Challenges and Future Learning Blended Learning-Based Information Technology

Jusmita Weriza, Universitas Ekasakti Padang, Sumatera Barat, Indonesia
Jalius Jama, Universitas Negeri Padang, Sumatera Barat, Indonesia
Hansi Effendi, Universitas Negeri Padang, Sumatera Barat, Indonesia
Titi Sriwahyuni, Universitas Negeri Padang, Sumatera Barat, Indonesia
Zulkifli, Sekolah Tinggi Teknologi Payakumbuh, Sumatera Barat, Indonesia

Abstract:

Nowadays e-learning trends are increasing from day to day. One of the tool to improve and apply this concept is through blended learning. This paper provides an overview of the challenges and future of learning for students and lecturers. It Also gives an overview of education in universities. The application of blended learning appropriately to overcome these educational challenges. In this 21st era, increasingly widespread technological developments has made face-to-face learning (face-to-face) decrease in attractiveness. Some students feel that face-to-face learning is no longer effective and makes them feel bored quickly. They are more interested in utilizing the development of existing technology to carry out the learning process by e-learning. By using blended learning students will be able to compete and overcome educational challenges especially for students at universty level who have great educational challenges. In the past in the classroom was the "transfer" of knowledge from teacher to student, then in this modern century happened in the classroom is the exchange of knowledge between teacher and students as well as between students and their peers. Tutoring for learners is given from the beginning, so that learners have a combination of learning skills from the beginning, because this ability will be a learning tool in the future.

Keywords: Blended Learning, E-learning, Technology

INTRODUCTION

Advances in science and technology in various fields of life bring changes, especially in improving the quality of education. Development in the field of education is mandated in Law Number 20 Year 2003 Article 3 concerning the National Education System (National Education System) that national education functions to develop capabilities and shape the character and civilization of a nation that is dignified in the context of educating the life of the nation, aiming to develop the potential of students to become people who have faith and are God-fearing, Almighty, healthy, knowledgeable, creative, independent, and become democratic and responsible citizens. Understanding the meaning of the national education system is a mandate that contains a moral message as the foundation of the implementation of education and a means of achieving the ideals of struggle in the Indonesian civilization. Sarah Bibi (2015; Journal of Vocational Education Vol 5, Number 1) According to Monica Mayeni (2017) The role of information-based technology systems is needed by the leadership of the education unit management in the context of

achieving educational goals. Strengthening and expanding the use of ICTs in education as directed towards national education development policies set forth in the Regulation of the Minister of National Education of the Republic of Indonesia Number 2 of 2010 concerning the Strategic Plan of the Ministry of National Education in 2010-2014 is intended to be able to support efforts to improve and equalize access to education, improve quality , the relevance and competitiveness of education, and governance, accountability and public image of education. Information system technology plays a role in helping students to solve problems faced and as a source of reference In educational institutions, information technology (IT) has become a source of knowledge. This technology connects knowledge sources and experts through an information network facilitated by the internet. IT in educational institutions serves as a tool or a means of organizing teaching and learning activities and learning activities. This is related to the increasing number of teachers and lecturers using various IT tools to help them move to provide explanations of teaching materials in various visual or multimedia illustrations that are interesting. Jati Emas (Journal of Engineering and Community Service Applications) Vol.1 No. March 1, 2017 - e. ISSN: 2550-0821.

LITERATURE REVIEW

In writing this article is about the use of blended learning by using the library research method in accordance with the reviews discussed and doing it with a review of various literature such as scientific journals both national and international journals and reference books as well as the web.

RESEARCH METHODS

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FUNDINGS AND DISCUSSION
Challenge

The technical challenges of getting technology to work on the ground and vice versa ensure the success of the program by utilizing and supporting appropriate technology that is ensuring participants succeed in using this technology. On the organizational challenge that blernded learning is the right direction for training initiatives, but fails to understand that this is a complex process that needs to be thought beyond individual programs. Organizational challenges include overcoming the idea that blended learning is not as effective as traditional classroom training, redefining the role of the facilitator and managing and monitoring the progress of participants. In the learning design challenge when learning technology is introduced, attention is often given to technology implementation while appropriate content design takes too little time and budget to make a successful program. Instructional design challenges include, seeing how to teach not just what is taught, matching the best delivery media with performance goals, keeping online offers interactive and not just "talking" with participants, ensuring participant commitment and follow-up with "non-living" elements "And ensuring all mixed elements are coordinated (hotman, 2011) in Manjot Kaur procedia-social and behavioral sciences 93 (2013) 612-617. A student's curiosity about a learning material can be answered through its active exploring various learning resources that can be found and accessed. Even with animations, simulations, and serious games for example, real-world contexts can easily be brought into the classroom. Technological applications such as collaboration tools, virtual meetings, and team games can be used to facilitate group-based learning models or team collaboration. Technologies such as virtual reality and augmented reality are widely used

in developed countries to facilitate this kind of learning process. The presence of multimedia provides a new atmosphere and experience in learning that is more interesting, interactive, and fun. The argument delivered by both parties is a form of enriching discourse. This material can be obtained from various sources that are spread in various formal and informal institutions Information technology allows students to learn in accordance with the speed and style of each. Communication applications such as e-mail, chat, mailing lists, forums, blogs, etc. are a number of ways that learners use to defend various ideas or ideas. Social media is one phenomenon where individuals can express their critical opinions widely, to be able to be discussed and commented on by colleagues or the public. In this 21st era, more extensive technological developments are making face-to-face learning decreases attractiveness. Some students feel that face-to-face learning is no longer effective and makes them feel bored quickly. They are more interested in utilizing the development of existing technology to carry out the learning process by e-learning. The appeal of e-learning in the 21st era is indeed great because with the increasingly widespread development of technology it can facilitate students in conducting the learning process anywhere and anytime. The attraction itself is a person's ability or a thing in luring and attracting someone to like an object. Attractiveness can arise because there is a uniqueness or characteristic and ease in using or understanding a thing. In the learning process, attraction needs to be had in order to attract or entice students into the learning process. Not only the strategy of organizing and delivering teaching that has an important role in the learning process, but the quality of teaching also has a role, used as a strategy for organizing teaching, teaching delivery, and teaching quality because blended learning is able to accommodate broad technological developments in the 21st era without having to leave face-to-face learning (face-to-face). With blended learning students will be able to compete and overcome educational challenges especially for students at tertiary level who have great educational challenges. Kasali (2013; in Sari, 2014: 133) states that there are five challenges of education in higher education, namely:

a. new educational models that bring unprecedented competition from traditional models.

b. a lot of new publications and research are not well understood by decision makers.

c. digital media is expected to be a literacy in education for academic professionals.

d. Experiments with the application of innovative technology are often regarded as an outside role of a researcher.

e. in the Open Source world, libraries are under pressure to develop new ways to support students.

The application of blended learning is right to overcome these educational challenges. With blended learning the teacher can provide innovation in the learning process because if it does not provide innovation then the teacher will not get unexpected learning outcomes and role in the future too teachers will be replaced by technology, as expressed by the Director of Diktis, Prof. Dr. Dede Rosyada (Diktis News: 2014; in Sari, 2014: 134) that learning with a conventional face-to-face system is currently not appropriate technological developments in the 21st era and are instructional in nature. Deklara Nanindya Wardani (e - ISSN: 2615-8787 file: /// C: /Users/HP/Downloads/2852-9931-1-PB.pdf).

Development of learning activities through conventional classrooms, virtual classes, class combinations (blended learning) the advantages of learning can be seen in the table below:

Comparative Assessment Table of Three Learning

No	Variable	Class Conventional	Celass Virtual	Celass Combination (*blended learning*)

1.	Registrasi	campus	on line	both
2.	Learning environment	life	programmed	both
3.	Campus environment	Campus	off campus	both
4.	The presence of the teacher / tutor	needed right	not required	both
5.	In the classroom	certain place and time	anytime and anywhere	anytime and anywhere
6.	e-mail	there is no	yes	yes
7.	Audio, vidio, converencing, chatting	there is no	there is no	yes
8.	Consultation	face to face	announce	both
9.	Work in group	yes	no	yes
10.	House chores	yes	no	yes

Source: Soekartawi, 2006: A - 97

Information Technology

According to Aji Supriyanto (2005) The term information technology (IT) which is popular today is part of a long chain of developments in the term world Information Systems (SI). The term Information Technology indeed refers more to the technology used in conveying and processing information, but basically it is still part of an information system it self. The following is one definition of Information Technology taken from the "ICA99 Information Technology Training Package" published by the Australian National Training Authority (ANTA). The Information Technology Industry is definet as technology development and application of computers and communication-based technologies for processing, presenting and managing data and information. This includes computer hardware and component manufacturing; computer software development and various computer related services; together with communications equipment, component manufacturing and services. Technology in learning has been proven to contribute to learning activities in the form of knowledge of problem solving learning, the provision of professional staff that can arouse learners to learn, various learning resources, and the latest information needs that can be accessed quickly (Susila 2015, 4 in the journal Purwadita I Ketut Widiara volume 2, no.2 September 2018 ISSN 2549-7928.

Blended Learning

Blended learning is learning that combines face-to-face meetings in class with integrated activities facilitated with computers, the internet and other learning media providing three definitions for blended learning, namely: an integrated combination of traditional learning with a web-based online approach, a combination of media and learning tools in e-learning environment, a combination of several approaches in education, with learning using technology. Heni Jusuf file: /// C: /Users/HP/Downloads/242-467-1-SM.pdf

Entering this digital era, teachers as the main learning resources are not enough anymore, but need to be equipped with other learning resources. Teacher learning resources must be integrated with other learning resources, namely print learning

resources, audio, audio visual, and computer. It can even take advantage of mobile learning, such as mobile phones. Required knowledge, attitudes, and skills of teachers in designing learning, especially in an effort to solve problems or apply them in a learning design so that the quality of learning increases. Learning is not only based on face-to-face, but combined with sources of science and technology that are both offline and online, one of the answers is blended learning method.

The future of learning

The trend of future learning has changed the traditional learning approach towards future learning, which is called knowledge age learning, that people can learn anywhere, meaning that people can learn in classrooms / lectures, in the library, at home, or on the road at any time , not according to what is scheduled to be morning, afternoon afternoon or evening, with anyone, through teachers, experts, friends, children, family or community, through any learning resources, through textbooks, magazines, newspapers, internet, CD ROM, radio television and so on. The characteristics of learning in knowledge age, namely: teachers as facilitators, mentors and consultants, teachers as learning peers, learning is directed by people who learn, learns openly, flexibly as needed, learning mainly based on projects and problems, oriented to the empirical world with real action, methods of inquiry and design, discover and create, collaborative, community-focused, open outcomes, creative diversity, computers as tools of all types of learning, dynamic multimedia interactions, and unlimited communication. To engineer learning systems in this knowledge age, it is also necessary to understand the nature, terminology or understanding of learning. The word learning, nowadays, is more widely used to replace the word teaching. In fact, learning has a different meaning compared to teaching. Learning refers to facilitating learning, while teaching refers to teaching (interaction with the instructor as the main learning source). Learning emphasizes more on

efforts to organize the environment outside the learner's self (external factors), so that the learning process (internal factors) occur. While teaching places more emphasis on the teaching-learning process with the instructor (teacher) as the main actor, or accompanied by the media as aids or other props. Thus, learning is an effort to organize the environment as a source of learning so that the learning process occurs in the learner. Efforts to organize the environment are done by providing learning resources, for example: teachers, textbooks, learning materials, source people, television, VCDs, radio-tapes, magazines, newspapers, internet, CD ROMs, the environment and even his own friends. A measure of learning success is the process of interaction between learners learning with learners. It does not lie with the teacher who conveys information (teaching). The teacher is not the only source of learning, he is only one part of the learning source. All learning resources are designed to be able to encourage initiatives and learning processes to be more effective, efficient, and interesting, so that students remain "at ease" to continue learning. Therefore, the teacher's function will change towards the teacher as the manager of learning. The function of the teacher is to design the provision of learning resources so that learning becomes easier, faster, more interesting, and more enjoyable. In engineering an optimal learning system, there is

eight interacting factors, namely:

(1) students (students, students, students, employees, community?),

(2) content (what content is taught: facts, concepts, principles, problem solving etc?),

(3) objectives (knowledge, attitudes, behavior?),

(4) learning environment (in the classroom, laboratory, library, field?),

(5) learners (who are the learners?),

(6) learning resources (books, magazines, newspapers, VCDs) , computer, radio?),

(7) strategy (management, delivery, organization), and

(8) evaluation (oral tests, written tests, compiling papers, portfolios, and problem solving)

CONCLUSION AND SUGESTION

Based on the results of the discussion it can be concluded that the challenges and future of information technology learning using blended learning methods is one of the solutions to face these challenges. The study results obtained are good learning methods that include competencies developed by the instructor and Blended learning Components that combine face-to-face and elearning also meet all learning needs with a variety of learning characteristics of learners, so blended learning can be an alternative learning right. Entering this digital era, teachers as the main learning resources are not enough anymore, but need to be equipped with other learning resources. Teacher learning resources must be integrated with other learning resources, namely print learning resources, audio, audio visual, and computer. It can even take advantage of mobile learning, such as mobile phones. Required knowledge, attitudes, and skills of teachers in designing learning, especially in an effort to solve problems or apply them in a learning design so that the quality of learning increases. Learning is not only based on face-to-face, but combined with sources of science and technology that are both offline and online, one of the answers is blended learning method.

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