

ISPSC i-ACCESS

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Chapter I

INTRODUCTION

Project Context

As the world progresses of technology is also evolving. There are lot of changes that had occurred and changes are faster than what we imagined to, and it has no signs of slowing down anytime soon. In fact everything will be run by technology in the near future. We are very much embedded and influenced by the modern product of technology. Technology is around us all the time and lately with smart phones. These smart phones have become a prominent part of our daily lives and it had come to rely on them for on-the-go information and it is vastly innovative and beneficial to those who know how to utilize it. (One-to-One K-12 Computing Handbook)

Stated in the Pew Research Center, Internet, Science and Technology of Washington DC (October 29, 2015), sixty nine percent of cellphone owners find themselves checking their phone for messages, alerts, or calls — even when they do not notice their phone ringing or vibrating. Thirty one percent of cell owners describe their cell phone as “something they can’t imagine living without.

Before, usage of mobile phones was only for communication purposes. Nowadays, mobile phones go beyond the need of the people that make it effective and even amusing because of its advanced capabilities. Mobile phones can now be embedded with what we call mobile applications. A mobile app is a computer program designed to run on smartphones, tablet



computers and other mobile devices. It said also that the term "app" is a shortening of the term "application software". And apps also are usually available through application distribution platforms, which began appearing in 2008 and are typically operated by the owner of the mobile operating system, such as the Apple App Store, Google Play, Windows Phone Store, and BlackBerry App World. These applications are useful tools that perform different tasks. Some mobile applications are common on most mobile phones, including inexpensive units. However, as the need of every individual varies from the other, still, there is a need to develop a more useful mobile application. Wikipedia, the Free Online Encyclopedia.

To run these applications, it requires a highly efficient operating system and one of the widely used operating system these days is android. This android is from Google Incorporation. It has the largest installed base worldwide on smartphones. Most of android is free and open source, but a large amount of software on Android devices (such as play store, google search, google play services, google music, and so on) are proprietary and licensed. (Wikipedia the Free Online Encyclopedia)

In an article taken mobile application nowadays can be easily acquire with just a few step. Almost all students have their own mobile phones and mostly, it is operated by Android operating system which gives them the privilege to run different applications in their phones. These apps became convenient because we can do a lot of stuff depending on how they are programmed to (Oppapers. 2010)



According to Jacobson, (2011) IT student specializes in creating programs that would help to make the task easier in doing many processes through the use of computer. The advent of new technology gave rise to easy and hassle free interaction between and among humans. Whether it is in business, science or whatever task a person takes on the quality and speed of carrying out are enhanced with automation. Today, many systems have used an automation process like using computer system due to its efficiency and accuracy.

And now some universities and colleges here in the country have been using technology to improve the credibility of their school. Programmers build electronic voting, enrollment system, website and portals to allow students and faculty/staff to access information records and also their parents to monitor their children's schooling matters, and many more.

Since Ilocos Sur Polytechnic State College (ISPSC) has its own website that contains information about ISPSC like its Vision and Mission, History, School Profile, also with its curricular offerings, accredited programs, and academic calendar. It also contains about the admission requirements and procedure, tuition fees, and scholarship of ISPSC which was created by virtue of RA 8547 authored by Congressman Eric D. Singson (2nd District, Ilocos Sur). But most of the students in ISPSC are not aware of it. Students do not even bother to take a look at our website or cannot look at it because they do not have any computer to use and since all of the students in ISPSC already have their own cellphone together with them all the time, the researchers



decided to create a mobile application wherein students can login to have an access to their profile and school records.

The researchers introduced a mobile application system that allow students to view their own school profile, grades and billing statements. They may not again to experience again to wait for days just to know their grades result, and even with their previous grades in your previous semesters. They can access their balances in their tuition fees anytime they want without going to the accounting office to ask, and this will take just few clicks on their mobile phones.

Purpose and Description

This study was developed mainly for Ilocos Sur Polytechnic State College. The said system would allow the students to access their profile, grades and billing records whenever they want to.

The Administration (Accounting and Registrar Office Personnel).

This mobile application can process all transaction pertaining to the grades and billing statements of the student that can be viewed anytime and anywhere and is very much favorable to both accounting and registrar office personnel because of the fact that their work will be lessened and the hassle on their part will be relieved in doing such transaction.

Students. It would lessen the hassle and difficulty whenever they want or intend to inquire about their grades and billing statements. No need to fall in line at the registrar or accounting offices to secure their records.



School. This study would help the institution to adopt an efficient mobile application system for student and administration in the school. It will also help the college to maximize the tools of technology as they seek to adopt the fast moving changes of information technology. It is a great help for a fast operation particularly in inquiring grades of a certain student so with his/her billing records.

The Developers. This may served as a way for the developers to apply different principles in creating a mobile application system. Aside from enhancing their skills about programming, it may also relate concepts involving to their undertakings. It would also be an honor to be acknowledged someday because of this system which would lift the incredibility as developers.

Future Researchers. The researcher's project served as guide to help them to improve their own project and system development.

Statement of Objectives

The main purpose of this project is to develop a mobile application system for the students of ISPSC. Specifically it sought to achieve the following:

1. to determine the existing system of accessing students' records such as grades, billing and student information;
2. to create and develop mobile application system for ISPSC students of Santa Maria campus;



Chapter II

REVIEW OF LITERATURE

Mobile technologies are playing an increasingly important role in college students' academic lives. Devices such as smartphones, tablets, and e-book readers connect users to the world instantly, heightening access to information and enabling interactivity with others. Applications that run on these devices let the users not only consume but also discover and produce content. As such, it continues to transform how college students learn, as well as influence their learning preferences, both within and outside the classroom.

Mobile app is a computer program designed to run on mobile devices. Most devices are sold with several apps included as pre-installed software, such as a web browser, email client, calendar, mapping program, and an app for buying music or other media or more apps. Some pre-installed apps can be removed by an ordinary uninstall process, thus leaving more storage space for desired ones. Where the software does not allow this, some devices can be rooted to eliminate the undesired apps. They are usually developed in Java programming language using the Android Software Development Kit (SDK), that includes a comprehensive set of development tools such as debugger, software libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials. One can also develop Android software on Android itself by using the AIDE - Android IDE - Java, C++ app and the Java editor app. The officially supported integrated development



environment (IDE) is Eclipse using the Android Development Tools (ADT) Plugin, though IntelliJ IDEA IDE fully supports android development out of the box, and NetBeans IDE also supports android development via a plugin. (Wikipedia the Free Online Encyclopedia)

Android is an operating system that powers more than one billion smartphones and tablets. It delivers a complete set of software for mobile devices: an operating system, middleware and key mobile applications. In October 2003, Android was founded in Palo Alto, California by Andy Rubin, Rich Miner, Nick Sears, and Chris White. (Wikipedia the Free Online Encyclopedia)

Software Development Life Cycle (SDLC) is essentially a series of steps or phases that provide a model for the development and lifecycle management of an application or piece of software. It aims to produce high quality systems that meet or exceed customer expectations, based on customer requirements, by delivering systems which move through each clearly defined phase, within scheduled time-frames and cost estimates. (Veracode)

Mobile Application Development Lifecycle (MADLC) has been used for over a year in developing android mobile applications. This lifecycle addresses some of the distinguishing characteristics of mobile applications like lifespan, complex functionalities, fewer physical interfaces, more number of screens for interaction, battery and memory usage,cross platform development and maintenance. Mobile Application Development Lifecycle



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(MADLC) consists of the following phases; Design and Planning, Development and Testing, Deployment and Updating and lastly the Monitoring and Analysis.

The popularity of mobile technologies among college students is increasing dramatically. Baiyun, et. Al, Instructional designers at the University of Central Florida, conducted a research on students suggest that many undergraduate students bring their own digital devices to college, favoring small and portable ones such as smartphones and tablets. Although students still rate laptops (85 percent) as the most important devices to their academic success, the importance of mobile devices such as tablets (45 percent), smartphones (37 percent), and e-book readers (31 percent) is noticeably on the rise. Increasingly, students say they want the ability to access academic resources on their mobile devices. In fact, 67 percent of students' smartphones and tablets are reportedly being used for academic purposes, a rate that has nearly doubled in just one year. (EduCauseReview, 2013)

Swoboda, Felix et. Al., (2009) Mobile Event Guide was aim to enhance the overall event communication and assist organizers in generating additional revenues. They ensure that the app is branded to the event; work with client to deliver a robust feature-set for apps and provide the best advertising packages, and assist with the importation of data into the CMS. The main features are; 1)event information, where in dynamically search and filter the following: sessions, speakers, products, exhibitors, and attendees,



2)personal event agenda where it generate higher attendee event satisfaction by allowing them to save relevant information to their personalized agenda, 3)networking and attendees list, here they quickly identify relevant contacts within the attendees list and schedule at-event meetings easily and efficiently, 4)maps and navigation, they navigate through the venue and find exhibitors' booths and session rooms easily on the floor plan, 5)interaction, this where they can see actively engage the attendees throughout the event through posting questions to the speaker it also allow the attendees to rate the session and give feedback once the session has ended, 6)advertising opportunities, the exhibitors and sponsors have multiple in-app advertising opportunities. 7)updates, app content is always kept up-to-the-minute as schedule changes and event changes are made in real time. 8)push messages, directly target which smartphones to send push notifications. Choose when and where attendees should receive notifications including event news, messages from exhibitors, etc. and (8) iBeaconsMulti-Event App, all events in a single app – present your portfolio with your branded app and promote future events through cross-event marketing.

NYUAD Abu Dhabi (2010) NYUAD Student app is a mobile application uses in New York University Abu Dhabi as part of an ongoing effort to improve the online experience at NYUAD, United Arab Emirates, and it is designed only for current NYUAD students, the NYUAD student app can now be downloaded from the App Store and Google Play.



The authenticated app provides students with relevant NYUAD information to; view student announcements, view student events, Browse the entire NYU staff and faculty directory and view shuttle timetables and save "favorite" routes.

Calibuso, April R, et. Al., (2014) ISPSC A-mobile is a mobile application system developed to disseminate useful information and timely news to students, faculties of ISPSC and other users.

The application has the following modules; 1) About, where the users can read all about the organization; 2) Directory, where users can view and dial contact numbers; 3) News, where users can read some school related articles; 4) Academic Calendar, where one can update students of the school related activities; 5) Admission, where courses offered and requirements are listed; 6) Map that serves as a navigation guide; 7) Photos; 8) Videos; and 9) Prospectus, wherein users can view the subject of different courses.

Adviento, Joanna Marie B, et. Al., (2015) Radyo Kailian On-Air Android Application is also an android application mobile developed by the IT students of Ilocos Sur Polytechnic State College to widen the range of the existing radio station and to promote the radio easily especially for those Filipinos abroad.

According to them, this application allows the user to listen to music, news, events and aired programs. They can also leave they can also leave their comments or suggestions in the comment area. Another feature of the said application is that listener can review the top 10 most requested songs.



They can also watch radio announcers/dj's through RK stream and even interact with the presenter during the live broadcast.

Usefulness, Satisfaction, and Ease of use (USE) Questionnaire

Gary Perlman (2009). These are the three dimensions that emerged most strongly in the early development of the USE Questionnaire. This usability appears to consist of Usefulness, Ease of Use, Ease of Learning and Satisfaction are correlated.

This usability is developed to measure the most important dimensions of usability for user, and to measure those dimensions across domains. Ideally it should work for software, hardware, services, and user support materials. It should allow meaningful comparisons of products in different domains, even though testing of the products happened at different times and perhaps under different circumstances. In the best of all worlds, the items would have a certain amount of face validity for both users and practitioners, and it would be possible to imagine the aspects of the design that might influence ratings of the items. It would not be intended to be a diagnostic tool, but rather would treat the dimensions of usability as dependent variables.

Subsequent research would assess how various aspects of a given category of design would impact usability ratings. The early studies at Ameritech suggested that a viable questionnaire could be created. Interestingly, the results of those early studies were consistent with studies conducted in the MIS and technology diffusion areas, which also had



identified the importance of and the relationship between Usefulness, Satisfaction, and Ease of Use.



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