



**DESIGNING A MOBILE APPLICATION TO INCREASE AWARENESS
OF COMMUNITY BASED SERVICES ON CAMPUS**

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(Design Technology)
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Final Year Project Report

Masters

PhD

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16th June 2017

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COMMUNITY BASED SERVICES ON CAMPUS**

HO WUNG SZE

This project is submitted in partial of fulfillment of
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CHAPTER 1

INTRODUCTION

1.0 Background of Study

A case study by Campus Engage shows that campus community engagement activities can promote community based learning through practical experience which enables students to gain ‘work-ready’ skills (Morris, 2014). It also shapes the teaching and learning experience about real community needs.

A Kauffman Foundation report states that today’s students are looking more into to their own talents and ‘personal brands’ and not to corporate pay checks, as a basis of a

stable future (Kauffman Foundation, 2013). It also continues to state that conventional employment no longer looks as secure as it once did, nor the fact that entrepreneurship is as comparatively risky. Entrepreneurial skills set are best learned through experience (Silvestrini, 2016).

Based on numerous case studies of different higher education institutions by OOHLALAmobile, campus based mobile applications is not only beneficial to the students but to the campus as well (OOHLALA mobile, 2016). OOHLALAmobile creates campus mobile applications and based on their clientele of university campuses, these higher education institutions are looking more into technologies that makes it convenient for students to be more connected to the campus. Campus engagement is also a common goal in with regards to their choice of using mobile application as a platform for campus community related elements.

The I-VOL mobile application by a student from the Institute of Technology of Tallaght, makes the process of searching for volunteering opportunities easier and allows local volunteer centres to highlight available volunteering roles (Morris, 2014). Since its release in 2013, it has provided over 5,000 volunteer opportunities across Ireland. Similarly to how a volunteering mobile application was designed for the community of Ireland, a mobile application will be designed specifically to create awareness of community based services that are by the campus community and for its community.

1.1 Problem Statement

Based on my observations, student-run services are inevitable in a campus community and some services on campus are less known to the campus community. As smart phones are now prominent, students use various social media to post or advertise their services. There has yet to be a platform to display and categorize these community based services on campus. The campus community, especially students, often use social media to advertise these services. However, notifications and other social media posts and advertisements constantly fill social media pages. Every day, it is a battle of posting to prevent other posts from overshadowing these services. Not only is it tedious and time-consuming to advertise these services on campus, it also takes up potential customers' time in scrolling to look for these services among the social media clutter.

1.2 Research Objectives

1. To identify current community based services on campus.
2. To analyze the current media used to advertise the community based services available on campus.
3. To create a mobile application to increase awareness of community based services on campus.
4. To evaluate the usability of the mobile application among the campus community.

1.3 Research Question

1. What kind of method should be used to identify current community based services on campus?
2. What are the current media used to advertise community based services on campus?
3. Which elements need to be focused create a mobile application to increase awareness of community based services on campus?
4. How is the extent of usability of the application in assisting the campus community?

1.4 Target Audience

The target audience of mobile application is the campus community. There are student-run services on campus and existing campus services. Various social media networks have been used to advertise these services. To separate from the clutter of other social media posts and notifications, this research is conducted to provide a suitable and user-friendly platform for the campus community to increase awareness of services in and around campus.

1.5 Limitation of Research

The greatest limitation of the research is geographical. As different campuses have different campus community based services, it will be presumptuous to apply the data from this research to other campuses. The second limitation to this research is technicalities. As the end product from this research will not be a fully functional mobile application, it will be difficult to accurately showcase the usability of the application.

1.6 Significance of research

Through this research, community based services on campus will have a proper platform to create awareness of the services. It will also provide opportunities to stimulate student entrepreneurship and campus community engagement. By designing a mobile application to create awareness of community based services on campus, it will be easier for the campus community to access services as long as you have a smart phone. This research will also contribute towards understanding the needs and problems of a campus community and the study on usability of mobile application.

1.7 Conclusion

In conclusion, there is a need for a suitable platform to create awareness of community based services on campus. Community based services may encourage campus community engagement and student entrepreneurship. By establishing mobile application as the platform to create awareness of community based services on campus, it makes it convenient to identify these services among the campus community.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This literature review is to understand mobile applications, community based services and student entrepreneurship, mobile marketing, and mobile commerce and examine current models available to evaluate the usability of mobile applications.

2.1 Mobile Application

A mobile application is a type of application software designed to run on mobile devices such as a smartphone or tablet, which can be typically downloaded from an app marketplace such as the Apple's App Store or Android's Google Play store (Angeles, 2014).

There are three types of mobile application which are native apps, mobile web apps and hybrid apps (Budiu, 2013). Native apps live on the devices once they are installed through an application store. Native apps can utilize the devices features such as camera, GPS, list of contacts and so on. Gestures from the standard operating systems or new, app-defined gestures may also be incorporated in a native app. It can also have the option to work online or offline.

Mobile web apps may appear to have similar features to that of native applications but are actually websites viewed through a web browser. Although they are viewed through a mobile web browser and are built in HTML/CSS, they are not mobile websites. As mobile websites are just mobile sites designed to appear on smaller handheld display and are just a customized version of a regular website. (Blue Foundation Media, 2015)

Hybrid apps are a mix of mobile web apps and native apps. Similar to native apps, they live in an app store and can take advantage of the device features available on a smartphone. They also contain web apps' attributes like HTML rendered browser which is embedded within the app. Hybrid apps are a more popular option as cross-platform development enables it to reduce development costs which means the same HTML code components can be reused on different mobile operating systems (Budiu, 2013).

2.2 Community Based Services on Campus

A community is defined as “a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings” (Metzger, et al., 2001).

There are multiple definitions of services. However in this context where there is monetary involvement, service is defined as useful labour that does not produce a tangible commodity (Morris, 2014).

2.3 Student Entrepreneurship

While in university, running one's own business is not only a great way to make extra cash but also, develop entrepreneurial skills (Qureshi, 2009). Conventional employment is no longer as secure as it seems and entrepreneurship is as comparatively not as risky in the present day (Kauffman Foundation, 2013). Today, instead of looking into steady corporate paying jobs, students of today are looking more intently into their own talents and 'personal brands' as a basis of a stable future (Kauffman Foundation, 2013).

2.4 Mobile Marketing

According to Vernali and Toker (2010) who conducted a comprehensive literature review on mobile marketing, it is concluded that a commonly accepted classification framework for mobile marketing has not been established. However, one of the earliest definitions for mobile marketing by Ververidis and Polyzos (2002), defines it as "all the activities required to communicate with the customer through the use of mobile devices in order to promote the selling of the products or services".

Mobile marketing has become more interesting research topic in the recent years (Vernali & Toker, 2010). New definitions are constantly arising. The most current and simplified definition by Kaplan (2012) states that mobile marketing is "any marketing

activity conducted through a ubiquitous network to which consumers are constantly connected using personal mobile devices”.

2.4.1 Mobile Commerce (m-commerce)

Mobile marketing is often closely linked with electronic commerce (e-commerce) (Latto, 2014). And mobile commerce or m-commerce is considered a subset of e-commerce. The difference between m-commerce and e-commerce is the channel and devices used. All parties in m-commerce, buy, sell and exchange information with mobile devices wirelessly, whereas e-commerce is more towards wired computing environment (Ngai & Gunasekaran, 2007).

2.5 Usability of Mobile Application

Usability is defined as a quality of a product or system which refers to the extent to which it allows people to accomplish their tasks or goal quickly and easily (Saleh, Fabil, & Isamil, 2015). It is important to understand usability and its existing usability models to conduct usability evaluation on mobile applications. As the main purpose of usability evaluation, is to identify the core issues in the user interface that may lead up to human error, termination of the user interaction with the system and cause user frustration (Saleh, Fabil, & Isamil, 2015).