

**BUSINESS ANALYSIS AND SYSTEM DESIGN OF ONLINE
MARKETPLACE FOR INTERACTIVE LEARNING CENTER PLATFORM**

By

FARRAS RAMADHAN

11402005



SWISS GERMAN UNIVERSITY

The Prominence Tower

Jalan Jalur Sutera Barat No. 15, Alam Sutera
Tangerang, Banten 15143 - Indonesia

July 2018

Revision after the Thesis Defense on July 17th 2018

STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

Farras Ramadhan

Student

Approved by:

James Purnama M.Sc

Thesis Advisor

Date

Date

Dipl. -Ing. Randy Anthony S.Kom., M.Kom.

Thesis Co-Advisor

Date

Dr. Irvan Setiadi Kartawiria ST, M.Sc.

Dean

Date

Farras Ramadhan

ABSTRACT

BUSINESS ANALYSIS AND SYSTEM DESIGN OF ONLINE MARKETPLACE FOR INTERACTIVE LEARNING CENTER PLATFORM

By

Farras Ramadhan

James Purnama M.Sc, Advisor

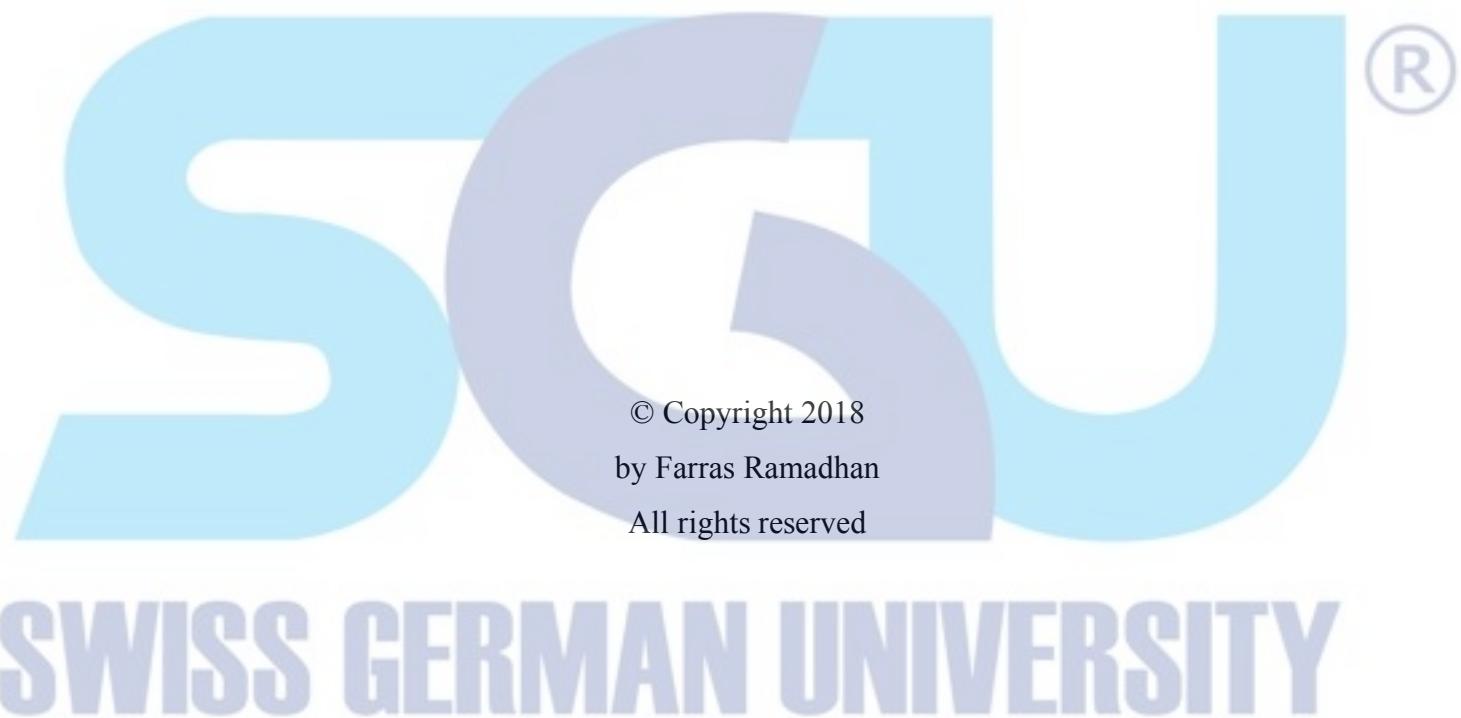
Dipl. -Ing. Randy Anthony S.Kom., M.Kom., Co-Advisor

SWISS GERMAN UNIVERSITY



Information Technology is growing rapidly, with seemingly new updates every day. This situation means new knowledge be absorbed continuously. While there are problems of high-Cost IT training, no time to take IT training and cannot get suffice quality IT training. By analyse the business prospects of online learning and design an online marketplace platform for learning. The prototype of XPlatform is fulfil the needs of people for the availability of a high quality computer course, easy to use and has competitive prices. To proof the hypothesis, a questionnaire by Webqual method is used. The result of the questionnaire is XPlatform is answer the needs of people for the availability of a high quality computer course, which is easy to use and has competitive prices with an interactive online course.

Keywords: Online Course, Webqual, marketplace



DEDICATION

I dedicate this works for the future of the country I loved: Indonesia and my family.



ACKNOWLEDGEMENTS

I would like to thank Allah SWT who has given opportunity, strength, and health to finish thesis entitled "BUSINESS ANALYSIS AND SYSTEM DESIGN OF ONLINE MARKETPLACE FOR INTERACTIVE LEARNING CENTER PLATFORM" and also to my prophet Muhammad SAW.

I would like to thank my father, Agus Pramono, my mother, Nani Puspitasari, my brother, Aziz Prasetyo, and all my family who always give me help and support to finish the thesis.

I would like to thank my thesis advisor, Mr. James Purnama M.Sc and my thesis co-advisor, Mr. Dipl. -Ing. Randy Anthony S.Kom., M.Kom who always help and guided me to create this thesis.

I would like to thank Desty Armand for always supporting me to finish the thesis, and thanks to HOAM for always cheering me up to finish the thesis and all my best friend who helped and supported me to create this thesis. And for Mohammed Elfaza who always helped me to make the website done when I face difficulties.

SWISS GERMAN UNIVERSITY

TABLE OF CONTENTS

	Page
ABSTRACT	3
SWISS GERMAN UNIVERSITY.....	3
DEDICATION.....	4
ACKNOWLEDGEMENTS.....	6
TABLE OF CONTENTS	7
LIST OF FIGURES.....	11
LIST OF TABLES	12
CHAPTER 1 - INTRODUCTION	13
1.1 Background.....	13
1.2 Research Problem	13
1.3 Research Objectives	14
1.4 Research Question.....	14
1.5 Hypothesis	14
1.6 Scope	14
1.7 Research limitation	14
CHAPTER 2 - LITERATURE REVIEW.....	15
2.1 E-Learning	15
2.2 Smart Business Map Framework	16
2.3 Disruption	17
2.4 Comparison Table	18
2.5 XYZ Generation.....	23
2.6 Indonesia Is a Country Who Like to Give.....	24
2.7 Supporting Data	25

2.8 Software Testing	25
2.9 Usability Testing.....	25
2.10 Software Quality Measurement.....	26
2.10.1 Conceptual Model	26
2.10.2 Website Quality.....	26
2.10.3 Statistical Product and Service Solutions (SPSS).....	27
2.10.4 SUMI (Software Usability Measurement Inventory)	27
2.10.5 Webqual	28
2.11 Conceptual Model based on Webqual	29
2.12 Sampling	29
2.13 Sample Criteria.....	30
2.14 High Quality Computer Course.....	30
CHAPTER 3 - Business Analysis and Design	32
3.1 Methodology.....	32
3.2 Business Analysis & Model	33
3.2.1 Industry/Category	33
3.2.2 Problem to Solve	33
3.2.3 Who has The Problem	34
3.2.4 How Big is The Market	36
3.2.5 How to Solve the Problem	37
3.2.6 Core Environment	38
3.2.7 Unique Selling Proposition (USP)	39
3.2.8 Brand	41
3.2.9 Communication	41
3.2.10 Pricing.....	41
3.2.11 Sales & Channel Distribution	41
3.2.12 Customer Management.....	42
3.2.13 Revenue Stream.....	42
3.3 Business Model Canvas.....	43

3.3.1	Customer Segments	44
3.3.2	Value proposition	44
3.3.3	Channels.....	44
3.3.4	Customer Relationship	44
3.3.5	Revenue stream	45
3.3.6	Key Activities.....	45
3.3.7	Key resources	46
3.3.8	Cost structure	46
3.4	System Analysis.....	46
3.4.1	Architecture Diagram	47
3.4.2	System Overview	48
3.4.3	Use case	49
3.4.4	Registration Activity	53
3.4.5	In Course Activity	54
3.4.6	Top-up balance	55
3.4.7	Charity	56
3.4.8	Written quiz activity	57
3.4.9	Oral quiz activity	58
3.5	Business Maturity level.....	59
CHAPTER 4 - System Analysis and Design		61
4.1	System Design	61
4.2	Database Design.....	62
4.2.1	Chen Diagram	62
4.2.2	Crow's Foot Diagram	63
CHAPTER 5 - Software Testing Scenario Design.....		64
5.1	Design of Experiment.....	64
5.2	Testing scenario	64
5.3	Method of Collecting Data	65
5.4	Result of Questionnaire	67

5.4.1 First Test	68
5.4.2 Second Test.....	75
CHAPTER 6 - Result and Discussion	82
6.1 Conclusion	82
6.2 Future Works	82
REFERENCES	83
CURRICULUM VITAE	85

