



Improve Student Learning Environment with MyClassRoom (MCR) and Cloud Storage Collaboration

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ABSTRACT

Pandemic has changed the process of education in the world, it leads to a better approach of learning through an online environment. Unfortunately, most educational institutions are still using conventional approaches in their learning system, in fact, information technology has been growing continuously nowadays, especially mobile applications. This paper presents a collaboration between myclassroom application and google drive to improve student learning environment, especially in providing materials, attendance, assignments and grades based on mobile. This research used waterfall approach and questionnaire to collect feedback from one hundred and twenty-one students on the features and content of myclassroom. The myclassroom application was successfully developed using the Model View Controller concept with databases and google drive collaboration. The application testing has confirmed that myclassroom has been successfully developed and works properly. The result shows that the student learning environment has improved by up to 95%.

1. INTRODUCTION

The development of information technology today requires all fields to adapt and use it including the field of education [1], therefore teachers and educational practitioners are required to use the latest technology in their teaching [2]. Current technologies such as smartphones, artificial intelligence, social media, e-learning and cloud storage provide opportunities for educational practitioners to utilize these technologies in developing learning media [3]. With e-learning we can include learning materials in the form of writing, sound, video and many more. We can also create quizzes or exams using e-learning, and the implementation is also carried out online.

eLearning makes learning can be done from anywhere and anytime. One of the advantages of e-learning can be utilized as an online exam media [4]. E-learning has been applied for family planning programme education [5]. Research related to e-learning evaluation has been conducted by Rijois Saragih by asking students about criticisms and suggestions for e-learning-based learning implementation.

Google Drive is an internet media which scientifically means a search engine for all internet information that has a proprietary distributed system developed by Google which is used for the demands of the needs used as a channel to convey messages or information to support the e-learning process. So in general, learning media using Google

Drive is very important for the world of education today because the existence of this online learning system can facilitate students in the teaching and learning process and provide easy access for students to share assignments with the lecturer concerned.

Myclassroom is an e-learning system designed using the latest technology aimed at helping the learning process in the campus environment online. As for data storage, it is collaborating with Google Drive so that the system becomes faster, more precise and accurate in order to support students' learning environment.

2. METHODS

This study applied a design-based research method with a waterfall application development process consisting of requirements analysis, system design, coding, testing and operation [6]. In addition to application development, this study also used a questionnaire to evaluate the developed myclassroom application. MVC concept here shows how the application is developed in a framework.

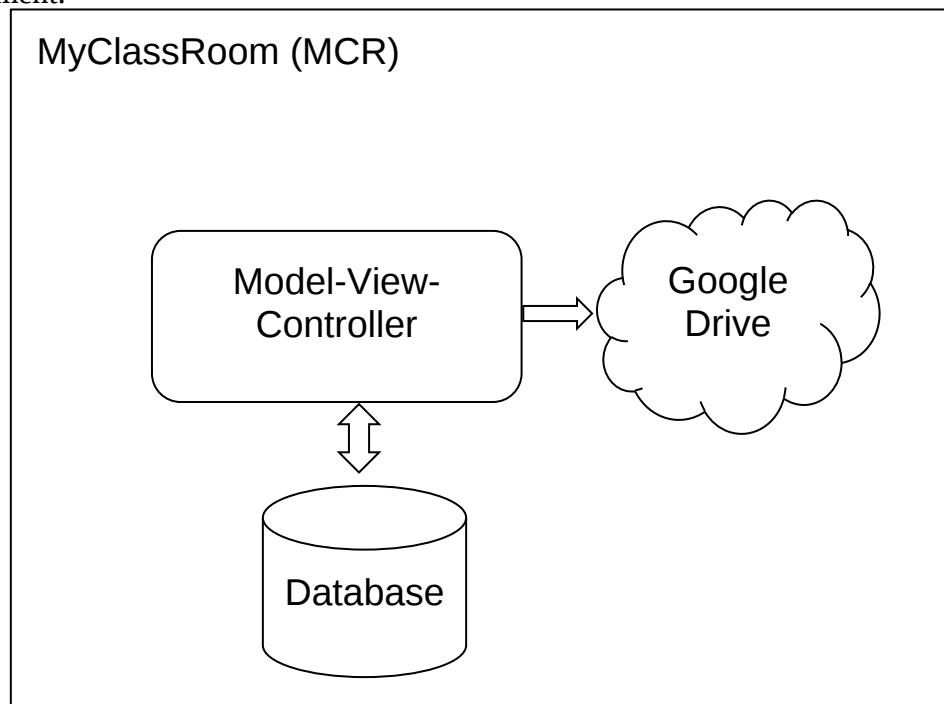


Figure 1. Structural work of MyClassRoom using MVC

3. RESULTS AND DISCUSSION

Myclassroom has 2 main components, namely Application Programming Interface (API), User Interface database, google drive and application server. Myclassroom

development code used igniter framework. CodeIgniter is a PHP-based application development framework used for used to make application development more systematic and dynamic [7].

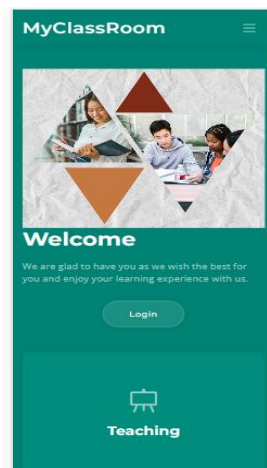


Figure 2. Homepage

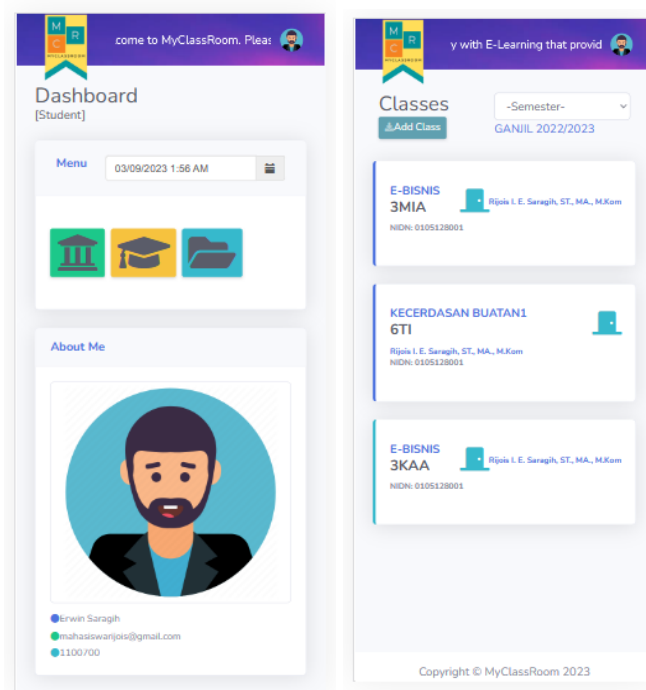


Figure 3. User Accounts

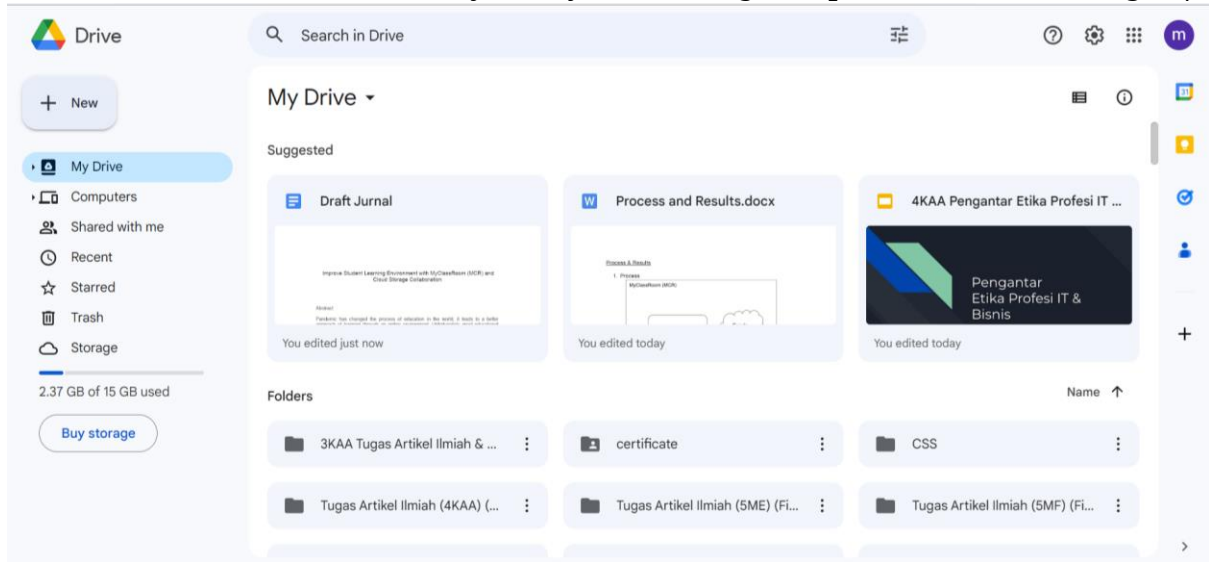


Figure 4. Google drive

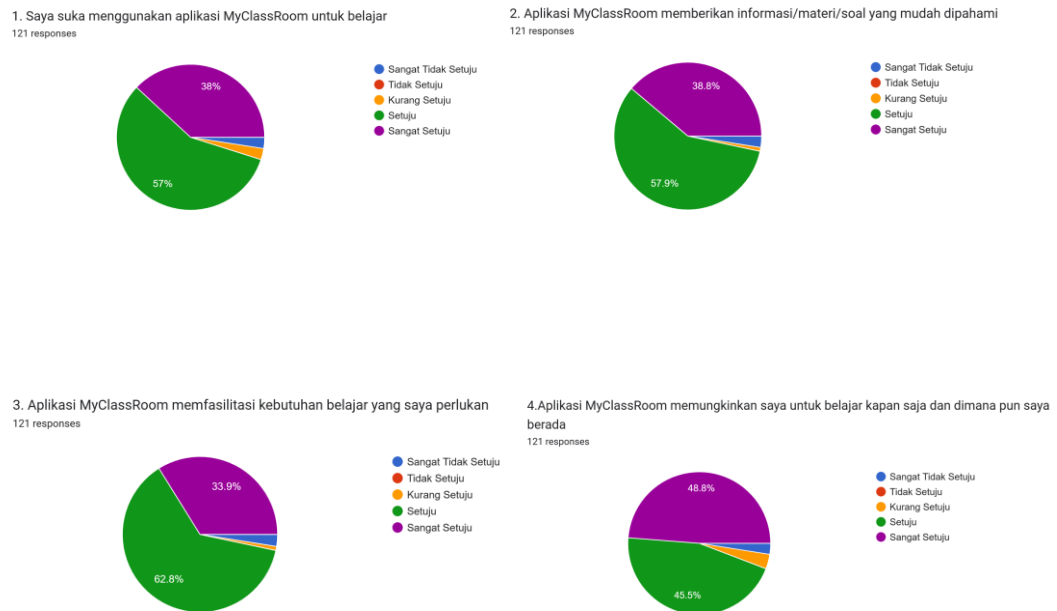


Figure 5. Some questions of questionnaire

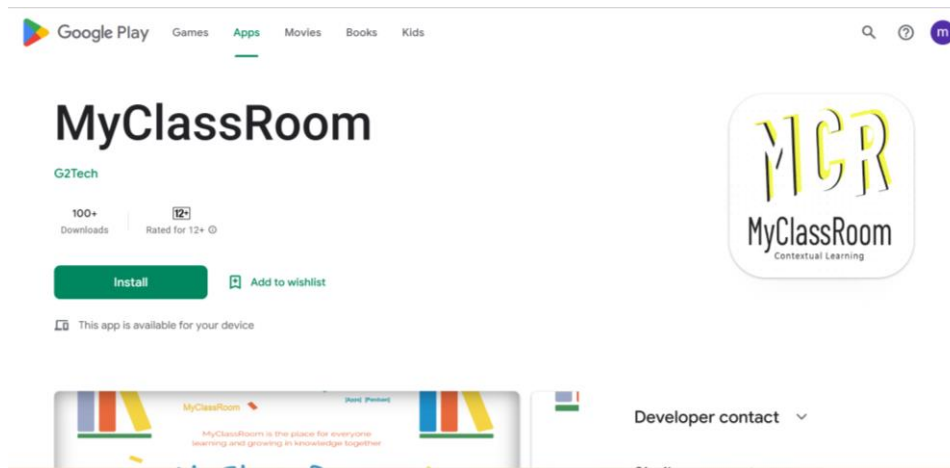


Figure 6. Myclassroom Apps

4. CONCLUSION

Myclassroom is a mobile application developed as a tool to support e-learning and improve the learning environment for students. The results of myclassroom application showed that all the features were successfully operated. The feedback from students showed that myclassroom is practical, user-friendly, innovative and useful in improving students' learning up to 95%

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