Love Our Earth – Educational Mobile Application

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Abstract: The application titled Love Our Earth is developed to assist teachers and students to understand the environmental care topics more easily. The applications are suitable for use by all students including special needs. This app is named as Love Our Earth and covers two major focus, which is pollution and recycled. MIT Inventor 2.0 is used as the main medium of application development other than several other linked sites such as Microsoft Sway, Quizziz and YouTube. It also has a simple coding game which is related with 3R and pollution. Through this application, some of the benefits that can be earned are students can perform self-learning everywhere. This application can also be used as a reward item for pupils who successfully complete the task. Overall, the application can increase the creativity of students and to prepare students with current needs in fulfilling the 4.0 Industrial Revolution.

Keywords: mobile application, special education, environment, pollution, development.

INTRODUCTION

Environmental awareness is a growing aspect among Malaysians especially for school students. In this regard, an online educational application was built to help teachers implement teaching and learning sessions in the classroom. In addition, this application can also be used as a self-learning material by school pupils. The applications are suitable for use by all students including special needs. This app is named as Love Our Earth and covers two major focus, which is pollution and recycled.

These two topics are in the syllabus of the Standard Curriculum of the Secondary School which is being used by all secondary schools in Malaysia. In addition, this topic also part of Sustainable Development Goals (SDG) which is set by the United Nations General Assembly in 2015 for the year 2030. Nowadays everybody was trying to educate students about SDG to have a better life.

LITERATURE REVIEW

Technologies such as mobile apps should be used to increase environmental awareness among students. Students in manydisciplines could be provided opportunities to engage in class and outdoor activities that mobile technologies. (Uzunboylu et al. 2009)

Mobile apps also play an important role in students daily lives, because it can suggesting their potential to be used in health-promoting strategies.(Dute et al. 2016)

Significant insight shown on how students engage with mobile apps to articulate their design implications as well as general guidelines for selecting quality mobile apps to encourage engagement in home, classroom, and library use.(Noorhidawati et al. 2015)

Providing rich interactive multimedia is a key feature of cloud learning at Deakin. It enables students to access resources that support learning wherever they are; without the need to attend a specific location at a

defined time. The use of audio and video also makes it possible to present knowledge in different ways and enables different forms of interaction with learners(Deakin Worldly 2014).

There is potential for fostering the practice of reflection in classroom learning through the use of apps for audio-visual recordings.(Leinonen et al. 2016)

The integration of project-based learning in the design and development of the apps suggests that it could facilitate learners to have a dominant control of their own learning process.(Nurul Farhana Jumaat & Zaidatun Tasir 2013)

The app which provided sources related to lessons offered extra support to students to practice in and after class. Participating students expressed positive attitude towards mobile learning.(Zou & Li 2015)

The research demonstrated that it is necessary to expand the studies about interaction techniques with no conventional devices, as the oculus rift, in order to improve the game immersion and associate them to the pedagogical aspects of the proposal.(Nunes et al. 2016).

METHOD
How the Apps were built?
The app was built using an MIT App Inventor 2.0 online application. A few informative websites are linked in this application to provide the correct input to the students for the purpose of understanding and self-learning. The quiz-shaped website is also linked to assess the sense of learning. In this application also, there are some fun learning such as videos, craft and songs.

Objective of the study
1. To beautify the elements of HOTS and 21st CLD focused on high-impact practices.
2. The activity is unpacked curriculum.
3. To provide comprehensive and flexible activities according to the suitability of students and location.
4. To improve social skills among mainstream students and special needs students (SEN).

FINDING AND DISCUSSION
Project achievement
Students can apply learning in everyday life.Students are easier to understand and then apply what they learn through this mobile app in everyday life. Through Go Green campaigns, they are seen easier to understand the concept of recycling.

Figure 1. Students were collecting recycle trash around the school.

Figure 2. Students learn to sort the trash based on the bin.

This application also can be used by everybody in the school because the environment topic were covered in most of the subject such as English, Bahasa Melayu and Science.

Figure 3. Student used the apps in a lesson.

Acknowledgement and recognition from a certified Party/authority

This application has been selected representing Malaysia to Busan, South Korea in the match "The 9th e-ICON World Contest 2019" on 18 to 24 August 2019. This app has been awarded with the "Cooperation Award" in the match. This match was held as a joining programme under of the Ministry of Education of South Korea and APEC.
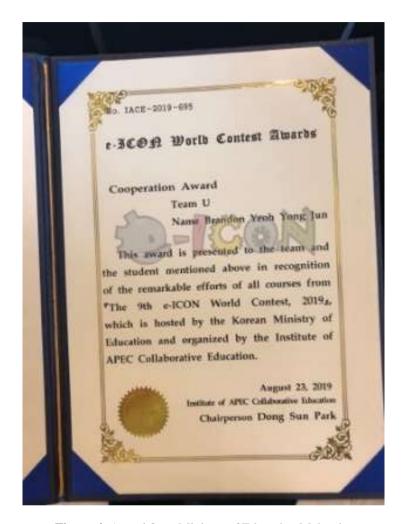
Figure 4. Award from Ministry of Education of South Korea and APEC.

Figure 4. Award from Ministry of Education Malaysia.

It is also has been awarded as Platinum Innovation in National Innovative Competition of Education and Technology from Ministry of Education Malaysia.

CONCLUSSION

       This Love Our Earth app is a structured, comprehensive and encompassing element of HOTS, 21st CLD and fun learning. This application can also be as an induction set to increase students' interest in learning related topics. In addition, this application can be used as a reward if students successfully perform the tasks given by the teachers. In addition, this application is able to assist teachers in strengthening efforts towards producing generations that are capable of fulfilling the country's aspiration in The 4.0 Industry Revolution.

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