

**DEVELOPING DESIGN PROCESS MODEL AND
MEASURING ACCEPTANCE OF POLYTECHNIC CO-
OPERATIVE E-RETAIL WEBSITE**

RASHDAN BIN RASHID

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**DEVELOPING DESIGN PROCESS MODEL AND
MEASURING ACCEPTANCE OF POLYTECHNIC CO-
OPERATIVE E-RETAIL WEBSITE**

**BY
Rashdan bin Rashid**

**A Thesis submitted to the Othman Yeop Abdullah Graduate School
of Business Universiti Utara Malaysia in
fulfillment of the requirements for the degree of Doctor of Philosophy**

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ABSTRACT

Research on the process model of e-retail web design using Content Management System (CMS) remains scarce. CMS is one way of developing website quickly, with less cost and usage of IT expertise. Researchers mostly focus on identifying the significant relationship towards particular website especially on web design and suggest for practical implementation. Previous studies on web development are on the architecture of CMS while the use of CMS attracts little interest among researchers. Only a number of researchers concentrate on the process development of e-retail website especially using CMS. To fill the practical gap, this research proposed a process model of e-retail website through SDLC and extended the model with the introduction of internet marketing. It was tested in the development of a e-retail website. Each stage is discussed in details along the way of the web development. After the website was successfully developed, this research examined the acceptance of e-retail website by measuring consumers' behavioural intention and actual usage using Unified Theory of Acceptance and Use of Technology (UTAUT). In addressing the theoretical gap, this research provides an empirical test of three forms of self-efficacy (Computer Self-efficacy, Internet Self-efficacy, and Online Shopping Self-efficacy) and anxiety (Computer Anxiety, Internet Anxiety, and Online Shopping Anxiety) towards behavioural intention to shop online. The research subjects were 91,830 polytechnic students from 33 polytechnics in Malaysia. A total of 357 full-time polytechnic students from five polytechnics in Malaysia have been involved in this research. From a list of students' name, self-administered survey questionnaires were distributed at response rate of 77.8%. Correlation and Multiple Regression were used to test the significant relationship while Hierarchical Regression was used to test the moderator of gender. The research reveals that Performance Expectancy, Social Influence, Facilitating Condition and Online shopping Self-Efficacy are found to have significant effect on students Behavioural Intention to use polytechnic co-operative e-retail business. E-retailer needs to encourage the potential customer to make on-line purchasing because it is no longer a norm against the use of the Internet and computer. The process model is readily transferable to another website so that it describes as sufficient for use. The future research shall apply the extended UTAUT in different subject (adult) and the process model shall extend until the Return on Investment (ROI).

Keywords: Process model, Participant observation, Content Management System (CMS), Unified Theory of Acceptance and Use of Technology, e-retail website, polytechnic co-operative.

ABSTRAK

Penyelidikan berkaitan model proses mereka bentuk laman web e-peruncitan menggunakan Sistem Pengurusan Kandungan atau *Content Management System* (CMS) masih sukar didapati. Penyelidik kebanyakannya tertumpu kepada usaha mengenal pasti hubungan yang signifikan ke atas laman web tertentu terutamanya terhadap reka bentuk laman dan menyarankan pelaksanaannya secara praktikal. Dalam kajian-kajian lepas mengenai pembangunan laman web, tumpuannya adalah seni bina CMS, manakala penggunaan CMS pula kurang menarik minat para penyelidik. Hanya beberapa penyelidik menumpukan perhatian kepada pembangunan proses laman web e-peruncitan terutamanya yang menggunakan CMS. Bagi mengisi jurang praktikal, kajian ini mencadangkan satu model proses laman web e-peruncitan melalui SDLC dan memperluaskan model tersebut dengan memperkenalkan pemasaran internet. Model ini telah diuji dalam pembangunan sebuah laman web e-peruncitan. Setiap peringkat sepanjang proses pembangunan web dibincangkan secara terperinci. Selepas laman web ini berjaya dibangunkan, kajian ini mengkaji pula penerimaan laman web e-peruncitan dengan mengukur niat tingkah laku dan penggunaan sebenar dengan menggunakan Teori Bersepadu Penerimaan dan Penggunaan Teknologi atau *Unified Theory of Acceptance and Use of Technology* (UTAUT). Dalam menangani jurang teori, kajian ini menjalankan ujian empirikal ke atas tiga bentuk efikasi sendiri (Efikasi sendiri Komputer, Efikasi sendiri Internet dan Efikasi sendiri Pembelian atas talian) dan kebimbangan (Kebimbangan Komputer, Kebimbangan Internet dan Kebimbangan Pembelian atas talian) terhadap niat tingkah laku untuk membeli-belah dalam talian. Subjek kajian terdiri daripada 91,830 orang pelajar politeknik dari 33 buah politeknik di Malaysia. Seramai 357 pelajar politeknik sepenuh masa dari lima politeknik di Malaysia terlibat dalam kajian ini. Berdasarkan senarai nama pelajar, soal selidik pemerhatian (tadbir sendiri) diedarkan dengan kadar maklum balas 77.8%. Korelasi dan Regresi Berganda telah digunakan untuk menguji hubungan yang signifikan, manakala Regresi Hierarki digunakan untuk menguji moderator bagi jantung. Dapatan kajian ini mendedahkan bahawa Jangkaan Prestasi, Pengaruh Sosial, Keadaan Fasiliti dan Efikasi Kendiri dalam pembelian atas talian didapati mempunyai kesan yang besar ke atas niat tingkah laku pelajar untuk menggunakan perniagaan e-peruncitan koperasi politeknik. Peruncit E-peruncitan perlu menggalakkan pelanggan yang berpotensi untuk membuat pembelian dalam talian kerana ia tidak lagi menjadi perkara biasa berbanding penggunaan internet dan komputer. Model proses ini sedia untuk dipindahkan ke laman web yang lain bagi menggambarkan keberkesanan penggunaannya. Kajian masa hadapan seharusnya menggunakan UTAUT lanjutan terhadap subjek yang berbeza (dewasa) dan model proses boleh dilanjutkan sehingga proses membawa pulangan ke atas pelaburan atau *Return on Investment* (ROI).

Kata Kunci: Model proses, pemerhatian peserta, Sistem Pengurusan Kandungan (CMS), Teori Bersepadu Penerimaan dan Penggunaan Teknologi (UTAUT), Laman web e-peruncitan, Koperasi Politeknik.

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TABLE OF CONTENTS

PERAKUAN KERJA TESIS / DISERTASI.....	III
PERMISSION TO USE	V
ABSTRACT	VI
ABSTRAK.....	VII
ACKNOWLEDGEMENT	VII
TABLE OF CONTENTS	IX
LISTS OF TABLES	XV
LIST OF FIGURES.....	XVII
PUBLICATIONS ASSOCIATED WITH THIS THESIS	XVIII
CHAPTER ONE.....	1
INTRODUCTION	1
1.1 Background of the Research.....	1
1.2 Problem Statement	11
1.3 Research Questions	25
1.4 Research Objectives	25
1.5 Significance of Study	26
1.6 Scope of Study.....	28
1.7 Definition of Key Terms.....	28
1.8 The research framework.....	31
CHAPTER TWO.....	33
THE BACKGROUND OF CO-OPERATIVE AND E-COMMERCE	33
2.0 Introduction	33

2.1	Co-operative in Malaysia	33
2.2	E-Commerce History.....	40
2.3	Online retail	43
2.4	The case: Tuanku Syed Sirajuddin Co-operative Limited.....	44
2.5	Summary	46
CHAPTER THREE.....		47
LITERATURE REVIEW		47
3.0	Introduction	47
3.1	Studies on web design.....	49
3.1.1	Previous research related to web design approaches	49
3.1.2	Guidelines on website design	55
3.1.3	Process models in web design	59
3.1.4	Usability evaluation in web design.....	68
3.1.5	Using Content Management System (CMS) in web design	72
3.2	Implications of web design in this research.	76
3.3	Determinants of buying behaviour on shopping decision-making.....	77
3.4	Determinants of buying behaviour on online shopping decision-making .	80
3.5	Theoretical Underpinning.....	88
3.5.1	Theory of Reasoned Action (TRA)	89
3.5.2	Theory of Planned Behaviour (TPB).....	89
3.5.3	Technology Acceptance Model (TAM).....	91
3.5.4	Decomposed Theory of Planned Behaviour	93
3.5.5	Social Cognitive Theory	94
3.5.6	Online Shopping Acceptance Model (OSAM).....	95
3.5.7	DeLone and McLean IS Success Model.....	96
3.5.8	Unified Theory of Acceptance and Use of Technology (UTAUT)	98
3.5.9	Implication of UTAUT on this research	104
3.6	Self-Efficacy	104
3.7	Anxiety.....	108
3.8	Behavioural Intention	111
3.9	Usage Behaviour	112

3.10 Summary	112
CHAPTER FOUR	114
THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT ..	114
4.0 Introduction	114
4.1 Research Constructs and Hypotheses Formulation	115
4.1.1 Performance Expectancy (PE)	116
4.1.2 Effort Expectancy (EE).....	116
4.1.3 Social Influence (SI)	117
4.1.4 Facilitating Conditions (FC)	117
4.1.5 Self-efficacy	118
4.1.6 Anxiety.....	119
4.1.7 Education Programme Background	121
4.1.8 Gender.....	123
4.1.9 Voluntaries, Experience and Age	124
4.1.10 Online shopping Intention and Use Behaviour.....	125
4.2 Hypotheses Summary	125
4.3 Summary	126
CHAPTER FIVE	127
METHODOLOGY	127
5.0 Introduction	127
5.1 The First Phase of the study: Web design process model	128
5.1.1 Case Study	129
5.1.2 Case study and Participant observation	130
5.1.3 Data Collection Technique	132
5.1.4 Role of researcher	133
5.1.5 Validity	134
5.1.6 Reliability.....	135
5.1.7 Web design process methodology.	135
5.2 The Second Phase of the study: Validating Modified UTAUT on polytechnic co-operative e-retail website.....	144
5.2.1 Population and Sample Size.	145
5.2.2 Data collection and measurement	149
5.2.3 Instrument Design.....	150
5.2.3.1 PE Dimension	151
5.2.3.2 EE Dimension.....	151

5.2.3.4	Social Influence Dimension	152
5.2.3.5	Facilitating Condition Dimension	153
5.2.3.6	Internet anxiety dimension	153
5.2.3.7	Computer anxiety dimension.....	154
5.2.3.8	Online shopping anxiety dimension	155
5.2.3.9	Internet self-efficacy dimension	155
5.2.3.10	Computer self-efficacy dimension	156
5.2.3.11	Online shopping self-efficacy dimension	157
5.2.3.12	Behavioural Intention	159
5.2.3.13	Use Behaviour	159
5.2.4	Validity of instrument.....	161
5.2.5	Reliability Assessment.....	162
5.2.6	Pilot test	162
5.2.7	Technique of Data analysis.....	163
5.3	Summary	164
CHAPTER SIX	165
RESEARCH FINDINGS	165
6.0	Introduction	165
6.1	The process model	166
6.1.1	Planning and Requirement.....	166
6.1.1.1	Managerial Decisions	166
6.1.1.2	Financial Decisions	168
6.1.1.3	Human resource allocation and training decisions.....	168
6.1.2	Development.....	169
6.1.2.1	The search for a content management system (CMS).....	169
6.1.2.2	Process of registration for the domain name	173
6.1.3	Design	175
6.1.3.1	Basic concept on online shopping navigation.....	175
6.1.3.2	Process of designing web interface	176
6.1.3.3	Product cataloguing management.....	182
6.1.3.4	CMS package selection on online shopping navigation.....	184
6.1.3.5	Buying process	185
6.1.4	Evaluating through Usability Testing	186
6.1.5	Website deployment	189
6.1.6	Promotion.....	191
6.2	Measuring Acceptance on UTAUT.....	203
6.2.1	Response Rate.....	203
6.2.2	Missing Data	204
6.2.3	Profile of Respondents (n=376).....	204

6.2.3.1	Gender	205
6.2.3.2	Programme	205
6.2.3.3	The respondents' computer knowledge.....	206
6.2.3.4	The respondents' internet knowledge.....	206
6.2.3.5	The respondents' Facebook™ account ownership.....	207
6.2.3.6	The respondents' aware of the existence www.ptsscoop.com.my	207
6.2.4	Treatment of Outliers (Mahalanobis Distance)	207
6.2.5	Descriptive Statistics for All Items and Constructs	208
6.2.6	Assessment of Normality.....	209
6.2.7	Homoscedasticity	211
6.2.8	Assessment of Multicollinearity	213
6.2.9	Assessment of Factor Analysis	213
6.2.10	Reliability Analysis.....	217
6.2.11	Correlation Analysis	218
6.2.11.1	Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition.....	219
6.2.11.2	Self Efficacy	220
6.2.11.3	Anxiety	220
6.2.11.4	Gender and Programme	221
6.2.12	Multiple Linear Regression.....	222
6.2.12.1	Effect of Performance Expectancy, Effort Expectancy and Social Influence on Behavioural Intention.....	223
6.2.12.2	Effect of students Self Efficacy on Behavioural Intention	224
6.2.12.3	Effect of students anxiety on Behavioural Intention	225
6.2.12.4	Effect of Education Programme on Behavioural Intention	225
6.2.12.5	Effect of Facilitating Conditions on Use Behaviour	225
6.2.12.6	Effect of Behavioural Intention on Use Behaviour	226
6.2.13	Hierarchical Regressions on moderating effect	227
6.3	Summary	231
CHAPTER SEVEN		234
DISCUSSION AND CONCLUSION.....		234
7.0	Introduction	234
7.1	Discussion on the proposed process model (Phase 1)	234
7.1.1	Planning and Requirement Analysis phase.....	236
7.1.2	Development and Design phase.....	237
7.1.3	Evaluation phase	237
7.1.4	Implementation phase	238
7.1.5	Internet Marketing phase	239
7.2	Discussion on User Acceptance evaluation (Phase 2).....	240

7.2.1	Use Behaviour level of co-operative e-retail website	241
7.2.2	The relationship between Performance Expectancy and Behavioural Intention	242
7.2.3	The relationship between Effort Expectancy and Behavioural Intention	243
7.2.4	The relationship between Social Influence and Behavioural Intention	244
7.2.5	The relationship between Facilitating Condition and Use Behaviour	245
7.2.6	The relationship between self-efficacy and Behavioural Intention	245
7.2.7	The relationship between anxiety and Behavioural Intention	246
7.2.8	The relationship between education programme and Behavioural Intention	247
7.2.9	Moderating effect of Gender.....	247
7.2.10	The relationship between intention and use behaviour.....	249
7.3	Practical Contribution	249
7.4	Theoretical Contribution	250
7.5	Limitation	252
7.6	Future research.....	255
7.7	Summary	256
	REFERENCES	258
	APPENDICES.....	300
	Appendix A User Task	300
	Appendix B Questionnaire	301
	Appendix C Letter of Request	314
	Appendix D Letter of approval.....	315
	Appendix E Normality	316
	Appendix F Factor Loading.....	318
	Appendix G Correlation PE,EE,SI,FC	321
	Appendix H Correlation SE.....	326
	Appendix I Correlation Anxiety	328
	Appendix J Correlation Gender and programme.....	330
	Appendix K Multiple Regression	331
	Appendix L Hierarchical Regression	333

LISTS OF TABLES

Table 1.1 Broadband Subscribers 2011-2014	4
Table 1.2 Personality at work	10
Table 1.3 Definition of key terms.....	29
Table 2.1 Chronology summary of co-operative events	33
Table 2.2 Co-operative by Function as at 31 December 2011	35
Table 2.3 Co-operative principles	36
Table 2.4 Summary of Polytechnic Co-operative.	39
Table 2.5 Summary of web addresses of consumer retail co-operative in Malaysia ..	40
Table 2. 6 Internet Service Provider for PTSS	45
Table 3. 1 Summary of previous research on variables and methodology.....	52
Table 3. 2 Guidelines for e-commerce website design.....	56
Table 3. 3 Others Components Guidelines for e-commerce website design.....	57
Table 3. 4 Summary of CMS stages for e-commerce	64
Table 3. 5 Summary of site building life cycle	65
Table 3. 6 The synthesises work from existing stages in the process model.	66
Table 3. 7 Categories and Technique used Usability Testing	69
Table 3. 8 Summary of research on usability testing	70
Table 3. 9 Differences between usability testing and theory of acceptance.....	71
Table 3. 10 Application Installed by Softaculous	73
Table 3. 11 Summary of previous research on online shopping	83
Table 3. 12 Sources of UTAUT construct.....	99
Table 3. 13 Summary of past research that used modified UTAUT model.	101
Table 3. 14 Summary of past research on self-efficacy	107
Table 3. 15 Summary of past research on anxiety.....	110
Table 4. 1 Summary of the hypotheses	126
Table 5. 1 Summary of the case study.....	134
Table 5. 2 Development Approach.....	140
Table 5. 3 Students Enrollment as of September 2012	146
Table 5. 4 The Probability of students for each region	148
Table 5. 5 Performance Expectancy	151
Table 5. 6 Effort expectancy	152
Table 5. 7 Social Influence	152
Table 5. 8 Facilitating Condition.....	153
Table 5. 9 Internet anxiety	154
Table 5.10 Computer anxiety	154
Table 5.11 Online shopping anxiety.....	155
Table 5.12 Internet self-efficacy.....	156
Table 5.13 Computer self-efficacy	157
Table 5.14 Online shopping self-efficacy	158
Table 5.15 Behavioural Intention	159
Table 5.16 Use Behaviour	160
Table 5.17 Variables and sources	161
Table 5.18 The data analysis techniques used in the research.....	164

Table 6. 1 Estimated expenses allocation.....	168
Table 6. 2 The summary of webhosting (CMS) requirements	170
Table 6. 3 Features of the Silver Plan.....	174
Table 6. 4 The descriptions of Menus	177
Table 6. 5 Participants feedback.....	188
Table 6. 6 Summary of Co-operative Facebook™ page insight news post	193
Table 6. 7 Summary of co-operative Facebook™ page insight product post.....	195
Table 6. 8 Facebook™ page insight product post with boost marketing.....	199
Table 6. 9 The sample study response rate.....	204
Table 6. 10 The frequency and percentage of students' gender	205
Table 6. 11 The frequency of respondents programme	205
Table 6. 12 The frequency of respondents computer knowledge.....	206
Table 6. 13 The frequency of respondents' internet knowledge	206
Table 6. 14 Respondents Facebook™ account ownership	207
Table 6. 15 Respondents awareness on the existence of co-operative e-retail website	207
Table 6. 16 Descriptive Statistics for all items (n=371).....	209
Table 6. 17 Skewness and Kurtosis for the variables	210
Table 6. 18 Test of Multicollinearity.....	213
Table 6. 19 Factor loading for Independent Variables	215
Table 6. 20 Factor Loading for Dependent Variable.....	217
Table 6. 21 Reliability Coefficient of the Variables.....	218
Table 6. 22 Relationship among Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition and Behavioural Intention	219
Table 6. 23 Relationship among Behavioural Intention and Actual	219
Table 6. 24 Relationship between Self Efficacy and Behavioural Intention.....	220
Table 6. 25 Relationship between Anxiety and Behavioural Intention.....	221
Table 6. 26 Relationship among Gender, Programme and Behavioural Intention....	221
Table 6. 27 Summary of multiple regression results on Behavioural Intention without moderating variables	223
Table 6. 28 Summary of the hypothesis testing from multiple regression analysis (PE, EE, SI)	224
Table 6. 29 Summary of the hypothesis testing from multiple regression analysis (SE)	224
Table 6. 30 Summary of the hypothesis testing from multiple regression analysis (Anx).....	225
Table 6. 31 Effect of Facilitating Condition on Use Behaviour	226
Table 6. 32 Summary of the hypothesis testing from multiple regression analysis (FC)	226
Table 6. 33 Effect of Behavioural Intention on Use Behaviour	226
Table 6. 34 Moderating Effect of Gender	229
Table 6. 35 Summary of tested hypotheses results.....	232
Table 7. 1 Summary of phase 1	235

LIST OF FIGURES

Figure 1. 1 The Research Framework	32
Figure 3. 1 Literature review diagram	48
Figure 3. 2 Categories of Web application (Kappel et al., 2003)	61
Figure 3. 3 Model of Buyer Behaviour (Kotler & Armstrong, 2010)	78
Figure 3. 4 Factors Influencing Consumer Behaviour (Kotler & Armstrong, 2010) ..	79
Figure 3. 5 Model of Consumer Behaviour (Andersone & Gaile-sarkane, 2008).....	80
Figure 3. 6 Online Shopping Acceptance Model (OSAM)(Zhou et. al., 2007).	95
Figure 3. 7 The original IS success model (DeLone & McLean,1992)	96
Figure 3. 8 The modified IS success model (Delone & McLean, 2003).....	97
Figure 3. 9 UTAUT Model (Venkatesh et. al., 2003)	100
Figure 4. 1 Proposed Theoretical Framework and Hypotheses.....	115
Figure 5. 1 Research methodology.	128
Figure 5. 2 Design Research Model (Vaishnavi & Kuechler, 2004).....	136
Figure 5. 3 The proposed stages of web design process model development.	141
Figure 5. 4 Survey session.....	150
Figure 6. 1 Proposal Presentation to Board of Co-operative.....	167
Figure 6. 2 Screenshot of preloaded online shopping CMS.....	171
Figure 6. 3 Screenshot of osCommerce CMS website platform.	172
Figure 6. 4 Screenshot of e-commerce web using osCommerce Platform.....	172
Figure 6. 5 Screen shot of an online shopping CMS by Exabytes Network Sdn. Bhd.	173
Figure 6. 6 Online shopping navigation	176
Figure 6. 7 Flow of web design	180
Figure 6. 8 Screenshots of Page Design	181
Figure 6. 9 Screenshots of product categories.....	182
Figure 6. 10 Process flow of product cataloguing in CMS package selection	183
Figure 6. 11 Screenshot of product page	184
Figure 6. 12 Screenshot of the polytechnic co-operative e-retail website.....	185
Figure 6. 13 Screenshot of WhatsApp message and Poslaju.....	186
Figure 6. 14 Screenshot of focus group session	187
Figure 6. 15 Screenshot of the interview session with BOC	190
Figure 6. 16 Screenshot of the Polytechnic Co-operative Facebook™ Page.....	191
Figure 6. 17 Screenshot of Facebook™ configuration	192
Figure 6. 18 Screenshot the shopping cart in Facebook Page™	192
Figure 6. 19 Screenshot of setting up Facebook™ Page Promotion.....	198
Figure 6. 20 Screenshot of co-operative blog.....	200
Figure 6. 21 Screenshot of message box and Skype™	201
Figure 6. 22 The final of web design process model.....	202
Figure 6. 23 Scatterpolts of Standardized Residuals against the Predicted Values...	211
Figure 6. 24 Scatterplots of studentized	212
Figure 6. 25 Research findings diagram.....	233

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Journals

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Rashdan, R., & Shahizan, H. (2013). Participant Observation in a Case Study on Web Design Process of E-retail Website. *Information Management and Business Review*, 5(10), 499–504. (Peer reviewed; Google Scholar, ABI-INFROM, Business Database, EBSCOHost)

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Conference Proceedings

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Rashdan, R., Shahizan, H., Farizah, A., & Yuslina, S. (2012). Anxiety and Self-Efficacy Towards Tuanku Syed Sirajuddin Polytechnic Co-operative e-Retail website. Paper presented at the *International Conference on Technology Management, Business and Entrepreneurship (ICTMBE) 2012*. (proceeding p. 62). Malacca: Universiti Teknologi Tun Hussein Onn.

Rashdan, R., Yaakob, H., Taib, A., MdRudzi, R., & Saleh, S. (2015). The propose process research on the development and measuring acceptance of e-retail business. Paper presented at the *Interdisciplinarity ICT Practice Conference (IIPC) 2015*. Ipoh: Ungku Omar Polytechnic.

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Rashdan, R., Yuslina, S., & Farizah, A. (2012). Proposed Process Model for Polytechnic Consumer Co-operative e-Retail. Paper presented at the *PTSS Colloquium 2012*. (proceeding p. 13). Arau: Politeknik Tuanku Syed Sirajuddin. (Reviewer: Prof Madya Dr Bidin Yatim, from UUM)

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CHAPTER ONE

INTRODUCTION

This chapter introduces the background of research followed by the problem statement, research questions and objectives, significance of the study and, limitations and scope of the study. It also includes the definition of relevant key terms and structure of the research framework.

1.1 Background of the Research

The government intends to boost online business in Malaysia through multiple initiatives and programmes. Through the Economic Transformation Programme (ETP), for example, the government seeks to modernize the retail sector by building a more dynamic retail market. The government modernize retail sector by assisting small operators through improvement initiatives in skills and information technology. The government wants to provide global exposure to our small and medium enterprises (SMEs) through the virtual mall (*Economic Transformation Programme: A Roadmap For Malaysia*, 2010). According to the Deputy Prime Minister, Tan Sri Dato' Hj Muhyiddin in his speech at the opening ceremony of The Native Entrepreneurs' Expo on 8th July 2011, the initiated Entry Point Projects (EPP) under ETP has been designed to boost the growth of Gross National Income (GNI) through expanding online retail revenue. In addition, the Digital Malaysia Masterplan has been introduced as an effort to improve socio-economic development of the country by focusing on ICT and e-commerce (“Tangani Digital Malaysia,” 2013)

In line with the government’s Economic Transformation Programme (ETP) initiative such as Retail Transformation Project (TUKAR) and National Co-operative Policy

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REFERENCES

- Abdulhameed Rakan, A., Abdul Malik, A. K., & Arsaythamby, V. (2010). An empirical investigation into the role of enjoyment, computer anxiety, computer self efficacy and internet experience in influencing the studentd' intention to use e-learning: A case study from Saudi Arabian goverment universities. *The Turkish Online Journal of Education Technology*, 9(4), 22–34.
- Abels, E. G., White, M. D., & Hahn, K. (1999). A user based design process for web sites. *OCLC Systems and Services*, 15(1), 35–44.
- Abendroth, L. J. (2011). The souvenir purchase decision: effects of online availability. *International Journal of Culture, Tourism and Hospitality Research*, 5(2), 173–183. doi:10.1108/17506181111139582
- Adapa, S. (2008). Adoption of internet shopping: Cultural considerations in India and Australia. *Journal of Internet Banking and Commerce*, 13(2), 1–17.
- Agarwal, R., & Karahanna, E. (2000). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quartely*, 24(4), 665–694.
- Ahmad, N., Tarek Amer, N., Qutaifan, F., & Alhilali, A. (2013). Technology adoption model and a road map to successful implementation of ITIL. *Journal of Enterprise Information Management*, 26(5), 553–576. doi:10.1108/JEIM-07-2013-0041

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.
- Alberta Community and Co-operative Association. (2012). What is Co-operative. Retrieved from <http://acca.coop/co-op-resources/what-is-a-co-operative/>
- Alekseev, N. ., & Bondarenko, V. . (2009). Comparative analysis of web-site content management systems. In *19th Int.Crimean Conference "Microwave & Telecommunication Technology* (pp. 369–371). Sevastopol, Crimea.
- Alexander, R. R. (1982). Participant Observation, Ethnography, and Their Use in Educational Evaluation: A Review of Selected Works. In *Studies in Art Education* (pp. 63–69). National Art Education Association.
doi:10.2307/1319805
- AlGhamdi, R., Drew, S., & AlGhaith, W. (2011). Factors influencing e-commerce adoption by retailers in Saudi Arabia:A Qualitative analysis. *The Electronic Journal on Information Systems in Developing Countries*, 47(7), 1–23.
- Alkhunaizan, A., & Love, S. (2012). What drives mobile commerce? An empirical evaluation of the revised UTAUT model. *International Journal of ...*, 2(1), 82–99. Retrieved from <http://marcomacademy.co.uk/ijmma/What-drives-mobile-commerce-An-empirical-evaluation-of-the-revised-UTAUT-model.pdf>
- Al-Qeisi, K., Dennis, C., Alamanos, E., & Jayawardhena, C. (2014). Website design quality and usage behavior: Unified Theory of Acceptance and Use of Technology. *Journal of Business Research*, 67(11), 2282–2290.
doi:10.1016/j.jbusres.2014.06.016

- American Marketing Association. (n.d.). Dictionary of Marketing Terms.
- Amoroso, D. ., & Hunsinger, D. S. (2009). Understanding consumers' acceptance of online purchasing. *Journal of Information Technology Management*, 20(1), 15–41.
- Andersone, I., & Gaile-sarkane, E. (2008). Influence of factors on consumer behavior. In *5th International Scientific Conference Business and Management* (pp. 331–337). Vilnius.
- Atilgan-Inan, E., & Karaca, B. (2011). Planned behaviour of young consumers shopping on the internet. *European Journal of Social Sciences*, 19(4), 528–537.
- Aulia, F., & Dhewanto, W. (2014). Formulation of E-Commerce Website Development Plan Using Multidimensional Approach for Web Evaluation. *Procedia - Social and Behavioral Sciences*, 115(Icices 2013), 361–372.
doi:10.1016/j.sbspro.2014.02.442
- Awad, E. M. (2006). *Electronic commerce from vision to fulfillment* (3rd ed.). Pearson Prentice Hall.
- Azmah, O., & Fatimah, K. (2008). Enhancing co-operative movement to achieve Malaysia's development goals. In *The Role of Co-operatives in Sustaining Development and Fostering Social Responsibility* (pp. 1–39).
- Bailey, A. A. (2005). Consumer awareness and use of product review websites. *Journal of Interactive Advertising*, 6(1), 68–81.

- Ballantine, P. W. (2005). Effects of interactivity and product information on consumer satisfaction in an online retail setting. *International Journal of Retail & Distribution Management*, 33(6), 461–471. doi:10.1108/09590550510600870
- Balzer, R., Egyed, A., Goldman, N., Hollebeek, T., Tallis, M., Wile, D., & Rey, M. Del. (2007). Adapting COTS applications : An experience report. In *Second International Workshop on Incorporating COTS Software into Software Syatems: Tools and Technique*.
- Bamasoud, D. M. S. (2010). *E commerce guidelines for teen shoppers*. University Teknology Malaysia.
- Bandura, A. (1997). *Self-Efficacy: The Excercise of Control*. New York: W.H Freeman.
- Bandura, A. (2006). Guide for constructing self-efficacy scales. In *Self-Efficacy Beliefs of Adolescents* (pp. 307–337). Information Age Publishing.
- Baron, R. M., & Kenny, D. a. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–82. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/3806354>
- Battleson, B., Booth, A., & Weintrop, J. (2001). Usability testing of an academic library Web site: a case study. *The Journal of Academic Librarianship*, 27(3), 188–198. doi:10.1016/S0099-1333(01)00180-X

- Belkhamza, Z., & Azizi Wafa, S. (2014). The role of uncertainty avoidance on e-commerce acceptance across cultures. *International Business Research*, 7(5), 166–173. doi:10.5539/ibr.v7n5p166
- Benzing, M. (2006). Luwak: a content management solution. *Library Hi Tech*, 24(1), 8–13. doi:10.1108/07378830610652077
- Bergvall-kåreborn, B., & Stahlbrost, A. (2008). Participatory Design – One Step Back or Two Steps Forward ? In *PDC '08: Proceedings of the Tenth Anniversary Conference on Participatory Design 2008* (pp. 102–111). Indiana University.
- Bonera, M. (2011). The propensity of e-commerce usage: the influencing variables. *Management Research Review*, 34(7), 821–837. doi:10.1108/01409171111146706
- Brandt, E. (2006). Designing Exploratory Design Games : A Framework for Participation in Participatory Design ? In *PDC 2006 - Proceedings of the ninth Participatory Design Conference 2006 Designing* (pp. 57–66). Trento.
- Brannen, J. (1992). Combining qualitative and quantitative approaches: an overview. In *Mixing Methods: Qualitative and Quantitative Research* (pp. 1–37). Avebury.
- Broekhuizen, T., & Huizingh, E. K. R. E. (2009). Online purchase determinants: Is their effect moderated by direct experience? *Management Research News*, 32(5), 440–457. doi:10.1108/01409170910952949
- Brown, S., Massey, A., Montoya-Weiss, M., & Burkman, J. (2007). Do I really have to? User acceptance of mandate technology. *European Journal of Information Systems*, 11, 283–295.

- Burke, R. . (2002). Technology and the customer interface: What consumers want in the physical and virtual store. *Journal of the Academy of Marketing Science*, 30(4), 411–432.
- Butler, T., & Eireann, T. (1997). A case study of user participation in the information systems development process. In *ICIS '97: Proceedings of the eighteenth international conference on Information systems* (pp. 411–426). Association for Information Systems.
- Cao, M., Zhang, Q., & Seydel, J. (2005). B2C e-commerce web site quality: an empirical examination. *Industrial Management & Data Systems*, 105(5), 645–661. doi:10.1108/02635570510600000
- Celik, H. (2011). Influence of social norms, perceived playfulness and online shopping anxiety on customers' adoption of online retail shopping: An empirical study in the Turkish context. *International Journal of Retail & Distribution Management*, 39(6), 390–413. doi:10.1108/09590551111137967
- Celik, H., & Yilmaz, V. (2011). Extending the technology acceptance model for adoption of e-shopping by consumers in Turkey. *Journal of Electronic Commerce Research*, 12(2), 152–165.
- Center for Retail Research. (2012). Online Retailing: Britain and Europe 2012. Retrieved from <http://www.retailresearch.org/onlineretaling.php>
- Cervone, H. F. (2008). Developing the business case for a digital library project. *OCLC Systems & Services*, 24(1), 18–21. doi:10.1108/10650750810847206

- Cha, J. (2011). Exploring the internet as a unique shopping channel to sell both real and virtual items: A comparison of factors affecting purchase intention and consumer characteristics. *Journal of Electronic Commerce Research*, 12(2), 115–132.
- Cheek, G., Shehab, M., Ung, T., & Williams, E. (2011). iLayer: Toward an Application Access Control Framework for Content Management Systems. *2011 IEEE International Symposium on Policies for Distributed Systems and Networks*, 65–72. doi:10.1109/POLICY.2011.28
- Chen, C.-W. D., & Cheng, C.-Y. J. (2009). Understanding consumer intention in online shopping: a respecification and validation of the DeLone and McLean model. *Behaviour & Information Technology*, 28(4), 335–345. doi:10.1080/01449290701850111
- Chiou, J.-S. (1998). The effects of attitude , subjective norm , and perceived behavioral control on consumers ' purchase intentions : The moderating effects of product knowledge and attention to social comparison information. In *Proceedings National Science Council (ROC)* (Vol. 9, pp. 298–308).
- Chiu, Y.-B., Lin, C.-P., & Tang, L.-L. (2005). Gender differs: assessing a model of online purchase intentions in e-tail service. *International Journal of Service Industry Management*, 16(5), 416–435. doi:10.1108/09564230510625741
- Choon Ling, K., Dazmin, D., Hoi Piew, T., Keoy, K. H., & Hassan, P. (2011). Perceived risk, perceived technology, online trust for the online purchase intention in Malaysia. *International Journal of Business and Management*, 6(6), 167–183. doi:10.5539/ijbm.v6n6p167

- Choon Ling, K., Hoi Piew, T., & Teck-Chai, L. (2010). Investigating the shopping orientations on online purchase intention in the e-commerce environment: A Malaysian study. *Journal of Internet Banking and Commerce*, 15(2), 1–22.
- Chung, S. Y., & Park, C. (2009). Online shopping behavior model : A literature review and proposed model. In *ICACT 2009* (Vol. 2008, pp. 2276–2282).
- Cloniger, S. (2008). *Theories of Personality Understanding Persons* (5th ed.). New Jersey: Pearson Prentice Hall.
- Close, A. G., Kukar-kinney, M., & Benusa, T. K. (2012). Towards a Theory of Consumer Electronic Shopping Cart Behavior: Motivations of E-Cart Use and Abandonment. *Online Consumer Behaviour: Theory and Research in Social Media, Advertising and E-Tail*, 1–32. Retrieved from <http://ssrn.com/abstract=1986310>
- Cody-Allen, E., & Kishore, R. (2006). An extension of the UTAUT model with e-quality, trust, and satisfaction constructs. In *Proceedings of the 2006 ACM SIGMIS CPR conference on computer personnel research Forty four years of computer personnel research: achievements, challenges & the future - SIGMIS CPR '06* (p. 82). New York, New York, USA: ACM Press.
doi:10.1145/1125170.1125196
- Cohen, J. (1998). *Statistical power analysis for the behavioral sciences*. New Jersey: Lawrence Erlbaum.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. (3rd ed.). Routledge.
Retrieved from

[https://books.google.com.my/books?id=gkalyqTMXNEC&lpg=PP1&ots=tQFPZ4t8gh&dq=can correlation analysis nominal data gender&lr&pg=PP1#v=onepage&q=can correlation analysis nominal data gender&f=false](https://books.google.com.my/books?id=gkalyqTMXNEC&lpg=PP1&ots=tQFPZ4t8gh&dq=can+correlation+analysis+nominal+data+gender&lr&pg=PP1#v=onepage&q=can+correlation+analysis+nominal+data+gender&f=false)

Creswell, J. W. (1994). *Research Design Qualitative & Quantitative Approaches*. SAGE Publications.

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, 39(3), 124–131.

Cunliffe, D. (2000). Developing usable web sites - a review and model. *Internet Research: Electronic Networking Applications and Policy*, 10(4), 295–307.

Dasar Koperasi Negara 2011-2020. (2010) (1st ed.). Suruhanjaya Koperasi Malaysia.

Davies, K., & Burt, S. (2007). Consumer co-operatives and retail internationalisation: problems and prospects. *International Journal of Retail & Distribution Management*, 35(2), 156–177. doi:10.1108/09590550710728101

Davis, F. D. (1989). Perceived usefulness, perceived ease of use and end user acceptance of information technology. *MIS Quartely*, 13(3), 319–340.

Delafrooz, N., Laily, H. P., & Khatibi, A. (2010). Students' online shopping behavior : An empirical study. *Journal of American Science*, 6(1), 137–147.

Delafrooz, N., Paim, L. H. J., & Khatibi, A. (2011a). A research modeling to understand online shopping intention. *Australian Journal of Basic and Applied Sciences*, 5(5), 70–77.

- Delafrooz, N., Paim, L. H., & Khatibi, A. (2011b). Understanding consumers' internet purchase intention in Malaysia. *African Journal of Business Management*, 5(3), 2837–2846.
- DeLone, W. H., & McLean, E. R. (1992). Information systems success: the quest for the dependent variable. *Information Systems Research*, 3, 60–65.
- Delone, W. H., & Mclean, E. R. (2002). Information systems success revisited. In *Proceedings of the 35th Hawaii International Conference on System Sciences* (Vol. 00, pp. 1–11). Hawai.
- Delone, W. H., & Mclean, E. R. (2003). The DeLone and McLean model of information systems success : A ten-year update. *Journal of Management Information Systems*, 19(4), 9–30.
- Dennis, C., Merrilees, B., Jayawardhena, C., & Wright, L. T. (2009). E-consumer behaviour. *European Journal of Marketing*, 43(9/10), 1121–1139.
doi:10.1108/03090560910976393
- Dholakia, R. R., & Zhao, M. (2008). Retail web site interactivity: How does it influence customer satisfaction and behavioral intentions? *International Journal of Retail & Distribution Management*, 37(10), 821–838.
doi:10.1108/09590550910988011
- Di Domenico, M., & Phillips, N. (2010). Participant Observation. In A. J. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (pp. 653–656). Thousand Oaks: SAGE Publications.
doi:http://dx.doi.org/10.4135/9781412957397.n244

- Dillman, A. . (2003). Selecting a software development life Cycle (SDLC) methodology: A practical decision framework to maximize business value. *Project Management Solutions, Inc & Park Hill Technology LLC*, 1–12.
- Distante, D., Risi, M., & Scanniello, G. (2014). Enhancing Navigability in Websites Built Using Web Content Management Systems. *International Journal of Software Engineering and Knowledge Engineering*, 24(03), 493–515.
doi:10.1142/S0218194014500193
- Doherty, N. F., & Ellis-Chadwick, F. (2009). Exploring the drivers, scope and perceived success of e-commerce strategies in the UK retail sector. *European Journal of Marketing*, 43(9/10), 1246–1262. doi:10.1108/03090560910976474
- Du, J. (2005). A tentative study on the model of the campus e-commerce. In *Proceedings of the 7th international conference on Electronic commerce* (pp. 790–792). ACM. doi:10.1145/1089551.1089699
- Durndell, A., & Haag, Z. (2002). Computer self efficacy, computer anxiety, attitudes towards the Internet and reported experience with the Internet, by gender, in an East European sample. *Computers in Human Behavior*, 18(5), 521–535.
doi:10.1016/S0747-5632(02)00006-7
- Economic Transformation Programme: A Roadmap For Malaysia*. (2010). Retrieved from
http://etp.pemandu.gov.my/upload/etp_handbook_chapter_8_wholesale_and_retail.pdf
- Eisenhardt, M. (1989). Building theories from case study research. *The Academy Of Management Review*, 14(4), 532–550.

- Ellis, R. D., & Kurniawan, S. H. (2000). Increasing the usability of online information for older users: A case study in participatory design. *International Journal of Human-Computer Interaction*, 12(2), 263–276.
- Enterprise IT News. (2012). Malaysian Shoppers Skipped the Queues to shop online and on their mobile devices this festive season. Retrieved from <http://www.enterpriseitnews.com.my/component/k2/item/528-malaysian-shoppers-skipped-the-queues-to-shop-online-and-on-their-mobile-devices-this-festive-season.html>
- Escobar-Rodríguez, T., & Carvajal-Trujillo, E. (2014). Online purchasing tickets for low cost carriers: An application of the unified theory of acceptance and use of technology (UTAUT) model. *Tourism Management*, 43, 70–88.
doi:10.1016/j.tourman.2014.01.017
- Evans, P. (2014). *Malaysia becomes a regional leader with its nationwide broadband network*. Retrieved from <http://www.budde.com.au/Research/Malaysia-Telecoms-Mobile-Broadband-and-Forecasts.html>
- Ezlika, G., Adam, D. M., & Nurul Azlinawatee, M. (2006). Attitude towards online purchase of fish in urban Malaysia : An ethnic comparison. *Journal of Food Products Marketing*, 12(4), 109–128. doi:10.1300/J038v12n04
- Fagan, M. H., Neill, S., & Wooldridge, B. R. (2004). An empirical investigation into the relationship between computer self-efficacy, anxiety, experience, support and usage. *Journal of Computer Information Systems*, 95–105.

- Fan, Y., & Miao, Y. (2012). Effect of electronic word of mouth on consumer purchase intention: The perspective of gender differences. *International Journal of Electronic Business Management*, 10(3), 175–181.
- Fang, X., & Salvendy, G. (2003). Customer-Centered Rules for Design of E-Commerce Web Sites Xiaowen Fang and Gavriel Salvendy. *Communication of the ACM*, 46(12), 332–336.
- Faqih, K. M. S. (2013). Exploring the influence of perceived risk and internet self-efficacy on consumer online shopping intentions : Perspective of technology acceptance model. *International Management Review*, 9(1), 67–78.
- Fenech, T., & O’Cass, A. (2001). Internet users’ adoption of Web retailing: user and product dimensions. *Journal of Product & Brand Management*, 10(6), 361–381.
doi:10.1108/EUM00000000006207
- Field, A. (2009). *Discovering Statistics Using SPSS* (3rd ed.). SAGE Publications.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior*. Reading, MA: Addison-Wesley.
- Fogg, B. J., Marshall, J., Laraki, O., Osipovich, A., Varma, C., Fang, N., ... Hall, C. (2001). *What Makes Web Sites Credible? A Report on a Large Quantitative Study*.
- Freeman, M., & Freeman, A. (2011). Online grocery systems design through task analysis. *Journal of Enterprise Information Management*, 24(5), 440–454.
doi:10.1108/17410391111166512

- Furnham, A. (1992). *Personality at work: The role of individual differences in the workplace*. London: Mackays of Chatnam.
- Fusilier, M., & Durlabhji, S. (2005). An exploration of student internet use in India: the technology acceptance model and the theory of planned behaviour. *Campus-Wide Information Systems*, 22(4), 233–246. doi:10.1108/10650740510617539
- Gbenga, J. . (2010). *Acceptability Factors of Iris-Based Authentication Approach among Nigerian Users of Automated Teller Machine*. Universiti Utara Malaysia.
- Genuardi, P. (2004). *User Adoption of Information Technology: Implication for Application Development Research*. Georgetown University, USA.
- Glaser, J. M. (1996). The Challenge of Campaign Watching : Seven Lessons of Participant-Observation. In *PS: Political Science and Politics* (Vol. 29, pp. 533–537). American Political Science Association.
- Goi, C. L. (2007a). A review of existing web site models for e-commerce. *Journal of Internet Banking and Commerce*, 12(1), 1–17.
- Goi, C. L. (2007b). Correlation between Internet and ICT, Web Site Development, and Internet Marketing: Perception of Marketers in Malaysia and Singapore. *Journal of Internet Banking and Commerce*, 12(2).
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597–606.
- Gong, W., & Maddox, L. (2011). Online Buying Decisions in China. *The Journal of American Academy of Business*, 17(September), 43–51.

- Gong, Y. H., & Zhu, C. (2009). Design and implementation of electronic commerce website. In *2009 ISECS International Colloquium on Computing, Communication, Control, and Management* (pp. 278–281). Ieee.
doi:10.1109/CCCM.2009.5270433
- Gopi, M., & Ramayah, T. (2007). Applicability of theory of planned behavior in predicting intention to trade online: Some evidence from a developing country. *International Journal of Emerging Markets*, 2(4), 348–360.
doi:10.1108/17468800710824509
- Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. *Journal of Business Research*, 62(5), 565–571.
doi:10.1016/j.jbusres.2008.06.016
- Ha, Y., & Lennon, S. J. (2010). Effects of site design on consumer emotions: role of product involvement. *Journal of Research in Interactive Marketing*, 4(2), 80–96.
doi:10.1108/17505931011051641
- Haag, S., Cummings, M., & Rea, J. A. I. (2004). *Computing Concepts* (2nd ed.). McGraw Hill.
- Hair, J. ., Black, W. ., Babin, B. ., & Anderson, R. . (2010). *Multivariate data analysis: A global perspective* (7th ed.). New Jersey: Pearson Prentice Hall.
- Hameed, M. A., & Counsell, S. (2014). User Acceptance Determinants of Information Technology Innovation in Organizations. *International Journal of Innovation and Technology Management*, 11(05), 1450033.
doi:10.1142/S0219877014500333

- Han, Q., Yang, R., & Du, M. (2009). A study of computer anxiety among chinese students majoring in information technology. In *2009 International Conference on Computational Intelligence and Software Engineering* (pp. 1–4). Ieee.
doi:10.1109/CISE.2009.5366804
- Han, Y. (2004). Digital content management : the search for a content management. *Library Hi Tech*, 22(4), 355–365. doi:10.1108/07378830410570467
- Hansen, T. (2008). Consumer values, the theory of planned behaviour and online grocery shopping. *International Journal of Consumer Studies*, 32(2), 128–137.
doi:10.1111/j.1470-6431.2007.00655.x
- Haque, A., Sadeghzadeh, J., & Khatibi, A. (2006). Identifying potentiality online sales in Malaysia: A study on customer relationships online shopping. *Journal of Applied Business Research*, 22(4), 119–130.
- Hasan, L., Morris, A., & Probets, S. (2013). E-commerce websites for developing countries – a usability evaluation. *Online Information Review*, 37(2), 231–152.
- Hasina, M., Md. Aminul, I., Ku Halim, K. A., & Anayet, K. (2011). Customers satisfaction on online shopping in Malaysia. *International Journal of Business and Management*, 6(10), 162–169. doi:10.5539/ijbm.v6n10p162
- Hassanein, K., & Head, M. (2007). Manipulating perceived social presence through the web interface and its impact on attitude towards online shopping. *International Journal of Human-Computer Studies*, 65(8), 689–708.
doi:10.1016/j.ijhcs.2006.11.018

- Hausman, A. V., & Siekpe, J. S. (2009). The effect of web interface features on consumer online purchase intentions. *Journal of Business Research*, 62(1), 5–13. doi:10.1016/j.jbusres.2008.01.018
- Hernandez, B., Jimenez, J., & Martin, M. J. (2008). Differences between potential, new and experienced e-customers: Analysis of e-purchasing behaviour. *Internet Research*, 18(3), 248–265.
- Hernandez, B., Jimenez, J., & Martín, M. J. (2009). Adoption vs acceptance of e-commerce: two different decisions. *European Journal of Marketing*, 43(9/10), 1232–1245. doi:10.1108/03090560910976465
- Hernandez, B., Jimenez, J., & Martín, M. J. (2011). Age, gender and income: do they really moderate online shopping behaviour? *Online Information Review*, 35(1), 113–133. doi:10.1108/14684521111113614
- Hevner, A. R., March, S. T., Park, J., & Ram, S. (2004). Design science in information system research. *MIS Quarterly*, 28(1), 75–105.
- Hill, W. W., & Beatty, S. E. (2011). A model of adolescents' online consumer self-efficacy (OCSE). *Journal of Business Research*, 64(10), 1025–1033. doi:10.1016/j.jbusres.2010.11.008
- Hocko, J. (2011). User centered design in procured software implementations. *Journal of Usability Studies*, 6(2), 60–74.
- Hornby, A. . (2000). *Oxford Advanced Learner's Dictionary*. (S. Wehmeier, Ed.) (6th ed.). Oxford University Press.

- Hsu, M.-H., & Chiu, C.-M. (2004). Internet self-efficacy and electronic service acceptance. *Decision Support Systems*, 38(3), 369–381.
doi:10.1016/j.dss.2003.08.001
- Huang, Y., & Oppewal, H. (2006). Why consumers hesitate to shop online: An experimental choice analysis of grocery shopping and the role of delivery fees. *International Journal of Retail & Distribution Management*, 34(4/5), 334–353.
doi:10.1108/09590550610660260
- Husnayati, H., Rafidah, M. N., & Mohd Adam, S. (2008). Perceived attributes of e-commerce and the adoption decision : The case of Malaysian SMEs. *Jurnal Teknologi Maklumat & Mulitmedia*, 5, 107–125.
- Iacono, J., Brown, A., & Holtham, C. (2009). Research methods – A case example of participant observation. *The Electronic Journal of Business Research Methods*, 7(1), 39–46.
- Iacono, J. C., Brown, A., & Holtham, C. (2011). The use of the case study method in theory testing : The Example of steel eMarketplaces. *The Electronic Journal of Business Research Methods*, 9(1), 57–65.
- Im, H., & Ha, Y. (2011). The effect of perceptual fluency and enduring involvement on situational involvement in an online apparel shopping context. *Journal of Fashion Marketing and Management*, 15(3), 345–362.
doi:10.1108/13612021111151923
- Im, I., Hong, S., & Kang, M. S. (2011). An international comparison of technology adoption. *Information & Management*, 48(1), 1–8. doi:10.1016/j.im.2010.09.001

- International Co-Operative Alliance (ICA). (2012). Co-operative Definition.
Retrieved from <http://www.aciamericas.coop/Co-operative-Definition>
- Irfan, K. (2015). *Nota jutawan nota perniagaan internet*. Selangor: Telaga Biru Sdn. Bhd.
- Islam, N. (2011). Understanding continued usage intention in e-learning context. In *24th Bled eConference efuture: Creating Solutions for the Individual, Organisations and Society* (pp. 546–557). Bled, Slovenia.
- Jabatan Pengajian Politeknik. (2012). *Informasi Politeknik Jabatan Pengajian Politeknik*.
- Jaimangal-Jones, D. (2014). Utilising ethnography and participant observation in festival and event research. *International Journal of Event and Festival Management*, 5(1), 39–55. doi:10.1108/IJEFM-09-2012-0030
- James, L. R., & Brett, J. M. (1984). Mediators , Moderators , and Tests for Mediation. *Journal of Applied Psychology*, 69(2), 307–321.
- Jariah, M., Husniyah, A. R., Laily, P., & Britt, S. (2004). Financial behavior and problems among university students: Need for financial education. *Journal of Personal Finance*, 3(1), 82–96.
- Jayawardhena, C., Wright, L. T., & Dennis, C. (2007). Consumers online: intentions, orientations and segmentation. *International Journal of Retail & Distribution Management*, 35(6), 515–526. doi:10.1108/09590550710750377
- Johnson, M. (2008). *A new approach to Internet banking*. Cambridge.

- Jorgensen, D. L. (1989). Participant Observation. In D. L. Jorgensen (Ed.), *Participant Observation* (pp. 12–26). Thousand Oaks: SAGE Publications.
- Junaini, N. ., & Sidi, J. (2007). Customer-centered design approach to improve e-commerce web site usability. In *Unimas Research Symposium (URS 2007)* (pp. 147–154). Retrieved from myais.fsktm.um.edu.my/3073/1/urs_full_paper.pdf
- Kappel, G., Proll, B., Reich, S., & Retschitzegger, W. (2003). *Web Engineering: The Discipline of Systematic Development of Web Applications*. Heidelberg: John Wiley & Sons Limited.
- Kauffman, R. J., & Walden, E. A. (2001). Economics and electronic commerce : Survey and directions for research. *International Journal of Electronic Commerce*, 5(4), 5–116.
- Keisidou, E., Sarianniadis, L., & Maditinos, D. (2011). Consumer characteristics and their effect on accepting online shopping , in the context of different product types. *Int. Journal of Business Science and Applied Management*, 6(2), 31–51.
- Keong, M. L., Ramayah, T., Kurnia, S., & Chiun, L. M. (2012). Explaining intention to use an enterprise resource planning (ERP) system: an extension of the UTAUT model. *Business Strategy Series*, 13(4), 173–180.
doi:10.1108/17515631211246249
- Khairina, R., Yeow, P., & Siew, E.-G. (2012). Factors influencing audit technology acceptance by audit firms: A new I-TOE adoption framework. *Journal of Accounting and Auditing: Research & Practice*, 2012, 1–11.
doi:10.5171/2012.876814

- Khatibi, A., Haque, A., & Khaizurah, K. (2006). E-commerce: A study on internet shopping in Malaysia. *Journal of Applied Sciences*, 6(3), 696–705.
- Khechine, H., Lakhal, S., Pascot, D., & Bytha, A. (2014). UTAUT model for blended learning : The role of gender and age in the intention to use webinars. *Interdisciplinary Journal of E-Learning and Learning Objects*, 10, 33–52.
- Kiatruangkrai, P., Phusayangkul, P., Viniyakul, S., Prompoon, N., & Kanongchaiyos, P. (2010). Design and Development of Real-Time Communication Content Management System for E-Commerce. In *2010 Second International Symposium on Data, Privacy, and E-Commerce* (pp. 111–116). Ieee.
doi:10.1109/ISDPE.2010.24
- Kim, J., & Forsythe, S. (2010). Adoption of dynamic product imagery for online shopping: does age matter? *The International Review of Retail, Distribution and Consumer Research*, 20(4), 449–467. doi:10.1080/09593969.2010.504011
- Kirtis, a. K., & Karahan, F. (2011). To be or not to be in social media arena as the most cost-efficient marketing strategy after the global recession. *Procedia - Social and Behavioral Sciences*, 24, 260–268. doi:10.1016/j.sbspro.2011.09.083
- Kobach, M. (2014). 10 Facebook Rules Every Business Needs to Know Before Posting. Retrieved from <http://socialmediatoday.com/matthew-kobach/2367336/facebook-cheat-sheet-10-facebook-rules-every-business-needs-know-posting-infographic>
- Kotler, P., & Armstrong, G. (2010). *Principles of Marketing* (13th ed.). New Jersey: Pearson.

- Krejcie, R. V, & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607–610.
- Kurt, N., Savaş, B., Günay, G., & Çeştepe, H. (2014). Consumers Perceived Online Purchasing. *Academic Journal of Interdisciplinary Studies*, 3(3), 185–192.
doi:10.5901/ajis.2014.v3n3p185
- Küster, I., & Vila, N. (2011). Successful SME web design through consumer focus groups. *International Journal of Quality & Reliability Management*, 28(2), 132–154. doi:10.1108/02656711111101728
- Kyrnin, J. (2013). What is the difference between web design and web development. Retrieved from <http://webdesign.about.com/od/jobs/qt/difference-web-design-web-development.htm>
- Laporan Mesyuarat Agung Tahunan kali ke 7.* (2011).
- Laudon, K. C., & Traver, C. G. (2007). *E-commerce* (3rd ed.). Pearson Prentice Hall.
- Laudron, K. C., & Traver, C. G. (2008). *E-Commerce Business Technology*. Pearson Prentice Hall.
- Lee, J., Park, D.-H., & Han, I. (2011). The different effects of online consumer reviews on consumers' purchase intentions depending on trust in online shopping malls: An advertising perspective. *Internet Research*, 21(2), 187–206.
doi:10.1108/10662241111123766
- Lee, M. K. O., Shi, N., Cheung, C. M. K., Lim, K. H., & Sia, C. L. (2011). Consumer's decision to shop online: The moderating role of positive

informational social influence. *Information & Management*, 48(6), 185–191.

doi:10.1016/j.im.2010.08.005

Lee, Y., Kozar, K., & Larsen, K. (2003). The technology acceptance model: past, present, and future. *Communications of the Association for Information System*, 12(50), 752–780. doi:10.1037/0011816

Li, J., & Sun, J. (2009). An empirical study of e-commerce website success model. In *MASS '09. International Conference on Management and Service Science* (pp. 3–6).

Lian, J.-W., & Lin, T.-M. (2008). Effects of consumer characteristics on their acceptance of online shopping: Comparisons among different product types. *Computers in Human Behavior*, 24(1), 48–65. doi:10.1016/j.chb.2007.01.002

Licker, P. S. (2001). E-commerce system success: An Attempt to extend and respecify the Delone and Mclane Model od IS Success. *Journal of Electronic Commerce Research*, 2(4), 131–141.

Lim, Y. M., Yap, C. S., & Lee, T. H. (2011). Intention to shop online : A study of Malaysian baby boomers. *Journal of Business Management*, 5(5), 1711–1717.

Lin, H.-F. (2007a). Predicting consumer intentions to shop online: An empirical test of competing theories. *Electronic Commerce Research and Applications*, 6(4), 433–442. doi:10.1016/j.elerap.2007.02.002

Lin, H.-F. (2007b). The role of online and offline features in sustaining virtual communities: an empirical study. *Internet Research*, 17(2), 119–138. doi:10.1108/10662240710736997

- Lindvall, M., Muthig, D., Kiefer, D., Dagnino, A., Wallin, C., Stupperich, M., & May, J. (2004, December). Agile software development in large organizations. *IEEE Computer Society*, 26–34. doi:10.1109/MC.2004.231
- Liu, B., Zhou, X., Dang, Y., & Chen, Z. (2010). Website building systems design and implementation based on content management. In *International Conference on Computer, Mechatronics, Control and Electronic Engineering (CMCE)* (pp. 200–203). IEEE Conference Publications. doi:10.1109/CMCE.2010.5610008
- Liu, Z., Yang, D., & Gu, D. (2010). Design and implementation of customized course website of data structure. In *2010 Second International Workshop on Education Technology and Computer Science* (pp. 491–494). Ieee. doi:10.1109/ETCS.2010.360
- Long, H., Lage, K., & Cronin, C. (2005). The flight plan of a digital initiatives project, part 2: Usability testing in the context of user-centered design. *OCLC Systems & Services*, 21(4), 324–345. doi:10.1108/10650750510631703
- Lu, J., Yu, C.-S., Liu, C., & Yao, J. E. (2003). Technology acceptance model for wireless Internet. *Internet Research*, 13(3), 206–222. doi:10.1108/10662240310478222
- Ma'ruf, J. ., Mohamad, O., & Ramayah, T. (2003). Intention to purchase via the internet:a comparison of two theoretical models. In *The Proceedings of the 5th Asian Academy of Management Conference*. Kuantan, Pahang.
- MacGregor, R. C., & Vrazalic, L. (2005). A basic model of electronic commerce adoption barriers: A study of regional small businesses in Sweden and Australia.

Journal of Small Business and Enterprise Development, 12(4), 510–527.

doi:10.1108/14626000510628199

Mackellar, J. (2013). Participant observation at events: theory, practice and potential.

International Journal of Event and Festival Management, 4(1), 56–65.

doi:10.1108/17582951311307511

Malek Mohammad, A.-M. (2011). *The Antecedents of Internet Banking Service*

Adoption in Jordan: Using Decomposed Theory of Planned Behaviour.

Universiti Utara Malaysia.

Malik, G., & Gupta, A. (2013). An empirical study on behavioral intent of

consumers in online shopping. *Business Perspectives and Research*, 13–29.

Manstead, A. ., & Eekelen, S. . (1998). Distinguishing between perceived behavioral

control and self-efficacy in the domain of academic achievement intentions and

behaviors. *Journal of Applied Social Psychology*, 28(15), 1375–1392.

Marchewka, J. T., Liu, C., & Kostiwa, K. (2007). An Application of the UTAUT

Model for Understanding Student Perceptions Using Course Management

Software. *Communications of the IIMA*, 7(2), 93–104.

Mariani, M. G., Curcuruto, M., & Gaetani, I. (2013). Training opportunities,

technology acceptance and job satisfaction: A study of Italian organizations.

Journal of Workplace Learning, 25(7), 455–475. doi:10.1108/JWL-12-2011-

0071

Marshall, C., & Rossman, G. . (2009). *Designing Qualitative Research* (4th ed.).

SAGE Publications.

- Masrom, M., & Ramlah, H. (2008). *User Acceptance of Information Technology: Understanding Theories and Models*. Batu Caves: Venton Publishing.
- Maxis. (2000). MaxisNet launches the e365 cyber-mall for online merchants and shoppers. Retrieved from <http://www.maxis.com.my/mmc/index.asp?fuseaction=press.view&recID=7>
- Melati, M. A. (2012). "TUKAR", A Move To Provide New Image For Retailers. Retrieved from <http://www.kpdnkk.gov.my/en/web/guest/program-tukar-bantu-naik-imej-kedai-runcit;jsessionid=345408613C0656DAC4393FC1CA4381B0>
- Michael, D., Nripendra, P., & Yogesh, K. (2011). Is UTAUT really used or just cited for the sake of it? A Systematic review of citations of UTAUT's. In *19th European Conference of Information System, ECIS 2011*. Helsinki.
- Mohammad, I. (2013). *Factors influencing consumers' acceptance of mobile marketing services*. Universiti Utara Malaysia.
- Mohammed Atiquil Islam, A. Y. (2011). Viability of the extended technology acceptance model: An empirical study. *Journal of ICT*, *10*(1), 85–98.
- Monsuwé, T. P. Y., Dellaert, B. G. C., & Ruyter, K. De. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management*, *15*(1), 102–121. doi:10.1108/09564230410523358
- Moon, J., Chadee, D., & Tikoo, S. (2008). Culture, product type, and price influences on consumer purchase intention to buy personalized products online. *Journal of Business Research*, *61*(1), 31–39. doi:10.1016/j.jbusres.2006.05.012

- Moshrefjavadi, M. H., Rezaie Dolatabadi, H., Nourbakhsh, M., Poursaeedi, A., & Asadollahi, A. (2012). An Analysis of Factors Affecting on Online Shopping Behavior of Consumers. *International Journal of Marketing Studies*, 4(5), 81–98. doi:10.5539/ijms.v4n5p81
- Muhayiddin, M.-N., Musa, E., & Ismail, H. (2011). Technology Acceptance of a Gold Dinar Based Electronic Payment System. *iBusiness*, 03(03), 295–301. doi:10.4236/ib.2011.33039
- Mustafa, S. H., & Al-Zoua'bi, L. F. (2008). Usability of the academic websites of Jordans' Universities An evaluation study. Retrieved from [http://faculty.ksu.edu.sa/lalzouabi/Documents/Usability of the Academic Websites of Jordan's Universities An Evaluation Study.pdf](http://faculty.ksu.edu.sa/lalzouabi/Documents/Usability%20of%20the%20Academic%20Websites%20of%20Jordan's%20Universities%20An%20Evaluation%20Study.pdf)
- Naseri, M. B., & Elliott, G. (2011). Role of demographics, social connectedness and prior internet experience in adoption of online shopping: Applications for direct marketing. *Journal of Targeting, Measurement and Analysis for Marketing*, 19(2), 69–84. doi:10.1057/jt.2011.9
- Nasir, A. G. (2010). UKM bantu wanita jadi e-usahawan melalui pasaraya maya 1nita.my. Retrieved from <http://www.ukm.edu.my/news/index.php/ms/berita-penyelidikan/452-ukm-helps-to-create-virtual-market-for-small-time-women-entrepreneurs-1nitamy.html>
- National Australia Bank. (2012). Online sales growth recorded a recovery in June. Retrieved from <http://www.nab.com.au/wps/wcm/connect/bb3bea004c1ce8df8033aba00d1e0a8c/NAB-OnlineRetailSalesIndex->

June2012.pdf?MOD=AJPERES&CACHEID=bb3bea004c1ce8df8033aba00d1e0
a8c

- Nikolaeva, R. (2006). E-commerce adoption in the retail sector: empirical insights. *International Journal of Retail & Distribution Management*, 34(4/5), 369–387.
doi:10.1108/09590550610660288
- Noorfadzilah, M. Z., Wan Fatimah, W. A., & Goh, K. N. (2010). Designing e-commerce user interface. In *2010 International Conference on User Science and Engineering (i-USER)* (pp. 163–167). Ieee. doi:10.1109/IUSER.2010.5716744
- Norazah, M. S. (2010). An empirical study of factors affecting the internet banking adoption among Malaysia consumers'. *Journal of Internet Banking and Commerce*, 15(2), 1–11.
- Norazah, M. S., Ramayah, T., & Norbayah, M. S. (2008). Internet shopping acceptance: Examining the influence of intrinsic versus extrinsic motivations. *Direct Marketing: An International Journal*, 2(2), 97–110.
doi:10.1108/17505930810881752
- Norshuhada, S., & Shahizan, H. (2010). *Design Research in Software Development*. Universiti Utara Malaysia Press.
- Norzieiriani, A., Azizah, O., & Ramayah, T. (2010). Consumer lifestyles and online shopping continuance intention. *Business Strategy Series*, 11(4), 227–243.
doi:10.1108/17515631011063767

- Nurminen, J. K., Wikman, J., Kokkinen, H., Muilu, P., & Grönholm, M. (2008).
Drupal content management system on mobile phone personal mobile website
Apache Symbian MySQL. In *IEEE Computer Society* (pp. 1228–1229).
- Nysveen, H., & Pedersen, P. E. (2014). Consumer adoption of RFID-enabled services.
Applying an extended UTAUT model. *Information Systems Frontiers*, 1–22.
- Öncü, S., & Sengel, E. (2010). Conducting preliminary steps to usability testing :
investigating the website of Uluda University. *Procedia Social and Behavioral
Sciences*, 2, 890–894. doi:10.1016/j.sbspro.2010.03.122
- Onwuegbuzie, A. J., & Leech, N. L. (2007). Sampling designs in qualitative research :
Making the sampling process more public. *The Qualitative Report*, 12(2), 19–20.
Retrieved from <http://www.nova.edu/ssss/QR/QR12-2/onwuegbuzie1.pdf>
- Oostveen, A., & Besselaar, P. Van Den. (2004). From small scale to large scale user
participation : A case study of participatory design in e-government systems. In
Proceedings of the eight conference on Participatory Design. (pp. 173–182).
Toronto: ACM.
- Oye, N. ., Noorminshah, A., & Nor Zairah, A. . (2011). Examining the effect of
Technology Acceptance Model on ICT usage in Nigerian tertiary institutions.
Journal of Emerging Trends in Computing and Information Sciences, 2(10),
533–545.
- Ozdemir, E., & Kilic, S. (2011). Young ocsumers' perspectives of website
visualization : A gender perspective. *Business and Economics Research Journal*,
2(2), 41–60.

- Pallant, J. (2007). *SPSS Survival Manual A step by step guide to data analysis* (3rd ed.). Open University Press.
- Palsson, H. (2007). Participant observation in logistics research: Experiences from an RFID implementation study. *International Journal of Physical Distribution & Logistics Management*, 37(2), 148–163. doi:10.1108/09600030710734857
- Pavlou, P. ., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: an extension of the theory of planned behavior. *MIS Quartely*, 30(1), 115–143.
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce : Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), 69–103.
- Paynter, J., & Lim, J. (2001). Drivers and impediments to e-commerce in Malaysia. *Malaysian Journal of Library & Information Science*, 6(2), 1–19.
- Perez-Hernandez, J., & Sanches-Mangas, R. (2011). To have or not to have internet at home: Implications for online shopping. *Information Economics and Policy*, 23(3-4), 213–226.
- Peter, J. P., & Olson, J. C. (2008). *Consumer Behavior and Marketing Strategy* (8th ed.). McGraw-Hill/Irwin. Retrieved from http://books.google.com.my/books/about/Consumer_Behavior_and_Marketing_Strategy.html?id=2ZgVAAAACAAJ&redir_esc=y

- Prasad, J. S., & Aryasri, A. R. (2009). *Determinants of Shopper Behaviour in E-tailing : An Empirical Analysis* (Vol. 13). Retrieved from www.cob.unt.edu/slides/paswan/e-tailing/India.pdf
- Pressman, R. S., & Lowe, D. (2009). *Web Engineering: A Practitioner's Approach*. Singapore: McGraw Hill.
- Puenesvary, M., Radziah, A. R., Sivabala, R. N., Noor Fadhilah, M. . . , & Noor Hashima, A. A. (2008). *Qualitative Research: Data Collection & Data Analysis Technique*. Universiti Utara Malaysia Press.
- Ramayah, T., & Ignatius, J. (2010). Intention to shop online:The mediaton role of perceived ease of Use. *Middle-East Journal of Scientific Research*, 5(3), 152–156.
- Reblex. (2013). *3rd Asia E-Commerce Conference*. Malaysia: Reblex. Retrieved from www.e-commerceconference.com
- Rogayah, A. M., Nor Laila, M. N., Wan Adilah, W. A., & Suria, M. (2010). A survey on user involvement in software development life cycle from practitioner 's perspectives. In *5th International Conference on Computer Sciences and Convergence Information Technology (ICCIT), 2010* (pp. 240–243). Seoul. doi:10.1109/ICCIT.2010.5711064
- Rosli, M., & Noor Azizi, I. (2009). Electronic commerce adoption in SME:The trend of prior studies. *Journal of Internet Banking and Commerce*, 14(2), 1–17.
- Sam, H. K., Abang Ekhsan, A. O., & Zaimuarifuddin Shukri, N. (2005). Computer self-efficacy , computer anxiety and attitudes toward the internet : A study

among undergraduates in Unimas. *Educational Technology & Society*, 8(4), 205–219.

Sejarah Gerakan Koperasi di Malaysia. (n.d.). Retrieved from

<http://www.skm.gov.my/sejarah-gerakan-koperasi1>

Sekaran, U., & Bougie, R. (2010). *Research Methods for Business: A skill Building Approach* (5th ed.). West Sussex, United Kingdom: John Wiley & Sons Limited.

Sellappan, P. (2000). *Software Engineering: Management and Method*. Sejana Publishing.

Seman, E. A. A., Idyawati, H., & Sura, S. (2009). Website design evaluation: Comparison of telecommunication websites in Malaysia. In *PICMET '09 - 2009 Portland International Conference on Management of Engineering & Technology* (pp. 1790–1797). IEEE. doi:10.1109/PICMET.2009.5261948

Shahizan, H., & Li, F. (2005). Evaluating the usability and content usefulness of web sites : A benchmarking Approach. *Journal of Electronic Commerce in Organizations*, 3(June), 46–48.

Shahizan, H., Norshuhada, S., & Ab Salam, S. (2015). Social media as persuasive technology for business : Trends and perceived impact in Malaysia. *International Journal of E-Business Research*, 11(June), 18–39. doi:10.4018/ijebr.2015040102

Shao, X., & Siponen, M. (2011). Consumer Acceptance and Use of Information Technology : Adding consumption theory to UTAUT2. In *SIGSVC Workshop* (Vol. 11). Retrieved from <http://sprouts.aisnet.org/11-157>

- Sharma, A., Singhal, Y. K., Makhija, D., Goyal, A. K., Agarwal, N., & Bakhshi, A. (2007). Factors affecting e-tailing website effectiveness: An Indian perspective. In *Second International Conference on Internet and Web Applications and Services (ICIW'07)* (pp. 41–41). Ieee. doi:10.1109/ICIW.2007.33
- Shen, W., Liu, J., & Wang, H. (2009). The research of the effects of consumer traits on online purchasing intentions. In *IEEE*.
- Siddiqui, N., O'Malley, A., McColl, J. C., & Birtwistle, G. (2003). Retailer and consumer perceptions of online fashion retailers: Web site design issues. *Journal of Fashion Marketing and Management*, 7(4), 345–355. doi:10.1108/13612020310496949
- Siemer eCommerce Report. (2013). Retrieved from http://www.siemer.com/dev/wp-content/uploads/2013/07/Siemer-Associates-eCommerce-Report_Spring-2013.pdf
- Sinha, P. K., & Uniyal, D. P. (2005). Using observational research for behavioural segmentation of shoppers. *Journal of Retailing and Consumer Services*, 12(1), 35–48.
- Small Retailer Transformation Programme (TUKAR). (2011). Retrieved from [http://etp.pemandu.gov.my/8_March_2011-@-Small_Retailer_Transformation_Programme_\(TUKAR\).aspx](http://etp.pemandu.gov.my/8_March_2011-@-Small_Retailer_Transformation_Programme_(TUKAR).aspx)
- SME's Urged To Tap The Global Market Via-E-commerce. (2014, August 14). *Bernama*. Retrieved from <http://www.bernama.com/bernama/v7/bu/newsbusiness.php?id=1060273>

- So, W. C. M., Wong, T. N. D., & Sculli, D. (2005). Factors affecting intentions to purchase via the internet. *Industrial Management & Data Systems*, 105(9), 1225–1244. doi:10.1108/02635570510633275
- Souer, J., Joor, D.-J., Helms, R., & Brinkkemper, S. (2011). Identifying commonalities in web content management system engineering. *International Journal of Web Information Systems*, 7(3), 292–308. doi:10.1108/17440081111165901
- Souer, J., Urlings, T., Helms, R., & Brinkkemper, S. (2011). Engineering web information systems : A content management system-based approach. In *Proceedings of the 13th International Conference on Information Integration and Web-based Applications and Services* (pp. 5–7). Ho Chi Minh City.
- Spake, D. F., Finney, R. Z., & Joseph, M. (2011). Experience, comfort, and privacy concerns: antecedents of online spending. *Journal of Research in Interactive Marketing*, 5(1), 5–28. doi:10.1108/17505931111121507
- Spinuzzi, C. (2005). The methodology of participatory design. *Technical Communication*, 52(2), 163–174.
- Stafford, T. F., Turan, A., & Raisinghani, M. S. (2004). International and cross-cultural Influences on online shopping behavior. *Journal of Global Information Management*, 7(2), 70–87.
- Stockdale, R., & Standing, C. (2006). A classification model to support SME e-commerce adoption initiatives. *Journal of Small Business and Enterprise Development*, 13(3), 381–394. doi:10.1108/14626000610680262

- Straub, D., Limayem, M., & Karahanna, E. (1995). Measuring System Usage : Implications for IS Theory Testing. *Management Science*, 41(8), 1328–1342.
- Su, D., & Huang, X. (2011). Research on online shopping intention of undergraduate consumer in China:Based on the theory of planned behavior. *International Business Research*, 4(1), 86–93.
- Suratida, R., & Settapong, M. (2005). Information technology implementation by applying NIE - SDLC model : The case study on an organization in Thailand. In *Engineering Management Conference 2005* (pp. 250–254).
- Suruhanjaya Koperasi Malaysia. (2011). *Indeks 100 koperasi terbaik Malaysia*. Retrieved from www.skm.gov.my
- Suruhanjaya Koperasi Malaysia. (2012). Statistik. Retrieved from <http://www.skm.gov.my/documents/10157/5bd19d87-7282-44ab-aa85-c8d8f1fe5cd6>
- Syed, S. A. (2009). *E-Commerce in Malaysia: issues and cases*. University Publication Center, UiTM.
- Syed, S. A., Zaharah, B., Hishamuddin, I., & Nilufar, A. (2008). Young consumers online shopping : an empirical study. *Journal of Internet Business*, (5), 81–98.
- Systems Development Life Cycle : Objectives and Requirements. (2003).
- Tabachnick, B. G., & Fidell, L. . (2007). *Using multivariate statistics* (4th ed.). New York: HarperCollins.

Tangani Digital Malaysia. (2013, November 14). *Bernama*. Kuala Lumpur. Retrieved from

http://ww3.utusan.com.my/utusan/Dalam_Negeri/20131115/dn_01/Tangani-Digital-Malaysia

Taylor, M. ., McWilliam, J., Forsyth, H., & Wade, S. (2002). Methodologies and website development: a survey of practice. *Information and Software Technology*, *44*(6), 381–391. doi:10.1016/S0950-5849(02)00024-1

Teo, T. S. H. (2006). To buy or not to buy online: adopters and non-adopters of online shopping in Singapore. *Behaviour & Information Technology*, *25*(6), 497–509. doi:10.1080/01449290500256155

Thatcher, J. B., Loughry, M. L., Lim, J., & McKnight, D. H. (2007). Internet anxiety: An empirical study of the effects of personality, beliefs, and social support. *Information & Management*, *44*(4), 353–363. doi:10.1016/j.im.2006.11.007

Thatcher, J. B., & Perrewe, P. L. (2002). An empirical examination of individual traits as antecedents to computer anxiety and computer self-efficacy. *MIS Quarterly*, *26*(4), 381–396. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/cbdv.200490137/abstract>

Thomas, I., Davie, W., & Weidenhamer, D. (2012). Quarterly retail e-commerce sales. Retrieved from http://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf

TM and Lelong.my in pact to aid SMEs. (2012, December 18). *Digital News Asia*. Retrieved from <http://www.digitalnewsasia.com/enterprise-updates/tm-and-lelongmy-in-pact-to-aid-smes>

- Turban, E., King, D., & Lang, J. (2009). *Introduction to Electronic Commerce* (2nd ed.). Pearson Prentice Hall.
- Vaishnavi, V., & Kuechler, B. (2004). Design science research in information systems. Retrieved from <http://www.desrist.org/desrist/content/design-science-research-in-information-systems.pdf>
- Van Der Sijde, P., Van Reekum, R., Jeurissen, W., & Rosendaal, B. (2014). To adopt or not to adopt? The RFID adoption consideration by entrepreneurs in a purchasing cooperative in Dutch Book retailing. *International Journal of Innovation and Technology Management*, 12(1), 1550006. doi:10.1142/S0219877015500066
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204. Retrieved from <http://mansci.journal.informs.org/content/46/2/186.short>
- Venkatesh, V., Morris, M., & Ackerman, P. (2000). A longitudinal field investigation of gender differences in individual technology adoption decision-making processes. *Organizational Behavior and Human Decision Processes*, 83(1), 33–60. doi:10.1006/obhd.2000.2896
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS*, 27(3), 425–478.
- Venkatesh, V., Thong, J. Y. ., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157–178.

- Wan, Y., Nakayama, M., & Sutcliffe, N. (2010). The impact of age and shopping experiences on the classification of search, experience, and credence goods in online shopping. *Information Systems and E-Business Management*, 10(1), 135–148. doi:10.1007/s10257-010-0156-y
- Wang, Y. (2008). Assessing e-commerce systems success: a respecification and validation of the DeLone and McLean model of IS success. *Information Systems Journal*, 18(5), 529–557. doi:10.1111/j.1365-2575.2007.00268.x
- Wang, Y., Hung, Y.-H., & Chou, S.-C. T. (2006). Acceptance of e-government service : A validation of the UTAUT department of information management. In *5th WSEAS International Conference on E-Activities* (pp. 165–170). Venice, ITALY.
- Wang, Y., & Liao, Y.-W. (2006). Assessing e-government Systems Success: A validation of the Delone and Mclean Model of Information Systems Success. In *Proceedings of the 11th Annual Conference of Asia Pacific Decision Sciences Institute* (pp. 356–366).
- Weaver, P. (2004). *Success in Your Project A Guide to student System Development Project*. Prentice Hall Financial Times.
- Weisberg, J., Te'eni, D., & Arman, L. (2011). Past purchase and intention to purchase in e-commerce: The mediation of social presence and trust. *Internet Research*, 21(1), 82–96. doi:10.1108/10662241111104893
- Wigder, Z. ., Sehgal, V., Evans, P. ., & Johnson, C. (2010). Asia Pacific Online Retail Forecast, 2010 to 2015. Retrieved from

<http://www.forrester.com/eCommerce#/Asia+Pacific+Online+Retail+Forecast+2010+To+2015/quickscan/-/E-RES57481>

Williams, A. (2009). User centered design, Activity centered design and goal-directed design : A review of three methods for designing web applications. In *Proceedings of the 27th ACM international conference on Design of communication* (pp. 1–8). ACM.

Wu, S.-I. (2003). The relationship between consumer characteristics and attitude toward online shopping. *Marketing Intelligence & Planning*, 21(1), 37–44. doi:10.1108/02634500310458135

Xu, Y., & Paulins, V. A. (2005). College students' attitudes toward shopping online for apparel products: Exploring a rural versus urban campus. *Journal of Fashion Marketing and Management*, 9(4), 420–433. doi:10.1108/13612020510620795

Yang, Y., & Li, Q. (2010). A quantitative research on influencing factors of the behavior that consumers buying diamond jewelry online. In *2010 International Conference on Internet Technology and Applications* (pp. 1–4). Ieee. doi:10.1109/ITAPP.2010.5566582

Yao, C., & Liao, S. (2011). Measuring the antecedent effects of service cognition and internet shopping anxiety on consumer satisfaction with e-tailing service. *Management & Marketing Challenges for the Knowledge Society*, 6(135), 59–78.

Yao, G., & Li, Q. (2009). The effects of online shopping familiarity and internet self-efficacy on the formation of trust toward online shopping. In *2009 International Conference on E-Business and Information System Security* (pp. 1–5). IEEE. doi:10.1109/EBISS.2009.5138114

- Yao, X. (2009). Study on internet purchase behavioral intention. In 2009 *International Conference on E-Business and Information System Security* (pp. 1–4). Ieee. doi:10.1109/EBISS.2009.5138085
- Yaping, C., Dan, H., & Jun, Y. (2009). The impact of B2C website design features on consumers' purchase intention. In 2009 *International Conference on Networks Security, Wireless Communications and Trusted Computing* (pp. 17–20). Ieee. doi:10.1109/NSWCTC.2009.179
- Yin, R. K. (2009). *Case Study Research Design and Methods* (4th ed.). SAGE Publications.
- Yin, R. K. (2011). *Qualitative Research from Start to Finish*. New York: The Guilford Press.
- Yoshida, H., Tani, S., Uchida, T., Masui, J., & Nakayama, A. (2013). Structural Analysis of Anxiety in Online Cooperative Learning. *International Journal of E-Education, E-Business, E-Management and E-Learning*, 3(5), 381–385. doi:10.7763/IJEEEE.2013.V3.263
- Yousept, I., & Li, F. (2005). Building an online grocery business : The case of asda.com. *International Journal of Cases on Electronic Commerce*, 1(June), 57–78.
- Yu, S., & Fu, F. (2010). Investigating customer needs and evaluation behavior in online shopping. In *IEEE* (pp. 462–467). IEEE.

- Yulihastri, Md.Aminul, I., & Ku Amir, K. D. (2011). Factors that influence customers' buying intention on shopping online. *International Journal of Marketing Studies*, 3(1), 128–140.
- Zetty Madina, M. Z., Norazlin, R., Fatimah, A. G., Azlina, S., Munirah, H., Jusoff, K., ... Mushaireen, M. (2011). Online grocery shopping: The affect of time availability on Malaysian consumer preferences. *World Applied Sciences Journal*, 12, 60–67. Retrieved from [http://www.idosi.org/wasj/wasj12\(SSTE\)/10.pdf](http://www.idosi.org/wasj/wasj12(SSTE)/10.pdf)
- Zhang, G., & Liu, C. (2010). Analysis and design on campus e-commerce system. In *Information Management Innovation Management and Industrial Engineering ICIII 2010 International Conference on* (Vol. 1, pp. 612–615). doi:10.1109/ICIII.2010.152
- Zhang, G., & Liu, Z. (2011). Effects of influential factors on consumer perceptions of uncertainty for online shopping. *Nankai Business Review International*, 2(2), 158–171. doi:10.1108/20408741111139927
- Zhang, K. Z. K., Cheung, C. M. K., & Lee, M. K. O. (2014). Examining the moderating effect of inconsistent reviews and its gender differences on consumers' online shopping decision. *International Journal of Information Management*, 34(2), 89–98. doi:10.1016/j.ijinfomgt.2013.12.001
- Zhao, L., & Du, S.-F. (2010). Design and implementation of j2EE-based web website content management system. In *2010 International Conference on E-Product E-Service and E-Entertainment* (pp. 1–4). IEEE International. doi:10.1109/ICEEE.2010.5660870

Zhou, L., Dai, L., & Zhang, D. (2007). A critical survey of consumer factors in online shopping. *Journal of Electronic Commerce Research*, 8(1), 41–62.