

THE IMPLEMENTATION OF E-LEARNING IN LEARNING PROCESS

Erni Munastiwi

ABSTRACT

E-learning is very well known in recent years. E-learning is a learning process that is carried out through a internet network. The purpose of this study is: (1) whether there is influence of the implementation of e-learning on students' learning motivation, (2) identify the factors supporting and inhibiting factors of e-learning implementation.

The results showed that there is an influence in the implementation of e-learning on learning motivation. Student participants can acquire a wider knowledge, and can change attitudes and personal skills. The advantages of e-learning is more flexible, easier learning objectives achieved and the quality of education increases. supporting and inhibiting factor for implementation of e-learning are: (1) the competence of lecturers, (2) students, (3) infrastructure, learning aids, (4) size and class condition, and time for learning.

Keywords: *implementation; e-learning*

A. Background of the Study

The development in science and technology has brought the changes in all aspects of human life. Various problems can only be solved by controlling and improving science and technology. To be able to participate in global competition, then as a nation needs to develop and improve the quality of human resources. There are several powers that will change the course of our life about how to learn (learning revolution) as described by Siti Irene Astuti (200) that the world is moving very fast through a turning point of history.

Therefore, improving the quality of human resources is a reality that must be done. Improving the quality should be planned, directed, intensive, effective and efficient. The results of the research states that whoever controls the information late, it will be late in the development opportunity. Information Technology (IT) is one of the sub-sectors of the fastest growing technology with the

diverse applications. IT applications are such as multimedia and the Web in education. This can emerge a new breakthrough in improving the efficiency and effectiveness of learning process. Therefore, many countries do not hesitate to invest in developing infrastructure for the use of IT in education.

One of the breakthroughs that can be used to improve the quality of learning is e-learning model. Teacher/lecturer is the determiner success factor of a learning process. There are several strategies that can be used by teacher/lecturer to motivate the student in learning. The strategies can evoke the spirit of learning and help the difficulties of learner/student learning. The implementation of the strategy is followed by the use of various methods and using the good media and according to the learning objectives. Therefore, the selection of learning model and media becomes the important part of learning to be selected by an educator/lecturer. Improper use of the model will cause less well on the learner/student achievement.

The success of a country can be measured by the success of the development of the education field. The development in the education field is an effort to form the personality and the attitude of the learner/student's character. The goal is to be able to create life for learner/student in towards a better future as a member of society in a country. The purpose of education is very dependent on the philosophy of life of a nation. It is appropriate with the content of the Constitution No. 20 of 2003 about National Education System Chapter II, Article 4, stated that the National Education aims to educate the nation and develop an Indonesian completely that is a faith and godly man towards Almighty God and a noble character, has the knowledge and skills, physical and spiritual health, stable and independent personality and a sense of civic responsibility and nationality. The implementation of learning is one of the factors that influences toward an effort in achieving the educational objectives.

Education is one field that is important in the development of a nation. The key for the future development of Indonesian is education. Through the education of each individual is expected to improve the quality of the knowledge, skills and attitudes. By improving the quality of human resources is expected to be ready to face the development world in the global era. It is a conscious and deliberate effort to create an atmosphere of a good learning and the process. Under these conditions, the learners/students are expected actively to develop themselves. The self-potential includes the religious spiritual strength, self-control, personality, intelligence, noble character and the skills required by the individual, society, nation and state.

The development of technology, information and communication has an impact on various aspects of life. One of the important aspects of life is education. Education gives a tremendous influence in the world. There are various models of learning by using the computer as E-Learning (Electronic Learning), CAI (Computer Assisted Instruction), CBI (Computer Based Instruction), and E-Teaching (Electronic Teaching). The impact of the learning model to the educators/lecturers and learners/students is to be more active, creative and proactive. Learning materials can be obtained directly from the internet site. Teachers/lecturers and learners/students can access the learning through the Internet and CD (Compact Disk). Learning materials can be learned in interactive and interesting without having to be accompanied by an educator/lecturer directly.

The development of Internet technology gives a new nuance in the learning model. The distant learning begins less desirable. Web-based learning model is more desirable. Web-based learning is known as the E-Learning (Electronic Learning), WBT (Web Based Training) or WBE (Web Based Education), Campus Maya (Virtual Campus), M Learning (Mobile Learning) and others. The advantages of this technology are more open access to learning resources, extensive, rapid and not limited to the space and time. The learning process is more practical and easy to be performed by educator/lecturer. Likewise learner/student is more flexible to receive an explanation lecture. This learning model can be made at any time. It does not depend on the space and time. The learning environment is more comfortable and enjoyable. The limitation of space, time and distance is not a problem anymore. E-learning model can be packaged for conference activity (electronic conferencing), discussion, and consultation electronically without having to meet in one place.

Generally, the current teaching method is implemented in the classroom. With the development of Science and Technology, the teaching method needs to be developed to respond to a very dynamic development of society. Teaching method should be adjusted to the technology development in order to the result is more optimal. In line with the development of Internet technology, e-learning model is developed, so the study and research is needed. The essence of e-learning is a conventional learning form as outlined in a digital format through internet technology. This system can be used in a distant education or conventional education. Therefore, developing this model is not just present the course material in the internet but it needs to be considered.

E-learning is a learning model that can be packed simply, personally, and fastly, and there is an entertainment element. Learners/students are more comfortable learning in front of the internet as if they learn in the classroom. Science and technology, especially information technology is growing very rapidly. The rapid development of technology has an impact on the social and cultural changes. In line with the development of technology and information (internet), electronic-based learning begins to be a trend in various educational institutions in Indonesia.

E-learning Model is one of the learning models that can foster motivation to learn. Motivation is a conscious effort to affect a person's behavior. Behavior causes the heart moved to act to do something, so it can achieve a specific goal (Ngalim Purwanto, 2011).

Related to the learning activities, motivation can be called as a driving force in the overall learners-self that raises, ensures continuity and provides a direction of learning activity, so the goal that is expected can be achieved. In the learning activity, motivation is very necessary, because someone who does not have the motivation to learn will not likely do a learning activity.

The progress in the field of Information Communications Technology (ICT) affects to human behavior; encourages human to increase the efficiency in every activity. In the future, it is believed that there is no aspect of human life which does not utilize ICT. One of the important technology to be developed today is computer technology, because it can be used as a means for presenting the information and utilized for a variety of fields, including education. For example, a multimedia computer with a technique that is capable to display an image or a still or motion writing /voice. It is time for computer technique used as one alternative of the effective and efficient instructional media.

To increase learner/student being active in the implementation of learning is developed ICT-based learning model. The use of multimedia learning can display the information such as text, image, video, and others, so the student can better understand the material presented by the educator/lecturer. Multimedia learning is suitable to be used in the learning process at the college. The educator/lecturer can utilize the technology to give the task to the students and collecting the assignment via email. By applying the model, it is expected there is a positive impact or effect and an efficiency in the learning process of Pancasila course. It means that the limitation of space and time can be resolved, because the learner/student can collect the assignment or the educator/lecturer can assign the tasks unhindered by the limitation of space and time. In addition, multimedia learning in the learning process can be done in the form of e-learning. It is meant that the learning is not always be done by using the books, but it can use and take advantage of the development of internet technology.

The lecture implementation in the form of e-learning demands of the institution readiness (faculty/university) in providing the facilities as a means that can support the successful of the learning and readiness of the learners/student in using the information technology infrastructure and communication and the ability to explore the sites which can provide science-related. The implementation of e-learning as an innovation in learning and teaching process must be supported by a regular internet access either by educator/lecturer and learner/student. In preparing it, the active role of an educator/lecturer is needed to guide the learners/student in order to the learning objectives can be achieved.

E-learning process will be more interesting if it is well designed. It is an initial capital of the learner/student in receiving the material conveyed by the educator/lecturer. The learner will be motivated to learn. So it will have a great chance in achieving the success in learning. The result of the analysis shows that the implementation of e-learning in the learning process has the relation with the learning motivation. The learners/students gain a broader knowledge, solve problems more easily, and can directly change the attitude and the skill personally. The implementation of e-learning is expected to be influenced positively and flexibly. Thus, the learner/student can increase the learning motivation.

B. Discussion

E-learning is well known for the last few years, although the concept has long been recognized. The definition of e-learning is very broad. The term of e-learning is more enough proposed in a variety of viewpoints, but basically it leads to the same understanding. In practice, e-learning services by using audio, video, computer software, or a combination of all three. E-learning is a learning process that is carried over the network. This allows e-learning can be used as a medium in the learning process. The learning materials can use the media of information and communication technology such as computer and the Internet or intranet. The learning process based on e-learning can be done any time. The learning process takes place efficiently and effectively. The characteristic of e-learning is irrespective of time and space (place). The learning can be done anytime and anywhere. E-learning provides the learning and instruction materials that can be accessed any time. E-learning does not require the wide room (place) as a conventional classroom.

Therefore, e-learning shortens the distance between the educator/lecturer and the learner/student. Hanney and Newvine (2006) said that e-learning has the following advantages a) enhance the learning

interaction (Enhance interactivity), b) facilitate the learning interaction anywhere and anytime (time and place flexibility), c) has a wider range (potential to reach a global audience), and d) facilitate the completing and storage of learning material (easy updating of contents as well as archivable capabilities).

E-Learning is a learning process by using an electronic technology. There is also to interpret e-learning as a form of a distant education which is done through the internet media. Siahaan (2002) defines e-learning as a learning activity of *asynchronous* through the electronic devices that acquire the learning materials that fits their needs. E-Learning is a distant learning that uses the electronic technology that is conducted via Internet. The various types of the learning activity process can be done includes: the delivery of learning content, interaction, guidance, and others.

The characteristic of e-learning is defined by Siahaan (2002) as follows a) the implementation is easy, flexible and fun, b) take the advantage of the computer (digital media and networks), c) the teaching materials are independent (self learning materials), and d) utilizing the lecture schedule, curriculum, learning progress result and everything relating to the educational administration. The educator/lecturer giving the learning materials are not limited by the space and time. The learner/student accesses the learning materials independently, easier, flexible and fun. The advantages of digital technology can be used optimally. Besides the learning materials, it can also be done a variety of academic activities that support the learning process. Siahaan (2002) stated that there are several advantages of e-learning, they are: a) dynamic: e-learning can be presented in various formats of the interesting presentations, attractive and interactive, b) flexible: the operation of e-learning is all the time, so the educator/lecturer and the learner/student can acquire the materials information/learning materials all the time, c) independent: individual learning process, and d) comprehensive: providing various forms of the learning activities from a various sources.

The impact of e-learning model is that the interaction between the educator/lecturer and the learner/student in the class may be replaced, although not 100 %. The routine learning process (delivery of learning materials), test implementation (Mid-Semester Exam/UTS and Final Examination of Semester/UAS), giving the task can be implemented into the web. In addition, the learning materials from the educator/lecturer in the *power point* form can be downloaded by the learner/student. The impact implication of e-learning instructional model for educator/teacher should be skilled in operating the information technology.

Conventional learning is no longer entirely to be a mainstay, but in the midst of technological advance today, it is necessary the learning model variations. Thus, the learning model can utilize a variety of sources and elements of the information technology and not leave the direct guidance patterns. This concept is termed with *blended learning* that is a combination of conventional learning in the classroom (face to face between the educator/lecturer with the learner/student) and e-learning.

Therefore, designing an e-learning needs to involve the stakeholders, they are: the educator/lecturer, the materials expert, the communication specialist, the programmer, etc. To realize a virtual school that is based on *web based learning*, the facility that needs to be considered is the human resource and infrastructure. The things to be considered are 1) the cost to convert the learning in the classroom into a multimedia electronic format, 2) the learning materials to be migrated into e-learning

model, 3) the examination of the effectiveness of the migration process, and 4) human resource that is involved in it.

In addition, today, Internet dynamic library emerges that can be used in the entire universe. This opinion is in line with Budi Rahardjo (2002). He said that the benefits of the Internet for education is that it can be an access (entrance) of sources, resources access, and as a medium for collaboration. The accesses of information sources are the online library, literature sources, access research results, and the access of material course. The access resources can be done the communication without having to meet physically. While as a medium of cooperation, Internet can be a medium to conduct the joint research or make some sort of collective paper.

E-learning is developed at the Faculty of Tarbiyah and Teaching UIN Sunan Kalijaga Yogyakarta. E-learning model can provide an additional quality time outside of class hour. In addition, e-learning becomes the learning tool to deliver of the materials and a structured task of Pancasila subject. This e-learning can be used as an interactive medium between students and lecturers and students in the discussion forum.

The learning process that involves various components of the study should be packaged attractively and systematically. So it produces an optimal result of learning. The ability of the educator/lecturer packs in an interesting and systematic learning component that can only be done by a professional lecturer. The success parameter of the learning process is the result of learning. It can spur the educator and the student to strive achieving the educational goals. Therefore, the educator must choose the appropriate learning method and strategy to the material that will be taught. Whereas the learner must strive to grow the motivation in following all learning materials. Based on the formulation and the limitation of the problem, so the framework can be developed where the motivation is very influential in the learning result of the learner. Thus, the motivation can determine the learning result of the learner, so the higher of the motivation, the learning result will be higher.

Based on the results of the study by using e-learning model, there is a significant influence on the learning result of learner/student. E-learning has a positive impact on the learner/student motivation in learning, the spirit to seek and find and to think critically and logically. This can be explained due to the e-learning gives many advantages, especially in terms of improving the interactivity of the learner/student in learning and the ease of reaching the information.

The study states that the data used by the researcher has complied the criteria of validation and reliability. Therefore, these data are valid and reliable. The result of the regression analysis is revealed that the acquisition variable of the student competence (X1) and the use of e-learning (X2) have a significant influence in the learning motivation. The relation between the two independent variables and the learning motivation of learner/student is positive. Thus, the hypothesis that states there is a positive and significant impact of the acquisition variable the learner/student competence (X1) and the use of e-learning (X2) that has a significant influence on the learner/student motivation is proved correctly. The regression result has complied the prerequisite of classical assumption that is stated that the data is normally distributed. The result of the analysis shows a positive impact of e-learning for the learner/student, because it can be improved the competence and useful in the lectures. Therefore, e-learning should be implemented in campus.

E-learning can be implemented smoothly, if the educator/lecturer has mastered the information technology before implementing in learning. Several learning methods can be performed include: discussion, demonstration, problem solving, inquiry, and discovery. The lecturer gives a specific topic via internet to be commented by the learner/student, then the student downloads via internet. In addition, the educator/teacher can give the assignment that requires the student to access the internet. The learner/student can deepen their knowledge about new things through the internet.

The method can be done by using the various learning models, for example: Cooperative Learning, Contextual Teaching and Learning, Direct Learning, Problem Based Learning, Problem Posing, Open Ended, Cycle Learning, Teams Games Tournament, STAD, NHT, Jigsaw, etc. The varied learning process has a good impact on the learner/student, because it is more fun and exciting, so the learning is meaningful. By implementing e-learning, it is expected the learner/student will be used to think critically and encourage self-taught learning.

E-learning has a positive impact on the learner/student, because the knowledge and insight can be developed and increase the learning motivation and the result. Therefore, the learning objective will be achieved and the quality of education will increase. The advantage of e-learning is in terms of flexibility. Discussion or question-answer can be done in e-mail and milist. It can be designed in an integrated manner, in the form of e-learning portal that contains the various learning objects that are enriched with multimedia and combined with the academic information system, evaluation, communication, discussion, and the various other education tools. Free weblog is a web that can be developed instantly composed a post and a page as a web-based learning method. Based on the study of the theory that free weblog as a medium of learning can be done by: 1) making a post as a discussion medium, 2) creating a page as a place to show a course, and 3) creating a sub-page as a place to show a subject in a course.

The implementation of e-learning in the lecture has been proven to increase the learning motivation, so it can improve the learning achievement. The delivery of the course is no longer considered difficult and less attractive, but the outlook has changed, more convenient and attractive. The result of this study are considered three basic studies, they are the lesson planning, the implementation result and the influence of the learning model toward the learning result of the student/student. In addition, it is also examined the correspondence between the theoretical study and the practical technology of the learning that includes the design, the development, the implementation and the evaluation.

The implementation of the e-learning model is more flexible. Quantitatively, there is an increasing, as well as qualitatively, the learning process has increased. It relates to the role of the educator/lecturer and the learner/student activity that is getting better in each course. The impact of the e-learning model to the educator/lecturer is better than before. The teacher/ lecturer is able to master the learning model. The experience of the educator/lecturer in delivering the learning materials contributes to the implementation of the development of e-learning model. In terms of the ability in resolving the problem and self-learning ability, the model of e-learning can improve the ability of problem-solving. The ability is based on the latest information, the ability of the opinion, and the individual responsibility. During the learning process, the dominant activity is centered to the learner/

student than the activity of the educator/lecturer. There is the spirit of the learner/student to be actively involved in responding every question.

Therefore, the model of e-learning should be maintained in order to the lecture is more fun, and challenging. E-learning is more interesting. The thinking ability of the learner/student is more optimally match with the ability level of each learner/student. This is one of the advantages of e-learning model.

The existence of a positive influence in the implementation of e-learning model to the learning result of the learner/student. The learning result is more increasing. Thus, there is a significant effect on the learning result of the learner/student. So, it is impacted on the learner/student motivation. The emergence of the spirit of searching for, finding, critical and logical thinking. This can be explained, because e-learning gives many advantages. These advantages, especially increasing the interactivity of the learner/student in the learning process. In addition, there is the ease in reaching the learning information. Therefore, the learning result of the learner/student has increased.

The mastery of the learning materials by the learner/student involves the process of medium and high thinking stage. If the test result is seen as the level of ability of the learner/student, the result of e-learning model can be categorized as a high thinking stage like application, analysis, synthesis, evaluation and creativity. It shows that the impact of e-learning model for the learner/student can master the deeper knowledge and wider than the usual learning.

The success of e-learning model is really influenced by the supporting factor. These factors include: the educator/lecturer, learner/student, infrastructure, learning resources, media and learning tools, size/class condition, and the time. The factors of the educator/lecturer are related to the ability of various aspects (educational background), the potential and condition, and the ability to manage the appropriate learning based on the learning characteristics. The factors of the learner/student are related to the characteristic, the potential, the ability interest and perception of the subject. The infrastructure factors are related to the learning resources, media and learning tools. The factors of the room size/classroom are related to the wide and the utilization of the size, the condition the class, the arrangement of the facilities and the infrastructure affecting the successful of the implementation of e-learning. The classroom atmosphere regards with the learning atmosphere. The use of the time in the implementation of e-learning is more effective. If the time is used effectively, the implementation of the learning process can be more efficient in using the time. So, the educator/lecturer has more time to pay attention to the student.

The barrier in the implementation of e-learning model is usually in the educator/lecturer, because the competency of the educator/lecturer does not fulfill the standards, for example, less understanding how to operate a computer. While the other barrier is the learners/student is not creative, active or independent, so the process of e-learning is less enjoyable. Another factor is the lack of the infrastructure including the learning resources, the media and the learning tools. The classroom size and the classroom condition that do not conform to the standards will affect the unsuccessful of the learning process. Thus, the successful of the implementation of a web-based learning model is strongly influenced by various factors. They are the educator/lecturer, the learner/student, infrastructure, the learning resources, the media and the learning tools, the class size/condition, and the time.

C. Conclusion:

The result of the analysis shows that there are some influences in the implementation of e-learning model towards the learning motivation. The learner/student can acquire a wider knowledge and can be able to solve their problems. Moreover, it can directly change the attitudes and the skills personally. The advantages of e-learning is more flexible, the learning objective is easier to be achieved and the quality of education increases.

REFERENCES

- Anwas, Oos M. (2003), *Model Inovasi E-Learning dalam Meningkatkan Mutu Pendidikan*. Jakarta: Jurnal Teknodik Depdiknas.
- Arikunto. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik*. Yogyakarta: Rineka Cipta.
- Depdiknas. (2003). *Undang-Undang Republik Indonesia Nomor 20, Tahun 2003, Tentang Sistem Pendidikan Nasional*.
- Depdiknas. (2004). *Peningkatan Kualitas Pembelajaran*. Departemen Pendidikan Nasional. Direktorat Jenderal Pendidikan Tinggi. Direktorat Pembinaan Pendidikan Tenaga Kependidikan dan Ketenagaan Perguruan Tinggi.
- Dimiyati dan Mudjiono. (2009). *Belajar dan Pembelajaran*. Jakarta: UNJ Press.
- Hannay, M dan Newvine, T. (2006). *Perceptions of Distance Learning. A Comparison of Online and Traditional Learning*, MERLOT Journal of Online Learning and Teaching, Vol. 2 No. 1 March 2006.
- Hartley, D.E. (2001). *Selling e-Learning, American Society for Training and Development*.
- Kirkpatrick, D.L. (1998). *Evaluating Training Programs: The Four Levels (2nd ed.)*. San Francisco. Berrett-Koehler Publisher, Inc.
- Siti Irene Astuti D. (2003). *Pengembangan Kecakapan Hidup (Life Skill) Melalui Penanaman Etos Kerja dan Membangun Kreativitas Anak*. Cakrawala Pendidikan Jurnal Ilmiah Pendidikan. Lembaga Pengabdian Kepada Masyarakat. Universitas Negeri Yogyakarta.
- Nana Sudjana. (2002). *Dasar-Dasar Proses Belajar Mengajar*. Bandung: Sinar Baru
- Nasution. (1982). *Teknologi Pendidikan*. Bandung: Bumi Aksara
- Ormrod, J.E. (2003). *Educational Psychology, Developing Learners*. (4d ed.). Merrill: Pearson Education, Inc.
- Prayitno, Elida. (1989). *Motivasi Dalam Belajar*. Jakarta: P2LPTK
- Purbo, Onno W. (2003). *E-Learning dan Pendidikan*. Jakarta: UT Press.
- Purbo, Onno W. dan Antonius AH. (2002). *Teknologi E-Learning Berbasis PHP dan My SQL: Merencanakan dan Mengimplementasikan Sistem E-Learning*. Jakarta: Gramedia.
- Purwanto, Ngalm. (2011). *Psikologi Pendidikan*. Bandung: PT. Remaja Rosdakarya

- Sappaile, B.I. (2007). *Pembobotan Butir Pertanyaan Dalam Bentuk Skala Likert Dengan Pendekatan Distribusi Z*. Jurnal Pendidikan dan Kebudayaan Tahun ke 13. Januari 2007.
- Sardiman, A.M. (1990). *Interaksi dan Motivasi Belajar Mengajar*. Jakarta: Rajawali.
- Siahaan, Sudirman. (2002). *E-Learning (Pembelajaran Elektronik) Sebagai Salah Satu Alternatif Kegiatan Pembelajaran*. Sumber: Internet.
- Esti, Sri.(1989). *Psikologi Pendidikan*. Jakarta: Grafindo
- Sugiyono. (2008). *Metode Penelitian Kuantitatif, Kualitatif Dan R & D*. Bandung: Alfabeta.
- Suryabrata, S. (2004). *Pengembangan Alat Ukur Psikologis*. Yogyakarta: Penerbit Andi.
- Sutrisno. (2007). *E-learning dan KTSP*. <http://www.edukasi.net/artikel/index.php?id=60> (20 Maret 2008).
- U.S. Department of Commerce. (2002). *Transforming Education and Training Through Advanced Technologies*. The Use of Advanced Technologies in Education and Training Summit, U.S. Department of Commerce.