

UNIVERSITI TEKNOLOGI MARA

**A CASE STUDY OF KLANG VALLEY IT
WORKERS TECHNICAL COMPETENCY
AMONG FRESH IT DEGREE GRADUATES IN
MALAYSIA**

SITI ZARITHIYLIA BT MOHAMMAD ZAINAL

IT Project submitted in partial fulfillment of the requirements for the
degree of

Master of Science in Information Technology

Faculty of Computer and Mathematical Sciences

February 2013

ACKNOWLEDGEMENTS

\$0\$K—————3

In the name of Allah, the Most Gracious and the Most Merciful. All praise belongs to Allah, Lord of the Universe. There is no god but Allah and Muhammad is his messenger, peace upon him. Salam and selawat on his Ahlal Bait and his companions.

First and foremost, praise to Allah the Almighty for His wisdom and blessing in giving me the strength and will to complete this IT project. I dedicate this success to my beloved family and husband who without fail to encourage and enlighten me during happy or difficult situation.

I also without doubt would like to thank my supervisor, Associate Professor Dr Syed Ahmad Sheikh Aljunid, who has make this project a success. His relentless patience, suggestions and guidance had moved and motivated me as an individual.

Lastly, I am very pleased and lucky to have a group of fellow UiTM students especially the PIM group where we work as one dynamic and big family and continue to push each others to achieve greater heights.

ABSTRACT

Current technology mainly computer related technology has changed rapidly and continues to change the lifestyle, succeed in business and interact socially. New and improved technology changes almost daily. Thus, the issues regarding to the supply of skills from the universities and the demands from the industry need to be recognized to lessen or close the space between IT graduates and the industry. This study was undertaken to identify the problems faced by the fresh Malaysian IT degree graduate students in terms of technical competency in the fields of IT, and the perception of these graduates of the requirements of IT skills required by the industry. This study intends to uncover the significance of different technical competency and technical skills for them for different positions, and the changes needed in the IT curriculum to enable the IT graduates to obtain appropriate initial skills required by the industry. A survey method is used in this study and a set of questionnaire were provided to 164 IT professionals in Klang Valley area. Based on the findings, it shows that most of the IT professionals need to have a combination of skills such as Analysis and Design Skills, Business Skills, and Interpersonal Skill. Skill level of the IT graduates for each skill is depending on the position, the knowledge that they obtain during university and from the working experience in IT industry which will help the IT graduates to obtain knowledge and skills. Further study need to be done to compare the universities curriculum taught in different universities in Malaysia in IT field for getting a clear understanding on the skills taught to the graduates and this will provide the universities the authorities to change the current curriculum based on the latest industry requirements. The contribution of the study is the first known study in the whole focusing specifically on the Klang Valley IT graduates where there are a few studies which have been conducted by other researchers based on the technical competency and issues faced by fresh IT degree graduates in the industry

TABLE OF CONTENTS

ACKNOWLEDGEMENT	ii
ABSTRACT	hi
TABLE OF CONTENT!	iv
LIST OF TABLES	vii
LIST OF FIGURES	ix
CHAPTER 1: INTRODUCTION	
1.1 Project Background	1
1.2 Problem Statement	2
1.3 Research Questions	3
1.4 Research Objectives	3
1.5 Significances of the Research	4
1.6 Scope of Research	4
1.7 Report Outline	5
CHAPTER 2: LITERATURE REVIEW	
2.1 Introduction	6
2.2 Definition	6
2.2.1 Competency	6
2.2.2 Technical Competency	8
2.2.3 The Differences Between Skills and Competencies	9
2.2.4 The Importance of Information Technology Technical Competency	10
2.2.5 Information Technology Technical Competency	11
2.3 Information Technology (IT) Education in Malaysia : The current trend	12
2.4 The Types of IT Graduates Produced by The Institutions of Higher Learning	14
2.4.1 Universiti Sains Malaysia (USM)	14
2.4.2 Universiti Teknologi Malaysia (UTM)	16

2.4.3	Universiti Malaya (UM)	20
2.5	The Skills Gap Between IT Curriculum and Industry	21
2.6	IT Employment in Malaysia	25
2.7	Market Demand and IT Skills Required	27
2.7.1	Demand and Supply	29
2.8	Malaysian Job Market Trends	31
2.9	MSC Malaysia	32
2.9.1	The Human Capital Development in MSC Malaysia	34
2.10	Summary	38

CHAPTER 3: RESEARCH METHODOLOGY

3.1	Introduction	40
3.2	Research Design	40
3.3	Data Collection Methods	41
3.3.1	Primary Data	41
3.3.2	Secondary Data	42
3.4	Sampling Design	43
3.4.1	Target Population	43
3.4.2	Sampling Frame and Sampling Location	43
3.4.3	Sampling Elements	44
3.4.4	Sampling Technique	45
3.4.5	Sampling Size	46
3.5	Sampling Design	46
3.5.1	Questionnaire Survey	46
3.5.2	Pilot Test	48
3.5.3	Scale of Measurement	49
3.5.4	Nominal Scale	49
3.5.5	Ordinal Scale	49
3.5.6	Likert Scale	50
3.6	Data Analysis	50
3.7	Validity and Reliability	51
3.7.1	Validity	51