Research Motivation and goal
Current focus and open research questions

My research interest is developing a mobile learning application on a smart phone. The application is purposely used to teach computer science students and it was developed based on Transactional Distance theory which is a theory in distance education.

The main focus of the research was to explore if the application that grounded on the education theory could engage the learners with their learning process and decrease the feeling of isolation when they have to take control over their own learning.

At this point we have successfully develop the first prototype, and evaluated it on its ability to engage learners. For the evaluation we developed two applications. In general they looked the same however one of them presented all the functions suggested by the theory so it has three types of media which are video, recorded voice and some text for the learners to read. We also provided a chat room so that the learners can contact their supervisors, a question and answer game for the learning to practice what they have learnt, and an assignment as a tool to evaluate their knowledge. While another application did not have those functions. It only presented text for the learners to learn.

We divided the participants into two groups. Each group learnt on an assigned application and we compare the engagement level between the two group. We found that the application that was designed based on the theory could engage the learners around 34% better.

Based on the findings we found some interface design problems that might affected learners' engagement and we found that the theory had guided to design towards functionality but lacks of interface design guideline. So, we added in another design technique called heuristic evaluation. We invited experts to evaluated the application based on the heuristics guideline mainly focusing on the interface design and interaction. After we get the results we will develop the second prototype.

What I would like to get is some comments is the software evaluation technique on the usability. What I have done was using a questionnaire to evaluate the engagement and capturing a video of the mobile phone screen to observe if there was any interface design problems however it was hard to judge based on the video because we didn't get to know the exact reasons behind the participants actions or their fingers movement. We have added a heuristic evaluation to focus better on the interface design.

If the evaluation methodology are efficient and did they cover all the aspects of software usability testing?