



De La Salle University – Dasmariñas
GRADUATE PROGRAM

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**DEVELOPMENT OF A COURSEWARE COMPUTER-ASSISTED
INSTRUCTION (CAI) ON HYPOTHESIS TESTING**

**A Master's Thesis
Presented to
the Faculty of the Graduate School of Education, Arts and Sciences
De La Salle University – Dasmariñas
Dasmariñas, Cavite**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Mathematics**

JEROME L. BUHAY

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ABSTRACT

Name of Institution: De La Salle University – Dasmariñas
Address: Dasmariñas, Cavite
Title: **Development of a Courseware Computer-Assisted Instruction (CAI) on Hypothesis Testing**
Author: Jerome L. Buhay
Degree: Master of Arts in Mathematics
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STATEMENT OF THE PROBLEM:

This study generally aimed to develop a courseware computer-assisted instruction on hypothesis testing for exclusive use of the students at the De La Salle University-Dasmariñas.

Specifically it aimed to determine the following:

1. The assessment of the subject matter specialists on the developed courseware CAI in terms of:
 - a) Instructional strategies;
 - b) Content quality.
2. The assessment of the programming experts on the developed courseware CAI in terms of:



- a) Interactive capability;
- b) General design;
- c) Web page quality.

3. The assessment of students towards the developed courseware CAI in terms of:

- a) Educational value;
- b) Courseware's appeal;
- c) Ease of use.

SCOPE AND COVERAGE:

The study involved the development of a courseware computer-assisted instruction (CAI) in hypothesis testing for exclusive use of students enrolled in Statistics at the De La Salle University - Dasmariñas. The syllabus on Elementary Statistics was used as basis for the development of the courseware CAI. Hypothesis testing is a topic discussed in the final period of the syllabus.

The developed courseware CAI is a tutorial type of program which includes introduction to hypothesis testing, test on the mean of single population, tests on the means of two populations and the analysis of variance (ANOVA). The development of the courseware CAI started on the first semester of the school year 2002-2003 and ended on the summer term of the same school year.



METHODOLOGY:

The study made use of the developmental descriptive method of research. The study utilized three stages in the development of the courseware CAI on hypothesis testing which are the collection and organization of the contents stage, the design and development stage, and evaluation and revision stage.

Three sets of questionnaire were prepared by the researcher and were subjected for validation and approval of the experts coming from the Mathematics Department, Computer Science Department and information Technology Center of the De La Salle University – Dasmariñas (DLSU-D). The questionnaires were used to evaluate the developed courseware CAI.

Nine subject matter specialists from the Mathematics Department of DLSU-D assessed the developed courseware CAI in terms of instructional strategies and content quality. Nine programming experts from the Computer Science Department of DLSU-D participated in evaluating the developed courseware. They evaluated the courseware's interactive capability, general design and web-page quality. A total of 30 students enrolled in Statistic at DLSU-D assessed the courseware CAI in terms of educational value, courseware's appeal and ease of use.