

INTRODUCTION

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1.1 Introduction

This chapter of the Project Report is to provide an overview of the project, discusses the reasons for choosing this particular project, the inspiration for such an undertaking, brief outline of the problem domain and the proposed solution. The requirement analysis is based on the description of problem domain facts given by the supervisor in the initial interview and all information culled from subsequent meetings.

1.2 Learning turns into E-learning

The rapid growth of information and communication technologies makes it possible to develop new forms of education. There are uncountable ways for learning in addition to the conventional method teacher and student. Digital media did a silent revolution in the learning arena and compact disk (CD) became the libraries of digital world. Internet, which assembled the world under one roof, had a great impact on traditional learning systems. The term e-learning refers to a computer-enhanced learning. It is usually delivered via a personal computer and it may base on network, intranet, or internet to store and transmit the content. The learning methods include online lectures, tutorials, performance support systems, and simulations. It can be a very rich learning experience. It can even surpass the level of training you might experience in a crowded classroom. It is self-paced, hands-on learning.

E-learning can suffer from many of the same pitfalls as classroom training, such as boring slides, monotonous speech, and little opportunity for interaction. The beauty of e-learning, however, is that new software allows the creation of very effective learning environments that can engulf learner in the material.

1.3 Motivation for M-learning

The traditional education is made in classrooms where the teacher presents the learning material to a group of students. The educational technology depends mainly of teacher and the students' physical participation in the learning process. Regardless of obvious advantages of direct contact between the teacher and students and immediate feedback, the traditional classroom education has many disadvantages such as if the student has no ability to take part in some lesson he or she will miss the training and ect. These disadvantages lead to search for new and more effective educational methods.

The rapid growth of information and communication technologies and rising computer knowledge of the students, make possible appearance of new educational models. Hand held devices are becoming increasingly popular than ever before in modern world. It has become fully compact data and information carrying device. As a consequence of the remarkable technology revolution, e-learning turns into m-learning where wireless communication technology plays a key role. The definition of m-learning includes the ability to learn from anywhere at anytime without permanent physical connection to cable networks.

[Ref: en.wikipedia.org/wiki/elearning]

People of many countries have a desire to learn a second international language for example English, German, French ect. Today in a world with congested roads traffic jams, long distance travel to work, people spend a considerable time moving form one place to another. M-learning allows these people to use the commute time productively by learning something while on the move. In this project, we propose a solution based on Web and Mobile to address this problem.

This project mainly focuses this on Sri Lankan community, because there is a big demand in Sri Lanka to learn foreign languages. The aim of this project is to create an application, which can be accessed through hand held devices, to fulfil the necessity of the society.

Through this exercise we expect to analyze, design and implement a robust, user-friendly and maintainable system, which will be helpful to subscribers who are willing to learn languages.

1.4 Overview of the System

Scope of the project

The proposed system would allow a user to continue his or her learning while on the move. An overview of the proposed system is depicted in Figure 1.1.

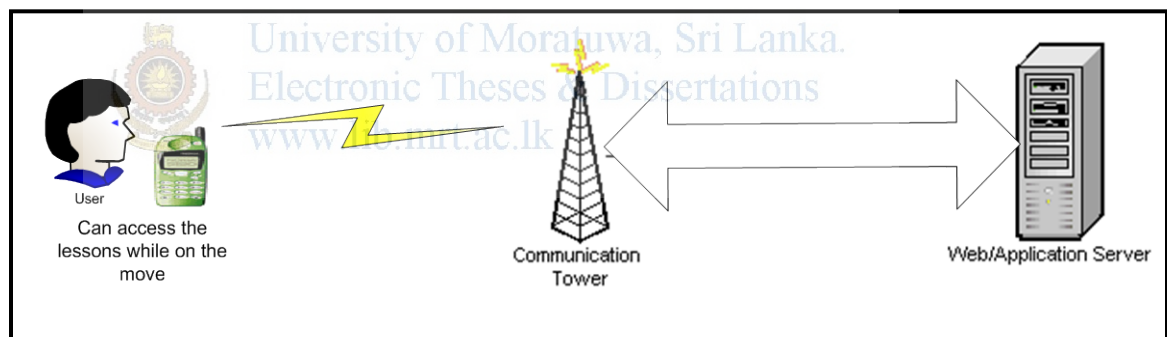


Figure 1.1 – Proposed System – How the system works

As shown in the figure, the proposed system will consist of a web server which is connected to the Internet. Subscriber can browse the system via mobile or PDA which is configured to access the Internet. It consists of selection of languages and levels namely Beginner, Intermediate and Expert. Dictionary will benefit whom willing to learn meaning of words. Proposed system would include in summary, the following functionalities.

- Subscriber validation when logging in to the system
- Browse through the desired language selection

Subscriber can access desired language English / German / France

and in this application only English will be the selected language.

- Select skill level according to the users current skill

He / she can select the level such as Beginner / Intermediate / Expert

The lessons selected according to the levels.

- Navigate through the lessons.
- Download and listen to the lesson using sound file.
- Dictionary
- Design and develop a database.
- Develop admin application for administration of the site.

1.5 System Deliverables

The system deliverables as identified in the Project Charter include the following,

- Interim Report with the System Requirement Specification (SRS)
- OOAD documents and Database Structure.
- Developed Application.
- Testing documents.
- Final dissertation.

1.6 Methodology

A software engineering methodology is a process for the organized production of a software. It usually presented as a series of steps, with techniques and notation associates with each step. [Ref: OOMD: James Rumbaugh]

The approach used for develop the proposed system was mainly interviewing subscribers who wish to learn foreign languages. Thereafter the users gave their input, which used to construct the possible outputs of the system. Once the user requirements were gathered, analysis and design of the proposed system been done. Based on the above factors initial prototype of the system will be developed. This approach identified as evolutionary software engineering. The evolutionary software engineering method is used to develop the proposed mobile based language learning

system. This method is based on the idea of developing an initial implementation, exposing this to user comment, and refining this through many versions. When developing the system, the specification, development and validation are carried out concurrently.

1.7 Objectives

Main objectives of the system as follows

- Build an applicable software solution.
- Provide valuable service to the society using latest technology.
- Gain knowledge of WAP and Mobile technology.
- Familiarize with mobile based programming tools.

The Project charter given in annex-A describes the objectives and the method of achieving them in extra detail. This document was prepared at the start of the project and served as useful source of system policy. It contains the general project aims, methods to be used during the project, constraints and enterprise policy documents to be referenced, and resources available.

1.8 Thesis Structure

Rest of the thesis content structured as follows

Chapter - 2	Chapter 2 will discuss the background study for the project and this will describe the research done on Wireless Application Protocol (WAP) and the MLL architecture and technical problems in WAP
Chapter - 3	Problem domain and Requirement analysis for the project are detailed in chapter 3. Technical analysis such as Unified Modeling Language (UML) diagrams and Database table structures (Entity Relationship diagrams) included in this chapter.
Chapter - 4	Chapter 4 includes the design of the proposed mobile based language learning system. The actual design comes under this chapter and it describes the underlying structure of the system.
Chapter - 5	Chapter 5 discuss the implantation of the system and it describes database implementation and coding modules. Problems face in implementation
Chapter - 6	Chapter 6 deals with testing of the system. What is the testing strategy and the form of test included here.
Chapter - 7	Evaluation of the system discuss in chapter 7. In this chapter we included reviews of users.
Chapter - 8	Chapter 8 is the documentation on Conclusion and Future Work and limits of the proposed system.

Table 1.1 – Structure of the Thesis