

**STUDENTS' ACCEPTANCE OF COMPUTER-AIDED
LEARNING:**

**AN EMPIRICAL INVESTIGATION USING THE
TECHNOLOGY ACCEPTANCE MODEL (TAM)**

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MASTER OF SCIENCE (MANAGEMENT)

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LEARNING: AN EMPIRICAL INVESTIGATION USING TAM**

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LEARNING:
AN EMPIRICAL INVESTIGATION USING THE TECHNOLOGY
ACCEPTANCE MODEL (TAM)**

By

NOZIE MAZZUANA BINTI MD AROF

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KOLEJ PERNIAGAAN
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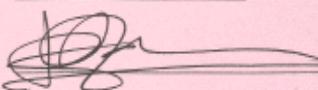
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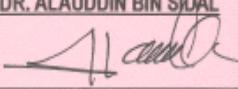

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ABSTRACT

This quantitative project paper entitled Students' Acceptance of Computer-Aided Learning: An Empirical Investigation Using the Technology Acceptance Model (TAM), aims to determine the effect of perceived ease of use (PE) and perceived usefulness (PU) as the independent variables on students' attitude towards acceptance of the computer-aided learning as the dependent variable (ATT). This study also intends to examine whether any differences on the students' attitude towards acceptance of the computer-aided learning (CAL) exist among the respondents from the urban and rural areas. Respondents for this study comprised 619 Form Four secondary schools students from the adjacent districts of Klang (urban) and Kuala Langat (rural) in Selangor. Three schools in Kuala Langat and four schools in Klang were selected randomly using random selection method of Microsoft Office Excel for the distribution of the questionnaires. Data were analyzed using SPSS version 17. Tests conducted were Pearson correlation, multiple regressions, T-test and One-way ANOVA. The Pearson correlation showed that PE and PU were correlated with ATT. The Pearson correlation result of PE to ATT was 0.75. The Pearson correlation result of PU to ATT was 0.710. Multiple regressions showed that PE and PU had significant effects on ATT. Without the mediator, the PE to ATT β -value was 0.750 for $p < 0.01$. The PU to ATT β -value was 0.504 with the same level of confidence. Perceived ease of use also had a significant effect on perceived usefulness. For the mediation effect, perceived usefulness mediated the relationship between perceived ease of use and students' attitude towards acceptance of the CAL. With the mediation effect, the PE.PU to ATT β -value was 0.372 for $p < 0.01$. This showed that PU was the partial mediator since the β -value was reduced and p -value was still $p < 0.01$. R^2 changed significantly from 0.562 to 0.640 when PU was substituted. This also indicated that PU was the mediator. The finding of the T-test showed that there was a significant difference of students' acceptance of the CAL between the rural and urban areas. Recommendations were suggested for the betterment of the educational system that are new policy enforcement, comprehensive training and skill development for teachers, and monitoring of the development and implementation of the CAL.

ABSTRAK

Kertas projek kuantitatif ini ialitu Penerimaan Pelajar Terhadap Sistem Pembelajaran Berbantuan Komputer: Suatu Kajian Empirikal Menggunakan Teori Model Penerimaan Teknologi, bertujuan mengetahui kesan kesedaran kemudahgunaan (PE) dan kesedaran kebergunaan (PU) sebagai pemboleh ubah bebas kepada sikap pelajar terhadap penerimaan pembelajaran berbantuan komputer (ATT) sebagai pemboleh ubah bersandar. Kajian ini juga bertujuan untuk mengenalpasti adakah terdapat perbezaan sikap terhadap penerimaan pembelajaran berbantuan komputer (PBK) di antara pelajar di kawasan bandar dengan luar bandar. Responden kajian terdiri daripada 619 pelajar Tingkatan Empat di sekolah menengah di dua daerah bersebelahan di Selangor iaitu Klang (bandar) dan Kuala Langat (luar bandar). Sebanyak tiga buah sekolah di Kuala Langat dan empat buah sekolah di Klang telah dipilih dengan menggunakan teknik pemilihan secara rawak “*Microsoft Office Excel*” untuk pengedaran borang soal selidik. Data dianalisis menggunakan SPSS versi 17. Ujian yang digunakan ialah korelasi Pearson, regresi berganda, ujian-T dan ANOVA satu hala. Ujian korelasi Pearson menunjukkan PE dan PU mempunyai korelasi dengan ATT. Keputusan korelasi PE kepada ATT ialah 0.75. Manakala korelasi PU kepada ATT ialah 0.71. Ujian regresi berganda menunjukkan PE dan PU mempunyai kesan yang signifikan kepada ATT. Tanpa pengantaraan, PE kepada ATT mempunyai nilai $\beta = 0.75$ dengan $p < 0.01$. Manakala PU kepada ATT mempunyai nilai $\beta = 0.504$ dengan aras keyakinan yang sama. PE juga mempunyai kesan yang signifikan terhadap PU. Untuk kesan pengantaraan, PU adalah pengantara di antara PE dengan ATT. Dengan adanya pengantaraan, PE.PU kepada ATT mempunyai nilai $\beta = 0.372$ dengan $p < 0.01$. Dapatan kajian menunjukkan PU ialah pengantaraan sebahagian dengan berkurangnya nilai β dengan aras keyakinan yang sama. R^2 juga berubah secara signifikan daripada 0.56 kepada 0.64 apabila PU dimasukkan. Ini juga membuktikan yang PU ialah pengantara. Dapatan ujian-T menunjukkan terdapat perbezaan yang signifikan dalam penerimaan pelajar terhadap PBK di antara bandar dengan luar bandar. Cadangan penambahbaikan dalam sistem pendidikan adalah penguatkuasaan polisi baru, latihan dan pembangunan kemahiran yang komprehensif kepada guru, dan pemantauan terhadap pembangunan dan pelakanaan PBK tersebut.

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TABLE OF CONTENTS

Certification of Project Paper	ii
Permission to Use	iii
Abstract	iv
Abstrak	v
Acknowledgement	vi
Table of Contents	vii
List of Tables	xi
List of Figures	xii
List of Abbreviations	xiii
Appendices	xiii

CHAPTER 1: INTRODUCTION

1.0	Background of the Study	1
1.1	ICT in Education	1
1.2	ICT in Education (Malaysia)	2
1.3	Technology Acceptance Model (TAM)	3
1.4	Problem Statement	4
1.4.1	Gap in the Practical Field	4
1.4.2	Gap in the Theoretical Field	7
1.5	Research Questions	12
1.6	Research Objectives	13
1.7	Significance of the Study	13
1.8	Scope of the Study	15
1.9	Location of the Study	15
1.9.1	Selangor	15
1.9.2	Klang	16
1.9.3	Secondary Schools in Klang	16
1.9.4	Kuala Langat	18
1.9.5	Secondary Schools in Kuala Langat	19
1.10	Summary	20

CHAPTER 2: LITERATURE REVIEW

2.0	Introduction	21
2.1	Application of CAL Electronic Tutorials to Enhance Learner Support at Universitas Terbuka, Indonesia	21
2.2	Promoting Learner-Centered Pedagogy through Computers	21
2.3	South Korean Universities	22
2.4	SchoolNet Thailand	22
2.5	Technology Acceptance Model (TAM)	23
2.5.1	History and Development of TAM	23
2.5.2	Previous Study of TAM	24
2.5.3	Perceived Ease of Use and Perceived Usefulness	30
2.5.4	Attitude towards Using	33
2.6	Mediation	34
2.6.1	Central Analytic Considerations	34
2.6.2	Testing Mediation	36
2.7	Summary	38

CHAPTER 3: RESEARCH METHODOLOGY

3.0	Introduction	39
3.1	Research Framework	40
3.2	Hypotheses	40
3.3	Operational/Conceptual Definition	41
3.3.1	Computer-Aided Learning	41
3.3.2	Urban Area	42
3.3.3	Rural Area	42
3.4	Research Design	42
3.5	Measurement of Variables/Instrumentation	43
3.6	Population and Sampling	45
3.7	Pilot Study	47
3.8	Data Collection	48
3.9	Data Analysis Technique	49
3.9.1	Testing the Research Instrument	49
3.9.2	Testing the Research Data	51

3.9.3	Data Analysis	55
3.10	Summary	58

CHAPTER 4: RESULTS AND DISCUSSION

4.0	Introduction	59
4.1	Factorial Analysis	60
4.2	Reliability Analysis	62
4.3	Descriptive Analysis	63
	4.3.1 Descriptive Statistics on Demographical Factors of the Respondents	63
	4.3.2 Descriptive Statistics for the Major Variables	67
4.4	Inferential Analysis	68
	4.4.1 Normality Test	68
	4.4.2 Linearity Test	68
	4.4.3 T-Test	69
	4.4.4 One0way ANOVA	70
	4.4.5 Correlation Analysis	71
	4.4.6 Multiple Regression Analysis	73
4.5	Summary	75
4.6	Conclusion	75

CHAPTER 5: DISCUSSION AND RECOMMENDATION

5.0	Introduction	76
5.1	Objective Achievements	76
	5.1.1 Effect of Perceived Ease of Use on Students' Attitude towards Acceptance of the Computer-Aided Learning	76
	5.1.2 Effect of Perceived Usefulness on Students' Attitude towards Acceptance of the Computer-Aided Learning	77
	5.1.3 Effect of Perceived Ease of Use on Perceived Usefulness	77
	5.1.4 Effect of Perceived Usefulness that Mediates the Relationship between Perceived Ease of Use and Students' Attitude towards Acceptance of the Computer-Aided Learning	78
	5.1.5 Difference of Students' Attitude towards Acceptance	

of the Computer-Aided Learning	79
5.2 Recommendations	80
5.2.1 New Policy Enforcement	80
5.2.2 Comprehensive Training and Skill Development for Teachers	81
5.2.3 Monitoring of the Development and Implementation of the Computer-Aided Learning	81
5.3 Future Research	81
5.4 Conclusion	82
References	84

List of Tables

Table 1.1: Category of SAG	6
Table 1.2: SPM Result of 2009 in Selangor Districts by SAG	6
Table 1.3: Comparison of SPM Result of 2007-2009 by SAG	7
Table 1.4: Secondary Schools in Klang	17
Table 1.5: Secondary Schools in Kuala Langat	19
Table 3.1: Questionnaire Source	43
Table 3.2: Likert Scale and Notation	44
Table 3.3: Sampling Frame	46
Table 3.4: Rand between Method for School Selection	47
Table 3.5: Interpretation of Cronbach's Alpha Value	51
Table 3.6: Strength of Correlation Value	56
Table 3.7: The Use of Analysis Technique for Each Hypothesis	57
Table 4.1: Results of the Factor Analysis	61
Table 4.2: Reliability Coefficients for the Major Variables	62
Table 4.3: Profile of Respondents	64
Table 4.4: Descriptive Statistics for the Major Variables	67
Table 4.5: Differences in the Major Variables by School Category	69
Table 4.6: Differences in the Major Variables by Streams	69
Table 4.7: Differences in the Major Variables by Ethnicity	70
Table 4.8: Differences in the Major Variables by Parent's Income	71
Table 4.9: Intercorrelations of the Major Variables	71
Table 4.10: Results of the Regression Analysis	73
Table 4.11: Results of Regression Analysis with Mediation Effect	74
Table 4.12: Summary of the Results	75

List of Figures

Figure 1.1: Steps taken by the MOE to Minimize the Digital Divide between Schools in Rural and Urban Areas	3
Figure 2.1: Original TAM Proposed by Fred Davis	33
Figure 2.2: Path Diagram of a Mediation Effect	35
Figure 3.1: Students' Acceptance of Computer-Aided Learning: an Empirical Investigation Using the Technology Acceptance Model (TAM)	40
Figure 4.1: Mediating Effect of Perceived Usefulness	73

List of Abbreviations

ICT - Information and Communication Technology

CAL - Computer-Aided Learning

MOE - Ministry of Education

TAM - Technology Acceptance Model

SAG - School Average Grade

SPM - *Sijil Pelajaran Malaysia*

TRA - Theory of Reasoned Action

TPB - Theory of Planned Behavior

PU - Perceived Usefulness

PE - Perceived Ease of Use

ATT - Acceptance of the Computer-Aided Learning

NGO - Non-governmental Organization

PBC - Perceived Behavioral Control

CB - Control Beliefs

PF - Perceived facilitation

CHILD – Computer Helping Instruction and Learning Development

NECTEC – National Electronics and Computer Technology Center

ANOVA – Analysis of Variance

β - Beta Value

KMO - Kaiser-Meyer-Olkin

MSA - Measure of Sphericity Adequacy

Appendices

Appendix A: Application Letter

Appendix B: Questionnaire

Appendix C: SPSS Output

CHAPTER 1

INTRODUCTION

1.0 Background of the Study

One of the many challenges facing developing countries today is preparing their societies and governments for globalization and the information and communication revolution. Policy-makers, business executives, NGO activists, academics, and ordinary citizens are increasingly concerned with the need to make their societies competitive in the emergent information economy.

1.1 ICT in Education

Globalization and technological changes, the processes that have accelerated in tandem over the past fifteen years, have created a new global economy. This scenario, in turn, has serious implications on the nature and purpose of educational institutions. As information continues to shrink and access to information continues to grow exponentially, schools cannot remain mere venues for the transmission of a prescribed set of information from teachers to students over a fixed period of time.

Concerns over educational relevance and quality coexist with the imperative of expanding learning opportunities to those made most vulnerable by globalization: low-income groups, girls and women as well as low skilled workers. Global changes also put pressure on all groups to constantly acquire and apply new skills. Information and communication technologies (ICTs)

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