Abstract

UTILIZATION OF E-LEARNING IN DEVELOPING

HUMAN RESOURCE CAPACITY:

CASE STUDY FROM BLENDED TRAINING OF THE INDONESIA MINISTRY OF TRANSPORTATION

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E-learning has encouraged the democratization of teaching and learning processes by providing greater control in learning to students. Also, rapid change in technology brings consequences for students and educators in managing learning. The available technologies to make a course new and exciting, always changing. Ministry of Transportation Republic of Indonesia is a ministry within the Government of Indonesia in charge of transportation affairs. The key in the realization of excellent transportation services for the people of Indonesia is the availability of excellent, professional and ethical transportation human resource in performing their duties. One of the policy implemented to achieve the vision is to utilize technology in developing students and staff capacity to meet competitive graduates through e learning. With 27 schools, academy and polytechnics, the Ministry begin with e-learning to promote new approach in learning. This study is aiming at describing the innovation process of e-learning utilization among educators and staff in the ministry. Survey to the lecturers and trainers using questionnaire and interview to the leader are the methods used in this study. Some importance findings are the need of leadership role in analyzing the need for using e-learning, preparation of human resources, supporting resources and facilities, incentive system, management of learning system and managing change of learning from conventional to e learning.

Keywords: blended learning, leadership role, change management

1. INTRODUCTION

1.1. Distance Education and e Learning

Quality human resources are the driving force of a nation. Thus, developing human resources is a very important aspect to do. One of the most effective ways to improve the quality of human resources is through education, especially higher education (Swamy, 2002; Lockwood, 2002; Najafi, 2012).

The increasing number of students and labor needs in various countries, requires a new approach in providing education services. The existence of various advances in the field of information and communication technology, provides a great opportunity for the education sector to use it. One form of educational approach that utilizes information and communication technology is the use of online e learning. Utilization of information and communication technology in education will contribute to efficiency and effectiveness in producing quality human resources (Global Juournal of Resource Management, 2016).

Distance education has become a new trend in world education (Verduin & Clark, 1991). Distance education has been widely used in primary and secondary education (Clark & Barbour, 2015; Simonson, Smaldino, Zvacek, 2015) and in higher education (Lockwood, 2002). Universities and educational institutions offer distance education programs for the arts, social sciences, management, even study programs in science, technology, agriculture, nursing, even medicine (Powar, 2002).

In the current development, many companies and educational institutions have used e learning to manage their learning. E learning is one form of implementation of the distance education system. In this mode, the learning process is characterized by the separation of instructors and students. The learning process can be done flexibly; anytime and anywhere.

One of the institutions that started using e learning to produce human resources is the Human Resource Development Development Agency, Ministry of Transportation of the Republic of Indonesia. The Ministry of Transportation of the Republic of Indonesia is a ministry responsible for fulfilment of the needs of transportation facilities for all Indonesian people. To carry out the mandate, the Ministry must be supported by excellent, professional and ethical human resources in providing reliable and zero accident oriented transportation. To carry out this task, the field of Human Resources Development Agency (BPSDM) Transportation has a very important role.

So far, BPSDM Transportation manages 27 technical colleges in the transportation sector throughout Indonesia, with a total of 14,000 students and 1,000 teaching staff. BPSDM collaborates with the Universitas Terbuka, Indonesia, to develop an e learning system for students and the public who need transportation functional education and certification. This collaboration includes preparing human resources to manage and implement e learning in the form of blended learning, train Information Communication Technology (ICT) staff, lecturers / trainers and learning managers. In addition, UT also helps educational institutions under the coordination of BPSDM Transportation to prepare the Moodle Learning Management System for schools.

Currently, educational institutions within the Transportation BPSDM environment apply boarding school. E learning is used as a support for students to enrich their experiences in various fields of science. The study time that is applied at this time is 7:30 p.m. - 9:00 p.m., which is after students study in class starting at 08.00 - 17.00. In addition, for 7th and 8th semester students who are taking practical education (internship), can use e learning during practice, so that they will still be

able to study and complete education outside the classroom, which in turn will shorten the time of graduation.

To implement this plan, colleges in the Ministry of Transportation are being prepared to be able to carry out the teaching-learning process remotely, with the e-learning system.

1.2 E Learning as An Innovation

For most of lecturers and trainers in the BPSDM Transportation, e learning is new idea which is introduced by the Minister of Transportation as an effort to always adapt to change. Thus, e learning can be seen as an innovation. E learning in the BPSDM Transportation environment is taking palce in various stages. The following are the steps taken by the Transportation BPSDM in implementing e learning innovations.

a. *Introduction stage*: the stage where school leaders / lecturers are introduced to e learning through meetings, which are then followed by formal letters from the BPSDM to the school directors to prepare for e learning environment..

b. *Persuasion stage*: Persuasion stage includes trainings on e learning for the lecturers/trainers. Training starts in 2017 and continues in 2018. At this stage, lecturers/trainers as member of the BPSDM system, express their opinion to the innovation. At this stage, lecturers were designed to experience blended training so that they can feel how to learn from e learning. The training consist of 2 weeks online session and 3 days face to face session. Pros and contras are happening among the participants.

c. *Decision stage*: the stage when system members determine whether to accept or reject an innovation after experiencing blended training.

d. *Implementation stage*: the stage of using innovation in the real situation

e. *Confirmation stage*: the stage where members of the system seek strengthening of the innovation decisions made whether to continue or stop, based on experience in implementation. These five stages are known as the innovation decision process (Rogers, 2003).

2. METHODOLOGY

This study is a descriptive survey conducted by distributing questionnaires to lecturers and leaders of educational institutions within the BPSDM Transportation environment as participants of e learning training and interviews with the leaders of the BPSDM Transportation. This study involved 82 lecturers / trainers / school leaders in the BPSDM Transportation. Descriptive analysis is performed on the data collected. The questionnaire contains questions about the institution's need for e learning, institutional support for the implementation of e learning in their institutions, the possibility of applying e learning, constraints and sustainability of the application of e learning.

3. RESULTS AND DISCUSSION

From the analysis of the respondents 'answers, the results obtained that respondents' acceptance of e learning as an innovation shows different responses.

In the introduction stage, in several meetings with the BPSDM Transportation officials, participants expressed different opinions about whether or not the application of e learning is needed in learning at BPSDM Transportation, considering the competencies that must be achieved by students are skills that must be practiced directly. However, to carry out the Ministry's vision, each participant will be included in e learning training, to get to know this innovation. Support from leader in the process of introducing and implementing innovation are strongly needed, especially in schools where there are many opponents.

At the persuasion stage, after getting to know e learning during training, at this stage 2.2% of respondents said they did not need e learning. Furthermore, 41.5% of respondents stated that

their institution needed e learning while 56.2% said that they really needed e learning. The reason for the respondents agreeing to this implementation plan is to overcome the limited number of teaching staff.

After getting to know the e learning, participants then arrive at the decision stage. At this stage, 6% of participants stated that they still disagree with the application of e learning, considering the competencies in educational institutions are not appropriate if done through e learning. Meanwhile, 40.6% of respondents stated that they agreed to apply learning and 50% of respondents said they strongly agreed to apply e learning. Factors that support participants receiving e learning include the support of institutions and institutional leaders for the implementation of e learning, in addition to the support of costs. This finding is in line with the results of a survey conducted by Inside Higher Education (2017) which shows that lecturers/trainers in e learning require technical support related to the use of computer equipment and digital materials for their courses. In addition, they also need rewards in the form of better promotions, salaries, provision of teaching facilities, as a form of reward for the amount of effort and time given to teach online. Leaders in BPSDM are needed to manage change due to the implementation of e learning, includes the new regulation related to role of lecturers/trainers.

Although the majority of respondents stated that this innovation could be applied, they stated that it was necessary to study which competencies were suitable for e learning, especially those related to the use of various tools related to transportation. In addition, BPSDM needs to immediately improve the number and quality of supporting infrastructure for e learning, such as adequate internet access, computer equipment, training and assistance for lecturers and students, as well as regulations that support the implementation of e learning. For this reason, the decisions made are in the initial stages, the learning to be implemented is blended learning, where students will learn online and partly face-to-face. In addition, other efforts are needed to strengthen the application of e learning to all lecturers, students, school management and other support staff.

After going through the stage of persuasion, this innovation began to be applied in various schools in the BPSDM Transportation environment. From the introduction stage in 2017 until the implementation stage in 2018, of the 27 institutions in the BPSDM Transportation, 8 institutions have implemented blended learning. Adoption rate is 29%.

For the confirmation phase, institutions that have implemented blended learning still need the support of the BPSDM Transportation Department so that the program can continue. The constraints that have been identified to date include lack of strong internet connection at the site, inadequate human resource skills and increased

4. CONCLUSION

The decision process in the adoption of online learning innovations in BPSDM Transportation in improving the quality of human resources, undergoes a tiered stage. One factor that is quite decisive in the adoption of online learning innovations is that this innovation is an authority innovation decision (Rogers, 2003). The decision to use online learning is more determined by the authorities at the ministry level. Even so, the adoption of innovation in this program still shows its dynamics, especially in relation to the number of educational institutions that adopt this innovation.

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