DEVELOPMENT OF MOBILE LEARNING APPLICATION FOR TEACHING CYBER LAW COURSE

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ABSTRACT

Mobile learning seems to be the latest trend in teaching and learning. The technology seems to become more affordable and easily managed. This study aimed to develop mobile learning application by giving new learning pedagogy in the learning process of Cyber law course named CYBERLAW2U. Cyberlaw2U is developed to help lecturers on delivering new method of learning to the student. It also let students to easily access the learning content anytime and anywhere. The features of the application increases the motivation of the students and enjoyable than the traditional learning tools. Students are able to view all content that shared by the lecturers. The system should be adopted by others to have an additional material for learning. Cyberlaw2U is an innovation for mobile learning application as well as an example of Internet of things in education sector.

Keywords: Mobile learning, Cyber law course, online, learning tools.

1. Introduction

As the technology remains to grow, it has value people in many ways and gives many changes to the world. One of the largest influences of technology is on learning technology. Mobile devices such as laptops, personal digital assistants, and mobile phones have become a learning tool with great potential in both classrooms and outdoor learning (Sung *et al.,* 2016). Electronic learning means the use of computer and internet to deliver part or all of a course compared to the traditional learning method which teaching and learning processes are only held in classrooms. E-learning is using interactive technologies that can improve learning experiences. Regardless of the great benefits in terms of innovation, the fast and nonstop growth of the mobile market has caused in some division of the platforms that support mobile device as an ideal platform for learning applications in a fun and interactive devices (Pindeh *et al.,* 2016).

For these past few decades, electronic learning had been implementing and adopted by many learning institutes including schools and universities. In recent years, the e-learning technology has evolved to the mobile learning as the rapid progress of mobile application technology. Mobile learning is a part of e-learning which have the same purpose with the different of mobility devices are being used instead of computer. Mobile learning integrates the concept of blended learning which combine the conventional teaching methods and

electronic based resources. Mobile technology such as smartphones and tablet are used as devices for mobile learning. The concept of mobility is to make the learning and teaching process can happen at any time and anywhere make it more flexible.

Mobile devices such as mobile phones and tablet computers are now being used by an increasing number of learners and educators as tools in teaching and learning. Mobile devices facilitate learning. In the modernized era, smartphones offer the greatest potential for such invisible integration of technological hardware into language learning. These devices are technologically more to standard mobile phones, running on advanced operating systems such as iOS (Apple), Android (Google) and Symbian (Nokia) which allow for the use of high-resolution touch-screen interfaces and smartphone-specific applications. (Pindeh *et al.* (2016). During the last decade, the number of user of mobile phone in the world has been increased significantly. In fact, according to Statistica (n.d), there is approximately about 17.9 million of mobile phone with internet user in Malaysia in 2016. According Wei *et al.* (2016), mobile information technology learning environment has undergone major changes, mobile learning has been used as a new way of learning quietly into people's daily learning. Mobile learning can be integrated with other mobile technology and be integrated with other information and communication technology (ICT) resources to facilitate learning anytime and anywhere.

2. Problem Statement

Before the innovation students are fully depended on lectures notes given through Curriculum Information Document Online System (CIDOS). According Salam et al., (2014) most of the lecturers commented that the e-learning is not user friendly, too complex and difficult to use. CIDOS also did not fit into their teaching methodology and incompatible with a few courses. Furthermore, there is no learning tool that available to help student to do their revision other than searching details in the internet for better understanding. This could be timely and need a lot of effort from students to search the right information.

Learning with mobile technology enhances student's ability to learn and apply course content in context with other students. Student can collaborate and create knowledge with the interaction of larger range of content. They need mobile application for learning and easily access to the learning site that can only use their smartphones so they can study and do revision anywhere and anytime. Mobile learning is gaining its popularity as it is accepted to be an effective technique of delivering lesson and acquiring knowledge as its main strengths are anytime and anyplace. It can be utilized in many ways in the education industry (Bidin and Ziden, 2013). This research attempted to develop mobile learning application for Cyber law course using online designing tools Appy Pie and to create new learning tool for Cyberlaw course.

The biggest problem with lectures is that they are inherently ineffective because they involve groups. Students bring to class different backgrounds, experiences, interests, and aptitudes. It is impossible to meet the optimal learning pace of all students because one teacher cannot deliver dozens of customized lessons simultaneously (chalkboard.com, 2017). Traditionally, students will learn in class and do their revision from the lectures notes. During class, student will take

notes for their revision later. However, for students that not concentrate in class will having hard situation if they not taking any notes from the class. Even students who attend class can miss critical ideas when their focus fades. We've all had our attention diverted in a meeting or lecture.

Lecturers should be creative when designing their teaching materials or activities to enable students to use their intelligence in the classroom. With the interactive and suitable teaching materials and activities in class, student attention can be retained and also, improve lecturer's passion and motivation to teach and prepare teaching materials. Designing online MI teaching activities at higher education is the best solution to facilitate.

lecturers to create their own teaching materials without having any IT knowledge especially in programming. Lecturer can reduce preparation time and indirectly attract the attention of students to learn and use the materials effectively. It is recommended that an online MI teaching tool should be developed in order to achieve an effective teaching and learning process (Salam *et al.,* 2014).Therefore, it is hoped that this innovation in learning tools will able to help a better understanding of Cyberlaw course in the future. Figure 1 shows the problem based diagram of the current learning method of Cyberlaw course.

Figure 1. Problem based diagram of the current learning method of Cyberlaw course

3. Method

The research methodology for this development is ADDIT model. In this model, there are five phases consist of analysis (A), design (D), development (D), implementation (I) and testing (T).

3.1 Analysis

In the analysis phase, the content of the application is based on the topic in the
Cyberlaw course. The topics are:

(1) Chapter 1: Introduction to Cyberlaw
(2) Chapter 2   : Cyber crimes
(3) Chapter 3: Electronic and Digital Signatures
(4) Chapter 4: Intellectual properties
(5) Chapter 5: Protection, Privacy and Crimes in ICT

3.2 Design

During this phase the concept of CYBERLAW2U is simplified into system design, referred in Figure 2. Prezi Notes, Powtoon Notes and Mindmeister are online learning tool that can be used as an alternative to current method learning method. Instead of slides, Prezi makes use of one large canvas that allows you to pan and zoom to various parts of the canvas and emphasize the ideas presented there. The idea of using these
platforms is to attract students in different way of learning method. In addition, there are also videos to help students to understand the topic using Youtube videos link and some of the video is made by students in the class.
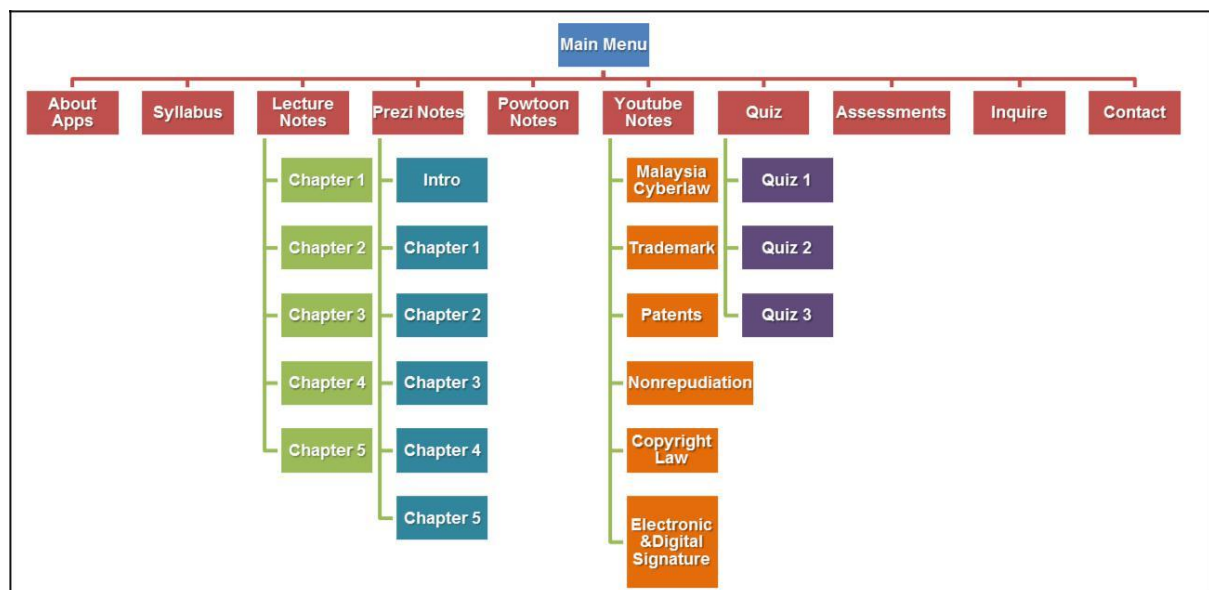

Figure 2. System design in CYBERLAW2U

3.3 Design and Development

CYBERLAW2U is developed using an online designing tool Appy Pie. Appy Pie is a mobile app creator released for Android, iOS, Fire OS, and Windows Phone

platforms that allows its users to create and monetize different types of mobile apps.Using online application development tools Appy Pie, the researcher design and developed the CYBERLAW2U mobile learning application that not only serves the core purpose of learning Cyberlaw course but also provide additional functionality. On the other hand, Appy Pie support clean interface makes it easier to use. Please refer to figure 3 for screenshots of the completed application and Figure 4 for screenshots of how the mobile application was developed using Appy Pie framework.
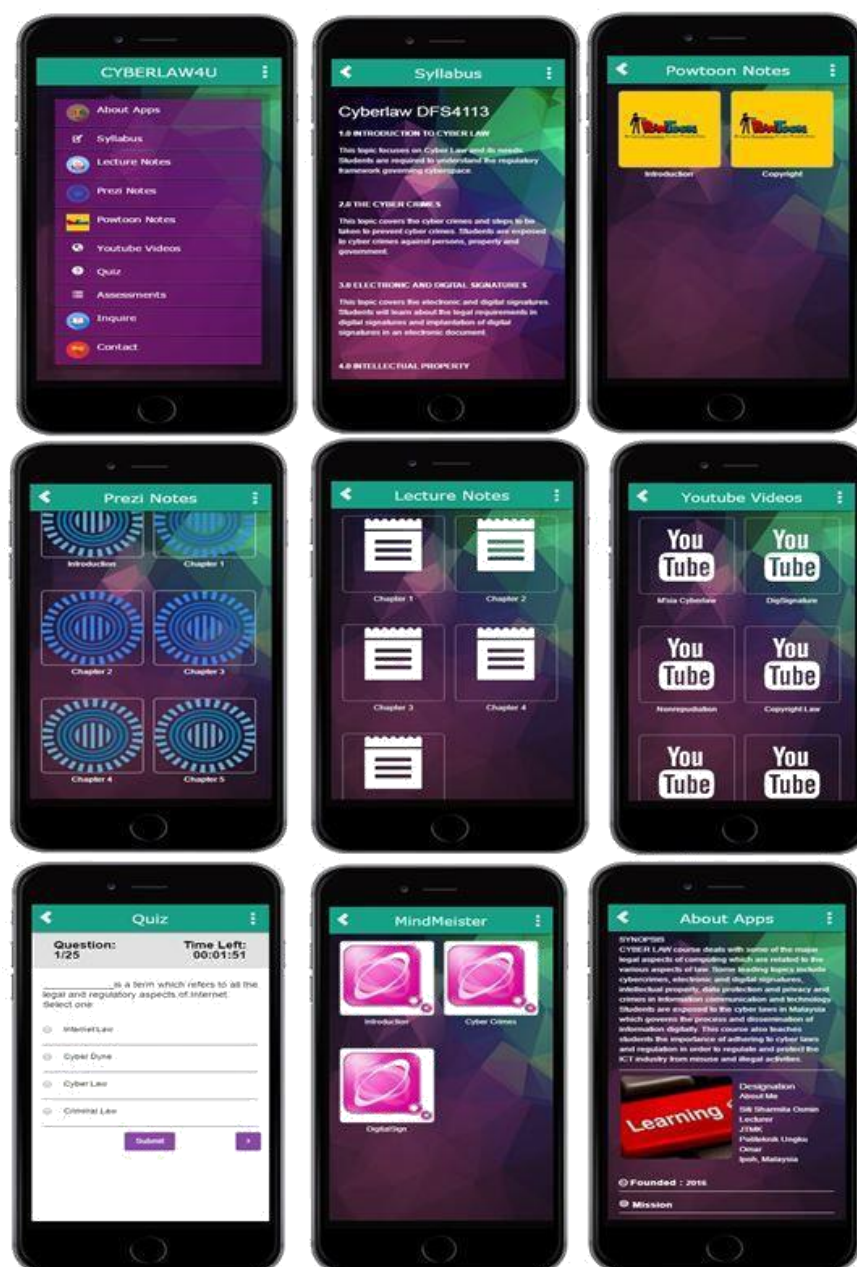

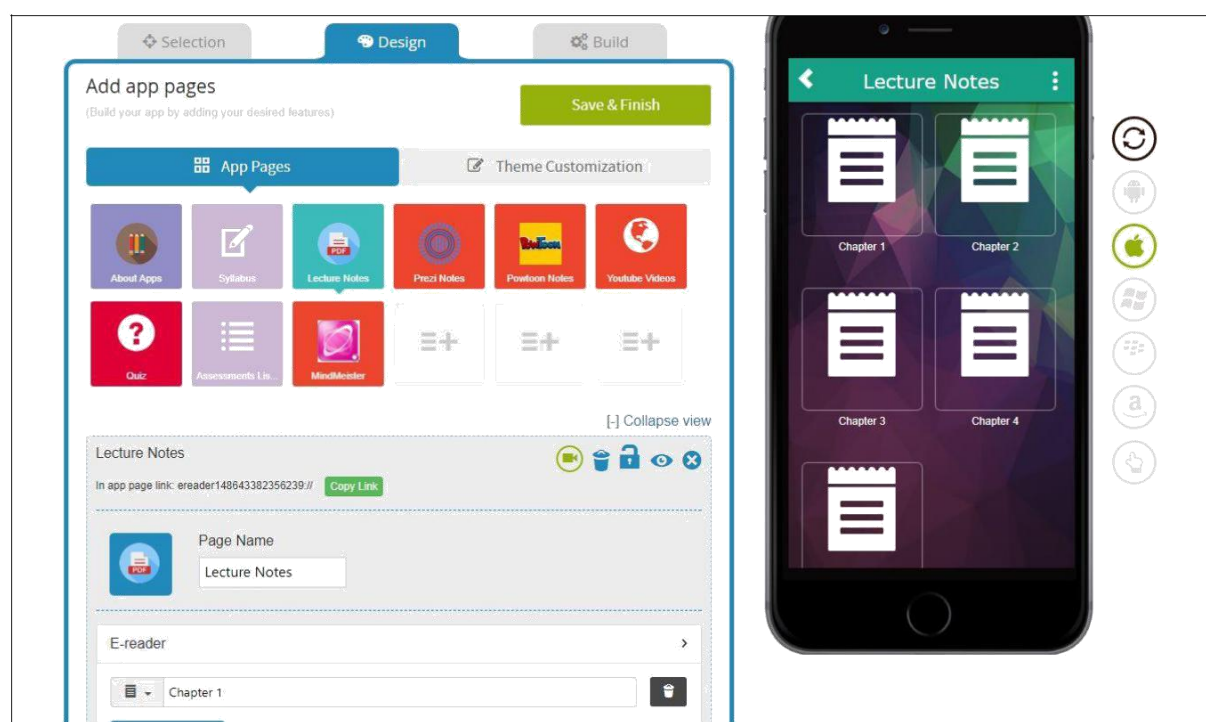*Figure 3.* Screenshot of CYBERLAW2U mobile learning application

Figure 4. Screenshot of Appy Pie development application tools.

3.4 Implementation and Testing

Implementation and testing phase is conducted to confirm that the application is functioning well. In this phase 5 students are selected to install and used the application. The students are required to explore and experienced the application. User accepting testing is conducted to finalize the requirements of the application. During the implementation and testing of CYBERLAW2U mobile application, students enjoyed, interested and active in discussing topics. CYBERLAW2U appears to increase student motivation and interest where some students want to use CYBERLAw2U in the future. Feedbacks from students on the use of the application are:

"It easier for me to make revision"

"I can study Cyberlaw anywhere using mobile phone"

"The video really help me understand the topics very
well"

4. Conclusion

Being able to create alternative learning tools motivated the researcher to develop mobile learning application in teaching Cyberlaw course. In is found that there is no such application available for Cyberlaw course. Furthermore, students are giving positive feedback on this application. In the future, it is hoped that there are more similar application developed to help teaching and learning process.

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