

**iLearnCentral: A CLOUD-BASED LEARNING CENTER
PLATFORM WITH MOBILE TECHNOLOGY**

A Research/Capstone Proposal
Presented to the Faculty of the
College of Computer Studies, University of Cebu

In Partial Fulfillment of the Requirements
for the degree Bachelor of Science in Information Technology

By

Jephunneh C. Mabini
Rhea Shane M. Chiong
Cristian G. Paragoso

Mr. Edsel C. Paray
Adviser

October 2019

ACKNOWLEDGMENT

The completion of this study would not have been possible without the presence of the following:

First and foremost, we offer our warm gratitude to our Adviser, Engr. Edsel C. Paray, for sharing his knowledge and guidance in writing our manuscript, for being patient in checking our papers, and for giving suggestions and inspiration for the study's completion.

To our dear parents, we offer our warm gratitude for the prayers, love, concern, and financial support.

To those who are not mentioned but, in one way or another, have helped us in this study, the product of this manuscript would not be possible without all of them.

Above all, the Almighty Father, the source of infinite wisdom, strength, and goodness. To God be the glory!

The Researchers

Jephunneh C. Mabini

Rhea Shane M. Chiong

Cristian G. Paragoso

DEDICATION

This project is lovingly dedicated to our respective parents, who have been our constant source of inspiration. They have given us the drive and discipline to tackle a task with enthusiasm and determination. Without their love and support, this project would not have been possible.

To our advisers and professors who genuinely helped us to finish this work,

And above all,

To our beloved God Almighty who never surrendered to shed us His love, grace and wisdom to accomplish this study that, somehow in the very near future, may contribute to help those who will use and appreciate it.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENT	ii
DEDICATION	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
 CHAPTER I: INTRODUCTION	
Rationale of the Study	1
Objective of the Study	2
Scope and Limitations	2
Significance of the Study	3
Flow of the Study	4
Definition of Terms	5
 CHAPTER II: REVIEW OF RELATED LITERATURE AND STUDIES	
Related Literatures	6
Related Studies	9
Comparative Matrix	10
 CHAPTER III: RESEARCH METHODOLOGY	
Software Engineering Methodology	12
Planning/Conception-Initiation Phase	14
Business Model Canvas	15
Program Workflow	16
Validation Board	19
Gantt Chart	19
Functional Decomposition Diagram	22

Analysis-Design Phase	22
Use Case Diagram	23
Storyboard	24
User Interface Diagram	25
Database Design	34
Entity-Relationship Diagram	43
Data Dictionary	44
Network Design	
Network Model	52
Network Topology	52
Development/Construction/Build Phase	53
Technology Stack Diagram	53
Software Specification	55
Program Specification	56
REFERENCES	58
CURRICULUM VITAE	60
APPENDICES	
A – Working Title Form	63
B – Consultation Log Form	64
C – Censor’s Certificate	65

LIST OF TABLES

Table No.	Table Name	Page
1	Comparative Matrix	10
2	Business Model Canvas	15
3	Validation Board	19
4	Gantt Chart	20
5	User Document	35
6	Learning Center Document	35
7	Educator Document	36
8	Resume Document	37
9	Student Document	38
10	Job Vacancy Document	39
11	Job Application Document	39
12	Course Document	40
13	Enrolment Document	40
14	Payment Document	40
15	Classes Session Document	41
16	Schedule Request Document	41
17	Lesson Plan Document	42
18	Student Record Document	42
19	Database Data Dictionary	44
20	Software List of Modules	56

LIST OF FIGURES

Figure No.	Figure Name	Page
1	Flow of the Study	4
2	Agile Development Methodology	12
3	User Activity Program Workflow	16
4	Hiring Module Program Workflow	17
5	Enrolment Module Program Workflow	17
6	Scheduling Module Program Workflow	18
7	Teaching Assistance Module Program Workflow	18
8	Functional Decomposition Diagram	22
9	Use Case Diagram	23
10	iLearnCentral Storyboard	24
11	Login Page	25
12	Account Type Selection Page	26
13	Sign up Page	26
14	Feature Subscription Page	27
15	Learning Center Profile Page	28
16	Job Posting Page	28
17	Applicants List Page	29
18	Potential Hire Search Page	29
19	Class Management Page	30
20	Educator's Profile Page	30
21	Job Search Page	31

22	Learning Center Search Page	31
23	Activity Management Page	32
24	Student/Parent Profile Page	32
25	Class Browsing Page	33
26	Enrolment Page	33
27	Payment Scheme Page	34
28	Entity Relationship Diagram	43
29	Network Model	52
30	Network Topology	52
31	Technology Stack Diagram	53