Chapter 38
BacTracker Mobile App

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Abstract

Learning about microbes can be fun through mobile app especially those microbes that may be found on you or with you. BacTracker provides platform to explore and enhance learning of microbes that may be present in your lives focusing on cosmetics.

Introduction

Bacteria are ubiquitous. They are small prokaryotic cells, typically from 0.2 to 1 um in length and are capable of living in boiling water, frozen ground, acid volcanoes and at the bottom of the ocean. They can reproduce by doubling with a generation time of 20 minutes or survive for centuries in a resting stage. Microorganisms are classified as autotrophs or heterotrophs based on whether or not they require pre-formed organic matter. Autotrophs derive energy from either light absorption or oxidation of inorganic molecule. The importance of bacteria are generate oxygen in the atmosphere, recycle nutrients stored in organic matter to an inorganic form and fix nitrogen from the atmosphere into a useable form. A mobile app was created that contains information about microorganisms, especially on bacteria. It is called BacTracker. The target users are people who may not aware the existing and importance of microbes. The information that will be provided is the basic things about microorganisms that are present in the environment. BacTracker can be used through smartphone and tablet to capture pictures of specific substances that will describe microorganisms that are present on it. This app will emphasize the types of bacteria that may present in either human daily tools or their surroundings such as water also their own body part such as hands. However, BacTracker focus is more to the cosmetics material that is a huge phenomenon nowadays. Cosmetics and women are well-known as inseparable friends. Besides, there are some in the university and the occupational world that really uses the cosmetics or make up as the main component to study or even to earn money. However, many of us do not aware of the bacteria that might happen to exist in the cosmetics especially in the old cosmetics. This app would help people to know about the existing bacteria in cosmetic so that they would know ways to prevent the negative effects of these unseen microbes.

The mobile app functions as an information provider of bacteria that are present in the list found in this app. Each picture of the things comes with a video about the bacteria present as an additional information. In fact, people love video and learn by watching the videos which are more appealing and interesting compared to reading (Spencer, 2016). Not only that, each tool will be provided with quizzes to enhance users’ understanding. The questions in the quizzes are based on the video that the users have watched earlier. This activity can help them to evaluate their understandings on that particular information that was obtained.

This mobile app (Figure 1) is important in education as it provides information and exposes users to the world of microorganisms. This app delivers information in an attractive way that can engage users. Studies also have shown that mobile apps promote entertainment. The learning process will be more active and interactive by using this app and without doubt will enhance education. Furthermore, this app also able to provide basic knowledge about microorganisms instantly on a mobile phone which is handy and easy to use. The users can access this app at anytime, anywhere.
Impact

This product provides a lot of information to the community and as learning tool in education. The users of this app can gain knowledge about microorganisms that live around them and with them. This is very important as these microorganisms may bring both good and bad effects to them. With the knowledge that they gained, people are more cautious and aware of their surroundings and hopefully appreciate life and see things differently. This mobile app was created with the purpose for learning without boundaries. BacTracker app enables people to get real-time feedback during exploration on microbes. This mobile app includes quizzes in the learning process. All quizzes provide the correct answers and can automate the grading and evaluation. This app also gives opportunity to create a fun and engaging learning process through videos. These intriguing activities lead to better results by helping people retain more of the information learned. This is an easy use mobile app that can enhance not only new knowledge for users, but also help to increase public awareness about the tiny things that they cannot see with their naked eyes. It is the fact that, not every person learns the same way. Even though the course material is consistent for all users, E-learning allows each individual learner to control the pace of the courses to develop self-directed learners. Because of the flexibility E-learning provides, users can also take the course in an environment more conducive to their learning style. This app will help educators create a higher quality, more effective learning experience for learners. When learners are excited about learning, meaningful learning can happen.

Conclusion

BacTracker provides platform to explore and enhance learning of microbes focusing on cosmetics. This mobile app enhance learning and instill interest on microbes.

References