ENGLISH LEARNING APPLICATION FOR

SLOW LEARNER

NURUL NAQIYAAH BINTI OMAR

BACHELOR OF COMPUTER SCIENCE AND SOFTWARE ENGINEERING

(GRAPHIC AND MULTMEDIA TECHNOLOGY)

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I declare that this thesis entitled "English Learning Application for Slow Learner" is the result of my own research except as cited in the reference. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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DEDICATION

I'm thankful to Allah S.W.T..

I'm dedicated this precious and meaningful moments to:

To the one who always give full support and gave helps as much as they can, my beloved parents.

To the person who always guiding and the one who I always look up to, my supervisor, Puan Ku Saimah binti Ku Ibrahim.

To all of my friends and lecturers, who always tried their best to give helps and support.

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I would like to extend my gratefulness to the other persons who directly or indirectly involved with my final year project.

ABSTRACT

English language usage in our country is almost equally to national language which is Malay Language. Various learning methods had been created and one of it is learning application but the application is limited and rarely found in nowadays market. ELASL is a study to developed English learning skills for slow learner patients. ELASL help the Slow Learner to develop the skills by providing an attractive and interactive learning application with complete elements of multimedia with simple navigations and easily understand instruction. ELASL is developed in order to overcome the problem which is there not many multimedia learning resources for slow learners.

ABSTRAK

Penggunaan bahasa Inggeris di negara kita adalah hampir sama dengan bahasa kebangsaan iaitu Bahasa Melayu. Pelbagai kaedah pembelajaran telah diwujudkan dan satu daripadanya adalah aplikasi pembelajaran tetapi aplikasi adalah terhad dan jarang ditemui di pasaran pada masa kini . ELASL adalah satu kajian untuk membangunkan kemahiran pembelajaran Bahasa Inggeris untuk individu yang dikenali sebagai 'Slow Learner'. ELASL membantu 'Slow Learner' untuk menambah kemahiran dengan menyediakan aplikasi pembelajaran yang menarik dan interaktif dengan elemen-elemen multimedia dengan navigasi yang mudah dan arahan yang senang untuk difahami . ELASL dibangunkan untuk mengatasi masalah yang ada kerana kekurangan aplikasi pembelajaran untuk 'Slow Learner'.

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CHAPTER 1

INTRODUCTION

1.0   Introduction

Interactive learning application is a platform approach that incorporates both social networking and urban computing into course design and delivery. The use of interactive technology in learning for these students is as natural as using a pencil and paper were to past generations.

English Learning Application for Slow Learner (ELASL) is an application that teach basic English lesson to the people that been considered as slow learner. This application contain basic lesson such as alphabets and numbers. ELASL is developed especially for the group of slow learner students. ELASL is also suitable to use to help little kids that attend kindergarten.

This application also contained exercises to test the user knowledge of English. The difference between this courseware and textbook is the learning environment which student can have more fun and interesting learning session using this interactive learning material. ELASL can be use by the teachers and parents as they can evaluate the user's performance through the exercises and quizzes provided. The student can do the exercises many times as they want until they understand the entire lesson.

Slow learner have the characteristic where they were slow in walking or talking and are known to not be able to perform to their level of intelligence level. Slow learners are also having problem in reading and solving problem. This group of people usually quiet, shy and hard to adapt with their surroundings and make them lost their self esteem [4, 8, 9].

One of the common characteristic that can be seen in slow learner is poor memory where they lack of concentration in learning something. Most of the slow learners prefer concrete learning than abstract learning[4,8,9].

1.1   Problem Statement

Interactive learning application for slow learner is hardly found in market nowadays ad the application is basically specified for normal students. There are several applications that are specified developed for slow learner but it is based on learning mathematics lesson and English learning lesson application is less developed and can't easily found in market.

The slow learner usually attracted to a fun and interesting learning environment. Most of the online learning application lacked of this features and the interface of the application mostly are very crowded so it will confuse the user and they also might lose the interest to study. The application with cheerful background music, colourful pictures with simple and suitable navigation button will attract the user to learn.The condition of slow learner is different with normal student. The abstract thinking is difficult for slow learner as their attention span is short[4, 8, 9].

ELASL help to overcome this problem by providing the attractive learning material to help the user to give their concentration to the learning session. For example, by applying the animation and use fun background music in the application. The navigation buttons are provided with sound to make the user understand the flow of the application. Besides that, all the instruction is also provided with voice instruction.

1.2 Objective

The objectives of this project include: -

i-   To develop an interactive learning environment for slow learner
ii-   To increase and improve English language skills for slow learner
iii-   To apply simple and fun lesson for slow learner

1.3 Scope

a. User

The scope of user for this application is strictly to the user of application which is slow learner. This learning material is developed where user can use anytime and everywhere as their guidelines. Besides, user can use this as their references along the travelling. The user scope for this application includes:

- Slow learner
- Teachers or Tutors
- Parents

b. Software/Hardware

The software that uses to develop this system is Adobe Flash CS5 and Adobe Photoshop. The tools that had been provided in Adobe Flash CS5 is good for developing e-learning. The platform to run this application is Adobe Flash Player and only can be run on computer or laptop. The computer or the laptop is chosen as platform to run the applications because most of the slow learners do not have the skills use other devices other that computer or laptop as the devices can be considered as common devices.

c. Modules

The modules provided in the lesson are simple and easy basic lesson to learn. The alphabet modules contained all the alphabets from the letter A to the letter Z meanwhile numbers contained number one to ten. These modules had been chosen because it is the basic lesson that suitable for kids below 12[11].

1.4   Thesis Organization

This thesis consists of this project have six chapters :

Chapter 1was the discussion and elaboration about the introduction of the courseware. The purpose of chapter 1 is to briefly explain about the development of the overview application. This chapter contained three subtopic which is problem statements, objectives and the scope of the study.

Chapter 2 is the discussion on literature review of the project that had been choosen. The research is divided into two part which are for the current application or case study and research of existing system.

Chapter 3 is the discussion of the research methodology that will be use in developing the system.This chapter will be briefly explain about the the techniques,algorithms and related software that will be used for the project development. Besides that, it wil also discuss about the process flow in detail of this research.

Chapter 4 is the discussion of the research design and implementation. This chapter will briefly explain about the application architectures that contained the design of interfaces and flow of the system.

Chapter 5 is the discussion of the result and findings of the research where all the result analysis and the result of user acceptance test had been explained in detail.

Chapter 6 is the overall conclusion of this research.

1.5   Conclusion

Based on the introduction above, we can conclude that a fun and interactive learning environment play an important role in attracting students to learn. We identify the problem statement from this project and make an objective.

CHAPTER 2

LITERATURE REVIEW

2.0   Introduction

This chapter explains about the description of literature reviews based on analysis conducted on the currently available English learning courseware applications. There are several examples were taken for the analysis and those applications are currently utilizing by users especially slow learner and parents all around the world to enhance and increase their knowledge on English. There are also addition to this chapter where this chapter also will explain about the software and hardware needed for implementation and development of this project. For the comparison between the new develop system with the previous or existing system, both web based application ad mobile based application were selected and eventually in developing project application.

2.1   English Interactive Learning for slow learner

2.1.1   Interactive Learning

Interactive learning is any type of schoolwork or academic plan that uses computer technology to emphasize or to teach specific materials. Interactive learning occurs when a student puts together knowledge and skills by connecting with information and experiences provided by the teacher. The student is engaged both intellectually and emotionally in interactive learning. Feedback, reflection and dialogue are integral components of interactive learning. In other similar terms, Interactive Learning is a pedagogical approach that incorporates social networking and urban computing into course design and delivery. Interactive Learning has evolved out of the hyper-growth in the use of digital technology and virtual communication, particularly by students.

2.1.2   Slow learner

Slow learner is a group of people that having a problem in learning process. This kind of people needs specific learning lessons that help them to learn things [5]. They need to repeat the learning lesson until they successfully remember what they learned and apply what they learned in their daily life[7]. Slow learners can be identified throughout several characteristics which is[9]:

    i.   Short attention span and concentration

    ii.   Slow reaction time

    iii.   Failed to recognizes familiar elements in new environment

    iv.   Lack of originality and creativeness

    v.   Lack of power to use the higher mental processes.

    vi.   Learn something slowly and tends to forget something quickly

2.1.3 English Language

English language had been widely used all around the world and also known as the main interaction language all over the world. In Malaysia, English is the second main language that had been used to interact within the multiple races beside Malay language. Thus of this situation, English language had been selected from one of the most important subject for students from pre-school to university level.

2.2 Learning theory

They are many types of learning theory. The learning theory that will be applied in this application is compensatory teaching. Compensatory teaching is an approach that used presentation of content to circumvent a student's fundamental weakness or deficiency [3]. Compensatory teaching recognizes content, transmits through alternate modalities (pictures versus words), and supplements it with additional learning resources and activities (learning centres and simulations, group discussions and co-operative learning). This may involve modifying an instructional technique by including a visual representation of content, by using more flexible instructional presentations (films, pictures, illustrations), or by shifting to alternate instructional.

2.2.1 Rules for developing application for slow learners

I.   Develop lesson that attract user's interest, needs and experiences
     This application should match with user's interest and make the user feels that this application had been specifically develop based on their interest. This rule also helps the user address the short span attention of slow learners.

II.   Incorporate individualized learning materials

Programmed texts and interactive computer instruction often are effective in remediation of basic skills of slow learners. In addition, an emphasis on frequent diagnostic assessment of the student progress, paired with immediate corrective instruction, often is particularly effective.

III.   Incorporate audio and visual materials

One common characteristic among slow learners is that they often learn better by seeing and hearing than by reading. Incorporating films, videotapes, and audio into lessons helps accommodate the instruction to the strategies learning modalities among slow learners. Emphasizing concrete and visual forms of content also helps compensate for the general difficulty slow learners have in grasping abstract ideas and concepts.

IV.   Develop worksheets and exercises

Text books and workbooks might be difficult for slow learner to learn something. Developing own worksheets and exercises are the best way to overcome this problems. The exercises based on games such as puzzles and picture and words matching can attract the user's attention.

2.3   Existing Application

There are several applications that can be found in the market nowadays. There are advantages and disadvantages that can be seen in the applications. All the application are generally for normal people and not specially for slow learners which make the application for slow learners are less found in market.

2.3.1 Edu Kids English Learning Game

This application is a free, effective and fun way of learning and spellings to builds English Words for all ages of Toddlers, Kids and User up the age of ten years old. This application is kind of similar with the style of the world famous 'flappy bird' game style but this is different in functionality which is this application is designed and developed to teaches the user to learn the basic English vocabulary. The features that are available in this application is that the developer had used the beautiful colour background to attract the user attention to focus in learning English. The option to change the background also can be said one of the special features in this application.

Figure 2.1 Alphabet Menu

This application consists of 26 alphabetical levels which the user had to collect coins in each level to increase their score. The developer also uses the alphabetic sounds when they collect any letter balloon accordingly.

Figure 2.2 Edu Kids Menu

This application consists of three main menu which is Play, Missions and Settings. The background use for this interface is mostly easily attracting the kids to play. One of the games provided in this application is Build Letters where user can select the alphabet in the balloon to spell the given words.

Figure 2.3 Edu Kids Games

i.   Advantages

1) The design if the interface is simple and attractive and the provided navigation is user friendly and simple as it will not confuse the mind of the kids.

2) The feature that provided is mostly suitable for kid's level of knowledge.

ii.   Limitations

1) No database provided for kids to save their previous score and to make the comparison between new score and previous score

2) There is no corrected answer to the false answer as reference for kids to make correction.

2.3.2 Learn English Kids Language (Mobile based system)

This application is an English educational game for kids and had simple and fun learning environment as its main objective is to help the kids in the process of learning the words in English through the association of each concept with its written words, images and pronunciation. The application had been developed by the expert educators who adapted the learning methodology to the tablets and smart phones so that kids can enjoy the process of learning. Learn English Kids Language is actually an educational game where kids can see the image of a character or an object and the pronunciation of its names thus they can quickly associate both and learn to speak properly.

Figure 2.4 Learn English kids Language main interface

There are 12 different stages or landscapes and 115 characters where the kids will have lots of stuff to learn vocabulary in English. It also contained its own child songs and lot of sound.
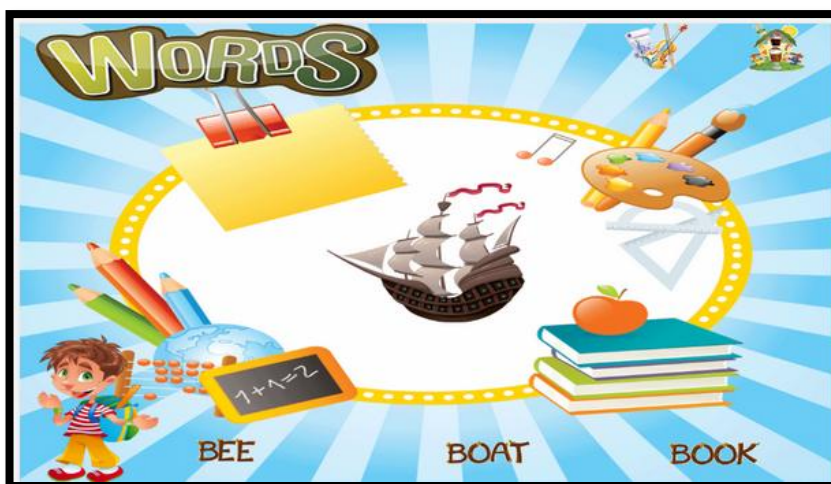
Figure 2.5 Learn English Words game

i. Advantages

1) The content is based on the educational syllabus and suitable and appropriate with user level

2) The media elements of the element are suitable to attract the kids to learn and help them to focus in study. The attractive interface also help the kids to gain a strong memory of what they learn.

3) The provided user songs will gain more attention and interest from the kids to practice in the pronunciation.

ii. Limitation

1) The appropriate exercises or revision is not provided as the application is more to games

2) There are no activities like quizzes or other activities like fill in the blank for kids to test the knowledge ability.

2.3.3 English4 – Kids by Kisito Futonge (Web based application)

English4-Kids is an application that provided the good and appropriate learning materials for English. The features content of this application is Lessons, Worksheets, games, tutorials, PowerPoint and flashcard which bring benefits to both students and teachers. Besides that, this application provided other additional features like teaching tips for parents and teachers, lab activities for the students, learning materials to download and others.

Figure 2.6 English 4-kids main interface

i.   Advantages

1) There are a lot of learning materials provided and it can be used by many parties like teachers, parents and students.

2) The contents are divided according to topics and school syllabus.

3) Many options of learning materials are provided and it is suitable to use whether in school or at home.

ii.   Limitation

1) The user interfaces are not very suitable for kids to use as the navigation buttons and menus are not easy for kids to understand.

2) There are many other links to other websites as it can confuse the kids.

3) There is no login function where the user cannot create their own account for this web application.

2.3.4   Pumkin Online English Learning Language Course for User

Pumkin Online English Learning Language Course for User is developed based on its main objective which is to make English learning are more fun and easier by maintaining the educational standard. This online learning course is developed directly from the classroom where it is structured properly to create an effective and engaging learning experience for kids. This application contains online tutorials, flashcards, cartoons, videos and songs to engage the kid's attention.

Figure 2.7 Pumkin Online English Learning Language Course for User main interface

i.   Advantages

1) There is login function provided for user to create their own account.

2) Daily reports are provided for teacher and parents to compare and keep up-to-date with kid's knowledge.

3) The virtual world concept is used in this application which is good to attract the attention of kids.

4) Various languages are provided so user can choose the language to learn the English.

ii.   Limitation

    1) There is no database used as the daily report can't be saved and to be review in next days

    2) The application only focused on activities like games and it's lacked typing and writing skills exercise.

2.3.5   Table comparison of existing systems

Table 2.1 Comparison table of existing system

	User friendly interfaces	Suitable contents	Database connection	Contain five element Of multimedia
Edu Kids English Learning Game	Good navigation Simple and tidy arrangement of menu	Providing suitable content for user like simple English word that can be easily understand	There is no database provided	Contain background music, attractive text and animation.
Learn English Kids Language	Easily understand of navigation and simple background interfaces	Simple English words and fun exercises	There is no database provided	Contain animation, sound and text.

Pumkin Online English Learning Language	Easily understand of navigation and simple background interfaces	Simple English words and fun exercises	Database is provided to store the username, password and score.	Contain animation, sound and text.
Learning English application for slow learner user	Easily understand of navigation and simple background interfaces	Simple English words and fun exercises	There is no database provided	Contain animation, sound and text.
English4 – Kids	Easily understand of navigation and simple background interfaces	Simple English words and fun exercises	There is no database provided	Contain animation, sound and text.

ELASL contained all the five element of multimedia which text, audio, image, video and audio that make this application attractive and interesting. The navigation of ELASL is easy to understand as it is simple navigation. The voice instruction and video tutorial will help the user to understand what they need to do especially the exercises.

2.4 Software and Hardware required

2.4.1   Software

i.   Adobe Flash CS5

Figure 2.8 Adobe flash CS5

Adobe Flash CS5 is a multimedia and software platform to developing various types of applications such as games, learning courseware application, online learning application and more. Flash manipulates vector and raster graphics to provide animation of text, drawings, and still images.

ii. Adobe Photoshop CS5

Figure 2.9 Adobe Photoshop CS5

Adobe Photoshop is a software provide graphic designing purposes, the use of this software will be utilized the development of the interface and other graphical features that will be included in the 3D courseware.

2.4.2   Hardware

i.   Acer Aspire 4752

Figure 2.10 Acer Aspire 4752

Acer Aspire 4752 is a personal desktop that can use in graphical editing and creating process because of the higher specification provided and advanced technology of processor and others had been put together in one set. The Acer Aspire 4752 features is:

- Processor: iCore3
- Display: HD LED screen
- Intel HD Graphics 3000 graphic card
- Up to 2GB DDR memory and 500 GB HDD

CHAPTER 3

METHODOLOGY

3.0   Introduction

This chapter is the will be the discussion and explanation of methodology that will be used in the development process of this project. Methodology is usually a guideline system for solving a problem with the specific component. For example, phases, tasks, methods, techniques and tool. There is a lot of methodology techniques to help the developer in developing the project.

The methodology had been discussed and ADDIE methodology had been chosen as a guideline to develop the project. ADDIE methodology had been commonly used in the development of courseware applications. The software and hardware requirements for the project development will be discussed in this chapter.

3.**1**   **Methodology for English Learning Application for slow learner (ADDIE)**

The method that had been decided is ADDIE methodology. The ADDIE model is a framework that lists generic process that instructional designers and training developers use. It represents a guideline for building effective training and performance support tools. ADDIE Methodology is also known as Instructional System Design (ISD). This methodology is commonly used in online learning application development as is it easy used and understand. This method is consist of five different phase which is Analysis, Design, Development, Implementation and Evaluation. Every phase must be completed and done before it can move on to the next phase.
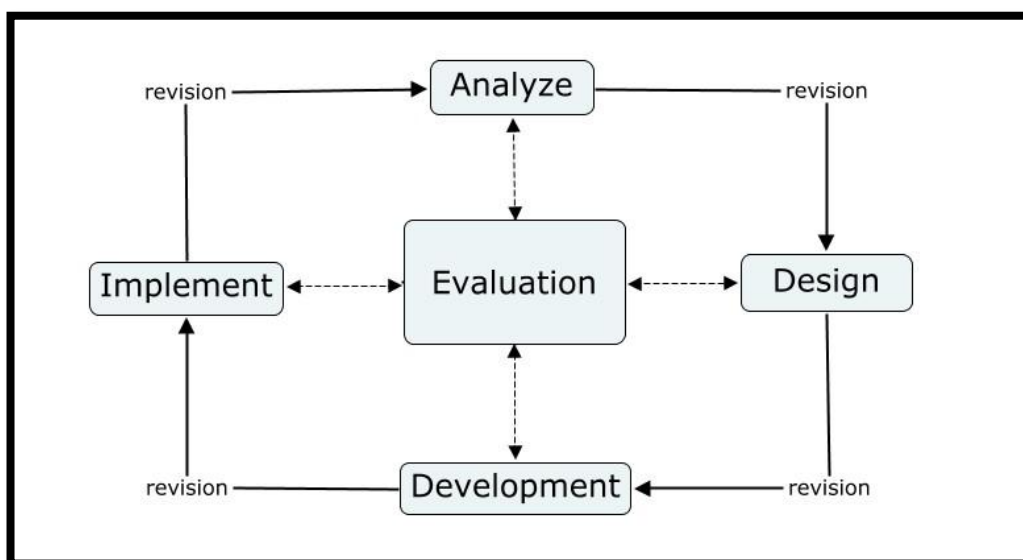

Figure 3.1 ADDIE Methodology Process

3.1.1 Analysis Phase

Analysis is a phase where the developer clarifies the instructional problems and objectives. All the data and requirements had been gathered and analyzed. The data that had been gathered were the objectives to support the development of this project, the problems and the related information of Interactive Learning and English learning materials that had been use in the teaching system. The related information about the interactive learning and English materials is gathered in order to help to understand more about the system. The methodology that will be used to develop the system also had been identified throughout this phase which is ADDIE. The software and hardware for the development are indentified and were shown as below.

a. Software Requirements

Table 3.1 List of software requirements use in the system

Item	Name	Purpose
Operating System	Windows 7	As a platform and based that supported the software that had been used to develop the system.
Software	Adobe Flash	To design and create multimedia elements that will be used in the system.
	Microsoft Word 2007	Help to do the documentation of the system
	Microsoft PowerPoint 2007	Help to do the presentation of the system
	Adobe Acrobat Reader	As a platform to read journal and article from internet.
	Adobe Photoshop CS5	Help to edit and create required images.

b. Hardware Requirement

Below are the hardware requirement needed to develop the system:

Table 3.2 List of hardware requirements use in the system

Item	Minimum Requirement
Processor	Intel® Core i3-2350M@2.3GHz, 3MB L3 cache
RAM	2 GB DDR3 Memory
Graphic Card	Intel® HD Graphics 3000
Hard Disk	500 GB

3.1.2 Design Phase

In this phase, a lot of process involved like identify the learning objectives, the assessment instruments, exercises, content, subject matter analysis, lesson planning, and media selection. All the learning equipments are the Basic English learning materials. Below is the flowchart on how the system will run.
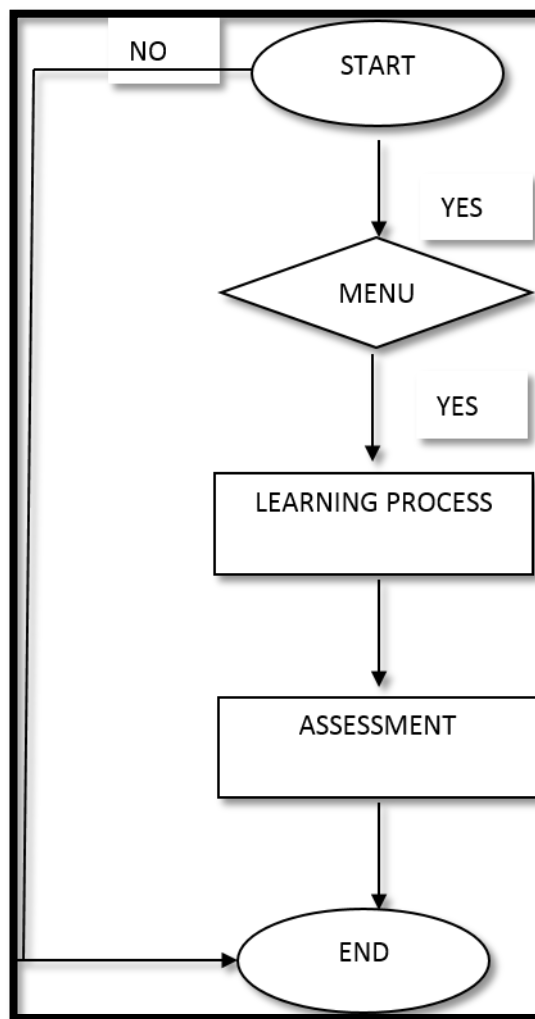
Diagram 1. English Learning Application for Slow Learner User flow diagram

 Storyboard

Below are the storyboards on how the system will run

....

Project: English   Learning   Application   for   Slow   Learner

Date:

....

Screen: 1 Screen description: home page

Links   from   screens: none

Links to screens: Menu/Register

....

functionality/interactivity: user sign in to the system

....
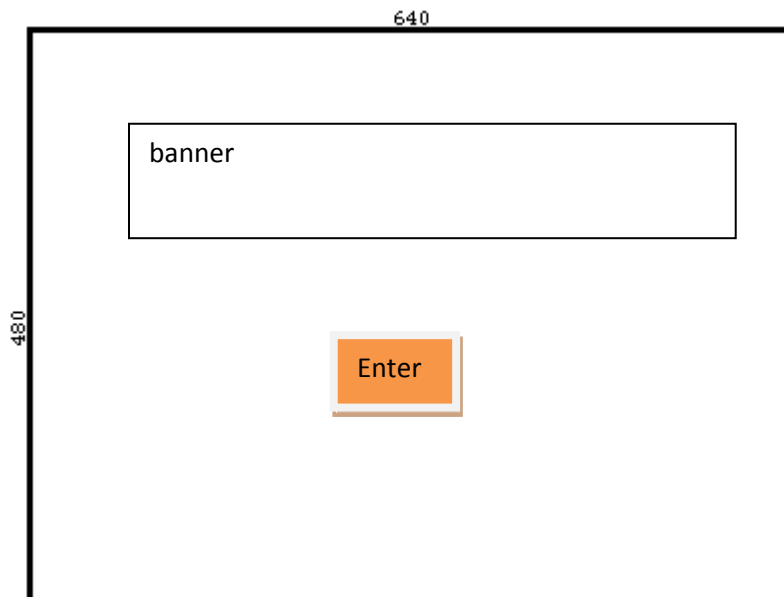
Project: English Learning Application for Slow Learner

Date:

....
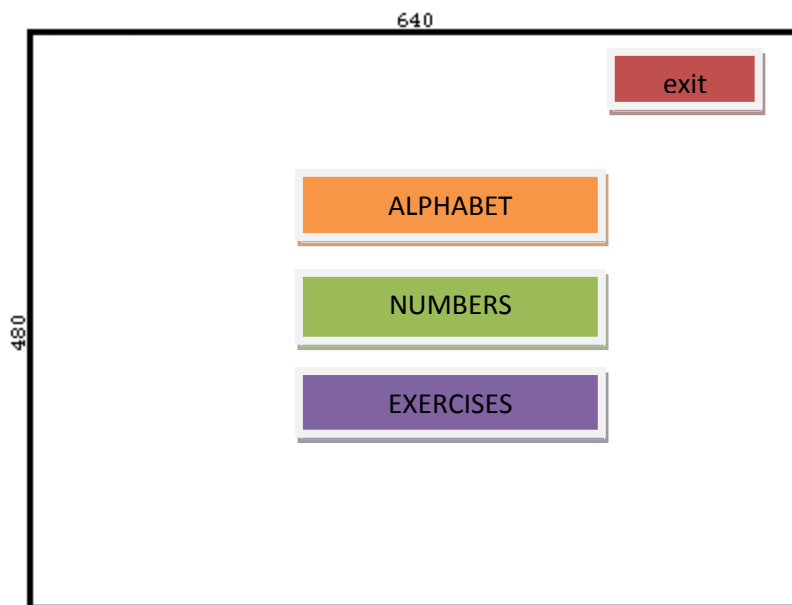
Screen: 2 Screen description: Menu page

Links   from   screens: Home

Links to screens: Lesson/ Assessment/ Videos

....

functionality/interactivity: User choose the menu based on what they want

....

Project: English Learning Application for Slow Learner

Date:

....

Screen: 4 Screen description: Exercise

Links from screens: Menu

Links to screens: level page

....

functionality/interactivity: User choose the menu based on what they want

....
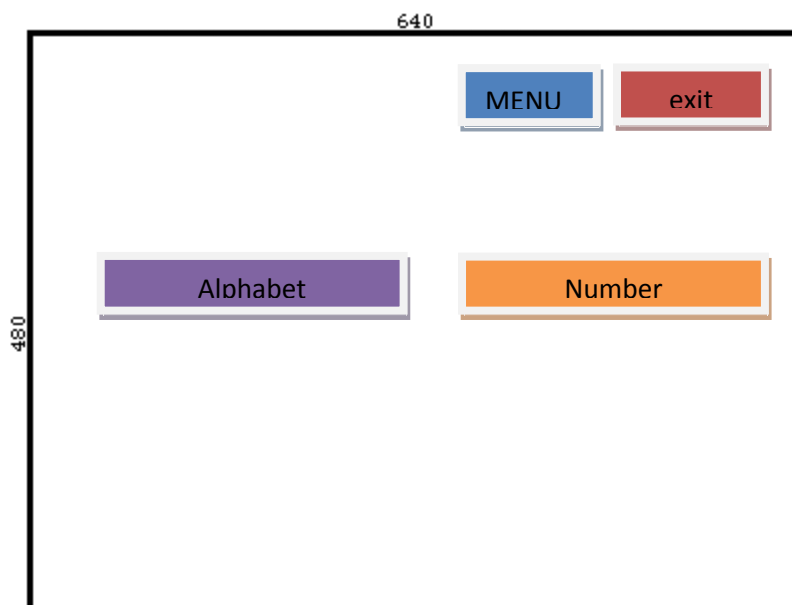
Project: English Learning Application for Slow Learner

Date:

....
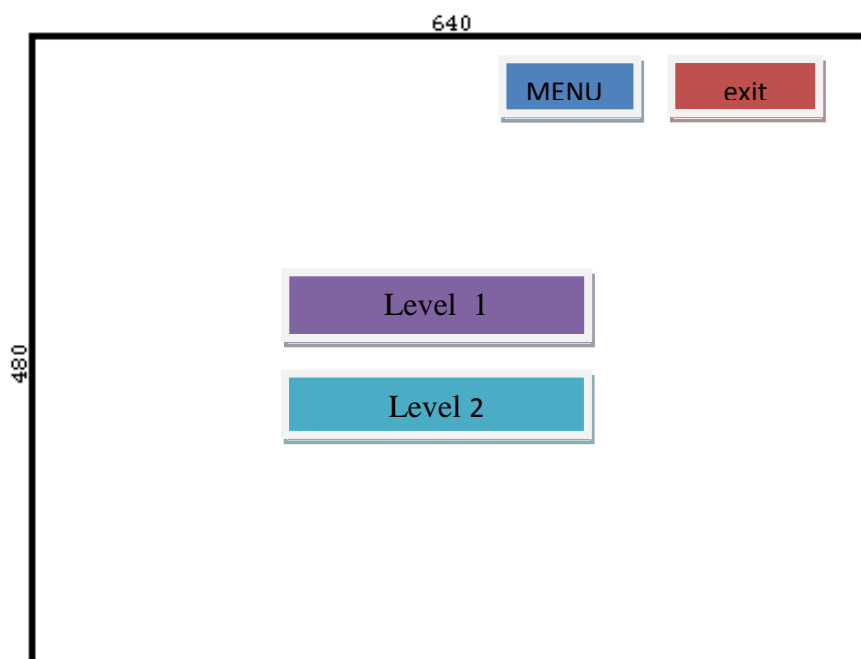
Screen:5   Screen description: level page

Links from screens: Alphabet exercise/ number exercise

Links to screens: level 1/ level 2

....

functionality/interactivity: User   choose   the   menu   based   on   what   they   want

3.1.3   Development Phase

This phase played big roles in implementation the system. During this phase, the prototype had been developed. Through this phase, the interfaces of the system that had been sketch from the design phase will be create using the Adobe Dreamweaver and the navigation and other functions will be implementing in this system by using Action Script 3.0.

3.1.4   Implementation Phase

T   his phase is basically important that we need to develop procedure for training facilitator and users which is slow learners, teachers and parents. In this phase, the application will be test whether it is function perfectly based on the procedures.

3.1.5   Evaluation Phase

Evaluation phase basically a phase where the user or other party (tester) evaluate the project from different kinds of perspectives. In this case, the students and teachers will be the tester. This phase also to determine whether the project had been achieve the objectives or not before the project been fully develop and launch. This phase play an important role in the beginning and the end of the process. The discovery of the evaluation objectives reflect much and can be found on the Analysis process that included the objectives ad expectations from the learner or user. From all the phase in ADDIE methodology, the evaluation phase is the least phase to understand by the developers.

CHAPTER 4

DESIGN AND IMPLEMENTATION

4.0   Introduction

This chapter will discuss about the design and the implementation phases where the interfaces are develop with the implementation phases where the navigation is added to run the system. This system contains three main menus which is Alphabet, Number, and exercises. The Alphabet and Number is the basic English learning part that contain attractive animations and images while the Exercises is where the user can do the assessment in order to test the how much the lesson provided help to develop the English skills among the user.

4.1   Application Development Environment

This subchapter will explain about the application development environment. The topic that mostly will be discussed the important things that needed to development the application.

4.1.1   Initialization of development

There are several files that important to complete information for developing this application which is SWAF (.swf) files, and Flash Documents (.fla). The Flash document is considered as a platform where developers use to do the multimedia and graphic authoring in flash project. This type of files can only be open in flash application as it is specific format files for this project. To deliver the flash files, the SWAF (.swf) is the format that had been commonly used in this activity. This file only can be open in flash media player and this file is the file where the developers use to display the complete application to the users. The different between (.fla) and (.swf) files is the (.swf) files cannot be edited in Flash application as it is considered as compiled files.

4.2   Application Architecture

All the interfaces in this application were designed in Adobe Flash CS5 as all the files such as images and produced animations for this application. This Application is created using the Adobe Flash CS5 with Action Script 3.0. Action Script 3.0 is a programming Language that commonly used for application development. The navigations button in this application is applied with Action Script 3.0.

This programming language is used with Adobe AIR system for the development of desktop and mobile applications. Besides that, the sound had been added to make this application more attractive and interesting

4.3   Interfaces and Architecture

i.   Main (start) interface

          This interface is created to let the user feel that they are welcome to use the application. The user need to click the enter button to enter the system. The image that had been used is to attract the user's attention to learn by this application.

Figure 4.1 ELASL Main Interface

ii.   Menu interfaces

This interface contains the menus where the user can choose the options that they want. The menus are consisting of alphabet, number and exercise menu. Each of the menus was directed to the each interface. Animation is applied in order to attract the user's attention to use the application. Besides that, exit button also provided to ease the user to close the application

Figure 4.2 ELASL Menu's Interface

iii.   Numbers interfaces

This interface consist of suitable text, appropriates images and navigation buttons. The text is to display the shape of the numbers and how to spell the numbers in words. The image was to display the total of the numbers. For examples, for number one, the total of the image is one. This will help the user to understand the lesson. There is four navigation buttons in each interfaces of number which is home button, exit button, next button and previous button. The animation applied in this interface is fade-in movement and more that help to attract user's attention.

Figure 4.3 ELASL Number's Interface

iv. Alphabet interfaces

This interface is similar with the numbers interfaces. As the numbers interfaces, this interface consist of suitable text, appropriates images and navigation buttons. The text is to display the shape of the alphabet and the example of words that use the alphabet as the first letter. The image was to display the shape of the thing to give the user the view of the objects. This learning material will help the user to understand the lesson. There is four navigation buttons in each interfaces of number which is home button, exit button, next button and previous button. The animations are also applied in this interface.
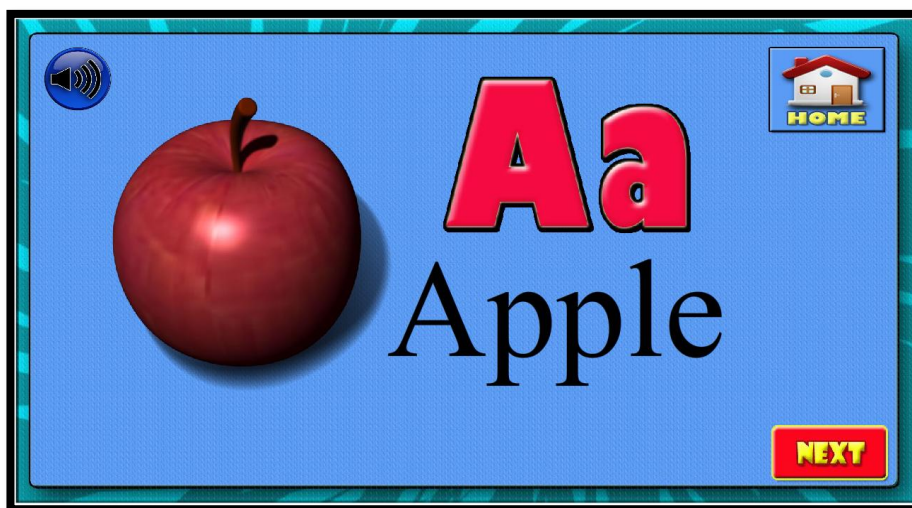

Figure 4.4 ELASL Alphabet's Interfaces

v.   Exercise menu

This interface is directly link from the exercise button on the main menu page. This interface contains two options which are alphabet and linked to the different interfaces. The alphabets button were linked to alphabet's exercises and the number button were linked to number's exercises.
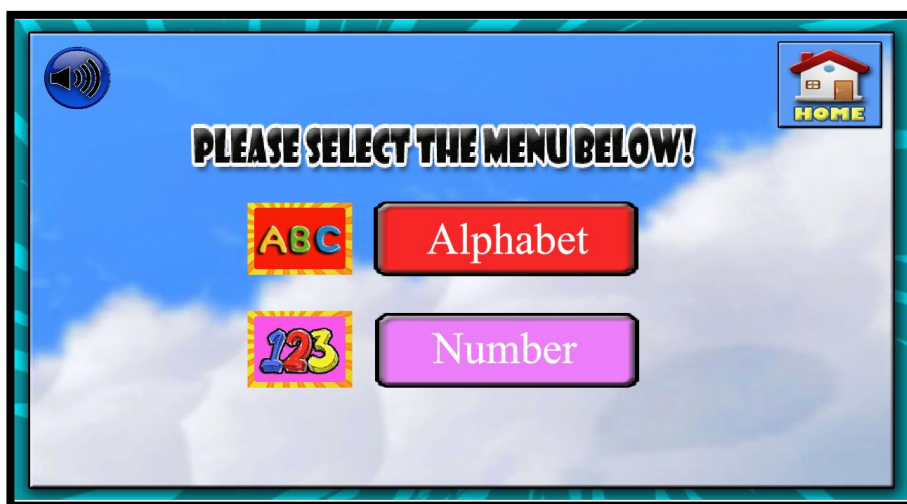

Figure 4.5 ELASL Exercises Menu's Interface

vi.   Sub menu interfaces

This interface consists of three different menus which are Level 1, Level 2, and Level 3. The levels are divided based on the user development progress. For level 1, the exercise is basically for the beginners. They can repeatedly do the exercise until they satisfied enough with their development.
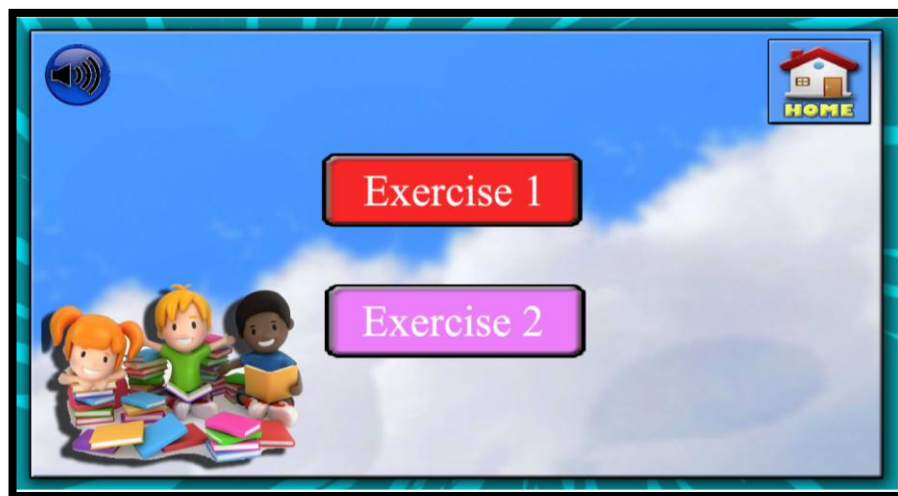

Figure 4.6 Exercises Level Menu's Interface

vii. Exercise Interfaces

The exercises are divided into two parts which are exercise 1 and exercise 2. Each level is created with the different type of exercises. For example, the Level 1 is a drag and drop exercise which the user need to choose the correct answer, drag the answer to the blank box provided. The exercise is created similarly in each level for alphabet and number exercise.
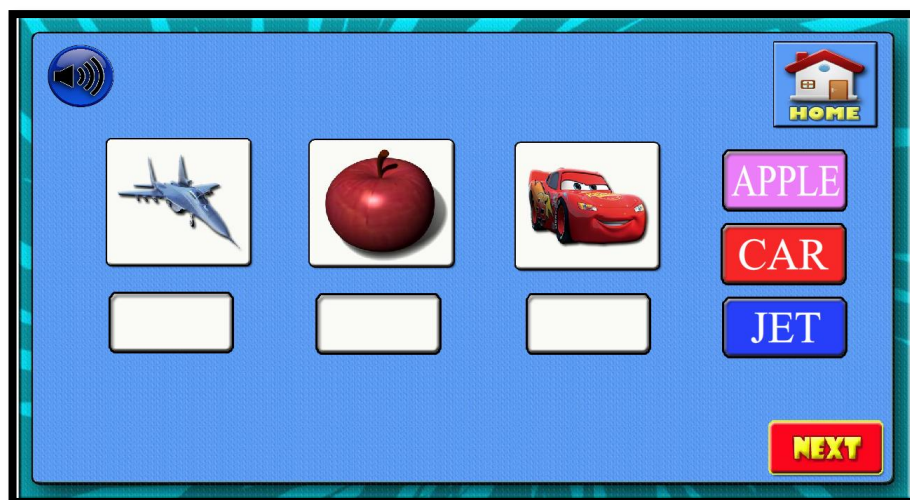

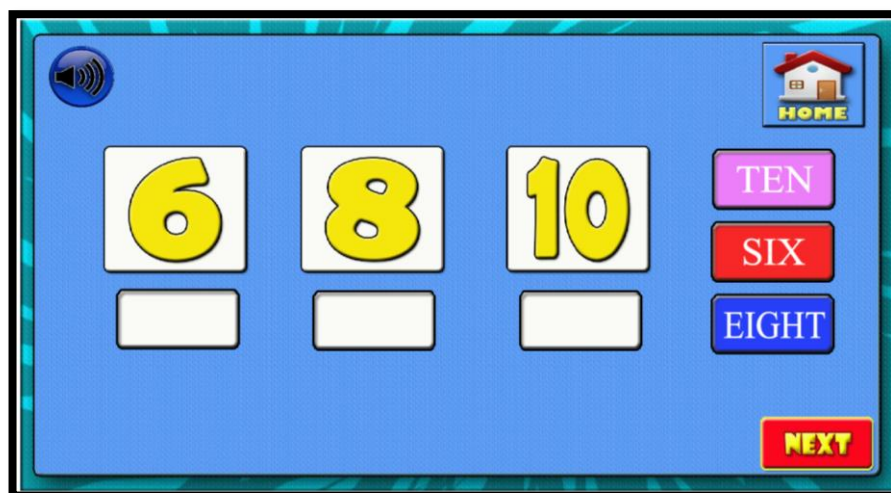Figure 4.7 ELASL Level 1 Exercise for Alphabet

Figure 4.8 ELASL Level 1 Exercise interface for Number

4.3   Strength of ELASL

ELASL is a learning application that contains all attractive and interesting materials. The images that used in this application are suitable for user. The application is a user friendly application that provided with easily understands navigation and simple instruction for each activity.

This application is using the simple but fun interfaces that are not excessively decorated with non-suitable images. The colour used in this application is bright and colourful that could attract the user attentions.

This application is a standalone application which the user did not need the internet connection and installer application. This application can be run by only use the Adobe Flash Player and can be run in different type of Operating System without having a different version for each operating system.

4.4   Weakness of ELASL

ELASL had several weaknesses that can be found. One of the weaknesses is unclearly sound of instruction. Each of the instruction is provided with a voice instruction so that the user can easily understand what to. This is because the devices that had been used to record the instruction are common recorder applications that produce a low quality sound.

The language content also might not be suitable for the user and they need their parents to translate to their own mother language as the all the instruction and navigation are written in English.

4.5   **Challenges of ELASL**

There are many challenges in developing ELASL. This application is develop in short time period that only consist a few of months to complete. The developer having a challenges where they need to make sure that this application is suitable or not for the slow learner. All the research had to be done precisely so that it can follow the user need and standard.

Besides that, the lack of the course prototype and software standards, new prototype need to be develop to overcome this problem. The specific application to learn English for slow learner user is not easily found in the market.

Before developing this application, the user's limitation on having the suitable devices and hardware are also important to be considered. There are some of people that cannot afford to own the current devices. The application need to be suitable to use in any version of operating system and any technology platform.

4.6   **Conclusion**

The implementation phase is very important as it shown how the application was development and how the application flow process work. By using various types of sources like tutorials and other learning materials, the implementation can be complete and finish. Several software had been used to develop this application such as adobe Photoshop and more. The action script 3.0 also help to develop this application by applying in the navigation button and else.

CHAPTER 5

RESULT AND DISCUSSION

5.0   Introduction

The result of ELASL will be discussed in this chapter. The outcome, expectation, assumption and further research are being discussed and explain in detailed. The purposed for this chapter is to add more idea and bring more benefits to future ELASL development in order to increase the performance and upgrade the application to a better application.

5.1   Result analysis

During the development process of ELASL, the objectives of this application had been met. Below are the objectives of this application:

i.   To develop an interactive learning environment for slow learner user

ii.   To increase and improve English language skills for slow learner user

iii.   To apply simple and fun lesson for slow learner user

5.1.1 To develop an interactive learning environment for slow learner

ELASL developed successfully with several functions. The list of modules that play roles to generate the outputs is:

i. User
- All users which are teacher, parent and the user can access the application.
- The user can put in their name before enter the lesson on the application and the name will display throughout the learning process.
- All the user can access the application without any exception and speciality given to specific user.

ii. Tutorial
- A video tutorial was provided in order for the user to understand better how to do the exercises.
- User can play the video tutorial before start doing the exercises.
- The video are provided with detail explanation and clear voice instruction for the user especially the user to understand how to do the exercises.
- The video tutorial can be accessed by all type of user.

iii. Modules
- The modules provided are the basic lesson for alphabet and numbers in English.
- Teacher, parents and the user can access this modules where there are no exception of user.

iv.   Exercises

- The exercises are divided into two part which is exercise for alphabet and exercise for number
- Each part of exercise are divided into two types which is Drag and Drop exercise and Questionnaire exercises.
- There are nine questions for Alphabet's Drag and Drop and five question for Questionnaire.
- There are five questions for Number's Drag and Drop and five question for Questionnaire.
-

5.1.2   To increase and improve English language skills for slow learner

ELASL is an application that was specially created for Slow Learner User below 12. This application will help this user and teacher also the parent to monitor the user performances. All the instruction is given in simple and understandable language for the user. The question are prepared in interesting way such as drag and drop exercise to attract the user to do the exercise. Each of right and wrong answer is given notification for the user to know whether they answer the right or wrong answer.

5.1.3   To apply simple and fun lesson for slow learner

ELASL is provided with simple but attractive and interesting interfaces that make the user give full attention to the lesson. The audio and animation provided in each interfaces help the user to easily remember what they learn throughout the lesson activity. The navigations were simple and easy to understand.

5.2   Result of the application

ELASL is an application for pc or laptop that contained Basic English lesson. This application can be run anytime and anywhere as long as there are pc and laptop provided. The main user for this application is slow learner students. The other user that can use this application is teacher and parents. The teacher and parents can used this application for lesson session to teach the slow learner students

This application is developed by using ADDIE methodology. ADDIE contained five phases which are Analysis, Design, Development, Implementation and Evaluation. Each phases played important roles in order to develop this application.

5.3   User acceptance test

An evaluation process had been done which is a questionnaire is been distribute to the four teacher of a special care centre that located in Putrajaya after they had played through the application. This activity is purposely done in order to get feedback from the user. There are several main question are being prepared such as below
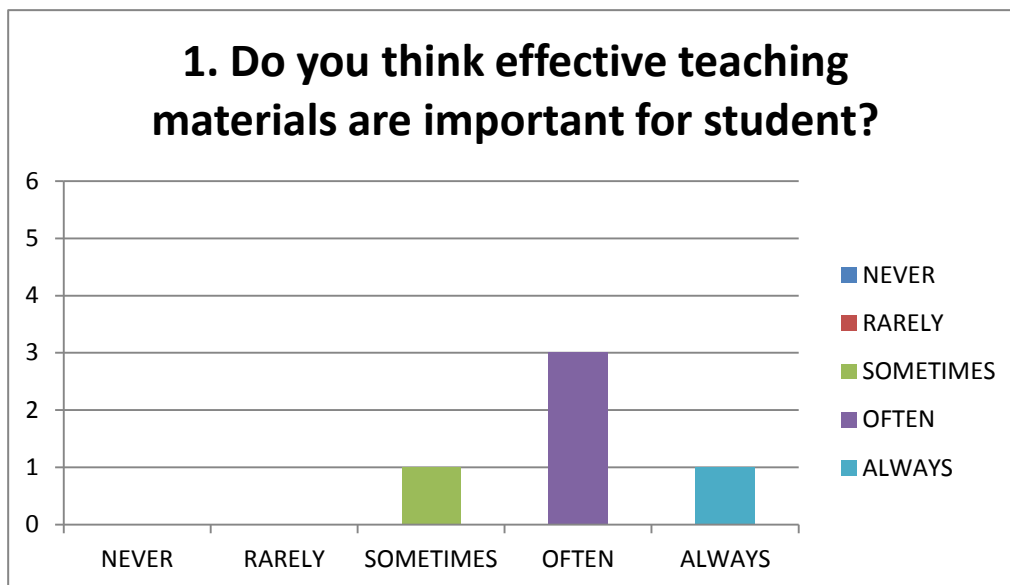
Figure 5.1: Bar chart for question 1

The result show that most of the teacher agreed that effective teaching materials are important for student. There are several types of effective learning materials which is textbooks and multimedia resources. ELASL is in the group of multimedia learning materials. The multimedia resources may help the students to improved their thinking skills and develop judgement of daily life [1]. Multimedia learning resources must be meaningful as the students will find it easy to use the learning resources.
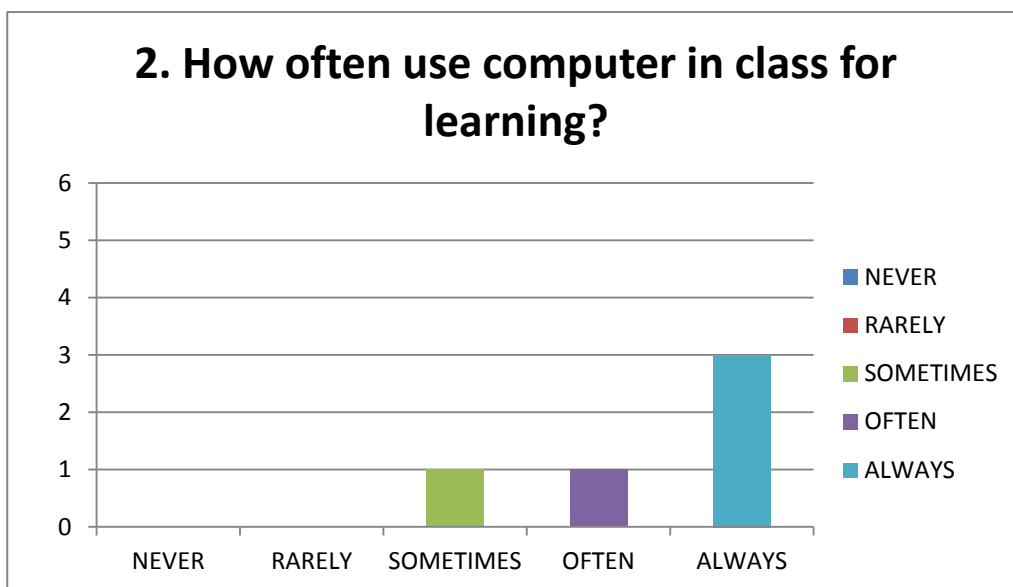
Figure 5.2: Bar chart for question 2

The teachers stated that there are rarely used of computer throughout the learning session because there are less provided computer in the special care centre. There a computer lab provided in the centre that only can be use by the special students that know how to use the computer.
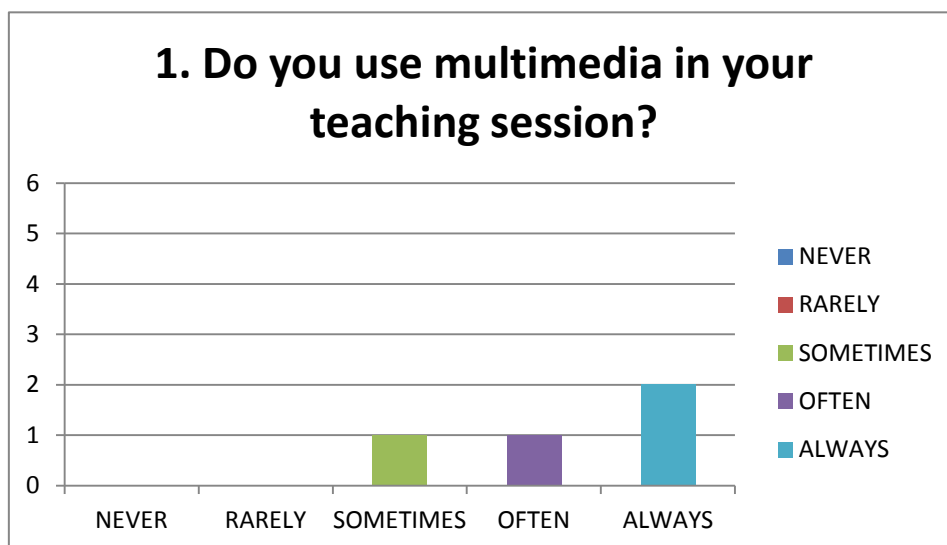
Figure 5.3: Bar chart for question 3

Based on the survey result, most of the participant involved stated that they often use the multimedia resources. The teachers at the special care centre stated that they often used multimedia learning resources by connecting a laptop with a projector for the students.
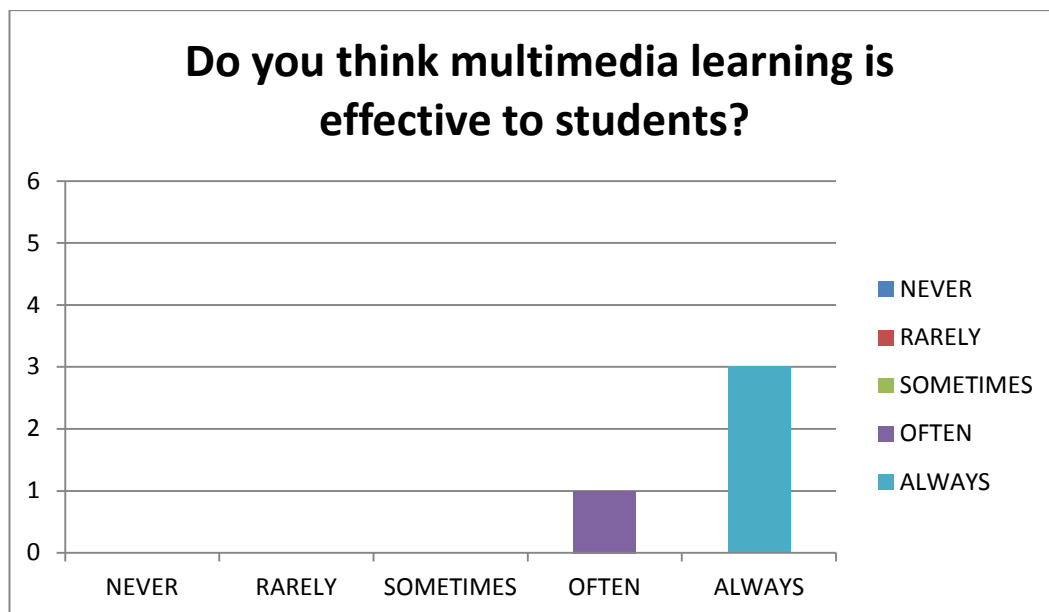
Figure 5.4: Bar chart for question 4

Most of the participants stated that multimedia learning is always effective to students. It is because the multimedia resources contained elements and criteria that somehow will attract the students to focus on the lesson especially the special care students like slow learner that had short pan of attention.

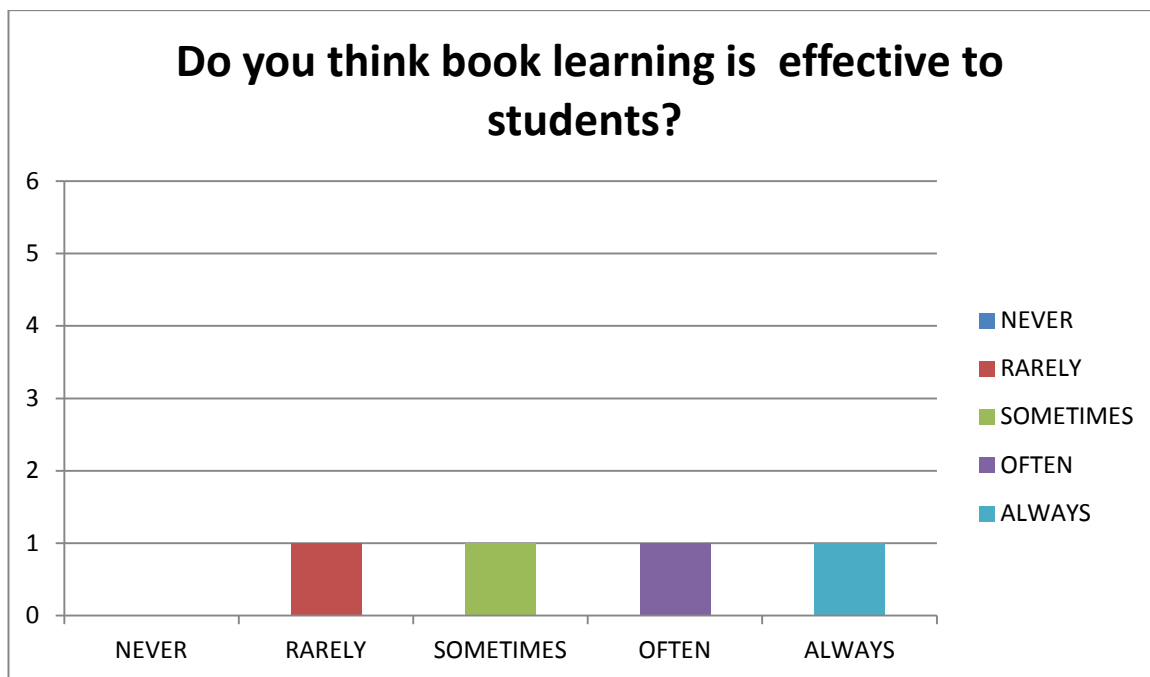Figure 5.5: Bar chart for question 5

Based on the bar chart above, the participants choose often and rarely as their answer. Basically the book learning only can be used by the students that had reading skills. Most of the special care students doesn't had the ability the to read and some of them had the ability to read but different with the normal students as their performance might be slower.

CHAPTER 6

CONCLUSION

6.0   Conclusion

This thesis contained six chapters which is start from Introduction, Literature Review, Methodology, Implementation, Result and discussion, and Conclusion. Each chapter described and explained in details the process of application development and the application itself which is English Learning Application for Slow Learner (ELASL).

The target user of this system is mainly for the slow learner student, parents and the teacher. ELASL will help the student to develop their English skills by learning the basic lesson which is alphabets and numbers. The teacher and the parents can monitor the student improvement by doing the exercise provided. The exercises are divided to two parts of each lesson which is drag and drop exercises also questionnaire exercises.

The application is developed by using the ADDIE methodology. This methodology has five phases which is Analyse where the data and the information are gathered, Design phases where the flow of the application and the interfaces of the application is being design, Development where the interfaces of the application and database is developed. The next phase is Implementation where the interfaces are being linked to each other and the application are being connected to the database. The last phase is Evaluation where the application is being evaluated in order to determine the problem and the solution to the problem for further enhancement of the system.

ELASL is designed and developed by using Adobe Flash Professional CS6 that required the use of Action Script 3.0 and Adobe Photoshop CS5. Both of this software are developed from Adobe Cooperation. Adobe Flash Professional CS6 help the developer to create the interfaces of the application and create animation meanwhile Adobe Photoshop help to ease the picture editing process that needed for the application development.

For the conclusion, it can be stated that all the objectives of this study had been met which is to develop the English learning application for the slow learner at the beginner level. Future research and more function should be developing for a better application and all the constraint should be overcome in order to enhance ELASL.

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APPENDIX A: User Acceptance Test

APPENDIX B

Survey Form

SCALE: 1: Never 2: rarely 3: sometimes 4: often 5: always

1. Do you think effective teaching   1   2   3   4   5
   materials is important for student?

2. How often use computer in class for   1   2   3   4   5
   learning?

3. Do you think parents participation is   1   2   3   4   5
   important for kids?

4. Do you use multimedia in your   1   2   3   4   5
   teaching section?

5. Do you think multimedia learning is   1   2   3   4   5
   effective to student ?

6. Do you think book learning is   1   2   3   4   5
   Effective?

7. What kind of studying material do you prepare for your student?
   - [ ] Book
   - [ ] Video learning kit
   - [ ] Education software
   - [ ] Others:_____

8. Do you have a laptop or PC?

    ☐   Yes

    ☐   No

9. What kind of studying material do you think will be effective to this current generation?

    ☐   Book

    ☐   Video learning kit

    ☐   Education software

    ☐   Others:_____

10. How is the student's respond towards traditional book learning?

    ☐   Very poor

    ☐   Poor

    ☐   Average

    ☐   Good

    ☐   Excellent

11. Do you think learning using learning application will be effective to your kid?

    ☐   Yes

    ☐ No

12. Do you have any suggestion on how a learning system that suitable for the generation kids should be