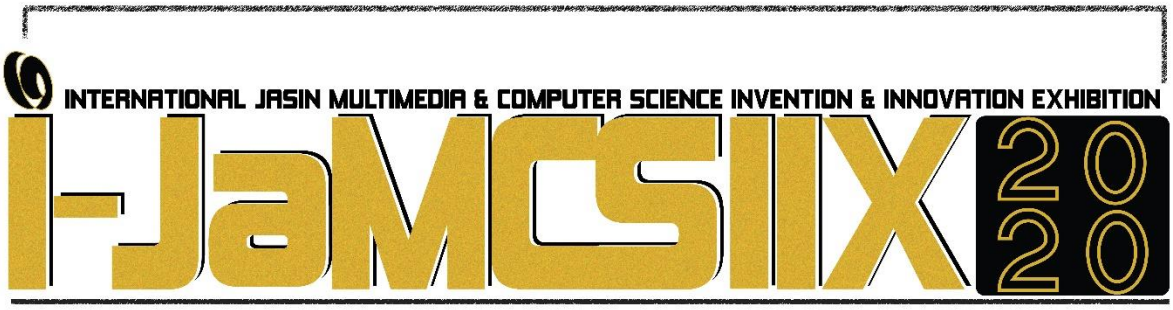


ECO Smart Result Checker

Foo Fong Yeng[1], Chong Peng Hwa[2], Ng Set Foong[3]
[1,2,3]Universiti Teknologi MARA Cawangan Johor, Kampus Pasir Gudang
email: [1]foofo931@uitm.edu.my, [2]chong900@uitm.edu.my, [3]ngsetfoong061@uitm.edu.my

ABSTRACT

We created a mobile app that can manage the result of students effectively in a paperless environment. This product is a green product that programmed online to assist the students and educators in result management. This mobile app makes the result checking task become more systematic and easier via integrated technology and promotes a paperless and ECO-friendly education industry. The traditional way of displaying the students' result is a printed paper containing assessment results of all students. Assessment results are something private and confidential. Most often, the student may feel awkward if his or her result is shown publicly. The printed paper is usually displayed on the notice board outside of the lecturer's office. Students need to present personally at the lecturer's office to check the result. Most of the time, although lecturers would hide the students' name on the name list and replace with student identification number when the results are posted, students are still able to see and get to know each other's results. The private and confidential of the students' result are not protected. To secure the students' results privately and confidentially, a mobile app was invented to enable the students to assess their individual assessment results online at anytime and anywhere. It is energy and time saving, students can check their results through this mobile app without present physically to the lecturer's office.

KEYWORDS : Result, Mobile app, Paperless

1 INTRODUCTION

To promote a paperless society within the education industry, a green product that enables students to check individual result through mobile app was created. The rationality of choosing a mobile app as the platform to promote the paperless society is the smartphone penetration in university students in Malaysia is very high nowadays [1] [2] [3]. Smartphone are practical gadgets that are popular among students today. It is a tool primarily used for communication purposes and a tool that encourages application in teaching and learning today [4] [5] [6]. Most university students are actively using a smartphone for educational purposes. The types of application (app) frequently used by university students are text messaging, search engines, calculators, English dictionary, YouTube, camera, and voice recorder [7] [8] [9].

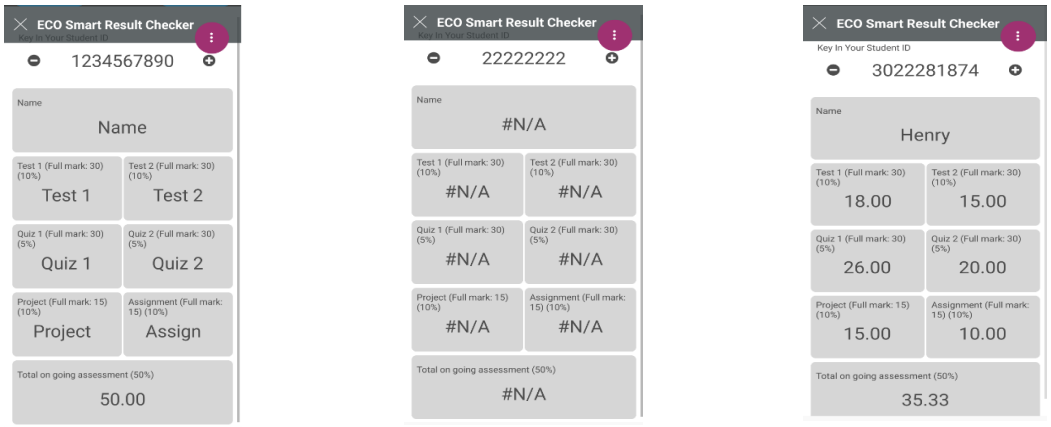
2 OBJECTIVE

The objective of this mobile app is to make the result checking task become more systematic and easier via integrated technology and promote a paperless and ECO-friendly education industry.

3 SIGNIFICANCE

This mobile app has the following novelty and usefulness: (1) For the benefit of students, it provides a private and confidential way for students to check their own assessment results. (2) For the advantage of students, it is a convenient and effective way for students to check their results online. (3) For the benefit of lecturers, this mobile app provides a paperless and effective way to display students' assessment results.

Students able to assess their assessment results online at anytime and anywhere. It is energy and time saving, students can check their results through this mobile app without present physically to lecturer's office. The commercial potential of this green product is that it can be customized for all subjects with different types of assessment. This product can be commercialized to all educators in all levels of education including primary, secondary and tertiary education institutions. The social impact of this mobile app is promoting a paperless society within the education industry.



(a) (b) (c)

Fig. 1: ECO Smart Result Checker interface in different situations. (a) interface that students view when they login to this app. (b) when a student key in the identification number wrongly. (c) when a student key in the identification number correctly.

4 METHODOLOGY/ TECHNIQUE

The mobile app uses the Microsoft Excel file as data storage and source. The necessary entries such as student identification number, name, assessment result for test, quiz, project and assignment (that are stored in Microsoft Excel) are selected as the elements in the mobile app. When a student needs to use the mobile app to check his/her results, the student needs to key in his/her student identification number (ID number) registered at the university. Every student has a unique student ID number in the university. When the app receives the valid student ID,

the student's name will appear on the screen of the app. In this way, the student may verify if the app has received the correct information from the first entry (ID number). The result will only be displayed if the student ID is valid. In this case, the students can see their own result in a confidential way.

This mobile app was pilot tested and implemented in several classes in a university. A survey on the feedback of the implementation was done and the results of the survey were analysed. Fig. 1 show the ECO Smart Result Checker interface in different situations. Fig. 1(a) is the interface that students view when they login to this app. Fig. 1(b) is the interface when a student key in the identification number wrongly. Fig. 1(b) is the interface when a student key in the identification number correctly.

5 RESULT

A survey with a sample size of 80 respondents was conducted to investigate the evaluation towards the usage of the mobile app. The respondents were students who used the mobile app to check their assessment results. Fig. 2 presents the students' evaluation of the implementation of the mobile app. Fig. 2 (a) shows that approximately three-quarters of students feel secure when they know the mobile app provides an access restriction to result and 27.50% of students feel neutral if they are the only one could access their own results. In Fig. 2 (b), there are 31.25% and 47.50% of students strongly agreed or agreed that able to access the results online is easy.

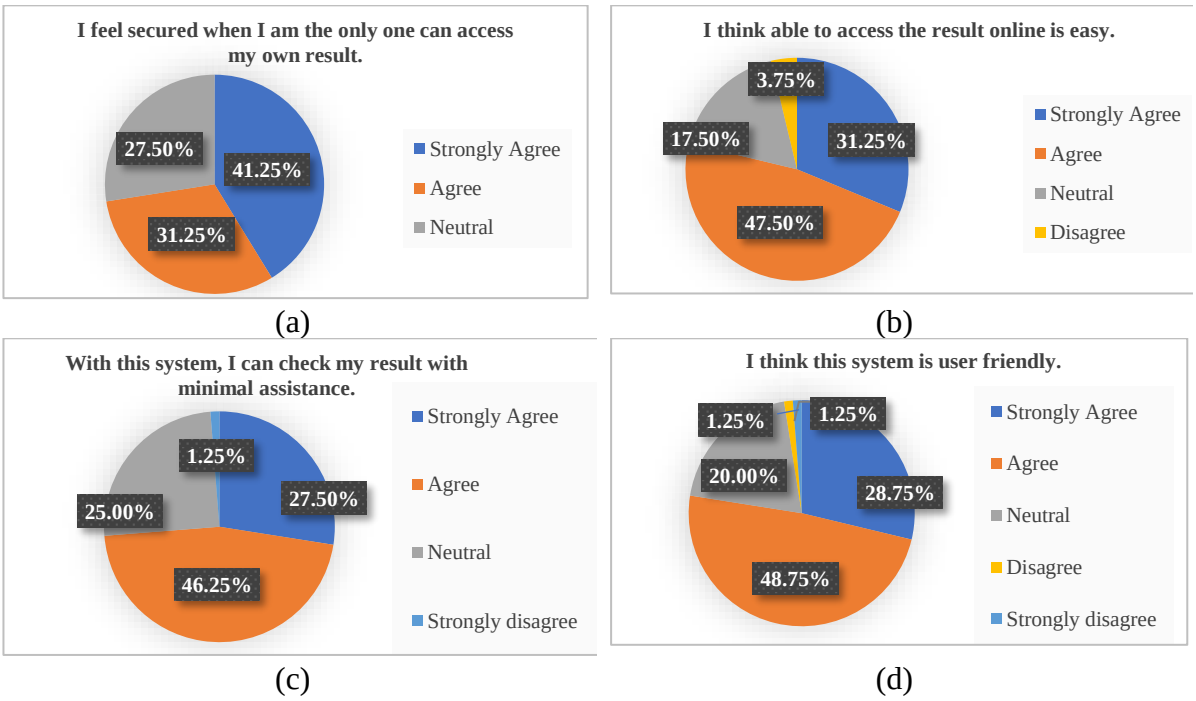


Fig. 2: The students' evaluation of the Mobile App. (a) Students sense of secure when their results could only access by themselves. (b) Students perception regards checking results online (c) The need of assistance in using the Mobile App. (d) Students' viewpoint of using the Mobile App.

Fig. 2 (c) indicates that more than 70% of students strongly agreed or agreed that they could use the mobile app with minimal assistance from the lecturer and one-fourth of students

hold a neutral view regards the difficulty of using this system. Fig. 2 (d) is the students' response as end users using this app. More than three-fourths of the students strongly agreed or agreed that the mobile app interface is user friendly and one-fifth of students hold a neutral opinion regards this app.

6 CONCLUSION

The mobile app was designed with the intention of making the result checking process easier and more confidential. With the implementation of this mobile app, the majority students as the users of the mobile app felt secure when they knew there is a restricted access to the result. Most of the students agreed that able to check their results online is convenient and easy. Most importantly, the mobile app has made the result display and checking in a paperless way. Hence, it promotes a paperless society within education industry.

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