



UNIVERSITI PUTRA MALAYSIA

***USE OF SITUATED COMPUTERISED ACCOUNTING COURSEWARE
BASED ON COGNITIVE APPRENTICESHIP MODEL AMONG
SECONDARY SCHOOL STUDENTS***

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STUDENTS**



By

NORAIZA CHE AWANG

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia
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Faculty: Educational Studies

The objective of the Malaysian secondary school subject, Principles of Accounting is to develop the competence of accounting students to a level specified by the International Education Standards of the International Federation of Accountants. Yet no research has been documented on the pedagogical initiatives taken such competence levels are achieved. Educators need to understand qualitatively the effectiveness of the teaching and the process of learning perceived and the impact achieved through the use of a situated computerised accounting courseware in a situated learning environment based on the Cognitive Apprenticeship Model.

A case-study approach was employed in this research. Eight volunteers, six female and two males teamed up into four dyads, participated in this research. Several methods were used to establish trustworthiness of the data. Participants were asked to do a "Think Aloud" protocol to articulate their thoughts while they were interacting with the situated courseware and their teammates as well. Participants were observed and both video and audio taped during the data collection process. Persistent observations and in-depth follow-up interviews were conducted in the

computer lab and the school library. Data were collected and documented in the forms of video tapes, audio tapes, questionnaires and field notes. Interview data were transcribed verbatim for accuracy.

The result was the identification of a value-added teaching and learning method which is able to supplement, but not replace, current educational teaching and learning strategies.

The objectives are achieved because the aspects of the learning design underpinned by the eleven strategies of a meaningful practice field design principles that emerged in the research were directly addressing the intended learning outcomes and explicitly embedded in the lesson plans.

Findings of the study clearly indicate the need to provide a motivating and challenging practice field or meaningful learning environment where students can see the usefulness of what they are learning. The study found that the development of strong accounting concepts and transfer of knowledge has occurred, strong reflective thinking occurred through articulation of understanding by students, and they also demonstrated that the level of base knowledge has increased tremendously within their Zone of Proximal Development and the enhancement of other non-technical skills or soft skills.

Abstrak tesis yang dikemukakan kepada Jawatankuasa PhD sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

**PENGUNAAN
SITUATED COMPUTERISED ACCOUNTING COURSEWARE
BERDASARKAN COGNITIVE APPRENTICESHIP MODEL DI KALANGAN
PELAJAR SEKOLAH MENENGAH**

Oleh

NORAIZA CHE AWANG

April, 2011

Pengerusi: Zaidatol Akmaliah Lope Pihie, PhD

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Objektif Prinsip Akaun sekolah menengah di Malaysia ialah membentuk kemahiran di kalangan para pelajar Akaun supaya selaras dengan keperluan *International Education Standards* yang dibentuk oleh *International Federation of Accounting*. Bagaimanapun tiada penyelidikan didokumentasikan dalam inisiatif pedagogik untuk membentuk kecekapan tersebut. Para pendidik perlu memahami secara kualitatif keberkesanan dan proses pembelajaran serta penghasilan yang dicapai, walaupun penggunaan *situated computerised accounting courseware* dan pendekatan *Cognitive Apprenticeship Model* dalam pengajaran dan pembelajaran selaras dengan *International Education Standards*.

Kajian kes digunakan untuk penyelidikan ini. Lapan orang sukarelawan iaitu enam orang perempuan dan dua orang lelaki sepasukan dalam dua orang terlibat di dalam penyelidikan ini. Beberapa metod digunakan untuk menguji ketelusan data. Para peserta diminta untuk melaksanakan protokol "Think Aloud" untuk mempernyatakan fikiran sewaktu mereka sedang berinteraksi menerusi *situated courseware* dengan ahli-ahli pasukan. Para peserta diperhatikan dengan video serta diaudiokan sewaktu proses pengumpulan maklumat. Pemerhatian yang

berterusan dan temuduga susulan yang mendalam telah dijalankan di makmal komputer dan perpustakaan sekolah. Maklumat dikumpul dan didokumentasikan dalam bentuk pita video, pita audio, soalselidik dan nota lapangan. Maklumat temuduga telah dialihtulis secara *verbatim*.

Keputusannya ialah metod pengajaran dan pembelajaran yang dicadangkan dapat menambah nilai, bukan untuk mengganti strategi pengajaran dan pembelajaran semasa.

Objektif penyelidikan telah tercapai kerana aspek-aspek rekabentuk pembelajaran berdasarkan sebelas strategi prinsip rekabentuk bidang praktik yang bermakna. Ianya ini telah terhasil dari penyelidikan yang menjawab terus kepada penghasilan pembelajaran yang dirancang dan secara terang digarapkan dalam perancangan pembelajaran.

Dapatan dari kajian ini dengan jelas menunjukkan keperluan untuk menyediakan bidang praktik yang memberangsangkan serta memberi saingan atau persekitaran pembelajaran yang bermakna di mana para pelajar dapat memperlihatkan keperluan mereka belajar. Kajian ini mendapati pembentukan konsep akaun yang kuat dan perpindahan pengetahuan yang telah berlaku, pemikiran reflektif yang utuh berlaku menerusi artikulasi pemahaman oleh para pelajar, dan mereka juga dapat mempersembahkan bahawa tahap asas pengetahuan telah meningkat dalam *Zone of Proximal Development* mereka dan pengukuhan kemahiran bukan-teknikal dan insaniah.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.



NORAIZA CHE AWANG

Date: 1 April 2011

LIST OF TABLES

Table		Page
1	A Comparison of the Traditional Approach and The New Approach in Accounting Education	10
2	Elements of situated learning, with supporting authors, and guidelines for implementation	107
3	A Teaching / Learning Theory Matrix	129
4	Cognitive Apprenticeship Model of Teaching and Learning	130
5	Measurement of Student Learning and the Desired Values	146
6	Demographic Data of the Participants	179
7	Computer Experiences of the Participants	180
8	Are You Ready to do Accounting Simulation	184
9	Wanting to Know More about Accounting Simulation	186
10	What Information Would Be Useful For You	187
11-14	Emotions to the Use of This Programme	189
15-18	Knowledge Construction	195
19	Individual Interview Schedule	206
20	Engagement in A Meaningful Learning Environment	210
21	Knowledge Transfer	222
23	Sources of Each Student Content Knowledge	223
24	Knowledge Application/Transfer	225
25	Grouping of Teams	241
26	AssetBase Accounting Simulation Marks Based on Groups	247
27	Features of Simulation Courseware	337
28	Features of the Selected Simulation that Satisfy Content Dimension Characteristics	340
29	Features of the AssetBase Simulation that Satisfy Methods Dimension Characteristics	340
30	Features of the AssetBase Simulation that Satisfy Sequence Dimension Characteristics	341

31	Features of the AssetBase Simulation that Satisfy Sociology Dimension Characteristics	341
32-33	Connections between Reviewer's Survey Items and Characteristics of the Cognitive Apprenticeship Model	344



LIST OF FIGURES

Figure		Page
1	Framework of Supportive Environment for Constructivist Learning	45
2	Learning as Intention-Action-Reflection	51
3	Learning in Context “In Situ”	53
4	Model for Qualitative Research	134
5	An Interactive Model of Research Design	139
6	Interview Structure Continuum	154
7	Model of Cognitive Apprenticeship	215
8	Emerging Model of Learning through Practice Field	266
9	Emerging Model of Learning through Practice Field	276
10	11 Criteria of Meaningful Practice Field	283
11	Hypothesized Relationship of Fidelity and Learning	336

LIST OF ABBREVIATIONS

AECC	American Education Change Commission
AICPA	American Institute of Certified Public Accountants
ASSETBase	Accounting Simulation Courseware
CAM	Cognitive Apprenticeship Model of Teaching and Learning
CBL	Computer Based Learning
IES	International Education Standards
IFAC	International Federation of Accountants
KBKK	Kemahiran Berfikir secara Kreatif dan Kritis
LPP	Legitimate Peripheral Participation
MoE	Ministry of Education
SPM	Sijil Pelajaran Malaysia
ZPD	Zone of Proximal Difference

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ABSTRAK	iv
ACKNOWLEDGEMENT	vi
APPROVAL	viii
DECLARATION	x
LIST OF TABLES	xi
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv
CHAPTER	
1. INTRODUCTION	1
1.1 Background of the Problem	1
1.1.1 Background of the Study	3
1.1.2 Computer Integration in Accounting Education	12
1.1.3 Development of Accounting Education in Malaysia	15
1.1.4 The Use of Simulation in Accounting	21
1.1.5 Emergence of Situated Learning	23
1.1.6 The Authenticity of Situated Learning	24
1.1.7 Cognitive Apprenticeship Model of Teaching and Learning (Student-Centred Epistemology)	25
1.2 Statement of Problem	27
1.3 Objectives of the Study	29
1.4 Scope of the Study	30
1.5 Research questions	31
1.6 Significance of the Study	32
1.7 Definitions of terms	34
1.8 Limitations	37
1.9 Organization of the Study	38
2. LITERATURE REVIEW	40
2.1 Accounting Pedagogical Tool and Instructional Design: From Behaviorism to Constructivism	40
2.1.1 Behaviorism	40
2.1.2 Cognitivism	41
2.1.3 Constructivism	42
2.2 Situated Learning	50
2.2.1 Origin of Situated Learning	51
2.2.2 Situated Cognition Theories	53
2.2.3 Bridging Apprenticeships and Creating the Practice Field for Apprenticeship-style Learning in the Classroom	57
2.2.4 Creating Situated Learning Environments	58
2.3 Benefits of Cognitive Apprenticeship	61
2.3.1 Computer-Mediated Cognitive Apprenticeship	64
2.3.2 Computer-Mediated Scaffolding	65
2.3.3 Computer-Mediated Mentoring	67
2.3.4 Computer-Based Cognitive Apprenticeship	69
2.4 Simulations in Education	71
2.4.1 Role of Simulation in Education	72
2.4.2 Benefits of Simulations	73

2.4.3	Simulation in Accounting Education	75
2.5	Student Learning	90
2.5.1	The Need for Student-Centered Approach	90
2.5.2	Evidence of Learning Accounting	91
2.6	Situated Learning and Cognitive Apprenticeship Model	105
2.6.1	Definition of Critical Characteristics of Situated Learning	107
2.6.2	Cognitive Apprenticeship Approach To Teaching Accounting	112
2.7	Conceptual Framework	130
2.8	Theoretical Research Framework	133
3.	METHODOLOGY	137
3.1	Introduction	137
3.2	Research Design	138
3.2.1	Case Study and Interpretive Approach	140
3.3	Data Collection	145
3.3.1	Data Collection Techniques	146
3.3.2	Think Aloud Protocol	149
3.3.3.	Use of Dyads (Collaborative Effort)	150
3.3.4	Observation	151
3.3.5	Interview Checklist	152
3.3.6	Interview	153
3.3.7	Supplemental Data Collection Tools	155
3.3.8	Procedures of Data Collection	155
3.3.9	Data Analysis and Interpretation	159
3.3.10	Validity and Reliability	162
3.3.11	Triangulation and Thick Description	164
3.4	Researcher as an Instrument	165
3.5	Procedure of Research	166
3.5.1	Operationalising the Situated Learning Environment	166
3.5.2	Criteria for the Evaluation	170
3.6	Summary	171
4.	DATA PRESENTATION AND ANALYSIS (Part A)	173
4.1	General Introduction of Data Presentation and Analysis	173
4.2	Principle of Accounting Cognitive Apprenticeship Model of Teaching and Learning Program, Schedule and Training Activities	175
4.2.1	The Facilitator of the Cognitive Apprenticeship Model Teaching and Learning Training Program	176
4.2.2	The Accounting Training Schedule	176
4.2.3	Form Four Participants Initial Training	177
4.3	Participants' Profiles and Their Reactions to the Accounting Simulation Session	179
4.4	Results of Follow-up Questionnaire after Interactive Source Documents Generation at the Beginning of the Accounting Simulation Session	184
4.5	Knowledge Construction	194
4.6	Discussions of Findings	198
4.6.1	Discussion of Learning from Constructivist Viewpoints	199
4.6.2	Discussion on Situated Learning	201
4.6.3	Discussion of the Methodology	203

DATA PRESENTATION AND ANALYSIS (Part B)	205
Introduction	205
4.7 Process of Data Collection and the Outcomes	208
4.7.1 Engagement in a Meaningful Learning Environment	209
4.7.2 An Appropriate or Inappropriate Tool for My Learning	211
4.7.3 Learning More In-depth Information	212
4.7.4 Impact on Learning and Teaching	216
4.7.5 Affecting (Facilitating, Refreshing or Reinforcing) Learning about Accounting Simulation Utilising Cognitive Apprenticeship Model of Teaching and Learning	217
4.7.6 A Supplementary Tool with Good Teaching Strategies	221
4.8 Knowledge Application and Transfer of Learning	221
4.9 Reflective Thinking and Reflective Judgement	241
4.10 Context Base Knowledge	246
4.11 Non-technical Soft Skills	253
4.12 Discussion of the Instructional Design	258
4.12.1 Discussion of Affordances of Computer Simulation	261
4.12.2 Discussion of Findings	262
5. SUMMARY, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS	267
5.1 Introduction	267
5.2 Summary	267
5.3 Conclusions	288
5.4 Implications for Accounting Education	296
5.5 Directions and Recommendation For Future Research	299
BIBLIOGRAPHY	305
APPENDICES	
Appendix A Letter to the Principal of the School	331
Appendix B Letter from the Ministry of Education	332
Appendix C Validity and Interpretability	333
Appendix D Lesson Plans 1-13	346
Appendix E Questionnaire	374
Appendix F Questionnaire	376
Appendix G Questionnaire	377
Appendix H Questionnaire	379
Appendix I Questionnaire	381
Appendix J Accounting Experts for Validation List	383
Appendix K Interview after KBKK	385
Appendix L Observation on the First Day of Training	397
Appendix M Transcriptions of the In-depth Interviews	407
Appendix N Accounting Simulation Problem for the Test	465
Appendix O In-Depth Interview Questionnaire	498
Appendix P Transcription of Interview and Think Aloud Protocol	499
BIODATA OF STUDENT	512