to Aydin and Tascii version. The result of this research showed that e-learning readiness index of The State Senior High School of Paringin 1 was 3.80, it indicated that the school is ready for e-learning implementation, but a few improvements are still needed.

**Keywords**— *e-learning, e-learning readiness, referral school.*

## I. INTRODUCTION

E-learning is a learning method that collaborates learning activity and technology. It is evolving as technology advances in the 21<sup>st</sup> century. In Indonesia, e-learning has been applied in several regions related to the education curriculum which is now applied in Indonesia, “The 2013 Curriculum”. It has a purpose to prepare Indonesia people to have life skill as a religious, productive, creative, innovative, and effective and citizen in order to contribute for the social, nation, and peoples’ life.

The Ministry of Education and Culture has held the referral school program. This program is a school coaching program that was national standardized. The schools as referral school based on the region with each the district/city should have at least a referral

school for a secondary referral school (Senior High School). The referral school program is expected to give distribution for the education quality in Indonesia. If there is a piece of new information about education development or training, referral schools will be the first to know the info. After that, they distribute the information to another school in their region. The referral school program was started in 2006. The total number of referral school in Indonesia is 614. In South Borneo province there are 13 referral senior high schools. The state senior high school of Paringin 1 is the kind of referral senior high school in Balangan district, South Borneo province.

The 2013 Curriculum provides e-learning at the referral school. One of the products is e-module [10], developed by the Ministry of Education and Culture. This E-module is based on computer. Teachers can use e-module as learning material. Now, there are some platforms which can support e-learning, such as Edmodo, Moodle, and Schoology. These platforms can be used in online learning, and it refers to the need for human resources, computer, internet network, and learning environment that provide e-learning at an educational institution.

There are many ways to implement e-learning by distributing the learning material by using electronic media or the internet so the students can access it whenever and wherever. The characteristic of e-learning is a learning environment which is flexible [8].

E-learning is a popular technology in this modern time. It is basically a learning platform that applies the utilization of electronic media and information and communication technologies (ICT) [7]. E-learning should also be applied in the referral school. Since in the 2013 Curriculum learning process should be based on information and communication technology.

E-learning program certainly needs many infrastructures and professional human resources. It is not surprising if e-learning implementation at the referral school has faced much difficultness, especially about finance. Because, if we want to

implement e-learning at school it should be prepared enough number of computer and internet network to provide learning activity. Moreover, the training program for human resources is required to develop their professionalism in e-learning.

E-Learning readiness is about physical and mental readiness of an organization to do action and create e-learning experience [1]. An e-learning readiness assessment is essential for institutions that want to implement e-Learning. This readiness assessment provides key information to supply solutions which can reveal the specific needs of each learning group. The management support, ICT infrastructure, web content availability, alongside with skilled human resources are crucial in determining the e-Learning readiness [11].

To implement e-Learning, five factors should be considered as follow [5]:

- a. The students; e-learning system ideally can be built in accordance with the students' characteristics as the subject in the whole process.
- b. The material; restructuring of the material is necessary to fit with technology format that used, it also can give more value than conventional class process.
- c. The organization; policy and leader commitment of a learning organization is necessary to lead and socialize this changing process.
- d. The system process; the working process of e-learning that has to be defined as the role and responsibility of the administrator, teacher (expert), technician, material planning, learn and teaching process, and arranging whole system process
- e. Technology; the supporting tool to reach the effectiveness of e-learning purposes for a learning organization.

The State Senior High School of Paringin 1 is located at Balangan district, Borneo Province, as one of the referral school in this district since 2016. Balangan district is the result of the regional expansion of Hulu Sungai Utara district in 2003. As the referral school, they should prepare for e-learning implementation. As the new district, of course, there are some differences with another district which has been an independent district as quite a long time. It is about infrastructure readiness. Therefore, it is important to know the e-learning readiness at these schools as the referral school.

## II. RELATED WORKS/LITERATURE REVIEW

E-Learning model is based on the component of e-learning readiness. It refers to some previous researches that were already developed the e-learning readiness model. The result of first previous research about developing an e-learning readiness model is the e-learning readiness model which was developed with

big four (4) category, i.e. technology, innovation, people, and self-development. In each big category contain additional categories; resources, skills, and attitudes. The model, therefore, requires managers about the level of their employees, whether their company has skilled human resources or personnel or training department specialists as well as a leader and external e-learning experts [3]. In this research, it also produced the e-learning readiness index as an assessment model of e-learning readiness. The index was used in this current research.

The e-learning readiness model that used the e-learning assessment contains the component for measuring the policy, technology, financial, human resources, and infrastructure [1]. The main objective of this research is to use the key success of e-learning implementation environment in the educational system of the USA and present it to higher education in Thailand. The result was supporting resources for online learning, learning plan development, careful selection of appropriate program, and training to improve teachers' teaching abilities as the key success. The e-learning readiness model which was developed is the new model of e-learning readiness assessment. The model contains demographic factors, culture readiness, technological readiness, and content readiness to assess e-learning readiness of lecturers from the institutions of higher learning in Kenya [11]. These results indicate that technological readiness was the most important factor followed by culture readiness, and lecturers but ICT infrastructure was inadequate to support the use of e-learning. The other studies on the e-learning readiness model measured the teacher readiness for e-learning. The assessment model contains technology, people, content, and institution component [4].

Another previous research used its own framework of e-learning readiness model that consists of six variables. Those are human resources, organization, technology, fund, infrastructure, and content [9]. The e-learning readiness model is to measure the e-learning readiness of ABC University in Jakarta. The data were compared with index e-learning readiness of [3]. The previous research with e-learning readiness model focusing on technical infrastructures, content, human resources, laws and regulations, supervision, support and management [2]. It proposed an appropriate framework in terms of enhancing existing potentials as well as avoiding certain shortages in using the e-learning environment within the higher education system. The results imply that laws, regulation, and management had a huge role in the implementation of e-learning in Iran. Those previous researches used the survey technique where questionnaire as the main instrument to collect the data. material and methodology

A. Data

This research developed its own framework by grouping the research components which is obtained from previous research. Grouping the components is done by paying attention to the similarities and the substance of each component.

The component which investigated in this research are :

1. Human resources that consist of people, self-development, and attitude.
2. The organization that contains organization culture, leadership, and policy of the organization.
3. Technology that involves the internet, hardware, and software.
4. Content.
5. Finance, or budget allocation and the policy of the budget organization.

This research use index readiness model adopted from [3]. The categories are :

- a. Not ready, it needs much more preparation for e-learning implementation (index 1-2.59).
- b. Not ready, it needs more preparation for e-learning implementation (index 2.6-3.39)
- c. Ready, it needs a few improvements in e-learning implementation (index 3.4-4.19).
- d. Ready, it can go through with e-learning implementation (index 4.2-5).

The developed framework can be drawn in this table below :

TABLE I. INVESTIGATED COMPONENT

| No. | Variable        | Indicator                         |
|-----|-----------------|-----------------------------------|
| 1.  | Human Resources | People (Teacher)                  |
|     |                 | Self Development (Training)       |
|     |                 | Attitude                          |
| 2.  | Organization    | Organizational Culture            |
|     |                 | Leadership                        |
|     |                 | Policy of Organization            |
| 3.  | Technology      | Internet                          |
|     |                 | Hardware and Software             |
| 4.  | Content         | Content of e-learning             |
| 5.  | Finance         | Budget Allocation                 |
|     |                 | The Policy of Budget Organization |

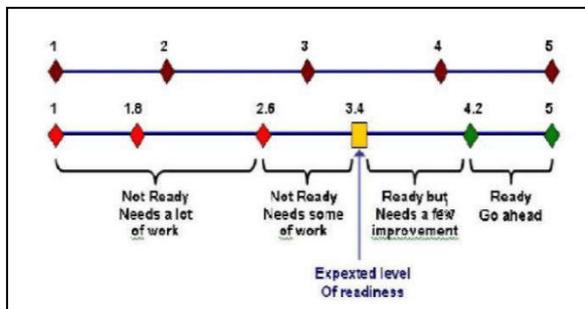


Fig. 1. E-learning Readiness Index by Aydin and Tasci version [3]

The procedure of this research were (1) having literature studies to look for the gap that will be investigated in this research, (2) determining the research variables, (3) arranging the instruments that in this research, i.e. interview guidance and questionnaire sheets, (4) collecting data, (5) analyzing the obtained data, (6) presenting the result by mapping the data based on Aydin and Tasci e-learning readiness index, and (7) making conclusion.

The data of this research was qualitative and quantitative data. The qualitative data were from interview to the school's administrator and the teachers. Meanwhile, the quantitative data were from the survey with a questionnaire as an instrument to collect the data.

This research used a purposive non-random sampling technique. The samples were the administrators of State Senior High School of Paringin 1 (the committee of the referral school) who were considered capable to assess the e-learning components in this research. The teachers were the civil servant with the age range 30-40 years old. The instruments used in this research were interview guidelines and questionnaire sheets. The questionnaire contains the close statements adopting Likert scale (1-5) to assess the statements.

After the data were collected, it will be processed and analyzed. It consisted of:

1. Determining the mean of all the questionnaire results from each variable component by using descriptive statistic.
2. Determining the mean to the index e-learning readiness by Aydin and Tasci version.
3. Determining e-learning readiness index for Paringin State Senior High School 1.

The data were analyzed to obtain information about e-learning readiness. The data were analyzed with a descriptive statistic. The research variables were described and produced the readiness index by using a Likert scale (1-5). The questionnaire assessed the index readiness scale is to measure e-learning readiness. Every mean indicator and variable in this research was determined. The mean result was mapped based on e-learning readiness index by Aydin and Tascii version. The mean computation for each variable was shown the e-learning readiness index for each variable. To determine the whole organization index, the mean was analyzed with computation from all of the variable.

B. Method

This research can be categorized as descriptive research to describe and explain the phenomenon of e-learning implementation in The Senior High School of Paringin 1 as the referral school. In this research, the researcher did not manipulate or give certain treatments to the object of research, all activities or event running as usual. The data about e-learning

readiness were obtained by survey and interview. The survey was using the questionnaire which had content validity. The Interview was an unstructured form. The information from the interview can support the data from the questionnaire.

### III. RESULTS AND DISCUSSION

#### A. Results

The analysis that was done showed the e-learning readiness index of each variable as shown in Table 2. Based on the result, it can be known that the e-learning readiness index of the school was 3.80. It indicated that the school is ready but it needs a few improvements to e-learning implementation (based on the e-learning readiness index in figure 1). The e-learning readiness index for each variable showed the same readiness, i.e. the index of human resources variable was 4.02, the organization variable index was 4.05, the technology index was 3.72, the content variable index was 3.46, the of finance variable index was 3.75, respectively. The recap of e-learning index readiness is shown in figure 2.

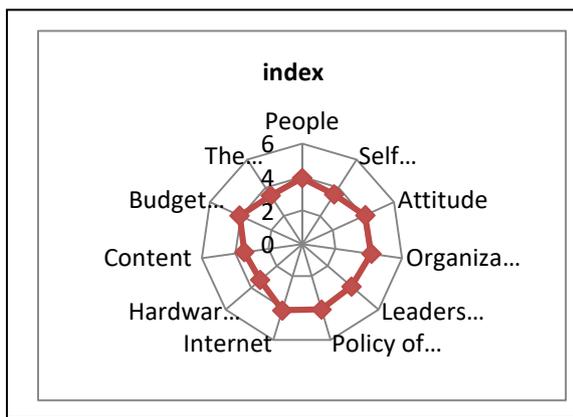


Fig. 2. The E-Learning Readiness Index Radar of Paringin State SHS 1.

TABLE II. THE MEAN OF EACH VARIABLE AND MEAN TOTAL

| Variable         | Indicator                         | Mean /Index |
|------------------|-----------------------------------|-------------|
| Human Resources  | People (Teacher)                  | 3.94        |
|                  | Self Development (Training)       | 3.52        |
|                  | Attitude                          | 4.12        |
| Mean of variable |                                   | 4.02        |
| Organization     | Organization Culture              | 4.16        |
|                  | Leadership                        | 3.89        |
|                  | Policy of Organization            | 4.09        |
| Mean of variable |                                   | 4.05        |
| Technology       | Internet                          | 4.15        |
|                  | Hardware and Software             | 3.29        |
| Mean of variable |                                   | 3.72        |
| Content          | Content of e-learning             | 3.46        |
| Mean of variable |                                   | 3.46        |
| Finance          | Budget Allocation                 | 4.07        |
|                  | The Policy of Budget Organization | 3.43        |
| Mean of variable |                                   | 3.75        |
| Total            |                                   | 3.80        |

The interview was done to some teachers and school administrators. Based on the interview, it was obtained information that budget for e-learning allocated for the referral school taken government fund. The training about e-Learning was held twice and all of the teacher at that school and some teacher from another school attended this training. Another result of the interview was some teacher using e-module and their own module because e-module from Ministry of Education and Culture had not completed yet. Moreover, the e-modules was limited for several subjects.

#### B. Discussion

It can be seen that e-Learning readiness index for the hardware and the software indicator was 3.29. it means this part was not ready yet and needs more preparation. It happened because all teacher in the school only used a single platform application in E-learning, Edmodo which was familiar for them. They knew this application from the training program, but they did not search the information about another application yet. There were 60 units of computers in the school and it was enough since the application for e-learning like Edmodo can be accessed from a smartphone. Based on the observation, almost all students have a smartphone so they can access all of the subject material wherever and whenever.

On the other hand, the highest index is on the organization variable. It means that e-learning needs support from the stakeholder and learning environment. It is consistent with the previous study. It also indicated that the laws and regulation, as well as management, played a huge role in the e-learning implementation [2].

The other previous result mentioned that human resources are crucial for the successful implementation of e-learning [3]. That is fit with the result of current research. Based on Table 2, it can be seen the readiness index of human resources variable in the current research was the second highest. The results of previous research [9] indicate that human resources also plays a big role in the implementation of e-learning in education. Another research also says that the key to the success of e-learning implementation is improving the abilities of human resources [1]. That statement is linear with another statement that lists the key success to implement e-learning is on the teacher [6]. Teachers in e-learning should have several abilities, such as mastering the subject material, having the ability of designing, as well as the internet and technology.

The variable with the lowest index is content (3.43). This content is to find out what and how teachers utilize the application in the e-Learning implementation. This is related to the use of hardware and software on technology variables, which also have a low index. When the use of hardware and software is

low, it will affect the utilization of the application. This is also similar to the interview result which states that some subjects have not completed with e-module from the government, such as Anthropology, Arabic, Mandarin Language, Economy, Geography, and Chemistry [10]

#### IV. CONCLUSION

From the results and discussion, it can be concluded that:

- The framework model developed in this research is the e-Learning readiness index of The State Senior High School of Paringin 1. The obtained score was 3.80 (ready), it means that school is ready for e-Learning implementation though there need some minor improvements.
- Every variable of e-Learning readiness in this research, such as human resources, organization, technology, content, and finance can be categorized in ready level but some improvement is needed.
- The State Senior High School of Paringin 1 has implemented the referral school program.

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