

Improving The Ease of Digital Marketing Learning Using Mobile Learning

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Abstract. Digital marketing is a new way of advertisement that has been in high demand by the public lately. Slowly, people are beginning to abandon conventional marketing methods and switch to digital marketing. But in general, they are self-taught. People who sell online really need digital marketing concepts to increase their understanding. If knowledge increases, marketing success increases. The main obstacle for people to get digital marketing courses is limited time and cost. Many digital marketing courses are offered but at high prices. In this study, we develop the digital marketing learning model that uses mobile technology and feedback learning method. By using this technology, people are expected to be able to increase their knowledge of digital marketing principles at any time at a very affordable cost. In this module, there are four main themes presented interactively, namely think, create, engage, and optimize. We design the mobile content using revised Bloom's concept that divided into four knowledge domains: factual, conceptual, procedure, and metacognitive. Along the learning process, the students are under monitoring, evaluating, and supervising their teacher. The results of the study show that mobile learning shows very attractive and exciting. The interesting finding in this research that the feedback part of the teaching is the most significant influence on student performance.

1. Introduction

One of the most common course materials today is digital marketing. But unfortunately, in Indonesia, the cost of this course is still high. The community requires knowledge about digital marketing because it has become a necessity to carry out business pursuits. In Indonesia, there are so many mobile devices for many backgrounds of users. It's means that, if we build an online learning system with an approach of smartphone devices is considering very suitable. If there does a digital marketing learning system that is practical, easy, inexpensive, this will be very beneficial for the community. Mobile learning offers the convenience of carrying out learning activities anytime and anywhere without the need for classrooms [1][2]. The Android-based mobile learning system is now a tool that is widely used for teaching and learning in Indonesia [3].

This paper discusses the responses of users or participants in digital marketing lectures who use mobile devices or better known as mobile learning. In this study, mobile applications are used to facilitate online learning for people who need to learn digital marketing. The main reason for using an Android application-based system is because this tool has high flexibility and the only tool that is mostly used every day by people today. The understanding of mobile learning in this paper is mobile

technology as a learning tool [4]. There are many varieties of smartphone technology for mobile learning applications. In this study, we developed based on the Android operating system. We prefer using Android rather than others, because of this already well known. Android is the most popular smartphone in the world; there are 73% Android users [5][6].

Android applications have been used successfully for various purposes, such as transportation and commerce. But for learning it is still at an early stage, so it still requires a lot of research. Smartphones have a high degree of flexibility, but if related to shopping, there are some disadvantages, including memory limitations, computational limitations, and interface convenience. This study aims to examine whether the use of mobile learning can increase the ease of participants in understanding digital marketing material. This research very important because everyone has different preferences in terms of how to process information [7]. On the other hand, each lecture material has different delivery characteristics so that the way to present it on a smartphone is also different. There are learning materials that do not require teaching media, but there are those that need learning media [8].

The results of this investigation are beneficial for the improvement of learning models, especially mobile learning. People favor to use a mobile device because of its simplicity, but in education, other factors require attention, namely the element of comfort and effectiveness. If we can extract these two elements, people will find it easier to improve their knowledge and eventually business in the digital age is growing.

2. Method

This experiment aims to measure the ease and effectiveness of using mobile learning applications. We tried the system with 85 participants in digital marketing lectures. The convenience of display demonstrated the ease of the module's operation, the effectiveness of the teacher's mentoring, and the effectiveness of the content. We collect the research data using questionnaire and testing. The students' accomplishments show the effectiveness of the entire system. We process data using Smartpls. Data obtained from purposive sampling to determine the characteristics of the ease of learning using applications. This trial uses purposive sampling because, in sampling based on a specific consideration [9][10], we use consideration of the similarity of learning interests and habits of using mobile devices. We chose students who take digital marketing courses. Because the number of samples is limited, we chose to analyze the sample using SmartPLS. SmartPLS is well known as Statistical Software for the Partial Least Square Structural Equation Modeling method [11][12][13][14]. Structural equation modeling with partial least square has three components namely, structural model (inner model), measurement model (outer model), and weighting scheme (weight relation) [15][16]. With modeling like this, it is expected to know the factors that influence the ease and effectiveness of using mobile learning.

Each student is allowed to use this application for one to two months with the assistance of a lecturer. For the first time, students are required to download the material first and then proceed with the registration process. Course material for one or several chapters stored on a smartphone and students can use it to study anytime and anywhere. In students are online. Then, the lecturer can check what students already did and how far the students can understand the lecture. The activities were always monitored and evaluated by the lecturer. Lecturers are directed to always look for the students who are low motivated and lack of understanding. Generally, less motivation is close to low activity. We can found low student motivation from the frequency clicks during the use of the application. We can find out less understanding by the low task scores. Each learning module has a quiz so that the lecturer can know the level of effectiveness of learning.

3. System Development

Most people today always take the time to use a smartphone wherever and whenever they have time. Easy to find, in general, they use smartphones for entertainment, so it is natural to feel at the screen for hours. What should we do if this applied for learning? Of course, it requires concepts, methodologies,

and technologies which a specific designed so that the learning objectives achieved. The concept is to answer the challenges of the learning culture of Indonesian people who are generally comfortable in a face-to-face manner. The methodology is a way to run a mobile device-based learning process. Technology is a characteristic of digital marketing content and mobile systems that are built to support concepts and methodologies.

3.1. Concept

This study uses the concept to provide practice facilities for students so that they are interested in using it. Practicality, we can obtain the aim by utilizing the advantages of Android smartphone applications. We can design the most important of learning elements from learning material arrangement on the smartphone screen. In this experiment, we arranged the learning material based on the knowledge domain of the revised bloom theory. The screen presents conceptual knowledge in text or image form as the central display. For factual knowledge, we presented in text or picture form in the sub-menus. Finally, the procedural and metacognitive knowledge presented in an interactive form such as video or animation. We conclude that the use of text, images, audio, video, animation, or interactive screens depends on the cognitive domain. Students will learn subject matter starting from concepts, but they can jump to factual or procedural. The screen layout can follow what the student learning sequence wants.

3.2. Methodology

The methodology is an important part. Students willing to study independently depend on how learning methods can influence them. The methodology was chosen to overcome student learning habits. Every student in Indonesia is comfortable with a face-to-face model. The methodology used here to direct the learning process. Students can study on their own but remain under the supervision and guidance of lecturers. There are two main learning factors which using for feedback learning mechanisms, namely motivation, and understanding. These two factors we must control so that each student achieves mastery. During the student learning to use the application, all the activity data automatically stored on the smartphone device. The system will send the data in an LMS (Learning Management System) server through a synchronization process. This system provides a synchronization process to anticipate data loss due to damage or replacement of smartphone devices. All activity and score data are used by lecturers to conduct the evaluation, monitoring, and treatment (mentoring). By using the monitoring module, lecturers can contact students directly through the WhatsApp application.

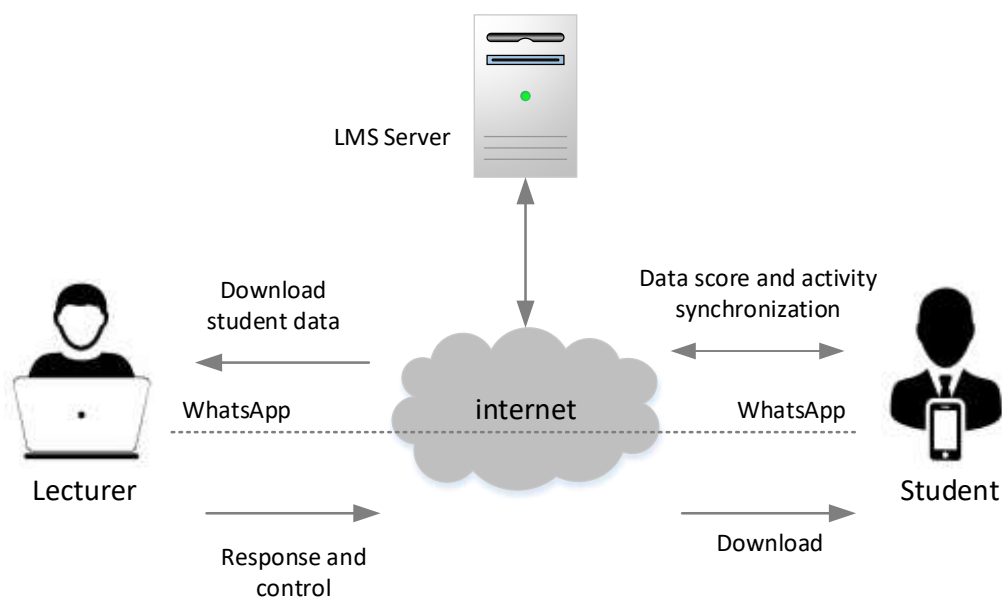


Figure 1. Monitoring, Evaluation, and Treatment

3.3. Technology

The technology was chosen and developed to overcome the cost control and internet connection. In most parts of Indonesia, the internet quality is low. In the other situation, most students still consider the price of the internet still expensive. We design technology to solve those problems and also this is easy in development. In this study, selected mobile applications based on HTML5, XML, and JavaScript. This selection considers the time needed to develop an application module. Each module is created using CourseLab authoring tools version 2.7 and PhoneGap. We choose Moodle as a server to collect data and control each module, both the lecturer and student modules. The system was developed using architecture, as shown in **Figure 2**.

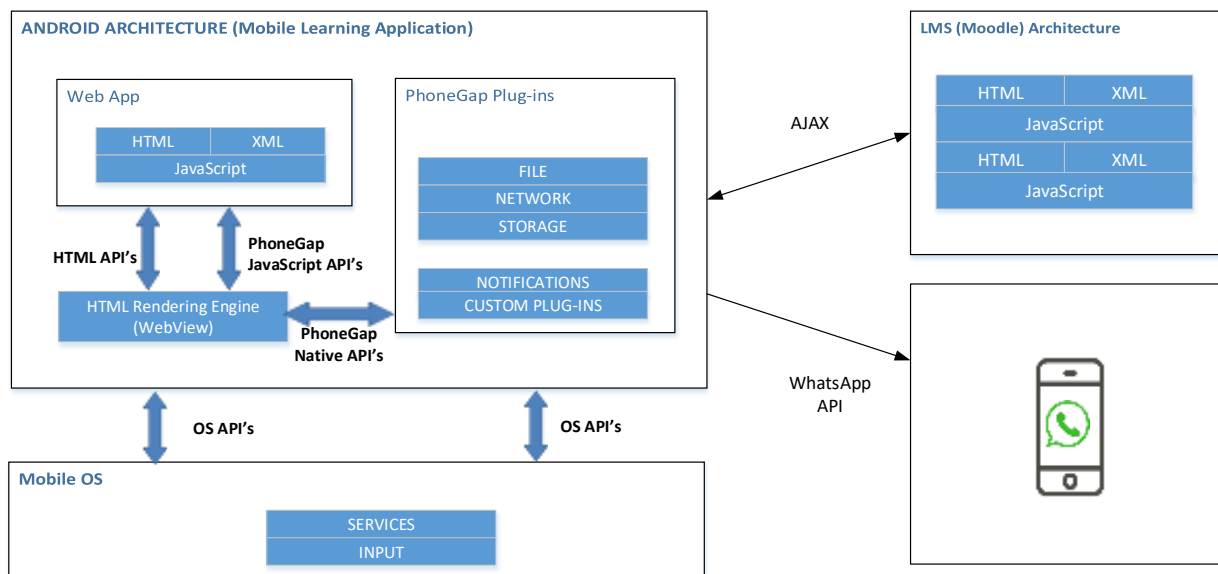


Figure 2. Mobile learning architecture for digital marketing

Figure 2 shows an architecture consisting of three blocks, Android application, LMS Moodle, and WhatsApp API. We choose the Android application module architecture that meets with the Moodle architecture so that they can communicate with each other using AJAX. We also use WhatsApp API so the communication can initiate from the monitoring module's link. This architectural design makes communication easy by combining mobile applications with Moodle without involving a web browser. The advantage of this architectural design without involving a web browser. The ease of design of this architecture to support the low-cost system learning process. Students only need one login, students can save material files into smartphone memory, and using it anytime with or without the internet. The synchronization and notifications make it easier for lecturers to monitor and control the students learning activity. The use of PhoneGap is a useful solution for building mobile applications using modern web programming languages, such as HTML, HTML5, CSS, and JavaScript rather than using other known languages such as C# or Java [17]. This design gives many benefits, especially to the development process, which an essential part of overall system development and operational [18].

4. Result and Discussion

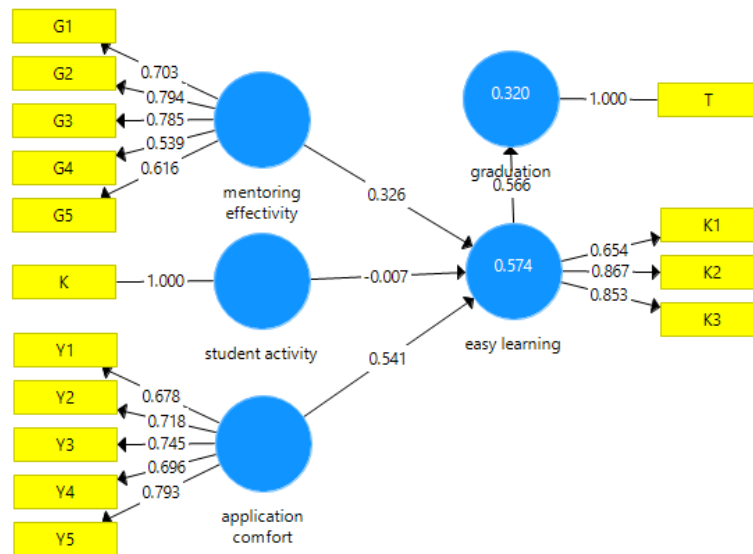


Figure 3. SmartPLS model calculation

From the results in **Figure 3** explain the results of calculations using the SmartPLS application. G1, G2, G3, G4, and G5 show the results of lecturer supervision, both in terms of criticism that also motivates lecturers who can pay attention, so it is beneficial in understanding the material. K is the number of clicks on the application module to measure student activity. Y1, Y2, Y3, Y4, and Y5 are the results of testing the convenience of application use; both in terms of appearance, an easily memorized menu, and a sequence of material that is easy to understand. K1, K2, and K3 are testing the ease of use of application modules, such as applications that formally can run anytime and anywhere, applications that can run on various types of smartphones and also the ease of understanding material without a lecturer explanation whereas is an indicator of the passing grade after using the digital marketing application module. Calculation results show that the model meets convergent validity because all loading factors are above 0.50 [19]. The data states that the use of this application can facilitate the learning of digital marketing material. The results that can show that the digital marketing application module can facilitate students in learning the material. The lecturer is only as a companion in charge of supervising. The final value looks quite increased after the use of digital marketing application modules.

As mentioned in the guide, the purpose of this research is to facilitate students in learning digital marketing material. The increasing of the number of smartphone users can provide widely learning manner possibility. It is meant that the concept of mobile learning has no limitations of time, space, and place [20][21].

We get the ease of learning from the results of the data obtained through a questionnaire. K1, K2, and K3 show the simplicity of the module, namely the ease of use of applications. It is mean that we can operate the module anytime and anywhere. Also, applications can run on various types of smartphones. Finally, the student feels comfortable to understand learning materials. We can say it is better than the lecturer's explanation. The results obtained by the average student show that the use of this application can facilitate digital marketing learning. The results also supported by other data, namely G1, G2, G3, G4, and G5 as a form of mentoring for lecturers, Y1, Y2, Y3, Y4, and Y5 are testing the comfort of application use, and also K as a form of test results on the number of clicks on

the application module, while T represents the passing value obtained after passing the final test contained in the module. The data obtained states that 51% of the results of this application test can facilitate students in learning the material, and 49% influenced by other variables that are not yet known. We can say that the students not yet familiar with using mobile learning.

From the above paragraph, we summarized that mobile learning has the potential to be developed as a digital marketing learning tool so that many people can use it. From the experiment, we found that learning can run well even though lecturers must proactively monitor and communicate with students. The existence of this application module greatly helps lecturers who carry out supervision activities. Lecturers do not need to collect and process data manually, so data that is synchronized automatically makes it very easy for lecturers to make assessments. The lecturer observes the data as a basis for evaluating and motivating according to student learning problems. According to the results of testing, this application can improve student grades. The application can also run well on any Android-based device, be it a smartphone or tablet. Lecturers as supervisors can also check the extent to which students understand the material. The lecturer assistance system is still very much needed to carry out the learning process using mobile learning, although theoretically the use of car learning is aimed at making it easier for students to be able to learn anytime, anywhere, and from any device. This application still needs further testing.

5. Conclusion

The use of mobile learning for digital marketing has the potential to facilitate learning communities. The use of mobile devices is also beneficial for lecturers to accompany students. Learning activities become easy because this system utilizes internet and smartphone facilities. This model very useful because we use Android smartphones that most popular in Indonesia. The digital marketing mobile learning application does not limit students to study; the students can study online or offline. The application proved to be able to run various android devices. With the use of digital marketing application modules that can run both online and offline, it helps students in easy learning anytime, anywhere, also using any Android device. Easy use anywhere and anytime also addresses the problem of students who are not comforted or not easy to catch the lecturer's explanation. So that the use of this application makes students comfortable in its use and can give a more in-depth understanding, students can improve grades with this application.

On the lecturer side, the use of this system makes it easy to communicate and provide assistance without being bound by place and time. Lecturers can see the results of student activities and performance. Lecturers can evaluate and find learning problems. The interesting thing found in this research is the use of mobile learning still requires adaptation, first to eliminate face-to-face learning habits, overcome the habits of smartphone students as an entertainment tool, and get the lecturers to monitor and assist learning.

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