

The Use and Development of Seamless Learning Strategy for Islamic Education Course in Indonesian Higher Education

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ABSTRACT

This study aims at developing a mobile seamless learning strategy in the Islamic education course taught in the State University of Malang, East Java, Indonesia. Anchored by the design of Research and Development developed by Borg & Gall, this study recruited students of Islamic education at the same university. The results of this study present learning based on the Android system enacted by the so-called *Ayo Sinau* (Let's Learn) application. This application facilitates learning and is equipped with questions and answers on religious problems provided by lecturers who are experts in their fields. It enables studying religion with lecturers who have authoritative *sanad* (chain of learning) of their religious knowledge, and provides informal and non-formal learning concepts, that are connected to the *Ayo Mondok* website. Thus, the App is easy to use for everyone who wants to study religion, anytime and anywhere. This tool also synchronizes inside and outside classroom activities, as well as independent, social, physical, and digital learning platforms. The results of the questionnaire showed a positive score.

Keywords: *Mobile-based learning, seamless learning strategy, higher education*

1. INTRODUCTION

A survey from the Indonesian Internet Service Association in 2017 portrayed that 88.24% of Internet users in Indonesia are holding Master's and Doctoral degrees, 79.23% of them holding undergraduate diplomas, 70.54% are senior high school students, and 48.53% are junior high school students. This indicates that the internet is mostly used by university students. Likewise, the survey also showed that 44.16% of the respondents access the internet through a mobile phone, 4.49% through computers/laptops, and 39.28% through both devices.

Islamic education covers a large scope of discipline, such as Islamic theology, Islamic sharia, and Islamic morals. However, in the context of Indonesian higher education, the study of Islamic education is included in the general basic course, known as MKDU in the Indonesian context, which is only taken in the first 4 semesters (semester 1-4). Thus, it requires an appropriate strategy to better teach all covering topics in one course. It is necessary to note the fact that the students, upon completing their senior high

school study and enrolling in university, possess relatively little understanding and knowledge of Islam.

The development of an appropriate strategy to cover the topics of Islamic education teaching in higher education is rooted in the lack of course details and teacher-student in-class meetings. Besides, curiosity of the students in learning Islamic values through the Internet has not been equipped well, particularly in the Indonesian higher education context. In fact, today's university students are deemed as millennials who are eager to learn new knowledge instantly, with easy accessibility, especially with regard to grasping Islamic knowledge.

Based on the background above, the researcher aims to answer these problems with *Ayo Sinau* (Let's Learn) application. *Ayo Sinau* is an Android-based learning system. This application is presented to synchronize formal, informal, and non-formal learning, either inside or outside the class. This application covers a special menu for religious-related questions. Thus, through this application, learning can take place at any time. This application is developed as a result of an analysis of the need of the students in the digital age, connecting between

on-campus and off-campus education, socially or individually, and physical as well as digital education. This learning strategy is seamless learning. It is a continuity of learning experiences in all contexts: formal learning and non-formal learning, allowing learning to happen anytime and anywhere.

Ayo Sinau application is developed based on an Android-based system because the majority of the students use Android on their mobile phones. Thereby, it is important to develop a mobile seamless learning strategy in the Islamic education course in Higher Education.

2. LITERATURE REVIEW

Effects of globalization have been uncontested in Indonesia. Along with sophisticated technological developments, the world is currently entering the era of the industrial revolution 4.0, which emphasizes digital, big data and disruptive innovation. Indonesia is one of the countries with high potentials to face the industrial revolution 4.0. The development of science and technology penetrated into all sectors of life, including education and learning. In fact, students can be connected to sources of information from anywhere and anytime through the internet connection. According to Xie, Cao, Wang, & Wen [1] learning is not only limited in the classroom. Students can learn anytime and anywhere through time and space [2].

The rapid development of technology has a significant impact on the learning process inasmuch as the act of learning takes place when interacting with the media [3]. Ki Hadjar Dewantara, the Indonesian historical figure of education, argues that education will succeed if there is "continuity" between education in the family, school and the environment [4].

Meanwhile, the Decree of the Director-General of Higher Education, Ministry of National Education of the Republic of Indonesia number 43/Dikti/Kep/2006 concerning the Implementation Signs of Personality Development Subjects Groups in Higher Education, stated that Islamic education in Indonesian higher education should be taught within three credits. This means that the course lasts three hours.

The provision of learning time for the Islamic education course is not comparable to the mission of the course, namely: the development of students who have faith, knowledge, and morality, and make Islamic teachings as the basis of thinking and behavior in the development of science and profession as well as social life. Thus, expecting this course to foster students' faith and morality is unreasonable. Therefore, it is encouraged to innovate the learning activity outside the classroom using an application that also involves the students' parents.

To deal with the complicated issues above, the integrated education [5] and mobile applications [6] are needed. As a result, learning is seamlessly connected. According to Song [7], seamless learning means the continuity of the learning experience across contexts [8] and allows the learning process takes place anytime and anywhere [9].

Research on seamless learning has been enacted by Yancy Toh et al [10]. They explored the inquiry learning used for the study of theories and discussion methods, of seamless based learning with the use of mobile devices in accordance with the recent development era. Elham M Foomani's (2016) research documented the learning of a foreign language using seamless-based learning.

Furthermore, Wong & Looi [9] introduced a framework for the use of mobile learning combined with seamless learning, which is known as mobile seamless learning (MSL). These are the proposed ten dimensions in a learning environment based on mobile seamless learning (MSL): (1) formal and informal learning; (2) personal and social learning; (3) across time; (4) across space; (5) access to knowledge everywhere; (6) physical and digital world; (7) several types of devices; (8) tasks (such as data collection, analysis, presentation and communication); (9) knowledge synthesis (integrating new and previous knowledge, abstract and concrete knowledge, and multi-disciplinary learning), and (10) multiple pedagogical and learning models [8].

3. RESEARCH METHODOLOGY

Research and Development (RnD) were employed in this present study. Educational research and development (R&D) is the process used to develop and validate a product in education. The steps in this process are generally known as an R&D cycle. It consists of an assessment of the results of previous studies related to the validity of the components of the product to be developed, efforts to develop it into a product, and trials to test the product designed, to review it, and also to improve it based on trials. That is an indication that the findings of the product-based development activities are objective. In this regard, products of education have a broad meaning. They do not simply include material creatures. Yet, approaches to research and development need to be carried out according to the procedural steps, in order to make it easier for the developers to go through each step. This model also has a methodical order, so as to produce a medium that is suitable for use in the learning process. The steps listed in this model basically have two objectives: they are to develop products and to test the effectiveness of the developed products.

The design was adapted from Borg and Gall [11] as explained below. The steps are as follows: The first step is the pre-development stage. It is carried out by observation and interviews with several lectures. The second step is development, in which data observations and interviews are analyzed. The third step is validation. Here, the initial draft is reviewed and discussed by practitioners and expert reviewers. The purpose of these activities is to produce an initial product and guide the further development and a feasibility trial will be conducted. The fourth step is product try out. At this phase the product is developed by students of the engineering faculty as a sample to test the effectiveness of the product. The fifth step is data analysis, which includes data processing of the sample and survey

results. The sixth step is model assembling. This activity is carried out to redesign or assemble the development model through validity, reliability, and assessment criteria for the draft. The seven step is user response. This activity is carried out by lecturers and students of the department of Islamic Education of Malang State University, who will assess the results of the developed product.

4. RESULTS AND DISCUSSION

Education nowadays is intertwined with global technological enhancement, forcing the use of the online application as part of the learning process as necessary. As an example, in the context of learning knowledge of Islam, students can access huge information from the Internet. However, in this online learning, teachers posit as central figures to help explain them the appropriate values of Islam from the Internet.

Religious learning from the Internet, especially without being guided by teachers, can lead to an understanding of religion, one that is not moderate and tends to be radical. Data from BNPT (National Counter-terrorism Agency) shows that some public universities are exposed to radicalism. Thus, it is deemed crucial to prevent university students from rampant radicalism in the Indonesia's higher education sphere. In search of emulating the students' identities of religious acknowledgment in higher education life, the phenomenon of fast-track religious identity construction on social media, may affect these students negatively, as they are new to emancipating themselves in religiously-emerged societies. To deal with this problem, continued and situated learning from lectures in the formal classrooms is highly demanded. To do so, the use of this *Ayo Sinau* application may serve the purposes.

From the analysis of the needs mentioned above, the researchers developed an Android-based learning application that is named *Ayo Sinau* (Let's Learn). *Ayo Sinau* derived from Javanese language, which means, let's learn. This name was taken based on the enthusiasm of inviting students to always learn anytime and anywhere. In addition, the name is also inspired by the use of similar trends in Indonesia, such as the national movement *Ayo Mondok* (Let's Study in the Boarding School), *Ayo Kerja* (Let's Work), *Ayo Makan Ikan* (Let's Eat Fish) and so on.

To use the *Ayo Sinau* application, the following steps are needed to be done. The first, the user must have an account. If not, then the user must register. After having an account, enter the username and password that have been registered, then click "sign-in". After logging in, the user will be directed to the next interface, as shown in picture 1 below:



Picture 1. Ayo Sinau Menu

1. Instructions for use: It explains how to use the Ayo Sinau application.
2. Formal Learning: This menu is integrated with google classroom, which is used for all teaching and learning activities in the classroom.
3. Informal Learning: This menu is integrated with the application Ayo Mondok which can connect the desired recitation information.
4. Non-formal learning: This menu contains news about religious information.
5. Q & A: Interactive question and answer between lecturers and students. If you want to ask the problem about Islam and other religious issues, this menu can be used anytime and anywhere.
6. Teacher Assessment: This is used to assess teachers or lecturers.



Picture 2. In-formal Learning



Picture 3. Non-formal Learning

Picture 2 is a menu display that is in the informal learning menu connected to the ayomondok.net website, which contains religious learning in Islamic boarding schools throughout Indonesia. While picture 3 is a menu display of the non-formal learning section, which contains about

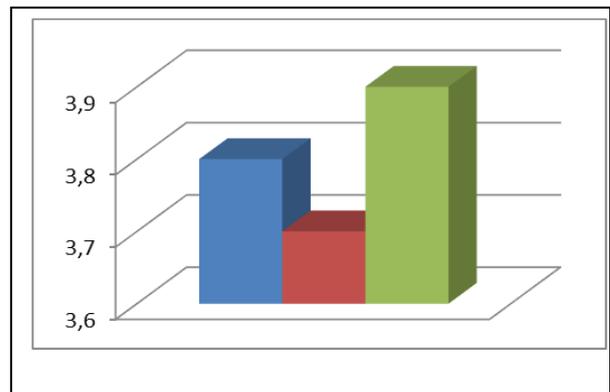
5 pillars of Islam (creed, prayer, zakat, fasting, pilgrimage).

This result corresponds with a study done by Wong & Looi, which produces a framework for the use of mobile learning combined with seamless learning, known as mobile seamless learning (MSL). They propose 10 dimensions in a learning environment based on mobile seamless learning (MSL). They are (1) formal and informal learning; (2) personal and social learning; (3) across time; (4) across space; (5) access to knowledge everywhere; (6) cover the physical and digital world; (7) combined use of several types of devices (such as computers, whiteboards, etc.); (8) switch between several tasks (such as data collection, analysis, presentation and communication); (9) knowledge synthesis (integrating new and previous knowledge, abstract and concrete knowledge, and multi-disciplinary learning), and (10) covering multiple pedagogical and learning models.

Ayo Sinau application for Islamic education is to answer students who want to study anytime and anywhere. *Ayo Sinau* supports Wong's research with 10 frameworks of seamless mobile learning, connecting formal and informal learning, as explained above.

The next activity is giving questionnaires to students. The contents of the questionnaire contained 3 main points. The questionnaire measure is user experience, media display, and content.

The results of the questionnaire showed that, with regard to the material aspect, the average value showed good criteria with a score of 3.8. As for the aspect of display, it shows a good criterion with a score of 3.7. As for the user experience, it also shows good criteria with a score of 3.9. See the following diagram:



4. CONCLUSION

The learning process of the Islamic education course in the general higher education is not limited to the classroom, but can also be conducted outside the classroom, by utilizing the Android-based learning application "*Ayo Sinau*". This application facilitates learning, and is equipped with questions and answers on religious problems, provided by lecturers who are experts in religious knowledge. It consists of in-formal and non-

formal learning concepts, that are connected to the *Ayo Mondok* website. So the App is very easy to use for anyone who wants to study religion, anytime and anywhere.

The results of the questionnaire show that with regard to the material aspect, the average value showed good criteria with a score of 3.8. The aspect of the display shows good criteria with a score of 3.7. While the user's experience also proves good criteria with a score of 3.9, the use of the application *Ayo Sinau* provides a positive result for the improvement of Islamic religious education in Indonesian higher education.

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