INTELEC2023
INNOVATIONS IN TEACHING & LEARNING COMPETITION

USM
UNIVERSITI SAINS MALAYSIA

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BIOPharm: A Website for The Learning of Rapidly Evolving Field of Biopharmaceuticals

ABSTRACT

Biopharmaceutical is a medicinal product derived from biological sources and the drugs produced using biotechnology. recently, they are dominating the therapeutic options for various chronic diseases, including Coronavirus Disease (Covid-19). Hence, web-based learning is a valid approach for this relatively new and rapidly growing field as compared to books. The current invention is a website consisting of drug information of 56 biopharmaceuticals, including Covid-19 vaccines. Briefly, the students were divided into groups and assigned to a biopharmaceutical product. Each group gathered information, such as generic name, dose, route of administration, side effects and precautions of the pharmaceutical drugs from various sources in the form of drug material sheets in English and Malay. The findings were also designed as an infographic as a quick reference. These drug material sheets and the infographics were then shared in the Padlet to validate the content by other groups and lecturers. Upon the content validation, the materials were presented in Google Cite in the form of a website and the link was shared among the students for their feedback. The student feedback on the learning activity showed that the majority of the student preferred the design and knowledge delivery through web-based learning. To the best of our knowledge, this website will serve as a comprehensive and up-to-date guide to biopharmaceutical drugs. It is an ideal tool for students and healthcare professionals to learn on biopharmaceutical drugs as it can be accessed via computers and mobile phones.

OBJECTIVES

- ❖ To develop a website consisting of drug information of 50 biopharmaceutical drugs
- ❖ To utilise the IoT for easing the learning of biopharmaceutical drugs
- ❖ To estimate students' preference on the knowledge delivery using a web-based approach

USEFULNESS

- ❖ Free and cloud-based, requires no installation and no hardcopies
- ❖ Accessible anywhere and anytime
- ❖ Emphasises on the iteration and improves student's performance
- ❖ Allows self improvement of students

VALUE ADDED

- ❖ A new website has been designed for biopharmaceutical drugs
- ❖ Connects students in massive classes
- ❖ Qualitative feedback on open-ended work – motivating and continued learning
- ❖ Similar approach applicable for other group of drugs

Website link and QR code
https://sites.google.com/view/biopharmaceuticals/home

COMMERCIALISATION POTENTIAL

- ❖ This is a valid approach to integrate a fair learning in the larger classrooms
- ❖ The product (website) has the potential to be expanded and turn into prototype of data analytics
- ❖ This will be part of a ladder to empower human resources for the benefit of local society and worldwide
- ❖ Copyright (infographics) has been submitted

RECOGNITION

- ❖ The website has been shared among the students and staff in the School of Pharmaceutical Science, USM and staff in Hospital Pulau Pinang.
- ❖ Most importantly the students recognise the feasibility of website learning as a tool for efficient learning of biopharmaceutical drugs which are widely being prescribed for the treatment of Covid-19.

INNOVATOR DETAILS

Thaigarajan Parumasivam
(thaigarp@usm.my)
Lecturer in School of Pharmaceutical Sciences
Universiti Sains Malaysia