

ONLINE COMPUTER AIDED INSTRUCTION IN BUSINESS

MATHEMATICS FOR PHILIPPINE TEHCNOLOGICAL INSTITUTE OF

SCIENCE AND ARTS AND TRADE INC.

An Undergraduate Research Proposal

Presented to the Computer Studies Department

College of Science

De La Salle University – Dasmariñas

In Partial Fulfillment of the Requirements for the

Degree Bachelor of Science in

Information Technology

Escanilla, Sam Tristan L.

Ortega, Mary Therese Nicole Z.

Presa, Alyssa Candice M.

May 2014

🙆 De La Salle University - Dasmarir	ĭas	
TABLE OF CONTENTS		
Acknowledgment	iv	
Abstract	v	
CHAPTER 1 - Introduction		
1.1 Background of the Study	1	
1.2 Statement of the Problem	3	
1.3 Research Objectives	4	
1.4 Significance of the Study	5	
1.5 Conceptual framework	7	
1.6 Scope of the Study	8	
CHAPTER 2 - Review of Related Literature		
2.1 Foreign Literature	10	
2.2 Local Literature	15	
CHAPTER 3 - Methodology		
3.1 The V- Model		
3.1.1 Requirement Analysis	21	
3.1.2 High-Level Design	22	
3.1.3 Detailed Design	23	
3.1.4 Coding	23	
3.1.5 Unit Testing	24	
3.1.6 Integration Testing	24	





🖄 De La Salle University - Dasmariñas

Abstract

Traditional method of teaching, which is known as the "chalk and talk" strategy, has always been a known teaching strategy of professors for many years. At present time, technology is starting to make an impact, and the education sector is where advancements are at most integrated. In this study, proponents incorporated technology in creating and implementing Online Computer Aided Instruction to their chosen school.

The Online Computer Aided Instruction in Business Mathematics for Philippine Technological Institute of Science Arts and Trade Inc. (PhilTech GMA, Cavite branch) was created to assist the professors in presenting lessons that will be more effective, creative and organized than the usual traditional teaching setting. Prior to building the said system, the proponents interviewed the school director of Philippine Technological Institute of Science Arts and Trade Inc. (PhilTech GMA, Cavite branch) and the professor in Business Mathematics to gather information about what could be supplementary how the curriculum is presented in the current school year. Surveys were also distributed and answered by the students to know the students' point of view as to what find their interest in learning Business Mathematics. The system was coded in C# programming language, under ASP.Net framework. It was uploaded online and could be accessed by the students and teachers anytime, anywhere. This would serve as an online classroom, where lessons, guizzes and grades can be retrieved by both teachers and students.

The system provides transparent report of grades incurred by students in guizzes, fixed knowledge-base of lesson which is presented in different modes: text, audio, video, simulations

🖄 De La Salle University - Dasmariñas

and games. Lessons in text format can be downloaded as a PDF document. Grades and class lists can be printed out too.

Upon system's completion, the proponents conducted a system's assessment survey to all of the sections of 1st year college students and the subject instructor. Based on the gathered results, the entirety of the Online CAI is viewed as user-friendly, accurate, transparent, supplementary and convenient, which means that the system can easily be navigated by students and professors. Different modes of presenting lessons were also successfully incorporated in the system. The system was able to accurately compute the grades of the students as soon as they are done answering the quizzes in each chapter. These grades can also be viewed real-time, in the system.

Succinctly, the researchers conclude that online computer aided instruction is a great way of improving the academic curriculum of institutions. It provides convenience to the educators and the learners in a way where enrichment of course is a guarantee and learners' sterling performance is the priority. Being of knowledge to the advancements of the current time is now essential, so online CAI is also a way of immersing both the students and the teachers in a technology-rich environment.