MYKIDS PORTFOLIO

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DECLARATION

I hereby declare that this project report entitled

MYKIDS PORTFOLIO

is written by me and is my own effort and that no part has been plagiarized without citations.

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DEDICATION

This project is dedicated to my father, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time.

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ABSTRACT

Portfolio is considered as an instrument to record and evaluate the achievement, performance and ability of a student in school. With the growth of technology in social network, e-learning portfolio has becoming a trend to enhance parent-teacher communication in education field. In traditional education system, teachers are facing problem on sharing the latest information of the student to their parents or guardians, but in this modern world digital devices and apps have become ubiquitous in the lives of thousands of people around the world. The paper aims to develop an e-learning portfolio with ubiquitous computing to provide teachers and parents an intermediate to connect to each other through internet with smartphone device. A pilot study is conducted to identify the problem faced by parents and guardians, the analysed result will be used in develop the smartphone application. Thus, this application will be instrumental in enhancing the communication and relationship between educators and parents and monitoring the child development.

ABSTRAK

Portfolio dianggap sebagai alat untuk mencatat dan menilai pencapaian, prestasi dan keupayaan pelajar di sekolah. Dengan pertumbuhan teknologi dalam rangkaian sosial, portfolio bagi e-pembelajaran telah menjadi aliran untuk meningkatkan komunikasi ibu bapa dengan guru dalam bidang pendidikan. Dalam sistem pendidikan tradisional, guru selalu menghadapi masalah untuk berkongsi maklumat terkini pelajar kepada ibu bapa atau penjaga mereka, tetapi dalam dunia yang moden ini peralatan digital dan aplikasi telah bergabung ke dalam kehidupan beribu-ribu orang di seluruh dunia. Kertas ini bertujuan untuk membangunkan satu portfolio bagi e-pembelajaran dengan mengambil kira unsur kehidupan untuk menyediakan guru-guru dan ibu bapa perantaraan untuk berkongsi maklumat melalui internet dengan peranti telefon pintar. Kajian perintis telah dijalankan untuk mengenal pasti masalah yang dihadapi oleh ibu bapa dan penjaga, hasilnya akan digunakan dalam membangunkan aplikasi telefon pintar. Oleh itu, aplikasi ini akan memainkan peranan penting dalam mengeratkan hubungan antara pendidik dan ibu bapa dan memantau pembangunan kanak-kanak.

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LIST OF ABBREVIATIONS

PSM	-	Projek Sarjana Muda
NEXT	-	New Experiment Xtra Terrestrial
MKP	-	MyKids Portfolio
WP	-	Windows Phone
SDK	-	Software Development Kit

CHAPTER 1

INTRODUCTION

1.1 Project Background

Studying in school at this modern era can be daunting and fun period for children. It is the most important step in every student's life to prepare for the future. Kindergarten and pre-school are institution that allows children below 6 years old to learn vocabulary and language. But there is always one thing that parents and guardians are most concerned about, their children's performance at school. Academic progress report and talk to teacher will be most common way to know what happening around their children, but progress report only be distributed on certain periods while parents and guardians maybe facing time constraint and language barrier during the meeting with the teacher.

"MyKids Portfolio" is an application designed for teacher of Pre-school/ Kindergarten to make it easier to report the children's daily progress and activity to parents and guardians. This application allows teacher to input details of children's progress and activity into a well-structured form and send to parent or guardian via email and smartphone apps. Information includes the daily progress, performance, food intake, and photo of class activity.

1.2 Problem Statements

On the starting of this project, three problem statement have been identified on the current education workflow in the kindergarten are stated as below:

- Does not have any daily reporting system to parent and guardian. They care about what happening around their child, such as activity and homework done by their child.
- Lack of communication between teacher and parent on their kid's development.
- Parents are not update with their kids study activity

1.3 Objectives

The objectives of this project is to solve the problem mentioned in the problem statement.

- To update parents on their child development.
- To ease the process of monitoring the child development.
- To tighten the relationship between parent and teacher.

1.4 Scopes

"MyKids Portfolio" is an application developed in windows phone 8 platform, it is a technology in education which mainly to assist teacher to update the progress of the children to their parents and guardian. This application is using "Azure Mobile Service" as the cloud database to store all the information. The target users are parent with child studying in kindergarten, teachers or educators working in kindergarten and administrator to manage the general information such as announcement.

1.5 Project Significance

"MyKids Portfolio" is designed to assist teacher in kindergarten/preschool to input the daily progress of the children through a smartphone application. While on the other side, this application will update parents and guardians the study activity of their children. Teacher will enter the necessary information, such as daily progress, performance, food intake, and photo of class activity to the application, and these information will stored in a database in a systematic way. When the parents and guardians open the application on their smartphone, the application will retrieve and display the information of their children's progression. Administrator will be responsible to maintain the information of the portfolio and managing the user, school schedule, food menu and announcement.

This application will work as an intermediate for parents to monitor the kid's development and for teacher to share information with the parents. All the information stored at a cloud database, which user able to retrieve the data from anywhere with internet connection by anytime. At this point, this application can reduce the paper usage in making the daily report.

1.6 Expected Output

This expected to help the parents and teachers in early education.

1.7 Conclusion

In conclusion, "MyKids Portfolio" will lighten the burden of teacher and tighten the relationship between parents and teachers. Besides, parents and guardians will get updated with their kids study activity.

CHAPTER 2

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

Portfolio is considered as an instrument to record and evaluate the achievement, performance and ability of a student in school. With the growth of technology in social network, e-learning portfolio has becoming a trend to enhance parent-teacher communication in education field. In traditional education system, teachers are facing problem on sharing the latest information of the student to their parents or guardians, but in this modern world digital devices and apps have become ubiquitous in the lives of thousands of people around the world.

MyKids Portfolio is an e-learning portfolio developed with mobile computing to provide teachers and parents an intermediate to connect to each other through internet with smartphone device. In this literature review will explain the terms of portfolio, electronic portfolio, cloud database and mobile computing. A pilot study is conducted to identify the problem faced by parents and guardians, the analysed result will be used in develop the smartphone application. Thus, a comparison between existing applications on the market is conducted to show the differences.

Project methodology describes the approach used throughout in the project which consists the development processes in developing this application. The chosen methodology approach will be discussed in later part of this chapter.

2.2 Facts and Findings

2.2.1 Introduction of Portfolio

"A portfolio may be defined as a purposeful collection of student work that tells the story of a student's effort, progress and/or achievement in one or more areas." (Arter and Spandel, 1992; MacIsaac and Jackson, 1994). The purpose of a portfolio can differ based on the type of the portfolio, Danielson and Abrutyn (1997) found three type of portfolio includes working, showcase, and assessment. Working portfolio is a document that used to record the on-going progress of children at school, while showcase portfolio is aimed at demonstrate the best achievement of a student and assessment portfolio is used to evaluate the specific curriculum goals and objectives that the student has met.

Lorenzo and Ittelson (2005) stated that:

> E-portfolios are a valuable learning and assessment tool. An e-portfolio is a digitized collection of artifacts including demonstrations, resources, and accomplishments that represent an individual, group, or institution. This collection can be comprised of text-based, graphic, or multimedia elements archived on a Web site or on other electronic media such as a CD-ROM or DVD. An e-portfolio is more than a simple collection - it can also serve as an administrative tool to manage and organize work created with different applications and to control who can see the work. E-portfolios encourage personal reflection and often involve the exchange of ideas and feedback.

Today, with the abilities of electronic devices, digital or electrical portfolios can be developed and stored effectively. Electronic portfolio (e-portfolio) provides a means for storing and processing large amount of information at a same time and to classify, organize and illustrate the material effectively. Multimedia materials such as hyperlinks, photo and videos can be integrated in the portfolio easily, this may be useful in reflect the performance of the children. Besides, compared with file folder and a ream

of paper, electronic portfolio that saved in digital format has made it easier to share between teachers and parents through internet and electronic media. Therefore, it can improve and enhance the communication and relationship between teachers and parents or guardians.

On this study will focusing on the development of electronic working portfolio of children attending pre-school and kindergarten with the following aspects:

- Child development.
- Process of monitoring the child development.
- Relationship between parent and teacher

2.2.2 Why E-Learning Portfolio and Mobile Computing?

Asoke K. Talukdar (2010) mentioned:

> Mobile computing can be defined as a computing environment of physical mobility. The user of a mobile computing environment will be able to access data, information, or other logical objects from any device in any network while on the move.

In a nutshell, mobile computing can let user to get access to all kind of information includes personal information through the network at anywhere and anytime. As the portability is the key criteria in this environment, devices such as PDA, smartphone, tablet and wearable technology are involve in mobile computing environment and wireless networks are used to convey the information.

As we all know, learning process of children has always been the concern of the parents and guardians. Electronic portfolio encourages interaction between parents and teachers, used as a tool for student to reflect on their performance, achievements and accomplishments, and allow displaying the on-going study progress of the children.

Therefore, a solution of e-learning portfolio with mobile computing will allows parent to understand their children study process by anywhere at any time through internet network. There are a few types of solution found in the market and it can be

roughly classified into two categories: web-based and apps (for smartphone and tablet).

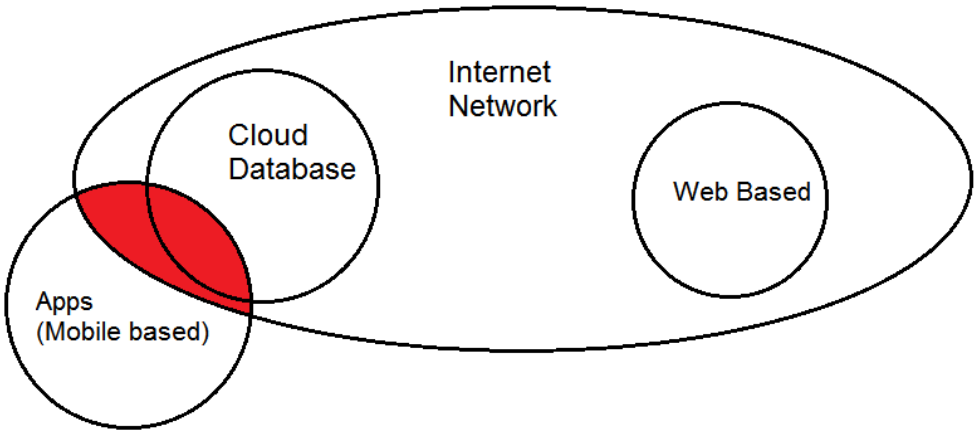
Web based e-learning portfolio is designed in web platform that to be access through an internet browser via any electronic devices. It is being developed with various technologies which can separate into client-side coding and server-side environment. The client side will showing the information requested from web server such as the their children's demographic information, transportation schedule, attendance activity, reporting period grades and class schedules by using a computer and a browser. While on the server side, it will perform the information fetching from the database based on the client's request. Therefore, it is totally platform independent where you can use this service at any computer operating system e.g. MacOS, Windows and Linux. On the other hand, in order to use web based e-learning portfolio, user must use computer with internet browser, so this can be the disadvantage of this solution as it may become a burden for user to have or to find both computer and internet connection and arises the availability problem.

App based e-learning portfolio is an application that solely designed for smartphone platform. There are few types of smartphone platform can be found in the market includes Android, iOS, Windows Phone, Blackberry and Symbian. App based electronic portfolio provides functions to display the necessary information to the user and store the record inside the phone. Besides, it can integrate with the camera and microphone function in the phone allowing user to take photo and record audio. Furthermore, apps on smartphone make it easier to publish or share the portfolio over the internet without needing of the computer and can be done at anywhere. The drawback of apps will be platform dependent, because of different platform are operate in different manner, so a apps cannot install directly into another platform without changing the inside coding of the apps.

In this study, an App based application system for electronic learning portfolio with combination of several technologies will be developed. MyKids Portfolio will be built under platform Windows Phone 8 with the using of internet network to connect to a cloud database. Figure 1 below shows a diagram further explains on this statement. With the internet access, MyKids portfolio application will synchronize with the cloud database service to store and retrieve information to the phone. The information inside

portfolio includes food intake, classroom schedule, learning progress and curriculum syllabus. Besides, it also allows user send these information through email service.

Figure 1: Technologies used



2.2.3 Motivation

A pilot study had conducted to identify the problems of current children's progression report and the needs of e-learning portfolio for the early education.

A total of 40 respondents have participated in this questionnaire. Table 1 below shown 22.5% or 9 respondents are having only one child while 32.5% or 13 respondents are having 2 children which is the highest. 10% or 10 respondents and 17.5 or 7 respondents are having 3 children and 4 children respectively. And the remaining 2.5% or one respondent is having more than 4 children.

Table 1: Number of child

Number of child	**Total**
1	9
2	13
3	10
4	7
Above 4	1
Total	**40**

From table 2 below, we can see that 87.5% or 35 of the respondents are preferred to have their child's progress report through electronic device; it is the highest among the result. While 5% or 2 respondents like to have email type of progress report and

2.5% or only one respondent wish to have a paper type of report. The remaining 5% or 2 respondents choose to have other type of report.

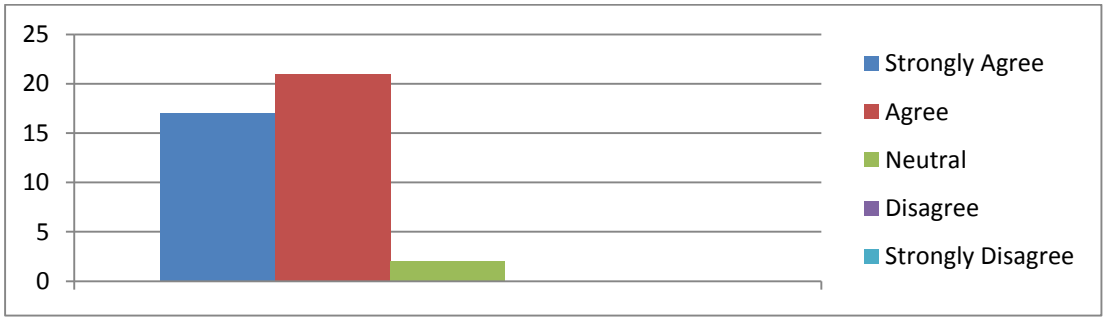
Table 2: Type of progress report

Type of progress report (preferred)	Total
Email	2
Paper	1
Through Electronic device	35
Other	2
Total	**40**

Below will briefly discuss about the result of some chosen questions

1. Would you find it helpful in the current report in kindergarten?

Figure 2: Chart of is it helpful in current report



The figure 2 above has shown the opinion of the respondents toward the question "Would you find it helpful in the current report in kindergarten?". 42.5% of the respondents strongly agree that current report in kindergarten is helpful. 52.5% of the respondents agree for the statement while 5% of the respondents stay neutral on the statement and no respondent disagree or strongly disagree that current report in kindergarten is helpful. From the result we can see most of the parents found that it is helpful in the current type of progress report.

2. Do you prefer to have an application in smartphone to check your children daily report?

Figure 3: Chart of smartphone app type of report

As the chart shown, 47.5% of the respondents strongly agree to have an application in smartphone to check their children daily report and the remaining 52.5% agree with the statement. It is clear that the parents are wishing to have an app on hand to check their child daily report since none of the respondent disagrees on the statement.

3. Would be convenient to read children report on smartphone?

Figure 4: Chart for convenient of portfolio in smartphone

From the result showing on the chart above, we can conclude that it is more convenient for the parents to check their child's report on the smartphone. 40% and 60% of the respondents are strongly agreed and agree with the statement respectively and none of the result is pointing to the categories disagree and strongly disagree.

Based on the pilot study conducted, the finding shows type of progress report in kindergarten is strongly concerned by parents. Every parent is eager to have a type of report that can be accessed anytime with their smartphone or other electronic device. This conclusion is based on the findings from the pilot study.

2.2.4 Related Work

Foliotek is a web based e-portfolio system designed for either individual or school. The founder of Foliotek is Christopher M. Miller which started in 1989 as an information system solution provider. Students using Foliotek can have three type of portfolio includes assessment, scrapbook and presentation portfolio. These portfolios can help student to evaluate their skill, document their achievement and demonstrate their accomplishment. Educator could configure the system to the need of the education syllabus as to ease the process of evaluation, reporting and collecting information. It is designed by educators and developed using C#, Javascript, jQuery and Microsoft SQL server. Besides, Foliotek also providing cloud database as storage for all of the documents. The price for educator or academic is USD $40 per portfolio owner with 500MB online storage space where the evaluator or administrator account is free, as for the individual or student the price is USD $19 per year with 250MB online storage space.

Similarly, Chalk and Wire is a web based e-portfolio system which founded in 1995 by a group of educators and IT specialist at the Communications Research Centre in Ottawa. Students and leaners can build their own portfolio to show their reflection on assignment and giving function to receive feedback from educator or teacher or assessors, all their work will keep in the database to showcase after graduated. Chalk and wire provide teacher and assessors the streamlined evaluation processes and function to giving feedback. Administrators are able to configure the system to meet their goals and objectives. Besides, accreditation report can be created by analysing the data in the database. The costs for hosting Chalk and Wire is USD $46 per user or student every year and the administrator accounts with assessment function are free of charge.

On the other hand, LinguaFolio is an online e-portfolio designed for student to help them document, evaluate and describe their languages skills in order to facilitate their articulation. This system will collect the previous learning experiences of leaner to recognize the needs for setting the learning gaols for them. It will connect US standards and guidelines accepted by Common European Framework of Reference for Language (CEFR). LinguaFolio can help to characterize their language programs and

serve as evidence in language learning processes. LinguaFolio is a free language portfolio over the internet.

Alternatively, ePortaro is another web based e-portfolio system that enables the portfolio owner to establish the work, skill and mastery in portfolio and publish it over the internet. One of the feature of ePortaro is able to support multiple languages for the counsellors, mentors and educators. For students, ePortaro provides the function to create portfolio that can reflect their skill and achievement, function to publish the portfolio and collaborate on shared projects or documents. ePortaro giving faculty members the feature to track students' information and document, to evaluate and feedback on shared documents and to organize own achievements, artefacts and research materials.

Likewise, Data180 provides an integrated suite of web based e-portfolio that designed especially for academicals use. Data180 let students to create their own e-portfolios and e-resumes with help in assure the quality of curricula and courses, and provides job search function and curricula transcript for them. As for faculty, they can use this system to collect the assessment data and to eliminate the duplicated data in database, and create self-evaluation statistics based on the submission of the students. Data180 provides the school with function of creates standardized reporting for annual faculty review, decision support to manage faculty resources, documents assessment of learning, generate accreditation and other external reporting.

Easy Portfolio is a powerful and easy to use e-portfolio to record the learning process. It is an app based system that can include various type of files including audio, video, photo, documents, web link and notes. Teachers and students can use it to capture their work for the purpose of showcasing their progression in learning. Easy Portfolios provide feature to share own portfolio with other people through email or saving it online by using Dropbox or Google Drive. The portfolio can be used as learning evidence for assessment and to monitor the behaviour and learning progress of a student.

Correspondingly, Educa is a web based e-portfolio system founded by Nathan Li, the current chief executive officer of the company. Educa is designed especially for