

***Mobile Learning Application Based On Hybrid  
Mobile Application Technology Running On  
Android Smartphone and Blackberry***

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**Abstract**—Nowadays some universities have been using e-learning in the teaching-learning process. Generally e-learning available in the form of web based application, but does not exist in the form of mobile application yet. Problem that arise when using a mobile device is the screen size is too small, so that the user need to zoom and scroll to get comfortable viewing. Another problem is the user using varying operating system such as android, blackberry and iOS. To overcome those problems, this research is conducted to assist in the teaching-learning process by developing a model of mobile e-learning application that can run on cross-platform, which is on Android and BlackBerry platform.

The application is created using PhoneGap that uses HTML5, CSS3, and JavaScript based on Hybrid Mobile Application. The system on the application follows Lentera e-learning system based on Moodle. Lentera is a web based e-learning system used in Petra Charistian University. On the server side, it takes a modified Moodle's source code based on PHP so the application can be run in accordance with the system. The application has a different interface from the website version. The interface is designed to be suitable on smartphone which is has limited screen space.

The result shows that the application can run on cross-platform, those are Blackberry and Android smartphone. The application also runs online together with the Lentera website. The basic features of Lentera have been successfully implemented on this application. Assessment of the application as a whole is more than 50% of respondents answered very good.

**Keywords**—mobile learning; Hybrid Mobile Application; smart phone; android; blackberry; cross platform; phonegap