



June 20, 2014

British Columbia Institute of Technology
School of Computing & Academic Studies
3700 Willingdon Avenue
Burnaby, BC V5G 3H2
CANADA

RE: SALMA LALJI'S APPLICATION

Dear Committee Members:

I am writing to commend Ms. Salma Lalji's creation. She created an app for me last year to use when teaching. As a Professor in Pharmacy at the University of British Columbia, I teach a class of undergraduate students in their second year of pharmacy the therapeutics of antimicrobial agents and infectious diseases (Pharmacy 352). Over the years my class size has grown from 70 students to 224! As such, I am always looking for ways to keep the classes engaged and have active learning exercises rather than continue with the passive lecture style learning approach. My understanding from talking to the Teaching and Learning Centre at UBC is that active engagement of the students during the lecture time allows for greater retention of the material.

Therefore in 2012 I decided to change some of my lectures to the more active learning style format. All my materials were posted on Connect a head of time and the students were expected to pre-read prior to the class time. One of the things I needed though was to know how much the students understood the material – so that I could expand upon issues that the students did not quite understand or were controversial.

I approached Ms Lalji, whom I knew through her employment as a web developer within one of UBC's research units - The Collaboration for Outcomes Research (CORE), to build an app for me, which could be used on any mobile device or computer. I do not provide paper handouts and thus all students, during class time, have their computers, tablets etc open to take notes. I asked Ms. Lalji to build a system such that I could post a patient case with an infection, allow time for the students to work in groups, and then ask a series of multiple choice questions to the students around the patient's diagnosis, signs and symptoms, which antibiotics to use for treatment and why etc. Based on their answer (posted in real time), I would elaborate / focus on that specific issue and then move to another question. I used one screen for my slides and the second screen for my questions and answers. Thus, my major requirements were that the students could use any device they chose (laptop, tablets, smartphones) to answer my multiple choice questions and that I didn't want to recreate my 30 lectures in a different system – I could continue using my slides which had the questions embedded within certain points of the entire lecture. Further, given that I have 224 students, I did not require student identification of any kind – I simply wanted a rolled up answer as the questions are not used for participation, assessment or marks, although this could be expanded upon in the future.

Ms. Lalji was able to create an application that worked on all possible devices the students would use. The application allowed me to have an administrative dashboard which enabled me to control when to ask a new question to the students. The app was user friendly for the student as they simply had to go to a website, read the question and click on their answer of choice. During development, Ms. Lalji would confirm with me a prototype and recraft according to my feedback. We met several times before I was able to conduct a test on my own mac air as well as other devices. The test uncovered a minor bug, related to student ID, which was fixed before introducing to my class.



When introduced within a few of my lectures, my class enjoyed having the multiple choice questions, and there was much more discussion on the topic of the day, the class seem to be “buzzing” instead of a quiet “hum”! Students felt the app was user-friendly app and I enjoyed engaging my students and improving class discussion and participation. I was able to gauge the class progress with the subject by conducting a review of past material. The colorful, graphical charts summarizing the data in real time were extremely helpful in creating a visual perspective of the class’s knowledge of the material.

I am very happy with the outcome and would like Ms. Lalji to build other applications that encourage student engagement in the classroom. The discovery of utilizing technology in the classroom has been helpful not only to the students but also to the instructors to steer the class towards enhanced learning.

Please do not hesitate to contact me for any further clarification.

Thank you,

Fawziah Marra, BSc(Pharm), ACPR, PharmD, FCHSP
Faculty of Pharmaceutical Sciences
University of British Columbia
Tel: 604-822-7898 | Fax: 604-822-3035
<mailto:fawziah.marra@ubc.ca>