Mobile Learning with Edmodo : Digital Virtual Class

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Abstrak

Permasalahan yang ditemukan di lapangan adalah keterbatasan pembelajaran tatap muka bagi siswa akibat merebaknya pandemi Covid-19. Penelitian ini dilakukan untuk menganalisis kelayakan, kepraktisan dan keefektifan pembelajaran online menggunakan smartphone android yang memanfaatkan learning management system Edmodo pada mata kuliah Learning Evaluation. Jenis penelitian ini adalah penelitian dan pengembangan. Model pengembangan yang digunakan adalah Model ADDIE yaitu Analisis, Pengembangan Desain, Implementasi dan Evaluasi. Instrumen dalam penelitian ini berupa soal tes. Sampel dalam penelitian ini adalah mahasiswa jurusan Pendidikan Bahasa Inggris. Data dianalisis dengan menggunakan Microsoft Excel. Hasil penelitian menunjukkan bahwa tingkat validitas mobile learning dengan Edmodo sebesar 84,75% dengan interpretasi yang digunakan valid, kepraktisan sebesar 86,64% yang artinya sangat praktis untuk digunakan dan untuk tingkat keefektifan menggunakan uji N-gain. Nilai N-gain sebesar 0,7 berarti penggunaan mobile learning dengan Edmodo efektif dalam evaluasi pembelajaran perkuliahan. Dapat disimpulkan bahwa penggunaan mobile learning dengan Edmodo dapat mengoptimalkan kegiatan pembelajaran di masa pandemi Covid-19 dan dapat menjadi alternatif bagi guru dan siswa dalam pembelajaran e-learning kedepannya.

Kata Kunci: Pembelajaran Online, Edmodo, Kelas Virtual

Abstract

The problem found in the field was the limitation of face-to-face learning for students due to the outbreak of the Covid-19 pandemic. This study was conducted to analyze the feasibility, practicality and effectiveness of online learning using an android smartphone that utilizes the Edmodo learning management system in the Learning Evaluation course. This type of research is research and development. The development model used is the ADDIE Model, namely Analysis, Design Develop, Implementation and Evaluation. The instrument in this research is a test question. The sample in this study were students majoring in English Education. The data were analyzed using Microsoft Excel. The results showed that the level of validity of mobile learning with Edmodo was 84.75% with a valid interpretation used, practicality of 86.64% which means it is very practical to use and for the level of effectiveness using the N-gain test. The N-gain value of 0.7 means that the use of mobile learning with Edmodo is effective in learning evaluation lectures. It can be concluded that the use of mobile learning with Edmodo can optimize learning activities during the Covid-19 pandemic and can be an alternative for teachers and students in e-learning learning in the future.

Keywords: Online Learning, Edmodo, Virtual Classroom

1. INTRODUCTION

The impact of the COVID-19 pandemic on the world of education is that many schools and universities have closed (Mishra et al., 2020; Nisrine & Abdelwahed, 2021). The closure of schools and universities resulted in the achievement of learning objectives not being maximal. The low achievement of learning objectives has a negative impact on the competencies possessed by students, to overcome this, media that supports learning are developed in the hope of increasing student competence. As stated by UNICEF United States on March 9 last, nearly 300 million students were affected by the closure of educational institutions. Indonesia is no exception, which has also been affected by the Covid-19 pandemic for the world of education. Almost all regions in Indonesia are ready to face COVID-19 by closing schools and universities (Restuati et al., 2021; R. Sefriani et al., 2021).

This policy is implemented with the aim of preventing the spread of COVID-19 infection, referring to WHO directives that all components of society must participate in preventing and minimizing the impact of the disease. Online learning can be done by lecturers and students by involving the use of android smartphones as research conducted that said that mobile learning can be applied effectively (Chiu, 2019). Previous studies said that their research that the way people learn is through mobility, which allows them to move across contexts as they learn (Danish & Hmelo-Silver, 2020). Mobile learning is learning in multiple contexts, through social interaction, using personal electronic devices that can immediately capture information about, or provide information to, users. Other study said that mobile technologies – such as tablets, mobile phones and other devices have the potential to play a useful role in promoting academic learning (Mayer, 2020). Previous study explain in their research that mobile learning is becoming increasingly universal, highlighting the potential need for mobile learning strategies that support higher education institutions to navigate increasing globalization and rapid technological change (Sarrab et al., 2018). Learning by utilizing mobile technology which refers to mobile learning has also been applied to vocational high school research which says it is effectively used in learning digital simulation. Mobile Learning or M-Learning is a form of communication work support that creates knowledge (Sarrab et al., 2018; Sletten & Montebello, 2021). Previous study states mobile learning is the concept of student self-learning, where learning materials are already contained in mobile learning applications (Lai et al., 2022). M-Learning according to previous study is the ability to carry out learning anytime and anywhere through the use of multimedia (text, sound, image, or video) and communication (phone calls, voice/text messages, email).

Learning through mobile use using an android smartphone can access the Learning Management System (LMS) application which has many applications on the internet. Some examples of free LMS include Edmodo, Schoology, Moodle, Appsmbler, GoSkill, Coggno. Opigno, ILIAS, OpenOLAT, SAKAI etc. In this study, the LMS used in online learning is the Edmodo application. In this application there are many features that help the learning process. Edmodo when registering offers 3 roles, namely registering as a teacher, student and parent. In addition to using a computer, the Edmodo application can also be downloaded via Android smartphones on Playstore, Appstore, etc. So that students and lecturers can use it via their respective smartphones, as long as the email has been downloaded. Edmodo is a free and secure educational learning software used to provide a simple way for teachers to create and manage online classroom communities and enable students to connect and work with their teacher classmates anywhere. Previous study argues that students use Edmodo mainly in resources, support and communication such as forums, discussions and also for online activities (Balasubramanian et al., 2014). Students consider Edmodo to be an excellent and user-friendly social learning platform that allows them to enjoy working in online classes. It is very closely related to the current conditions, where online learning with virtual classes is needed, which provides a discussion forum, between lecturers and students.

Digital classrooms during the Covid-19 pandemic can take advantage of the Edmodo application in the learning process. The results of previous study showed that participants felt that using Edmodo improved their language skills, developed interaction and communication, increased freedom to share ideas, and improved their vocabulary and language creativity in learning (Balasubramanian et al., 2014). Other study said that the Edmodo application is an E-Leaning-based media designed to manage classes and assignments online so that students can connect directly with teachers and friends classmate (Dewi & Wardani, 2020). This is of course very closely related to the use of Edmodo with the Covid-19 pandemic condition which requires students to study from home (Nisrine & Abdelwahed, 2021; Yuan et al., 2021). Online learning conducted at Putra Indonesia University Yptk Padang requires

lecturers and students to meet in virtual classrooms. Learning through virtual classes using the Edmodo application is important to apply to evaluation lectures for students of the Department of English Education, Faculty of Teacher Training and Education, Putra Indonesia University, Yptk Padang.

Learning through the LMS platform has also been applied to the Vocational Technology Education curriculum. According to research which states that learning with LMS as an e-learning media is effective during the pandemic Covid-19 (R. Sefriani et al., 2021). The use of LMS Edmodo in Learning Evaluation lectures is a smart solution and an effort is made, so that learning can be carried out well and learning objectives are achieved and learning activities can also take place even during the Vocid-19 pandemic. Making mobile learning media using Edmodo as another form of lectures with virtual classes for English Education students (Rini Sefriani et al., 2020; Sophonhiranrak, 2021). Other researchers state that the use of mobile learning in learning has a good impact on increasing student motivation (Montaner Sanchis et al., 2022; Noriega, 2016). Based on the initial presentation stating the need for a media learning management system that facilitates online lectures to overcome the limitations of lectures due to the impact of the COVID-19 pandemic, an LMS media was developed using Edmodo to uncover and analyze the feasibility, practicality and effectiveness of online learning in the COVID-19 pandemic era. The product that will be developed in this research is mobile learning using Edmodo LMS in the learning evaluation course. This study was conducted to analyze the feasibility, practicality and effectiveness of online learning using an android smartphone that utilizes the Edmodo learning management system in the Learning Evaluation course.

2. METHODS

This research uses research and development (R&D) methods. The research and development method is a scientific way to research, design, produce, and test the validity of the products that have been produced. The product that will be developed in this research is mobile learning using Edmodo LMS in the learning evaluation course. This study uses the ADDIE development model, which includes 5 stages, namely analysis, design, development, implementation, and evaluation (Noriega, 2016). The ADDIE development model is learning device development models consist of Analysis (analysis), Design (design), Develop (development), Implementation (implementation) and Evaluation (evaluation). The ADDIE development model is show in Figure 1.
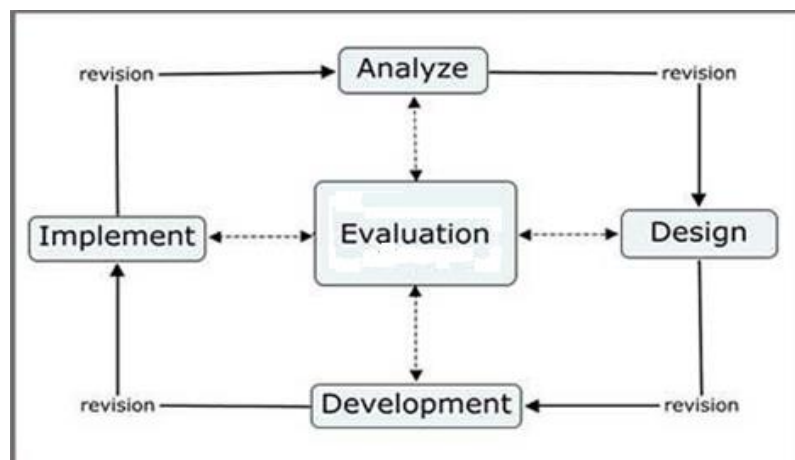

Figure 1. ADDIE Development Model

The research subjects in this study were 2nd or 4th semester students majoring in English Education FKIP Putra Indonesia University Yptk Padang. The number of students is 22 students consisting of 7 boys and 15 girls. The object of research is the feasibility of mobile learning with Edmodo. The research instruments in this development are validation sheets, RPS and learning outcomes tests. Validation was measured using a validation sheet which was assessed by three people, namely practitioners and academics. The validity test is carried out by experts who are asked to validate in terms of content, multimedia and software, meanwhile for the practicality test the instrument is given to lecturers and students as people who use it and who use it and outside the research subject. Data analysis was carried out using the validity test formula, practicality test and n-Gain test for the level of effectiveness.

The stages using the development of the ADDIE model begins with analyzing, then proceeds to making designs after which the development of the material to be input is carried out, then implemented and evaluated. Each stage is revised if necessary. The ADDIE development model is quite widely used by researchers. The ADDIE in development model is quite widely used by researchers. The product development flowchart can be seen in Figure 2.
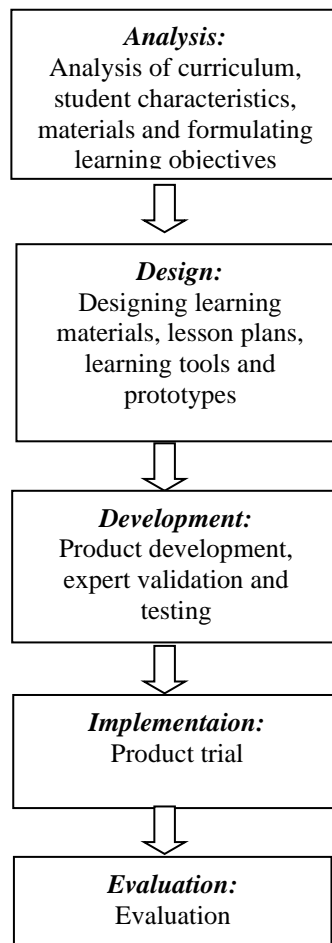
Figure 2. Flowchart of Mobile Learning Development

The product of this research and development is the development of mobile learning with Edmodo which is equipped with lecture materials, discussions, and assignments that are adapted to the semester learning design or RPS. This learning media product is made and designed according to the lecture material that measures the validity, reliability, discriminating power of questions and the level of difficulty of the questions and there are

several additional materials, with the aim of being able to be used as a tool for lecturers in delivering material and also as a source of independent learning at any time which revealed that the product made was in the valid category to use (Sepriana et al., 2019; Wulandari et al., 2019).

3. RESULTS AND DISCUSSION

Result

The validity test was carried out on mobile learning by Edmodo to determine the feasibility of the product. Validity is carried out by experts in the fields of software, learning materials and multimedia. The instrument used to conduct the assessment is in the form of a questionnaire. The validator assesses mobile learning by edmodo by looking at the products that have been designed and developed. Then provide an assessment with several indicators, namely content Eligibility, contents, presentation, Graphic. Each indicator consists of several statement items. The results of the validity by the validator can be found in Table 1 and Figure 3.

Table 1. Validity Value

No.	Aspek	Persentase
1	Content Eligibility	88 %
2	Contents	85%
3	Presentation	83%
4	Graphic	83%
	Average	**84.75 %**
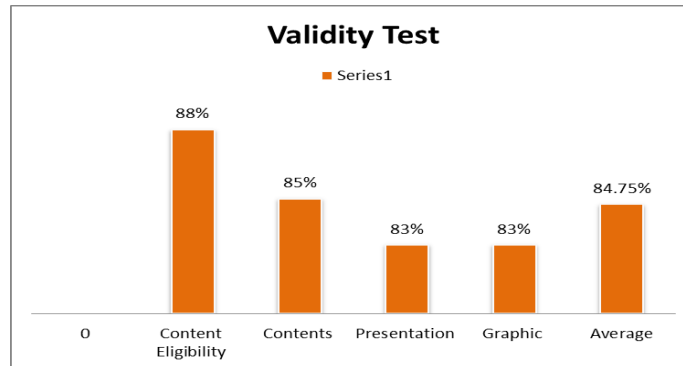
Figure 3. Validity Test Result

Based on Table 1 and Figure 3, it can be seen that the mobile learning product with Edmodo is feasible or valid to be used in the learning process or in student learning evaluation courses, Department of English Education, FKIP. This is indicated by the average value of the validity level of 84.75%, thus mobile learning with Edmodo is valid. Practicality of mobile learning products with Edmodo is show in Table 2.

Table 2. Parcticality Value

No.	Aspek	Persentase
1	Use	85.29 %
2	Study time effectiveness	88.89 %
3	Benefit	85.75 %
	Average	**86.64 %**

Based on Table 2, it can be seen that the Schoology-based e-learning media product is very practical to use in the learning process. This is indicated by the average practicum value of 86.64% which means that mobile learning with Edmodo is very practical to use. Based on the data, the N-gain value is 0.7, which means it is in the medium category.

Discussions

Based on the results of the analysis that has been carried out, it is found that each test of the validity, practicality and effectiveness of mobile learning with Edmodo is feasible to use, and is very practical and also effective in improving student learning outcomes. The level of validity obtained is 84.75 % with the category suitable for use in learning. Previous study found that the learning products made were also valid to use (Mubai et al., 2020). Meanwhile, at the practical level, it was obtained at 86.64% with a very practical category, which means that mobile learning by Edmodo is very practical to use in learning activities.

Referring to previous research that feasibility of a product before being used needs to be done. The same applies to the product who concluded that the product is very valid to use (Rini Sefriani et al., 2020; Sepriana et al., 2019). So it can be concluded that the validity of a product must be tested. The result also done by research that has been carried out by which produces products with a good level of practicality or products those are practical to use (Rini Sefriani & Wijaya, 2018). Other study also conducted product development research and conducted product practicality tests with the conclusion that the product is a very practical learning module to use (Kim et al., 2022). Thus, mobile learning with Edmodo is effective in improving student learning outcomes. In order to achieve academic success from online learning, independent learning must be prioritized and a consideration for educators and students. In this study there was an increase in academics in the form of learning outcomes that experienced an increase.

Previous study revealed that the use of mobile learning is very practical to use by using Moodle LMS (Faridah & Santi, 2021). The same thing was also done by previous research that revealed the application of mobile learning at the tertiary level was practically used by students (Romero-Rodriguez et al., 2020). For the level of effectiveness, it is proven by the N-Gain value which is in the range of 0.7 which means it is included in the medium category. Thus, it can be said that mobile learning products with Edmodo can be an alternative means and solution for online learning during the Covid-19 pandemic. With mobile learning with Edmodo, learning continues with virtual classes so that the learning objectives that have been set can be achieved. Other studies found that learning with mobile learning is highly recommended, especially during the Covid-19 pandemic because it makes it easier for students and teachers to interact with each other in learning (R. Sefriani et al., 2021; Zulham & Sulisworo, 2017).

By using the Edmodo platform there are differences experienced by students, namely improving learning outcomes (Maria Josephine Arokia Marie, 2021; Restuati et al., 2021). The Covid-19 pandemic condition is not an obstacle for educators and students to continue learning online. Using LMS wisely can add to the repertoire of learning models. The use of online media as a tool in the learning process will provide variations in the learning process (Agushinta R. & Satria, 2018; Sahudra et al., 2021; Supriadi et al., 2021). Educators and students are expected to increase creativity and learning innovation in the midst of the Covid-19 pandemic (Le et al., 2022; Saravanan et al., 2021). In one research found that Mobile learning as an approach that can increase their motivation significantly (Bağcı & Pekşen, 2018). Supported by research conducted that mobile learning can be a useful tool for accelerating learning, encouraging both experiential independent and collaborative learning, providing valuable interactions, increasing opportunities for language practice and promoting lifelong learning (Kuimova et al., 2018).

The same thing was also expressed by previous study state the use of mobile devices for learning has made a significant contribution in the delivery of education among higher education students around the world (Al-Adwan et al., 2018). It is recommended for further education researchers or practitioners to be able to develop and utilize the Edmodo Learning Management System (LMS) Platform or other applications. LMS can be used by all educators and students as long as they are willing and try to study it diligently and are given training that increases educators' knowledge in using it (Balasubramanian. K et al., 2014; Bezverhny et al., 2020; Llantos & Estuar, 2019).

The implications of this research can increase student involvement in learning. In this study, the results show that the use of Mobile Learning with Edmodo can increase student involvement in learning. Students can access learning materials from anywhere and anytime, and can also interact with teachers and classmates through the Edmodo platform. Thus, Mobile Learning can motivate students to study independently. By using Mobile Learning with Edmodo, students can study independently and collaborate with classmates. This can improve understanding and retention of learning materials, as well as improve social skills and technology skills. This research still has a limited number of students studied, it is recommended for further research so that there are more research subjects and with a newer LMS.

4. CONCLUSION

Lectures conducted online using Edmodo in the form of virtual classes are considered feasible and practical to use during the COVID-19 pandemic and effective in improving student learning outcomes. This is certainly a consideration in the future to use the right LMS in online learning. The use of LMS Edmodo or others can also be used by education actors to support lectures or blended learning. Edmodo is a free and secure educational learning network that can be used to provide educators with a simple way to create and manage online classroom communities and enable students to connect and work with their classmates' teachers anywhere and anytime.

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