



De La Salle University – Dasmariñas

GRADUATE PROGRAM

**REESTABLISHING THE VALIDITY AND RELIABILITY OF THE
QUALIFYING EXAMINATION FOR ENGINEERING STUDENTS
OF DE LA SALLE UNIVERSITY - DASMARIÑAS**

**A Master's Thesis
Presented to
The Faculty of the College of Science Graduate Studies
De La Salle University – Dasmariñas
Dasmariñas, Cavite**

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

**JAYZEL O. VELASCO- ALAM
MAY 2009**



ABSTRACT

This study anchored on the validity and reliability of the qualifying examination for the engineering students. The study involved second year college students S.Y. 2006 – 2007 and S.Y. 2007 – 2008.

The findings of this study concluded that: (1) there is a need for the reconstruction of the test items of the questionnaire used for the 2007 and 2008 qualifying examination. The validators were able to establish that the test items did not cover specific topics that are considered to be crucial for a particular subject matter and there were test items that were not included in the syllabus which was the basis to test the content validity of the test items; (2) there is need for reestablishing the Table of Specification of the questionnaire used for the 2007 and 2008 qualifying examination. The validators considered the distribution of the test items when grouped according to the Table of Specification as unevenly distributed. The validators pointed out that the level of analysis should have a higher percentage, followed by application, comprehension and the level of knowledge should have the least percentage; and (3) the test for reliability also showed that the test items were not reliable since the Cronbach's alpha were all below the 0.90 level that according to Hopkins should be the lowest coefficient that a qualifying examination should have. A test to be considered valid should be reliable first.



TABLE OF CONTENTS

Content	Page
TITLE PAGE	1
ABSTRACT	2
APPROVAL SHEET	3
ACKNOWLEDGMENT	4
TABLE OF CONTENTS	5
LIST OF TABLES	7
LIST OF APPENDICES	8
CHAPTER 1. THE PROBLEM AND ITS BACKGROUND	
Introduction	9
Objectives	11
Scope and Limitation of the Study	12
Significance of the Study	13
CHAPTER 2. REVIEW OF RELATED LITERATURE	
Tests	15
Qualifying Examinations	17
Validity	20
Item Analysis	25
Reliability	26
CHAPTER 3. METHODS	



Research Design	34
Research Instrument	34
Data Gathering Procedure	35
Statistical Tool	36
CHAPTER 4. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA	
The Content Validity Based on the Syllabus	38
The distribution of the items in terms of the Table of Specification	50
The measure of reliability of the CEAT Qualifying Examination	57
CHAPTER 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	
Summary	65
Conclusions	68
Recommendations	70
BIBLIOGRAPHY	71
APPENDICES	76



LIST OF TABLES

Table		Page
1	Content of the Questionnaire based on the Mathematics Syllabus(2007)	38
2	Content of the Questionnaire based on the Mathematics Syllabus (2008)	43
3	Content of the Questionnaire based on the Physical Sciences Syllabus (2007)	46
4	Content of the Questionnaire based on the Physical Sciences Syllabus (2008)	49
5	Table of Specification of the Questionnaire in Mathematics (2007)	51
6	Table of Specification of the Questionnaire in Mathematics (2008)	52
7	Table of Specification of the Questionnaire in Physical Sciences (2007)	53
8	Table of Specification of the Questionnaire in Physical Sciences (2008)	54
9	Reliability Result for Mathematics Items of the 2007 Qualifying Examination	57
10	Reliability Result for Mathematics Items of the 2008 Qualifying Examination	59
11	Reliability Result for Physical Sciences Items of the 2007 Qualifying Examination	61
12	Reliability Result for Physical Sciences Items of the 2008 Qualifying Examination	63



LIST OF APPENDICES

Appendix		Page
A	Request Letter to the Dean of CEAT	75
B	Request Letter to Questionnaire Validator	76
C	Validator's Profile	77
D	Syllabus	87
E	Table of Specification	131
F	Curriculum Vitae	132

