COURSEWARE ON E-SOLAT IN MOBILE

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ABSTRACT

The modern technology has change the way of many people work, studies and learning. People concentrate on their work but they ignore their real responsibility to their children which is teach and grown them. The course that children must learn from they are kids are *solat* which the basic learn on how to be good Muslim. Many of teenager nowadays are always not doing *solat* went the time is come because lack of knowledge on how to *solat* and lack practice of *solat* in daily life. Courseware on *E-Solat* is developing to guide user especially kid around six to twelve years old on how to doing *solat*. This courseware divides into two main courses which is learning *solat* and learning and remembering short *surah*. Under *solat*, there are five option which is kids can choose which *solat* he or she want to learn. The options are *Solat Subuh, Solat Zohor, Solat Asar, Solat Magrib* and *Solat Isya'*. The animation will teach kids how to *solat*.

ABSTRAK

Di zaman teknologi serba moden ini, teknologi telah merubah cara semua orang bekerja dan belajar. Banyak orang mengabaikan tanggungjawab mereka terhadap anak-anak mereka dalam soal mengajar dan membesarkan mereka. Pengajaran yang wajib bagi seorang kanak-kanak belajar semasa mereka masih kecil ialah solat iaitu pengaran asas bagi mereka suapaya mereka menjadi seorang muslim yang baik. Ramai remaja pada masa sekarang sentiasa meninggalkan solat apabila tiba masanya untuk mereka solat dan mereka juga boleh dikatakan tidak melakukan solat pada setiap hari. Courseware on E-Solat ini dibangunkan untuk membimbing pengguna khususnye kanak-kanak yang berumur antara enam hingga dua belas tahun untuk melakukan Solat. Courseware ini terbahagi kepada dua pengajaran utama iaitu, belajar solat dan belajar dan menghafal surah-surah pendek. Dalam solat menu, terdapat lima pilihan dimana kanak-kanak dapat memilih solat mana yang hendak dipelajari. Pilihan tersebt ialah Solat Subuh, Solat Zohor, Solat Asar, Solat Magrib dan Solat Isya'.

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LIST OF ABBREVIATION

NO.	ITEM	DEFINITION
1.	E-Solat	Electronic learning
2.	Solat	Pray
3.	Surah	Phrase in Al-Quran
4.	Upin and Ipin	Name on cartoon character
5.	Zohor	Time to doing pray from 1.00pm – 4.00pm
6.	Subuh	Time to doing pray from 6.00am – 7.00am
7.	Asar	Time to doing pray from 4.00pm – 7.00pm
8.	Maghrib	Time to doing pray from 7.00pm – 8.00pm
9.	Isya'	Time to doing pray from 8.00pm – 6.00am
10.	Al-Fatihah	One of short phrase in Al-Quran
11.	Al-Ikhlas	One of short phrase in Al-Quran
12.	An-Naas	One of short phrase in Al-Quran
13.	Al-Baqarah	One of short phrase in Al-Quran
14.	Al-Falaq	One of short phrase in Al-Quran
15.	Soundbooth	Adobe software that can edit sound
16.	Int-view	Integrate view
17.	Niat	The word that wish in the heart
18.	html	Hypertext markup language
19.	pdf	Portable document format

CHAPTER 1

INTRODUCTION

1.1 Introduction

Courseware is a term that combines the words 'course' with 'software'. Its meaning originally was used to describe additional educational material intended as kits for teachers or trainers or as tutorials for students, usually packaged for use with a computer. The term's meaning and usage has expanded and can refer to the entire course and any additional material when used in reference an online or 'computer formatted' classroom. Many companies are using the term to describe the entire "package" consisting of one 'class' or 'course' bundled together with the various lessons, tests, and other material needed. The courseware itself can be in different formats, some are only available online such as html pages, while others can be downloaded in pdf files or other types of document files. Many forms of e-learning are now being blended with term courseware. Most leading educational companies solicit or include courseware with their training packages [http://en.wikipedia.org].

On another word, Courseware engineering is an emerging set of practices, tools and methodologies which result from attempts to take an engineering approach to the production of courseware. The engineering approach is in contrast to a craft or artisan approach it emphasizes the use of principled methods rather than intuition it values replicability of processes and results rather than idiosyncratic creativity.[Goodyear , 1995].

Solat is the most important thing that must be do by Muslim around the world. Each Muslim must do *solat* every day. One Muslim must do five *solat* everyday according to Al-Quran. The implementation of solat are decrees along with ages. Many Muslim are does not have basic about *solat* and they are not practicing solat [Ruaain et al, 2004].

Courseware on *E-Solat* is an application which is contain of graphic, audio, and movement of cartoon character that can teach kids on how to do *solat*. This character will be a boy character. It require kids to interact with this application. Kids can choose which *solat* he or she want to learn. Other than that, kids can practice on remembering short *surah* which is also included in this courseware.

1.2 Problem Statement

Nowadays, much kind of media electronic are release. Many companies also use media electronic to promote their product. They use cartoon character to attract kids attentions and when kids attract to their product, they will ask their parent to buy the product. 94% of all 4^{th} – 7^{th} graders say that they often or sometimes attract to game [Just Kid Inc. Kid Id Study, 2001]. As we can see, kids today more likely to sit in front of television more then play outside with their friends. They easily learn something from the cartoon character more than learn from their parent. This is because cartoon character are cute, their voice are almost the same as them and the movement also almost the same as them. Kids consider the cartoon character as their friends and teacher. For example, if we ask they about cartoon character Upin and Ipin compared to cartoon character that in the book, they know more about the cartoon character that inside the media electronic which can move and talk.

Kids today also not had been given basic learning about *solat*. Their parent to busy with their work and they give full responsibility to the babysitter or their teacher to teach them make them not have the knowledge that they should get. From research,

53.2% of teenager doing their *solat* perfectly and another 46.7% of them are not doing *solat* perfectly [Ruaain et al, 2004]. Research from form six student give result that 15.91% of them are do not know how to *solat* [Ruaain et al, 2004]. For members of PELAPES University Malaya, 80% of them doing *Solat Zohor* and another 20% of them are not [Ruaain et al, 1994].

Solat learning should been teach to the kids since they are start talking because they are their mind are still fresh because they easily accept what they learn. A child's desire to master and learn new skills at the age of six and twelve.

In this thesis, problems are investigated according to these questions:

i) How to attract kids attention on *solat*?
ii) How to give positive impact to kids on *solat*?
iii) How to convert Arabic alphabet into vector?

1.3 Objective

The objective of developing *E-Solat* mobile application is as below:

i) To develop a courseware on *E-Solat* in mobile application that can teach kids how to *solat*.
ii) To know kids understanding about *solat*.
iii) To convert Arabic alphabet into vector in Adobe Flash.

1.4 Scope

The scopes of this project consist of four scopes.

i) This courseware is generally for kids around six to twelve years old.

ii) The courseware will be divided into five categories of *solat* which are *solat Subuh, Solat Zohor, Solat Asar, Solat Magrib* and *Solat Isya'*.

ii) This courseware will include five short *surah* which are *Al-Fatihah, Al-Ikhlas, An-Nas, Al-Baqarah, Al-Falaq*,

iii) The tools to develop this courseware are using Adobe Flash Professional, Adobe Photoshop CS4, Adobe Illustrator and Adobe Soundbooth CS4.

iv) The animation of the cartoon character would be in 2D animation.

v) The language use for this courseware would be action script 2.0.

vi) This courseware will be emulating in computer and will be running using mobile.

1.5 Thesis Organization

Chapter 1 will be describe about an introduction of courseware itself, problem occur from situation today and introduction of courseware on *E-Solat*.

Chapter 2 will be describe about the literature review on courseware *E-Solat* and other related research. In this chapter also give result on which technique will be choose to develop the courseware.

Chapter 3 will be describe more detail about methodology on *E-Solat* and technique use on developing this courseware which is each phase of the technique.

Chapter 4 will describe more detail on implementation of *E-Solat* Courseware. The interface and coding of *E-Solat* application will be shown in this chapter.

Chapter 5 will describe on result and discussion of *E-Solat* courseware which is the prove of the objective is achieve.

Chapter 6 will be describe about the conclusion of undergraduate project one which is overall of process on documenting courseware on *E-Solat*.

CHAPTER 2

LITERITURE REVIEW

2.1 Studies on project rationale

There are several paper that discuss about project rationale which is using system dynamics to model courseware development and conceptual modeling in the hypermedia development process.

2.1.1 Using system dynamic to model courseware development

This system dynamic is basically refer to that context as instructional systems design, or ISD, which is how it is referred to in the instructional science literature. The original form of ISD came directly from military planning technology which used static, sequential flow diagrams to characterize the planning of instruction [J. Micheal Spector, 1995].

2.1.2 Conceptual modeling in the hypermedia development process.

There has been relatively little interaction possible between lecturer and student in the predominantly lecture or tutorial approach. Two factors have been contributed are the nature of the material being taught and the teaching environment[Jana Dospisil, 1994].

2.2 Studies on Courseware Model

There are several technical papers that explain about courseware model. There are initial System Dynamic Model, Life-Cycle for Complex Hypermedia project, product Centered Int-View Life-cycle model and practical courseware engineering model.

2.2.1 Initial System Dynamic Model

As show in the figure 2.1, there are six phase in this model which is design, analysis, production, implementation, situational evaluation and maintenance. This model is focus on feasibility study [J. Michael Spector, 1995].

Recognizing the requirements of cognitively-based courseware requires that the designer be sensitive to many factors that can negatively influence the integrity of a production from conception to delivery. Because cognitively-based instruction has a rich instructional design space compared to that of behaviorally-oriented instruction, the designer is responsible for correspondingly more elaborate sets of authoring activities.

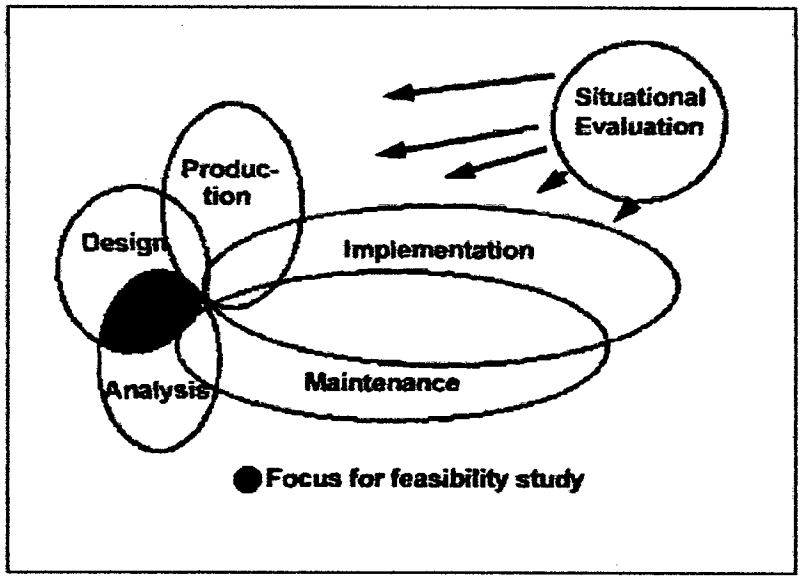

Figure 2.1: Initial System Dynamic Model

2.2.2 Life-cycle model for complex hypermedia project.

From figure 2.2, this model contain seven main phase which is content identification and feasibility study, requirement analysis, high level design, low level design and coding, verification and testing, packaging and lastly evaluation and active use. There are sub-phase under high level design, low level design and coding, verification testing and packaging. Under high level design, there are interface modeling, abstract function and MM scenario. Under low level design and coding, there are prototype, UI builder, video and audio capture, logic code and MM scripts, real time compression, PLV service, audio and component and product building. Under verification and testing, there are function test, audio test, still picture test, motion test and system verification test. Under packaging, there are code, audio and video.

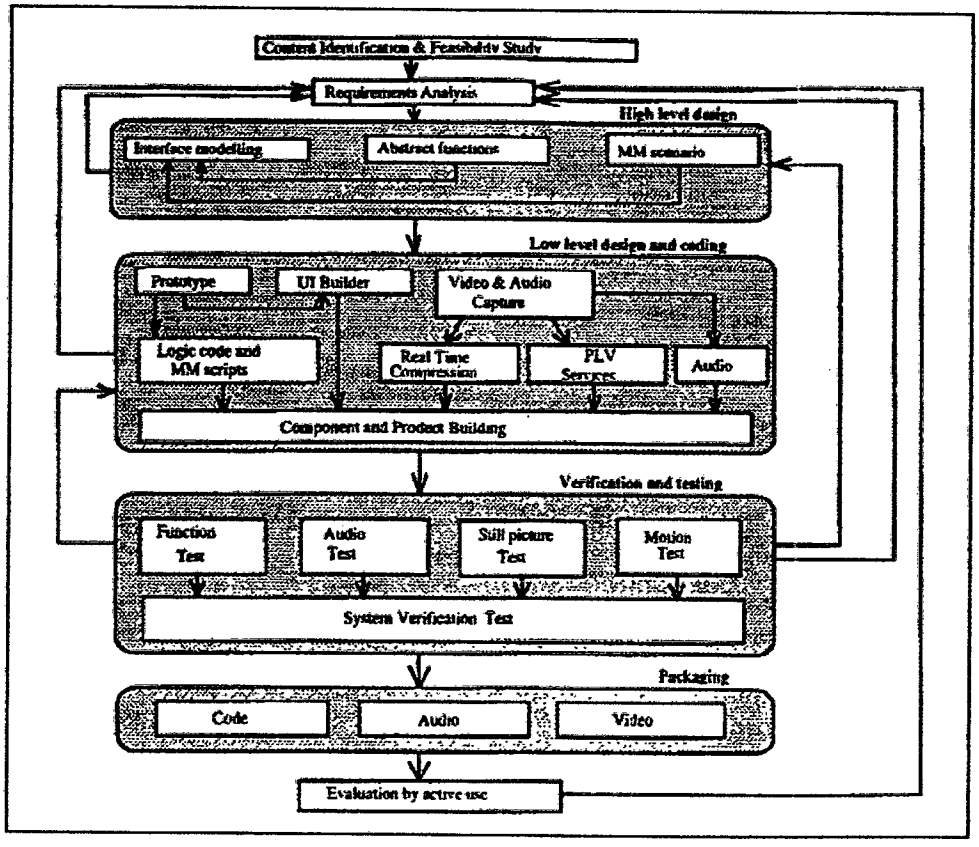

Figure 2.2: Life-cycle Model for Complex Hypermedia Project.

2.2.3 Product-centered Int View Life-cycle model

From figure 2.3, there are twelve phase to complete the system which is problem statement, courseware requirement, courseware design, courseware unit design, courseware unit script, integrated courseware screens, user interface integrating courseware functionality, executable courseware and courseware used[Ines Grutzner, 2004].

The *IntView* methodology for courseware engineering is filling a gap in current courseware production by enabling projects to control budget and schedule better as well as to produce high quality courseware. In particular, the lifecycle encompassing quality assurance methodology, which is integrated into *IntView,* allows to assure courseware quality right from project start. It integrates and adapts quality assurance methods from software engineering as well as from courseware development approaches in order to cover all development artifacts and the final courseware as it is proposed in software engineering.

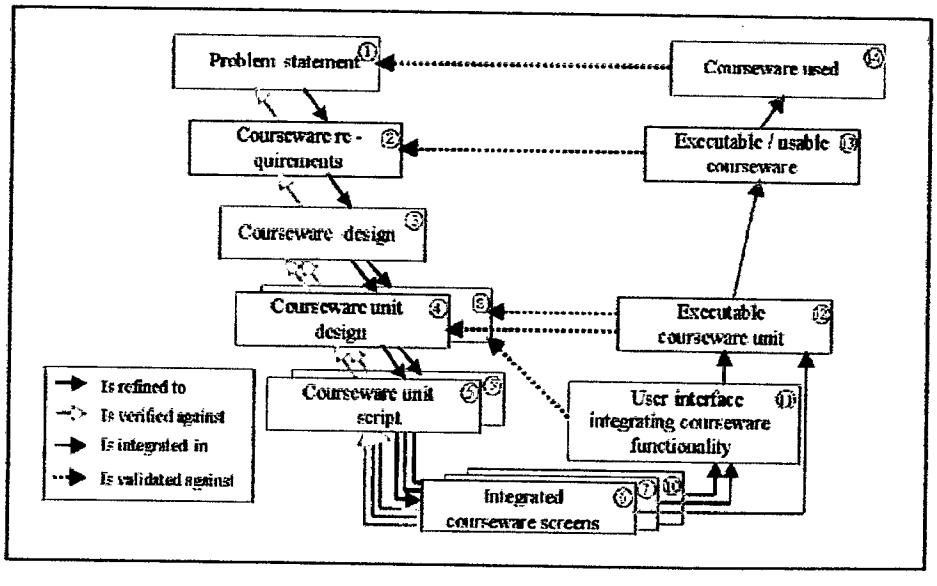

Figure 2.3: The Product-Centered Int View Life-Cycle Model

2.2.4 Practical courseware engineering model

From figure 2.4, there are five phase in developing courseware which is feasibility analysis, need analysis, design phase 1, production phase 1, prototyping cycle, pilot or field testing and revision and installation [http://www.keele.ac.uk].

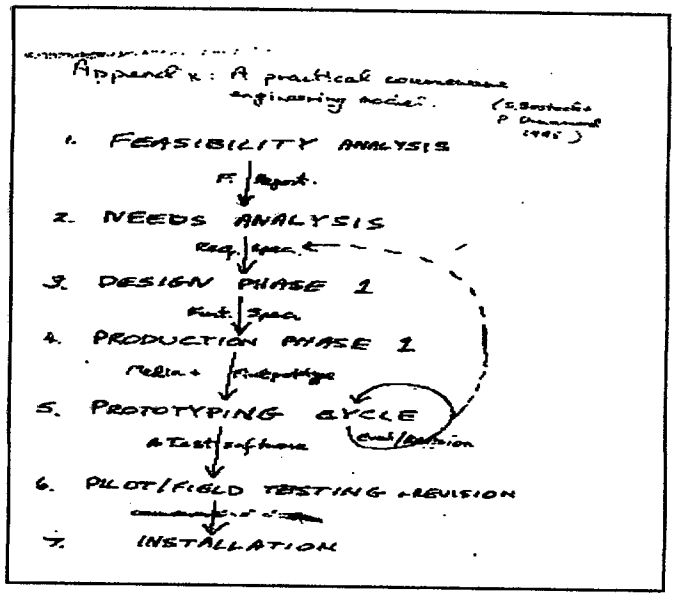

Figure 2.4: Practical Courseware Engineering Model

2.3 Studies on Courseware Requirement

There are several technical papers that writing about requirement. The requirement is about the requirement Acquisitions, requirement Validation and Software requirement specification.

2.3.1 Requirements Acquisitions

Requirements definition is a statement typically in a natural language of what user services the system is expected to provide [Sommerville, 1992], This should be stated in a way that is understandable to everybody involved in the project. In this paper, it looking at the relationship between a design methodology and the user requirements acquisition[Jana Dospisil, 1994].

2.3.2 Requirements Validation

System requirements must be validated in order to prevent errors propagating through the system. This process involves four separate steps which is, needs of the user must be shown to be valid, the requirements should be consistent, the requirements should be complete, and the requirements should be realistic [Sommerville, 1992]. In hypermedia or multimedia system. the validation of the user requirements will require development of a new methodology [Jana Dospisil, 1994].

2.3.3 Software Requirements Specification (SRS)

A specification is a description or definition of a task. For a specification to be useful in the software development, the statements must be unambiguous, so that all readers of the specification can reach exactly the same understanding of the task. Formal specification languages and mathematical notations, in which abstract concepts can be unambiguously expressed, as well as special-purpose languages, finite-stale machines, decision tables, object and entity relationship diagrams, and Petri nets meet the requirement of unambiguity well [Jana Dospisil, 1994].