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iWorkplace: The Development of a Prototype of Mobile Learning Application for Business and Professional Development Kit

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ABSTRACT

As technology advances, using gadgets like smart phones, ipads, tablets and other mobile devices are becoming popular among people today as the rise in technology is overwhelming. Therefore, this paper describes how iWorkplace mobile application can be implemented in Malaysian educational field. This application resource is specifically designed for undergraduate students and adult learners who are getting ready for the employment world. The application is being developed based on one of the language courses syllabus in the university. This mobile application features the virtual notes on the workplace and business and professional communication skills within an organization that can be used as a teaching aid for teaching and learning process. In this paper, we focus more on the design and the process of development of the application. The android application without coding is used in the design and development of this application. The design is considered the most important part of the application because it uses a small-sized screen and much information is to be placed in this application.

Keywords: Technology, Gadgets, Application, Workplace, Online Note

Introduction

Recently, flexible e-learning become the primary mode for student access by using mobile learning environment. It is already forecast that in the near future the number of mobile communication devices such as mobile phones and handheld computers will exceed the number of personal computers. Pinkwart (2004) defines e-learning as learning supported by digital electronic tools and media and by analogy. Many researchers and educators viewed mobile learning as the immediate successor of e-learning.

Definitions of m-learning

What is m-learning? First, we need to understand the differences between e-learning and m-learning. There are many opinions and ideas on the meanings of this term. Some definitions include the aspects which characterise mobile services-such as location independence (Vavoula & Shraples,2002). Traxler (2007) and other supporters of mobile learning define mobile learning as wireless and digital devices and technologies. Generally, it produced for the public and used by a learner as he or she contributes in higher education. In

fact, m-learning is similar to online learning which it physically separates teachers and learners but provides a communication channel between them (Kurbel & Hilker, 2003). However, the primary differences between m-learning and e-learning fall into four main categories: timing, information access, context and assessment. Therefore, m-learning is subset of e-learning and e-learning is the command concept that includes online and mobile learning environments. In Figure 1, modified from Brown (2003) presented the definition of m-learning as a form of eLearning which it can take place anytime, anywhere with the help of a mobile communication device such as mobile phone and mobile computer.

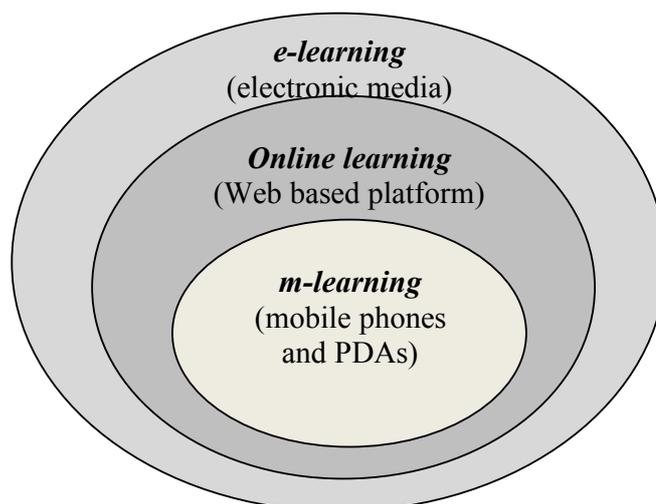


Figure 1. The subsets of flexible learning

The Concepts of Mobile Learning

In Malaysia, mobile learning is being discovered widely by many individuals, educators and researchers. However, Traxler (2007) considers that the concept of mobile education is still evolving and still indistinct. It is obvious that the advancement of mobile technology has opened up a numerous of learning opportunities for students in Higher Learning Institutions who need to manage with a multifaceted and challenging environment. Therefore, the educators should examine the possibility of integrating mobile learning into the academic programmes at Higher Learning Institutions. Norazah Nordin et al. (2010) surveyed that 120 post-graduate students in Universiti Kebangsaan Malaysia agreed that mobile phones had effectively improved the teaching and learning process and the activities with mobile learning helped to encourage and raise interaction among the students. Moreover, Naji Shukri Alzaza and Abdul Razak Yaakub (2011) indicated that the higher education environment has the required infrastructure to utilize m-learning services based on their study on students' awareness and requirements of mobile learning services among Malaysian students in the higher education environment. Figure 2 is a graphic illustration of the three concepts of mobile learning that can convey a higher level of educational instruction. The concepts of mobility can be divided into three significant areas which are mobility of technology, mobility of learner and mobility of learning especially in higher education environment.

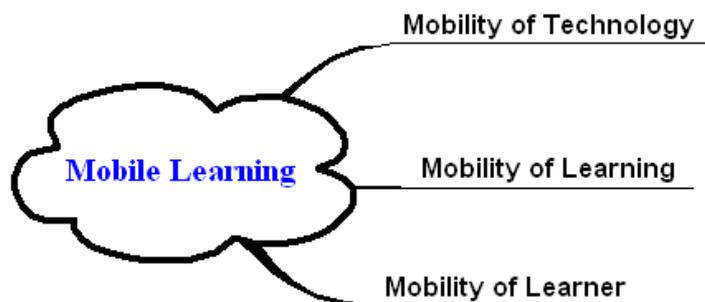


Figure 2. The three concepts of mobile learning

The successful provision of higher educational instruction depends on the multilateral significance of the word mobility as it used in the context of higher education. Thus, these three concepts are interdependent and are correspondingly important in making mobile devices feasible as devices for the delivery of higher education instructional contents.

Design and Development of Mobile Learning Application

The design and development of mobile learning application is not an easy task which needs software programming knowledge, graphic design knowledge, instructional design knowledge, content localizing. According to Savill-Smith and Kent (2004), the use of mobile devices for learning can assist students' motivation, help organizational skills, encourage a sense of responsibility, support both independent and collaborative learning, act as reference tools, track students' progress and deliver assessment. Therefore, some educational institutes, universities or schools started to develop specific mobile applications for their students according to their curriculum and particular need. Many researchers have explored research in mobile learning since the last decade. This leads to the various developments of mobile learning applications. Agnes Kulkuska-Hulme et al (2009) indicated that mobile learning can work, reaching places that other learning system cannot, it is best provided as part of a blend of learning activities, it offers a collection of pieces to be fitted to a learning need rather than a single solution, it is not simply a tool for delivering teaching material but can be used for learning through creativity, collaboration and communication. Some of mobile learning projects that have been established by researchers worldwide are 'bubble sort' and 'binary search' applications, the mobileDNA, AMULETS, MUSIS and MobileMath. Kariogiorgi & Symeou (2005) suggested that there must be learning approach in design and development phase such as active learning, collaborative learning, authentic learning and multiple perspectives. Hsu, Ching & Snelson (2014) in their recent research exposed that there are significances in research which can have effect on better design and development phase; (1) teaching and learning strategies; (2) affordances; (3) theory; (4) settings of learning; (5) evaluation/assessment; (6) learners; (7) mobile technologies and interface design; (8) context awareness and augmented reality; (9) infrastructure and management and (10) country and digital divide.

Analysis Phase

Based on Figure 3, there were three major parts in this phase and each step broke down to adaptable part.

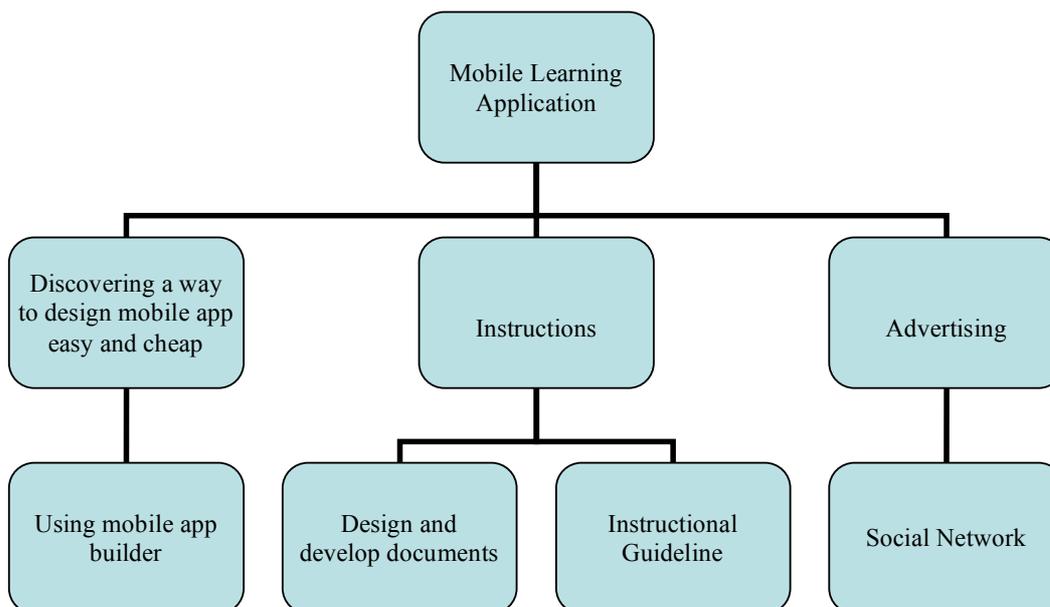


Figure 3. Analysis Phase

Development of Mobile Learning Application for Business and Professional Development Kit

Recently, there are many mobile applications builders which have been developed and help users to create their ideal custom mobile application. The administrators and users of this system might not be influent in ICT skills so that the system used should be simple and effective to manage and use. Therefore, this project selected and used *Andromo App Maker for Android* which is one of the free mobile applications builders without coding.

Problem Statement

Today, against a backdrop of rising unemployment and fierce competition for the jobs that are available, it is important that individuals stand out from the crowd and able to prove the positive impact that they make to an organization. Thus, the graduate students as job seekers should ensure themselves to give impact on an organization's performance and they need to constantly look at how they can develop and improve. Therefore, recognizing the need to offer mobile access to mobile learning application kit for business and professional development is a crucial motivating factor behind this research. The existing situation evidently demonstrates this need, wherein the use of mobile devices among educators and students is currently exponentially and will continue to do so in the future.

iWorkplace Mobile Learning Application

iWorkplace is a supportive mobile application developed specifically for young and adult learners. A lot of tips are extremely useful as a reference to those who desire a good practice and preparation notes on the workplace and communication skills within an organization. This virtual and flexible note also can be used by the educators and students as a teaching and learning aid. The notes have five main chapters and each chapter is equipped with additional feature which is YouTube video. Additionally, these videos provide ease and efficiency to the students and adult learners to view some samples and tips for each chapter and to make the students and adult learners understand better. Therefore, this application will help the users with job application and business communication skills within an organization and making them reach their job goals.

Objectives of the iWorkplace Project

The objectives of the project are outlined in the following goals:

1. To design and develop a virtual and flexible learning note for learning business and professional development skills
2. To encourage users with the usage of gadget application
3. To make teaching and learning process more flexible to learners
4. To make learners understand better the five chapters

Design and Utilisation of iWorkplace Mobile Application

There are five main chapters in iWorkplace; Effective CV and Applications, Interview Skills, Business Communication, Business Meeting, Conflict Management and Difficult Conversation. These, along with their videos, are shown in Table 1.

Table 1

Five Main Chapters of iWorkplace

Chapter	Topics	Video
1	Effective CV and Applications	Video of CV Writing
2	Interview Skills	Video of Job Interview
3	Business Communication	Video of Business Communication
4	Business Meeting	Video of Arranging Meeting
5	Conflict Management and Difficult Conversation	Video of Difficult Conversation

Hence, the screenshots of iWorkplace mobile learning application and also the five chapters in this application are shown in Figure 4.

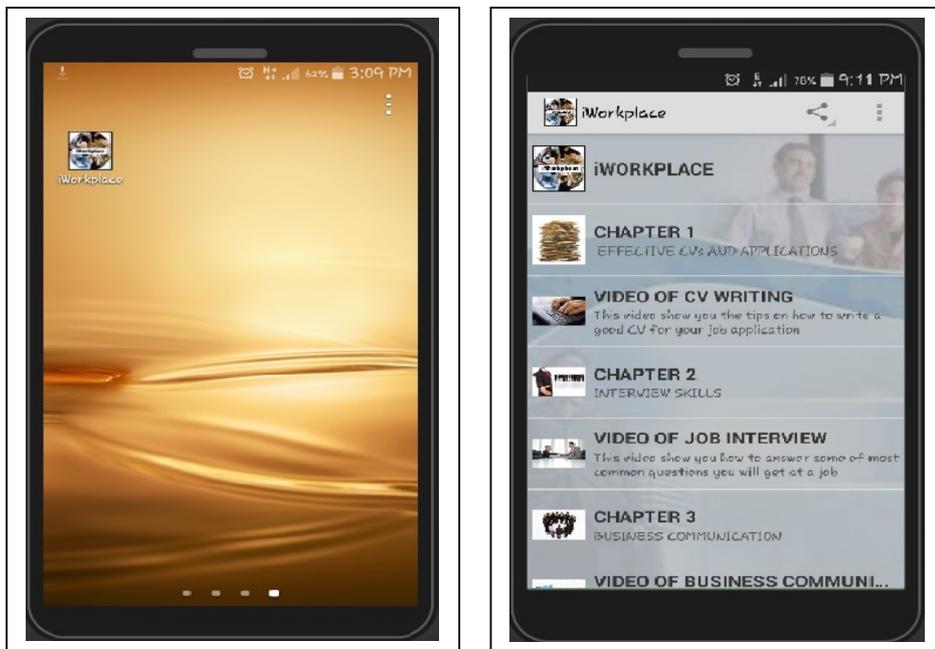


Figure 4. iWorkplace mobile learning application and the five chapters

The Screenshots of iWorkplace Mobile Application

Some screenshots of iWorkplace demonstrating these functionalities are illustrated in Figure 5.

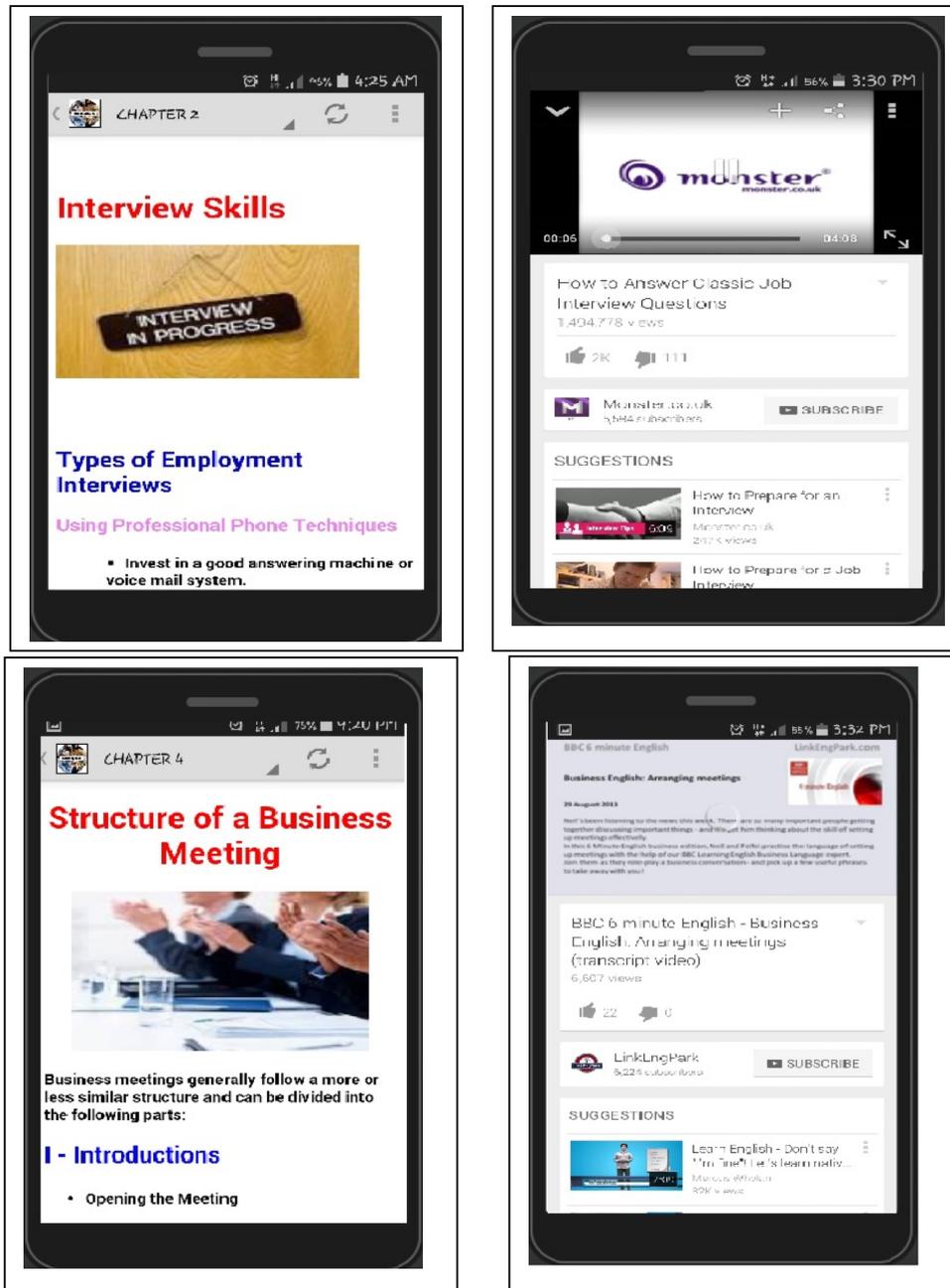


Figure 5. (in clockwise view) Chapter 2 (Interview Skills), YouTubeVideo (Video of Job Interview), Chapter 4 (Structure of Business Meeting) and YouTube Video (Video of Arranging Meeting)

System Installation and Maintenance

The designated mobile application is planned to be available on Google Play (Android). Then, it can be downloaded by the end-users at their convenience via their

individual smartphones, and users can access their iWorkplace application at any time or place. The developer will commit to regular updates of this application through the developer's account in the store. Thus, through this process, students automatically experience the latest versions of the application.

Implementation

The final production of this study was to install Android operational system for the actual mobile application. The summary of design and implementation of mobile learning application prototype is mentioned below:

- a) Creating research framework
- b) Carry out task analysis in every step and navigate based on the framework
- c) Consulting from instructional designer and IT experts
- d) Revising and adjusting of commands
- e) Implementing and developing prototype and validation with instructional designer expert

Conclusion and Future Research

This paper has presented the design and development of a mobile learning application for young and adult learners. Our focus in this project was utilising documents and multimedia elements on mobile phone especially Youtube video to help young and adult learners learn more effectively about the business and professional development skills. Therefore, it is hoped that the future research on this study will be carried out for examining the effectiveness of this mobile learning application towards the young and adult learners. Since mobile learning is spreading rapidly and likely to become one of the most efficient ways of delivering higher education instruction in the future, it has become necessary to examine its implication for the design of teaching and learning. It is also essential for research on the effects and modes of mobile learning to investigate and explore the practice of this particular medium in terms of the instructional design theories of the past and to adapt such theories so that they can account for the unexpected number of changes that have taken place not only in education but in society in large. Therefore, designers and practitioners of m-learning should be responsible to produce more coherent and reliable accounts of the likely consequences of the creation of mobile devices in the higher education landscape. The proper design of the technologies leads to greater effectiveness of mobile learning. In addition, the various advantages and disadvantages of mobile instructional devices as tools of higher education should also be discussed in detail in future research.

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