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Evaluation of Blended Learning Implementation in Faculty of Teacher Training and Education, Universitas Lampung

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Abstract: Evaluation of Blended Learning Implementation in Faculty of Teacher Training and Education, Universitas Lampung. Objectives: This study aims to evaluate the implementation of an online blended learning namely Edusmart as a support for face-to-face lectures at the Faculty of Teacher Training and Education, Universitas Lampung (FKIP UNILA). **Methods:** This study used a qualitative descriptive research method using three instruments, namely the observation guidelines, interviews and questionnaires. The subjects in this study were lecturers, students and helpdesk admin in FKIP UNILA. Data were collected in accordance with the object of research, namely to describe the implementation of blended learning through observation, interviews and questionnaires related to the responses of lecturers and students. **Findings:** The results showed that the implementation of blended learning had a positive impact and received good responses from lecturers and students. Students and lecturers are actively involved in learning activities, both online and face-to-face.

Keywords: evaluation, implementation, blended learning.

Abstrak: Evaluasi Penerapan Blended Learning di Fakultas Keguruan dan Ilmu Pendidikan, Universitas Lampung. Tujuan: *Penelitian ini bertujuan untuk mengevaluasi pelaksanaan system perkuliahan secara online berbasis blended learning bernama edusmart sebagai pendukung perkuliahan tatap muka di FKIP Universitas Lampung.* ***Metode:*** *Penelitian ini menggunakan metode penelitian deskriptif kualitatif dengan menggunakan tiga instrumen yakni pedoman observasi, wawancara, dan angket. Subjek dalam penelitian ini adalah dosen, mahasiswa dan admin helpdesk di lingkungan FKIP UNILA. Data dikumpulkan sesuai dengan objek penelitian yaitu untuk mendeskripsikan implementasi blended learning melalui observasi, wawancara, dan angket yang berakaitan dengan respon dosen dan mahasiswa.* ***Temuan:*** *Hasil penelitian menunjukkan bahwa implementasi blended learning berdampak positif serta mendapatkan respon yang baik dari dosen maupun mahasiswa. Mahasiswa dan dosen terlibat aktif dalam kegiatan pembelajaran, baik itu secara online maupun tatap muka.*

Kata kunci : *evaluasi, implementasi, blended learning.*

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INTRODUCTION

The improvement of the quality of education in Indonesia is accompanied by the readiness of students to be skilled and have extensive knowledge which have been mandated in Law No. 20 of 2003 in order to be able to compete in facing global competition in the 21st century. In line with this, the development of technology and communication has had a major influence in the world of education in Indonesia, especially in the learning process. One indication of this phenomenon is a shift in the learning process where interaction between students and educators is not only done face-to-face but also through communication media such as the internet, smartphones, computers and so on. Related to this, it is necessary to get used to the use of software in the learning process. The learning model that is increasingly popular today is blended learning, which is a learning model that mixes the face to face system with the online system.

Blended learning is a learning approach solution that is most appropriate to be applied in the world of education that combines the advantages of face-to-face learning and e-learning. In accordance with the statement of Osguthorpe and Graha (2003) that blended learning is learning that combines face-to-face with online which in its implementation maximizes its respective advantages. Learners can meet directly with educators during face-to-face learning, so that social interaction still occurs in the classroom where learners still need guidance in learning (Akkoyunlu & Soylu, 2006). So that learners will directly get feedback from the learning results. In addition, Blended learning is believed to be an approach in lecture activities which makes it easier for students to study anywhere. Blended learning is able to stimulate skills, a creative attitude to do independent learning activities. This is consistent with Bonk and Graham (2006) who stated that blended learning is superior to traditional face-to-face learning or full-online learning.

Implementing the blended learning model in the learning process is an important thing to do in terms of its usefulness. A study on the implementation of blended learning conducted by Tseng (2014) revealed that blended learning is significantly more effective than traditional learning. Dziuban, Hartman, and Moskal (2004) stated that blended learning has the potential to improve student learning outcomes. Furthermore, Rovaidan Jordan (2004) proved that blended learning produces a stronger feeling of community among students. Wicaksono (2018) also revealed that blended learning needs to synergize with understanding learning outcomes to determine material coverage, learning outcome assessment framework, and initial knowledge.

In this regard, practice and research in Indonesia are still in their infancy and so far not much research has been published. Graham & Halverson (2013) indicate that blended learning research at the primary and secondary education levels is very small. Based on this, various aspects related to blended learning can be studied, ranging from feasibility and philosophical studies to technical matters and their impact on learning participants.

The Faculty of Teacher Training and Education, University of Lampung, FKIP UNILA, has implemented a Web-based online learning system (e-learning) by several lecturers by utilizing existing LAN facilities and Internet connections. The implementation of blended learning is combined with face-to-face lectures, but students can read course material, do / send assignments or communicate with lecturers / friends online. The blended learning practice that has been running, needs to be evaluated, both in terms of development and implementation and its impact on the effectiveness of the learning process at FKIP Unila. FKIP University of Lampung as one of the higher education institutions that is responsible for the implementation of education and teaching in Indonesia. FKIP Unila views it as important to be

actively involved in the development of blended learning. Therefore, this study is intended to evaluate the recovery that has been running in this semester.

Based on some existing research, blended learning can have a positive impact on improving the quality of learning. By looking at the developments that occur in higher education institutions abroad and at home, blended learning is one of the learning systems that will be widely used in the future, both as a support for face-to-face learning systems and as a 'distance' learning system. Blended learning on a broader scale strongly supports the essence of lifelong learning (lifelong learning). Related to this, to get an effective blended learning system, its development requires in-depth study and testing, careful evaluation. In this early stage the study will only focus on evaluating blended learning as a support for the face-to-face class lecture system which includes technical, psychological, communication, impact on learning achievement, collaborative learning methods, new assessment methods, and so on in order to improve the learning system effective and quality.

METHODS

This study used a qualitative descriptive research method (McMillan and Schumacher, 2010 & Kitzinger, 1995) by using three instruments, namely observation and interview guidelines, and a questionnaire. The subjects in this study were lecturers, students and helpdesk admin in FKIP UNILA. Data were collected in accordance with the object of research, namely to describe the implementation of blended learning through observation, interviews and questionnaires related to the responses of lecturers and students. Furthermore, the data were analyzed descriptively.

RESULT AND DISCUSSION

The results of this study focus on evaluating the implementation of a blended learning-based online lecture system as a support for face-to-face lectures at the FKIP, University of Lampung to improve the quality of learning and create a flexible learning environment, easily accessible from anywhere and anytime. Following are the results of interviews conducted by lecturers, students and helpdesk admin.

Table 1. Results of lecturer interview responses

Interview questions	Answer / Response
What do you think about the blended learning (edusmart) based online lecture system on the courses you teach?	• Blended learning (edusmart) has become an alternative to my online learning. So far, my online learning has been very accepted by students without burdening them. • The blended learning (edusmart) based online lecture system is easy to implement, the creation of material content is not difficult but there are a few obstacles regarding the network • Very good
How are your efforts in animating interactions in the blended learning-based lecture learning process?	• Through discussion forums on the LMS that I use. Be it Edusmart or others • Learn operational techniques and communicate with students • By first inviting to read literature • Assisted interaction via whatsapp group
How is the enthusiasm of students towards blended learning-based lectures in the subjects that you teach?	• Good, very excited • Very enthusiastic, it's just that the signal is often constrained • Pretty good • Initially they were very enthusiastic, but as time went on, students began to experience boredom.

What do you think about the ability of learning outcomes that arise and develop for students after implementing blended learning-based lectures?	• Better, because students learn a lot from various sources • Can be awakened because it is not full online, there is a face to face meeting time, so that it can be controlled • The lecture process is smooth, students and lecturers learn from each other to operationalize IT • Whatever the result, the lecturers' efforts have been made with the intention of giving the best. Regarding good results, it is a sweet fruit, but for bad results, it is bad fruit and needs to be improved. So far, student learning outcomes have actually improved after online learning
How effective is the blended learning-based lecture system, in order to build open student character with increasingly rapid technological developments?	• Very extraordinary, independent work and responsibility • When offline learning can be done, when online it can be done depending on the lecturer preparing the discussion • Strongly supports lectures, students are more creative • Very supportive. However, it needs very tight and intense control in supervising the use of cellphones or PCs for students.

Table 2. Results of student interview responses

Interview questions	Answer / Response
What do you think about the activities of the online blended learning (edusmart) based lecture system?	• It is good, especially when online lectures like this are needed to access learning materials provided by lecturers, collect assignments and exams. However, it must be improved because it often takes a long time to open the web. • Enough to help us in lectures • Make it easier, and more flexible. Learning resources are freer to use especially from the internet or e-books and other articles. However, sometimes it is hindered by the network for those of us in the village • It is quite helpful in learning. Because I can access it easily, it can be via a laptop or cellphone because edusmart can be accessed via a link, does not have to install applications and is free of charge, but often experiences loading to be accessed • Online lectures with edusmart are generally good, it's just that the servers are sometimes slow and often disconnected.
What do you think about the teaching system carried out by educators through a blended learning-based lecture system?	• That's good enough, because this is very helpful in conditions that require online tuition like today • It is good, and quite effective, although there is not much material explained. But there are links to learning resources that are very useful. • Teachers can give assignments and students can access through edusmart about the assignments given • Self-explanatory instructions and in submitting assignments • lecturers can provide material and assignments and can set assignment deadlines, but there is often a limit to the file size that is not too big • is good enough

What about your learning outcomes after implementing blended learning-based lectures?	• Being more independent, looking for external references • Can help me readiness in lectures, study independently and make it easier to study material. The teaching materials and videos provided help me understand a concept. Especially regarding an abstract concept such as DNA replication and protein synthesis or others that are difficult to understand • It has improved considerably • Having a variety of learning like this makes me have a more different learning experience. • I find it easier and more confident when I want to ask questions or argue because it is not face-to-face
How do you feel about the blended learning-based lecture system?	• Difficult signal to access it • Loading continues due to unstable internet connection • Sometimes requires access to an adequate network • Difficult signal problems during power outages and rain. • Network constraints and the web is often down due to many who use it
How about the ease with which you feel about the blended learning-based lecture system?	• The ease with which we can access it anytime and anywhere • Easy to collect assignments, so assignments can be submitted before the deadline and collect them individually so that each individual is responsible for his own task • more accessible and more effective when collecting assignments

Table 3. Results of interview responses to the helpdesk team

Interview questions	Response
How is the availability of supporting technology in the form of hardware and software as well as the readiness of human resources in the FKIP UNILA environment?	• Availability of supporting technology for software, hardware and human resources is good • The supporting technology for software, hardware and human resources is quite good
How is the edusmart LMS application for online lectures based on blended learning at FKIP UNILA?	• Goes well • Needs updating
What are the obstacles and complaints that are often encountered while serving lecturers and students in the blended learning (edusmart) based online lecture system	• The network connection is not stable • Server needs to be upgraded
How does the helpdesk team help users in using edusmart as an online lecture application at FKIP UNILA	• The helpdesk team helps users in using edusmart to the fullest extent • The helpdesk team helps maximally regarding the problem being complained of
How is the accuracy of using the blended learning-based online lecture system in the FKIP UNILA environment?	• There is a need for synchronization and coordination between students, lecturers and the IT team

a. Lectures that are implemented with blended learning

The implementation of blended learning is carried out in 100 courses in FKIP UNILA which are divided into each study program. The results of the questionnaire analysis of lectures implemented with blended learning in 100 courses in FKIP UNILA in terms of overall lecturers showed an average percentage of 64.7% stated strongly agree and 35.3% agreed. Likewise, the results of the questionnaire in terms of the students as a whole showed an average percentage of 70.3% strongly agreed and 29.7% agreed.

Based on the results of the questionnaire analysis reviewed by lecturers and students, it indicates that both lecturers and students have implemented online blended learning-based lectures. The lecture system is implemented by combining face-to-face learning and online learning. At the time of online lectures, learning is carried out online. Students can take online lectures by accessing lecture materials through Android and IOS based applications. The material is adjusted to the material to be studied in face-to-face sessions. In online lectures, lecturers provide online discussion forums that involve the use of internet-based social networks, or through chat groups that are already available on the LMS used by lecturers. The use of computer technology with internet access is used by lecturers to provide information, reading materials and course materials for students. This is in line according to Donnelly & McSweeney (2009) that the role of educational technology is the effect of technological developments that influence academics to change learning.

Based on the results of the lecturer's interviews that had been conducted, the lecturer revealed that he did not experience difficulties in presenting interesting material content. Lecturers have also prepared materials and applications that are well integrated between face-to-face and online learning. This is in line as expressed by Kusni (2010), educators must be able to prepare digital references that can be referred to by learners. Educators who are able to prepare material and applications in blended learning, the implementation of blended learning can run optimally. Learners will have more learning resources and can interact with fellow students and lecturers even though outside school hours with applications that have been prepared and managed well by the lecturers.

This shows that the implementation of lectures with the blended learning system is a variation in learning activities and how to develop lectures by utilizing science and technology (IPTEK) in the industrial era 4.0 so that it requires fairly good technological literacy skills from both lecturers and students. Good educational technology literacy skills will facilitate the online learning process.

b. Lecture activities that are implemented with blended learning

Lecture activities that are implemented with blended learning, based on the results of the questionnaire analysis show that 40.2% of the data obtained from the lecturers stated that they strongly agreed, 44% agreed, and 15.1% were in doubt. Likewise, data from students were obtained as much as 48.4% stated that they strongly agreed, 38% agreed and 13.5% were in doubt about lecture activities. This indicates that lecture activities that are implemented with blended learning are carried out smoothly where in online lecture activities, discussions and assignment posts uploaded by lecturers are responded to by students. Students discuss with each other not only in class, but they can carry out discussions without being bound by place and time by using digital devices they have. In line with Hameed, Baidii & Cullen (2008) revealed that the use of technology is very useful in supporting face-to-face learning activities. face that allows students to have control over time and place to interact with learning material

Based on the results of the questionnaire, it also indicates that students are getting familiar with and are happy with online blended learning-based lectures. Through blended learning students discuss more about lecture material. Students become more enthusiastic in looking for references as well as the emergence of a sense of courage in discussions and are diligent in listening to the latest information provided by the lecturer. In addition, students can communicate directly with lecturers if there are problems in learning through online tools. This was expressed by the student during the interview, who said:

"I feel easier and more confident when I want to ask questions or argue because it is not face to face."

The results of the interview indicate that students become confident in arguing and giving their views and opinions scientifically and based on the material they are good at, both arguing between students and students and with lecturers who teach courses. This is in line with Lin & Lin (2015) that in the learning process, interaction between students and students and between lecturers and students is very important to arouse enthusiasm for learning, so that maximum results will be obtained by students.

Based on the percentage of students and lecturers who expressed doubt, as well as based on the results of student interviews which said that there were still students who still felt ashamed and lacked confidence in giving their arguments in groups or face-to-face. It takes more time and handling to familiarize students with the courage to argue and convey ideas. Students also revealed that according to them the instructor should provide a description of the materials they fully studied in the classroom. However, this percentage is smaller than the percentage of students and lecturers who strongly agree and agree.

c. Profile of student learning outcomes implemented with blended learning

The profile of student learning outcomes implemented with blended learning, based on the results of the questionnaire analysis, showed that 35.3% of the data obtained from the lecturers stated that they strongly agreed, 38.25% agreed, and 26.4% had doubts about the profile of student learning outcomes. Likewise, 39.6% of students obtained data that strongly agreed, 42.7% agreed and 17.7% had doubts about the profile of student learning outcomes.

Based on the results of this analysis, it can be shown that blended learning is an alternative learning that supports face-to-face lectures and is able to increase motivation, form independent learning and student learning outcomes where learning can take place outside the lecture room in terms of the percentage results of both lecturers and students who state totally agree and agree. As stated by Heinze (2008), blended learning can improve learning outcomes as well as or higher than students who study conventionally or who do learn completely online, although the success rate between disciplines varies. Ling (2007) also revealed that there are three aspects of presence, namely social, teaching and cognitive presence that can be achieved online. In addition, research on the effect of learning using blended learning has been conducted by Sjukur (2012) & Demirci (2010) showing that motivation and student learning outcomes increase due to the implementation of blended learning. The results of this questionnaire were supported by the results of student interviews. Based on the results of the interview, students stated that:

"Through online learning based on blended learning, it helps me readiness for lectures, learn independently and make it easier to learn the material. The teaching materials and videos provided help me understand a concept. Especially about an abstract concept such as

DNA replication and protein synthesis or others that are difficult to understand "

Through this video, of course, it helps students to concrete the teaching material so that it is easier to understand. This is in line with Betrancourt & Tversky (2020) which states that animation will be useful if the learning material discusses the trajectory of dynamic events or processes. A well-designed animation can help facilitate students to make a conclusion from a stage of the process. Moskal, Dziuban & Hartman (2013) state that blended learning has the potential to improve learning outcomes and is able to complement and overcome material that has not been conveyed in class or confirm material obtained from online materials so as to help deeper levels of understanding. In line with this, it is not surprising that many universities have started implementing or considering blended learning-based courses. This is in line with the opinion of Bonk & Graham (2006), which states "we can be pretty certain that the trend toward blended learning systems will increase". However, the success of blended learning does not happen automatically so it needs special attention. One of the main factors in the success of blended learning is to consider pedagogy and instructional design regarding the best way to take advantage of technological sophistication, such as facilitating interaction between students, how to motivate and organize the best material to be delivered online compared to face to face.

d. The responses of lecturers, students, and helpdesk admin to courses are implemented with blended learning

Lecturer responses to courses implemented with blended learning 45.3% strongly agree, 47.3% agree and 7.3% doubt. As for the student responses to courses implemented with blended learning 45.8% strongly agree, 44.4% agree and 9.7% doubt.

Based on the data from the response questionnaire analysis, it is known that most of the lecturers and students strongly agree and agree with the courses that are implemented with blended learning, few students and lecturers expressed doubts. The results of this questionnaire were supported by interviews from both lecturers and students. The lecturer said that the implementation of blended learning helped complete and overcome the material that had not been conveyed in face-to-face lessons. Students also said that blended learning made it easier for students to collect assignments, do quizzes and get the latest information that could be obtained via the internet. Students also said that besides getting face-to-face lectures with lecturers in the classroom, they can also access the material provided online from anywhere and anytime. This is in line with Akkoyunlu & Soylu (2008) which states that online learning offers round-the-clock learning where learning can be accessed anywhere and anytime. Hameed, Baidii & Cullen (2008) added that in online learning material can be accessed as often as possible if something is forgotten.

The results of the questionnaire analysis for the subjects implemented by blended learning showed that the percentage of lecturers and students expressed doubts in implementing blended learning. Although the persantese of this doubt is not too big, it shows that there is a need for improvement in the implementation of blended learning in the coming year. The results of this questionnaire were supported by the results of interviews conducted by lecturers and students. The lecturer said that the implementation of blended learning was very useful in supporting face-to-face lectures, but it was necessary to repair the server so that it was faster and the upload size was enlarged. Students also said they experienced some difficulties when accessing edusmart. Some of the difficulties faced include difficulties in uploading college assignments,

servers that go down when accessed by many users and difficulty logging in due to being constrained by an exhausted internet quota or difficulty getting a signal or a stable internet connection because not all students live in easy areas get a good internet network access. So that some students find it difficult to work on quizzes and access teaching materials or videos that have been uploaded to edusmart.

Based on the results of interviews conducted by the helpdesk team, the helpdesk team as a whole revealed that the availability of supporting technology in the form of hardware and software as well as human resources in the FKIP environment for the implementation of online lectures based on blended learning is good. The helpdesk team revealed that problems regarding data connections and servers that needed to be fixed were complaints that were often received while serving lecturers and students. Facilities, especially those related to easy internet network access, good server speed are very important in the success of blended learning. Bath & Bourke (2010) stated that the availability of various supporting equipment and facilities is part of the effectiveness of blended learning. Likewise, Syarif (2012) states that through blended learning, the teaching and learning process that is usually carried out conventionally will be helped by e-learning learning with information technology infrastructure that can be done anywhere and anytime so it is more effective. If learning with the blended learning model is not supported by adequate facilities or network connections, it will be difficult to run smoothly.

Overall, both lecturers, students, and the helpdesk team gave excellent responses to the implementation of blended learning-based online lectures. Blended learning is effectively applied to learning because of the conducive climate that comes from the benefits of online and face-to-face learning collaboration. Students feel motivated in understanding the material they are learning online so that they are able to confidently participate in face-to-face learning. They can also communicate intensively with each other discussing their preferred course material online. This is in line with what Vaughan (2007) stated that blended learning is effective to be implemented, so that the potential results that can be obtained are a conducive educational climate.

■ CONCLUSION

It can be concluded that blended learning has been successfully implemented, however, improvements need to be made regarding the availability of facilities, especially those related to easy internet network access, good server speed because it is very important in the success of blended learning. During the implementation of blended learning, efforts must be made so that there is appropriate support for students when using technology in learning activities. Outreach and evaluation activities need to be carried out to ensure a quality learning process is established between lecturers and students.

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