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THE RELATIONSHIP BETWEEN TEACHING PRACTICES, CAPABILITIES AND RESOURCES WITH THE DEVELOPMENT OF CORE COMPETENCIES AMONG LIBYAN ACCOUNTING STUDENTS

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THESIS SUBMITTED IN FULFILLMENT OF THE REQUIRENMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

FACULTY OF MANAGEMENT AND ECONOMICS
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DECLARATION OF ORGINAL WORK

I hereby certify that this work is based on my own investigation except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree than that of Doctor of Philosophy of the UPSI.

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Last but not least, very special thanks to my wife, my daughters, my sons, my brothers and sisters for their loving support and encouragement during my study in Malaysia. May Allah bless and protect them.

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DEDICATION

IN THE NAME OF ALLAH, MOST GRACIOUS, MOST MERCIFUL

To the soul of my mother, Fatima Suwan

To the soul of my Father, Moftah Alfatiemy

Who taught me how to deal in this life. Even though they passed away several years ago, but their wisdom, love, kindness, concern, and dedication are still the main elements of my success.

Dear Wife, Fauzia Al-Ghazali

For her continuous bear, patient and love

Honey Children

Fatima, Salma, Abdulkariem, Hawa, Abdulmajeed and Abdullatief

Hoping to be a candle that lights their future

Beloved Sisters, Brothers and their Families

For their encouragement, incessant support and love

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ABSTRACT

The objective of this study was to determine the relationship between teaching practice and teaching ability of lecturers and teaching resources with core competencies development of accounting students at universities in Libya. This study also aimed to determine the effects of teaching practices as a mediator in the relationship between teaching resources, teaching ability, and development of core competencies. A total of 306 questionnaires were answered by accounting undergraduates at six universities and ten students were interviewed. The findings showed that the accounting program in Libya did not adequately develop core competencies in accounting students. However, the findings showed that teaching practices served as mediator in the relationship between teaching resources, teaching capabilities and core competencies. Positive relationships exist between the teaching ability, teaching resources and core competencies with teaching practices. The major implication of the study showed that an initiative needs to be done to increase the lecturers‟ teaching ability, encourage student-centered teaching practices and enhance the quality of teaching resources at universities in Libya to ensure the positive development of core competencies of accounting students.

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HUBUNGAN ANTARA AMALAN, KEUPAYAAN DAN SUMBER PENGAJARAN DENGAN PERKEMBANGAN KOMPETENSI TERAS DALAM KALANGAN PELAJAR PERAKAUNAN DI LIBYA

ABSTRAK

Objektif kajian ini adalah untuk menentukan hubungan antara amalan dan keupayaan pengajaran pensyarah serta sumber pengajaran pembelajaran dengan pembangunan kompetensi teras dalam kalangan pelajar perakaunan di universiti-universiti di Libya. Kajian ini juga bertujuan untuk menentukan kesan pengantara amalan pengajaran dalam hubungan antara sumber pengajaran, keupayaan pengajaran, dan pembangunan kompetensi teras. Sebanyak 306 soal selidik telah dijawab oleh pelajar sarjana muda perakaunan di enam buah universiti dan sepuluh orang pelajar telah ditemu bual. Dapatan kajian menunjukkan bahawa program perakaunan di Libya tidak membangunkan kompetensi teras yang secukupnya dalam kalangan pelajar perakaunan. Walau bagaimanapun, dapatan menunjukkan bahawa amalan pengajaran berfungsi sebagai pengantara dalam hubungan antara sumber pengajaran, keupayaan pengajaran dan kompetensi teras. Hubungan positif wujud antara keupayaan dan sumber pengajaran serta kompetensi teras dengan amalan pengajaran. Implikasi utama kajian menunjukkan bahawa satu inisiatif perlu dilakukan untuk meningkatkan keupayaan pengajaran pensyarah, menggalakkan amalan pengajaran yang berpusatkan pelajar dan meningkatkan kualiti sumber pengajaran di universiti-universiti di Libya bagi memastikan perkembangan positif kompetensi teras pelajar perakaunan.

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TABLE OF CONTENTS

		Page
DECLARATION OF ORGINAL WORK		ii
DECLARATION OF THESIS FORM		iii
ACKNOWLEDGEMENTS		iv
DEDICATION		v
ABSTRACT		vi
ABSTRAK		vii
TABLE OF CONTENTS		viii
LIST OF TABLES		xii
LIST OF FIGURES		xiv
CHAPTER 1 INTRODUCTION		
1.1	Introduction	1
1.2	Background of study	1
1.3	Problem Statement	8
1.4	Objectives of Study	11
1.5	Research Questions	13
1.6	Hypotheses Development	14
1.6.1	The Effect of Teaching Resources on Teaching Practices	14
1.6.2	The Effect of Teaching Capabilities on Teaching Practices	16
1.6.3	The Effect of Teaching Practices on Competencies Development	18
1.6.4	Mediating Role of Teaching Practices	21
1.7	Conceptual Framework	23
1.8	Significance of Study	28
1.9	Operational Definitions	30
1.10	Limitation of Study	31
1.1	Conclusion	32

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CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	34
2.2	Accounting in Libya	34
2.2.1	Country Overview	35
2.2.2	Accounting Profession in Libya	37
2.2.3	Accounting Education in Libya	42
2.3	Theories in Student Development	46
2.3.1	Astin‟s Theory of Involvement	47
2.3.2	Tinto‟s Theory of Student Departure	47
2.3.3	Pascarella‟s General Model for Assessing Change	48
2.3.4	Teaching for Professional Competence Model	49
2.3.5	Open Systems Theory	50
2.3.6	Motivational Systems Theory (MST)	51
2.4	Prior Research	56
2.4.1	The Need for Change in Accounting Education	57
2.4.2	Competencies Needed for Success in Accounting Profession	61
2.4.3	Teaching Practices	66
2.4.4	Teaching Capabilities	72
2.4.5	Teaching Resources	78
2.5	Conclusion	82

CHAPTER 3 RESEARCH METHODOLOGY

3.1	Introduction	84
3.2	Research Design	84
3.3	Population and Sampling	87
3.4	Questionnaire	91
3.4.1	Core Competencies	92
3.4.2	Teaching Practices	93
3.4.3	Teaching Resources	94

05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

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	3.4.4 Teaching Capabilities	95
	3.4.5 General Information	96
3.5	Pre-Testing of Questionnaire	96
3.6	Questionnaire Validity and Reliability	100
	3.6.1 Validity	100
	3.6.2 Reliability	101
3.7	Personal Interviews	103
3.8	Data Collection	105
3.9	Data Analysis	106
	3.9.1 Factor Analysis	107
	3.9.2 Descriptive Statistics	107
	3.9.3 Interpretive Analysis Approach	110
	3.9.4 Structural Equation Modelling (SEM)	113
	3.9.5 Proposed SEM Model	120
3.10	Conclusion	123

05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

CHAPTER 4 DATA ANALYSIS

4.1	Introduction	124
4.2	Respondents‟ Gender	125
4.3	Respondents‟ Age	125
4.4	Goodness of Measures	126
	4.4.1 Factor Analysis	126
4.5	Descriptive Analysis	133
	4.5.1 Accounting Core Competencies	133
	4.5.2 Teaching Practices Used by Libyan Accounting Faculty	139
	4.5.3 Teaching Resources at Libyan Universities	143
	4.5.4 Teaching Capabilities of Libyan Accounting Faculty	148
4.6	Confirmatory Factor Analysis (CFA)	156

05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

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4.6.1 Confirmatory Factor Analysis for Core Competencies (CC) 156
4.6.2 Confirmatory Factor Analysis for Teaching Practices (TP) 166
4.6.3 Confirmatory Factor Analysis for Teaching Resources (TR) 174
4.6.4 Confirmatory Factor Analysis for Teaching Capabilities (TC) 177
4.7 Full Measurement Model 186
4.8 Structural Model 192
4.9 Correlation Analysis 199
4.10 Testing the Hypotheses 201
4.11 Conclusion 205

CHAPTER 5 DISCUSSIONS AND CONCLUSIONS

5.1 Introduction 208
5.2 Discussion of Findings 208
5.3 Contributions and Implications 228
5.4 Suggestions for Future Studies 231
5.5 Conclusion 232

REFERENCES 234
APPENDIX A SURVEY INSTRUMENT 247
APPENDIX B COVER LETTER 251

05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

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LIST OF TABLES

Table		Page
Table 3.1	Number of Participants and Response Rates	89
Table 3.2	Participants in the Semi-Structured Interviews	90
Table 3.3	Survey Instrument Matrix	91
Table 3.4	Core Competencies for Accounting Profession	92
Table 3.5	Teaching Practices	93
Table 3.6	Teaching Resources	94
Table 3.7	Teaching Capabilities	95
Table 3.8	Reliability Statistics-Cronbach‟s Alpha (Pilot Study)	99
Table 3.9	Reliability Statistics-Cronbach‟s Alpha (Final Data)	102
Table 3.10	Interview Questions	104
Table 3.11	Model Fit Indices	118
Table 4.1	Respondents‟ Gender	125
Table 4.2	Respondents‟ Age	126
Table 4.3	Rotated Factor Loading for Core Competencies	127
Table 4.4	Rotated Factor Loading for Teaching Practices	129
Table 4.5	Component Factor Loading for Teaching Resources	130
Table 4.6	Rotated Factor Loading for Teaching Capabilities	131
Table 4.7	Core Competencies by Percent, Means and Standard Deviations	135
Table 4.8	Teaching Practices by Percent, Means and Standard Deviations	139
Table 4.9	Teaching Resources by Percent, Means and Standard Deviations	144
Table 4.10	Teaching Capabilities by Percent, Means and Standard Deviations	149
Table 4.11	First-Order CFA of Core Competencies Model	158
Table 4.12	Correlations and Square of Correlation – Core Competencies Model	159
Table 4.13	First-Order CFA of Modified Core Competencies Model	162
Table 4.14	Correlations and Square of Correlation – Modified CC Model	163
Table 4.15	Second-Order CFA of Core Competencies Model	165
Table 4.16	First- Order CFA of Teaching Practices Model	168
Table 4.17	Correlations and Square of Correlation – Teaching Practices Model	169

05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

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Table 4.18	First-Order CFA of Modified Teaching Practices Model	169
Table 4.19	Correlations and Square of Correlation – Modified Teaching Practices Model	171
Table 4.20	Second-Order CFA of Modified Teaching Practices Model	172
Table 4.21	CFA of Teaching Resources Model	174
Table 4.22	CFA of Modified Teaching Resources Model	177
Table 4.23	First-Order CFA of Teaching Capabilities Model	179
Table 4.24	First Order - CFA of Modified Teaching Capabilities Model	182
Table 4.25	Correlations and Square of Correlation –Teaching Capabilities Constructs	182
Table 4.26	Second Order CFA of Teaching Capabilities Model	185
Table 4.27	CFA of Full Measurement Model	188
Table 4.28	Comparison of Goodness-of-Fit Indices for Hypothesized and Modified Full Measurement Models	190
Table 4.29	The Factor Loadings (λ) and Squared Multiple Correlations (R^2) for the Modified Measurement Model (Model.2)	192
Table 4.30	Factor Loadings (λ) and Squared Multiple Correlations (R^2) for the Hypothesized Structural Model (Model.0)	195
Table 4.31	Comparison of Goodness-of-Fit Indices for Hypothesized and Modified Full structural Models	196
Table 4.32	Factor Loadings (λ) and Squared Multiple Correlations (R^2) for Modified Structural Model (Model.1)	198
Table 4.33	Parameter Estimates of Modified Structural Model (Model.1)	199
Table 4.34	Correlations – Modified Structural Model Constructs (Model.1)	200
Table 4.35	Summary of the Hypotheses Tests	201
Table 4.36	Structural Models of Alternative Models	204
Table 5.1	Competency Development Levels of the Libyan Undergraduate Accounting Students	211
Table 5.2	Libyan Accounting Educators‟ Levels of Use of Teaching Practices	215
Table 5.3	Levels of Adequacy of Teaching Resources at Libyan Universities	218
Table 5.4	Libyan accounting Educators‟ Levels of Use of Teaching Capabilities	220

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LIST OF FIGURES

Figure		Page
Figure 1.1	Faculty motivation to use alternative teaching practices Model	25
Figure 1.2	Using Motivational Systems Theory to explore factors that Influence Teaching Strategies.	25
Figure 1.3	Teaching for Competence Model	26
Figure 1.4	Conceptual Framework	27
Figure 2.1	Map of Libya	36
Figure 3.1	Research Process	85
Figure 3.2	Proposed SEM Model of Latent Variables	121
Figure 3.3	Full Structural Model of the Study	122
Figure 4.1	First-Order CFA of the Core Competencies (CC) Model	157
Figure 4.2	First-Order CFA of the Modified Core Competencies Model	161
Figure 4.3	Second-Order CFA of the Core Competencies (CC) Model	164
Figure 4.4	First-Order CFA of the Teaching Practices (TP) Model	167
Figure 4.5	First-Order CFA of the Modified Teaching Practices Model	170
Figure 4.6	Second-Order CFA of the Modified Teaching Practices Model	173
Figure 4.7	CFA of the Teaching Resources (TR) Model	175
Figure 4.8	CFA of Modified Teaching Resources (TR) Model	176
Figure 4.9	First-Order CFA of the Teaching Capabilities (TC) Model	178
Figure 4.10	First-Order CFA of Modified Teaching Capabilities (TC) Model	181
Figure 4.11	Second-Order CFA of Teaching Capabilities Model	184
Figure 4.12	CFA of Full Measurement Model	187
Figure 4.13	CFA of Modified Full Measurement Model (Model.2)	191
Figure 4.14	Full Hypothesized Structural Model	194
Figure 4.15	Modified Full Structural Model (Model.1)	197

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CHAPTER ONE

INTRODUCTION

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1.1 Introduction

This chapter includes background of research problem, problem statement, objectives of the study, research questions associated with the study, hypotheses, the conceptual framework in which the study was grounded, significance of the study, definition of terms pertinent to the study and limitations of the study.

1.2 Background of study

Rapid technological development and the globalization of financial and capital markets present new challenges to accounting discipline. Thus accounting education has been a subject of interest in many countries. These countries realize that

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developing and improving accounting education is one of the challenges of the contemporary environment.

Business schools and faculties are under pressure to provide the core competencies accounting graduates and future business managers need. In recent years, the accounting education has been in the spotlight with many issues such as the following being raised: faculty knowledge and ability to offer real-world guidance; the delivery or teaching approach; course content and curricula; students‟ exposure to technology and its applications in business (De Villiers, 2010). There is a growing consensus among accounting professionals that recent accounting graduates do not adequately meet the high standards set by potential employers (Clovey & Oladipo, 2008).

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A debate over the educational preparation being provided to accounting students is an ongoing issue that continues to worry interested parties. Many claims that accounting students are not being prepared adequately for tasks awaiting them in the complex business world (Burnett, Friedman, & Yang, 2008; Gammie & Kirkham, 2008). It has been widely argued that accounting education has been deficient in equipping students with the requisite set of generic competencies (AICPA, 2012; De Villiers, 2010; Elaokali, 2012; Jackling & De Lange, 2009; Paisey & Paisey, 2010), and that instructional methods are too conventional, based merely on knowledge transmission, and heavy reliance on a largely homogeneous set of textbooks, and do not develop students‟ ability to learn skills (Clovey & Oladipo, 2008; Kitot, Ahmad, & Seman, 2010; Veselinovska, Gudeva, & Djokic, 2011).

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In Libya, Elaokali (2012) indicated that there is an absence of a way to learn job related skills such as: job commitment skill, competitiveness skill, desire for excellence skill and teamwork and problem-solving skill in the Libyan university curriculum. This may be because: there is not enough practical training, there are insufficient libraries and laboratories, the curriculum do not contain programs that can help students acquire these skills. The Libyan universities have unclear aims, and similar curriculum, books and teachers with similar academic background and with the same methods of teaching and learning.

According to Ahmed and Gao (2004), accounting practice and accounting education in Libya remain under-developed. They also highlighted other problematic areas of Libya‟s accounting education, including the unsuitability of the syllabuses to the needs of the economy, the shortage of qualified accounting academics and educators, the unsuitable marriage of academic teaching and professional training in the accounting curriculum, and the inadequate accounting research. Musa and Almagouri (2007) conducted a study to explore Libya‟s accounting education‟s impact on the professional qualification of accounting graduates, by investigating the extent to which the accounting education meets the economic developments and the contemporary needs of the profession. The study concluded that: there is no correlation between accounting programs and the requirements of the accounting profession, which created a gap between the academic and professional field; accounting curriculum is outdated to cope with the contemporary developments in the business environment; and students lack of professional competencies that accounting graduates should possess. Massly (2010) argues that the pedagogy used by accounting educators at Libyan institutions depends on the conventional methods which often

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rely more on memorization than creativity, and the curriculum does not develop logical thinking and critical analysis skills in students.

The current education model is rules-based, relies on memorization, tests for content, and teaches to certifying exams. It is inefficient and, more importantly, does not prepare students for the ambiguous business world they will encounter upon graduation. The pedagogy often lacks creativity, depends too much on lectures and textbooks, and does not equip future accountants adequately for later working life. There is too much focus on content at the expense of skill development-skills students need in order to be successful professionals (Jackson & Durkee, 2008; Paisey & Paisey, 2010).

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Albrecht and Sack (2000) reported that if accounting graduates are to meet future challenges of the profession, they must develop the knowledge, skills, and competencies necessary to become independent and life-long learners. These skills should be incorporated into accounting curriculum. The authors stated that existing curriculum and teaching methods implemented in accounting programs are unable to prepare students sufficiently for the changing business environment, since they are not exposed to the real accounting profession. Many employers declare that university graduates know the details of the accounting. However, they lack appropriate advanced communication skills, good teamwork skills, and leadership skills required in today business environment (Clovey & Oladipo, 2008; Ewell, 2003).

Significant attention has lately been given to the active learning. It is a teaching technique promoted by learner-centered, where students are likely to be

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active in the learning process by participating in discussion and collaborative activities, whereas passive learning is content-centered instruction involves situations where material is delivered to students by a lecture-based format (Halonen, Brown-Anderson, & McKeachie, 2002). Main (2009) recommends some strategies that support active learning and should be employed by educators in the accounting classroom, some of which are as follows: debates, business simulations, unstructured problem solving, the case studies, collaborative learning, specific real-world business events, technology such as tutorials, visuals (slides, multi-media, video), and computer-based instruction, and fieldwork such as service learning and accounting internships.

Generally, the results of studies regarding the effectiveness of teaching practices support active learning methods. Researchers as Bozkurt and Ilik (2010) point out that the courses with interactive simulations have a positive effect on students‟ beliefs about physics and physics achievement, because they found that students who studied with simulations are more successful than students who studied with traditional methods. Further, group-oriented discussion method has shown that team learning and group-student discussions lead to positive student performance outcomes, encourage participation, self-confidence and leadership skills (Perkins & Saris, 2001; Yoder & Hochevar, 2005). Cabrera, Colbeck, and Terenzini (2001) investigated the relationship between instructional practices (Instructor Interaction and Feedback, Collaborative Learning, and Organization and Clarity) and students‟ self-reported development of professional competencies (problem solving skills, group skills, and understanding of engineering as an occupation). They found that instructional practices were significantly and positively associated with the

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development in all three professional competencies. Hunt, Haidet, Coverdale, and Richards (2003), found positive learning outcomes related to team learning methods, as compared to traditional lecture-based methods. Arquero, Cardoso and Joyce (2004), investigated the effect of two different case-teaching methods (decision-oriented and complex cases) to improve nontechnical skills (communication and problem-solving skills) in a financial statement analysis class. They concluded that the case-teaching methods were useful for improving nontechnical skills.

Colbeck, Cabrera, and Marine (2002) found a positive relationship between capability beliefs (teaching capabilities) and the use of learner-centered education such as group and design projects, and the activities that require helping students to improve their own skills to effectively relate with team members. They also found that lack of confidence in capability to define, identify, and solve ill-defined problems was related with the use of traditional teaching methods such as lecture and textbook problem sets. According to Einarson (2001), the use of learner-centered education has specially been promoted in undergraduate education and faculty members are promoted to utilize learner-centered teaching methods. Learner-centered instruction is well-suited with Chickering and Gamson (1987) seven principles for good practice in undergraduate education that state; good teaching practice: 1) encourages contact between students and faculty; 2) develops reciprocity and cooperation among students; 3) encourages active learning; 4) gives prompt feedback; 5) emphasizes time on the task; 6) communicates high expectations; and 7) respects diverse talents and ways of learning.

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Many faculty developers affirm that most faculty members get little formal preparation in teaching, as an alternative they depend on informal training gained by discussing with colleagues, reading about teaching, observing their own professors, or occasional formal instructional workshops (Colbeck et al., 2002). Albrecht and Sack (2000) argued that universities cannot expect faculty members who possess dated knowledge and skills to make the changes desired nowadays. Accounting faculty members were educated in ways that are no longer relevant. It is vital that faculty be given the resources to keep on up to date. This means that they must develop globally, technologically, and have recent and broad business and accounting knowledge. Albrecht and Sack (2000) argued that universities that do not devote enough resources for faculty development will find that their faculty members are incapable to make the changes desired these days.

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Even if a person has essential skills, it might be difficult to accomplish her/his goals if the environmental context is not helpful, supportive or has insufficient resources. Resources are material factors that can facilitate or impede task performance (Popoola & Haliso, 2009). Students are likely to be motivated by adequate resources of the teaching and learning process. Everything from university administration and management structures, through the infrastructure such as computer labs, libraries and adequate classrooms, will contribute to or prevent motivating students. However, the most keen students will not be motivated if they usually met with unhelpful librarians and administrators, lack of student support services, and uneasy access to essential resources such as computer labs, libraries, internet, audio/visual equipments, and so on (Ahmad & Gao, 2004; Colbeck et al., 2002; Massly, 2010). Students‟ perceptions of the accessibility, quantity, and quality

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of facilities, and teaching and learning resources are likely to influence their opportunities to gain knowledge and develop core competencies.

Although the accounting education has received attention of many countries, especially those that are convinced that the world is living in an era of technology, and many studies and research has been conducted which aimed to develop and reform accounting education systems and to enable accounting graduates to keep pace and cope with business and professional developments, the studies and research conducted concerning accounting education in Libya is still very limited, and the existing ones had not been allocated directly to study the relationship between accounting teaching process and student competency-development (Ahmad & Gao, 2004; Khalat, Almagouri, & Almashat, 2007; Massly, 2010).

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1.3 Problem Statement

Due to the lack of coordination between Libyan universities and Libyan labor market, the university system has failed to provide needed skills to develop the national workforce, and the higher education in Libya offers a traditional education which is not directly related to work requirements (Elaokali, 2012). According to Al-Badri (2007), the fundamental problems facing higher education in the Arab world lie in the weak relationship between higher education and society. In addition, Al-Badri in his study about higher education problems in Libya argues that higher education has no clear policies and scenarios, which has made a lot of problems in the higher education programs.

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A great many studies have been directed towards accounting education and how it might be enhanced in developed nations, however, the research on accounting education in developing countries is still far behind (Al-Twaijry, 2010). In Libya, in spite of the efforts that have been made in order to improve the education in Libya, the accounting education has been slow in introducing and/or revamping programs that can significantly affect change in graduates and provide them with the core competencies to succeed in the business environment (Ahmad & Gao, 2004; Khalat et al., 2007; Massly, 2010; Musa & Almagouri, 2007). According to Ahmad and Gao (2004), accounting curriculum in Libya does not offer a foundation for lifelong learning, which elsewhere is now considered a fundamental objective of accounting education. The traditional teaching approach to accounting education is still predominant in this country, with the emphasis on the transfer of knowledge. There is no evidence of sufficient attention being given to general skills and professional values as defined by (IFAC) (1996). They also noted that the Libyan accounting education uses syllabuses that are inappropriate to the needs of the economy, does not have sufficient qualified accounting academics and educators, fails to incorporate systematic academic teaching and professional training to accounting students, and lacks accounting research to support effective teaching and learning process.

Khalat et al. (2007), sought to ascertain the graduates‟ satisfaction with their undergraduate programs. They concluded that the current accounting curriculum is no longer appropriate to the requirements of the job market in light of the openness of the Libyan economy towards globalization and developments in information technology. They also indicated that the curriculum did not develop logical thinking and critical analysis of students because it was relying on traditional teaching methods. There is

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no focus on teaching communication and report writing skills, which weakens the ability of graduates to deliver accounting information to users. The researchers suggested that an empirical study should be conducted to investigate how accounting education fulfills the market demands and stakeholders needs in the Libyan business environment.

Musa and Almagouri (2007) conducted a study to disclose the actuality of Libyan accounting education and its impact on the professional qualification of accounting graduates, by recognizing the extent to which the accounting education meets the economic developments and the contemporary needs of the profession. They concluded that there is no association between accounting programs and the requirements of the accounting profession, which created a gap between the academic and professional field. This happens because the accounting curriculum is outdated and fails to cope with the contemporary developments in the business environment, the traditional teaching approach was used to transmit classroom material to students, and most of Libyan universities lack the necessary modern teaching resources, such as computers, data shows, the Internet, e-libraries, and appropriate classrooms equipped with the necessary tools for the educational process. As sequence, students lack of core competencies that accounting graduates should possess.

Massly (2010) argues that the pedagogy used by accounting educators at Libyan institutions depends on the conventional methods which often rely more on memorization than creativity, and the curriculum does not develop logical thinking and critical analysis skills in students, and accounting colleges in Libya lack adequate institutional resources that support learning and teaching process, such as; labs, e-

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libraries, internet, and other facilities which could encourage faculty members to use innovative teaching practices.

With the challenges facing accounting graduates in a changing business environment, students need all the competencies development they can acquire in the undergraduate degree to prepare them for professional life in this new century. Research in accounting education discourse has identified what competencies are required of an accounting graduates, yet very little research (overseas) and no one (in Libya) has been undertaken on how competencies are perceived to be developed from vital stakeholders in accounting education, and the extent to which such development is affected by teaching process (Clovey & Oladipo, 2008; Kerby & Romine, 2010; Main, 2009; Massly, 2010; Norwani & Yusof, 2011; Paisey & Paisey, 2010). As students are key stakeholders within any teaching and learning process, it is important that efforts to investigate this issue encapsulate their perceptions. This study is motivated by the desire to examine the perceptions of Libyan undergraduate accounting students regarding their development of core competencies required by accounting profession, and the extent to which such development was affected by teaching process.

1.4 Objectives of Study

This study aims to examine to what extent specific core competencies are perceived to be developed by undergraduate accounting students, and to determine the mediating effect of teaching practices on the relationships between teaching resources, teaching

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capabilities, and the development of these core competencies. To achieve these aims, the research has the following objectives:

1. To investigate to what extent Libyan institutions‟ programs are developing in accounting students the core competencies needed to be successful in the accounting profession.
2. To investigate the teaching practices that Libyan accounting educators practiced more frequently in their classrooms.
3. To investigate to what extent teaching resources are adequate at Libyan universities as perceived by Libyan accounting students.
4. To investigate to what extent Libyan accounting educators are equipped with teaching capabilities as perceived by Libyan accounting students.
5. To determine the relationship between teaching resources and the teaching practices used by Libyan accounting educators as perceived by Libyan accounting students.
6. To determine the relationship between teaching capabilities of Libyan accounting educators and their use of teaching practices as perceived by Libyan accounting students.
7. To determine the relationship between teaching practices used by Libyan accounting educators as perceived by Libyan accounting students and the students‟ self-reported development of core competencies.
8. To determine the relationship between teaching resources at Libyan universities as perceived by Libyan accounting students and the students‟ self-reported development of core competencies.

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9. To determine the relationship between teaching capabilities of Libyan accounting educators as perceived by accounting students and the students‟ self-reported development of core competencies.

1.5 Research Questions

Based on the research objectives stated, the following research questions are addressed:

RQ1. To what extent are Libyan institutions‟ programs developing in Libyan accounting students the core competencies needed to be successful in the accounting profession?

RQ2. Which are the teaching practices that Libyan accounting educators used more frequently in their classrooms?

RQ3. To what extent teaching resources are adequate at Libyan universities as perceived by Libyan accounting students?

RQ4. To what extent Libyan accounting educators are equipped with teaching capabilities?

RQ5. Is there a positive relationship between teaching resources at Libyan universities and the teaching practices used by Libyan accounting educators?

RQ6. Is there a positive relationship between teaching capabilities of Libyan accounting educators and their use of teaching practices?

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RQ7. Is there a positive relationship between teaching practices used by Libyan accounting educators and the students‟ self-reported development of core competencies?

RQ8. Do teaching practices used by Libyan accounting educators fully mediate the relationship between teaching resources and the students‟ self-reported development of core competencies?

RQ9. Do teaching practices used by Libyan accounting educators fully mediate the relationship between teaching capabilities and the students‟ self-reported development of core competencies?

1.6 Hypotheses Development

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In order to address research questions (**RQ5** to **RQ9**) the following hypotheses were developed:

1.6.1 The Effect of Teaching Resources on Teaching Practices

Even if a person has essential skills, it might be difficult to accomplish her/his goals if the environmental context is not helpful, supportive or has insufficient resources. In any institution there are facilities other than classrooms that can make a contribution to teaching and learning process. For teaching and learning process to take place teachers and learners must have access to necessary tangible and intangible teaching and learning resources. Resources are “material factors that can facilitate or impede

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task performance" (Martin, Schermerhorn, & Larson, 1989). According to Popoola and Haliso (2009), the teaching and learning resources that should be available at the libraries as those in both printed and electronic formats; such as journals, textbooks, indexes, newspapers and magazines, reports, computers, video tapes/cassettes, computer software, online databases, internet/E-mail, electronic books and e-journals. Alike, teachers and students are likely to be motivated by adequate resources of the teaching and learning process. Everything from university administration and management structures, through the infrastructure such as computer labs, libraries and adequate classrooms, will contribute to or prevent motivating students. However, the most keen students will not be motivated if they usually met with unhelpful librarians and administrators, lack of student support services, and uneasy access to essential resources such as computer labs, libraries, internet, audio/visual equipments, and so on (Adeoye & Popoola, 2011; Colbeck et al., 2002; Massly, 2010).

Using different teaching methods requires different teaching resources than assigning textbook problem sets and delivering lectures. Colbeck et al. (2002) found a positive relationship between perceived adequacy of computer and laboratory support and the use of group and design projects. The authors suggested that laboratory and computer resources that faculty use for their research come in handy when their students are involved in the process of solving ill-defined problems. They also suggested that using different teaching practices however, requires additional administration and clerical support than faculty require for using lectures. The results of Chen (2010) study show that the construct "context" which refers to teachers‟ perceptions about the instructional resources (technological equipment, time, and support) available at the school site, had a moderate influence on teachers‟ use of

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technology in teaching and learning. Hence, as long as adequate resources and support are provided to teachers, technology integration would follow (Chen, 2010). It is somewhat possible that accounting departments can supply specific administrative and clerical resources at a minimum cost to facilitate active and collaborative teaching and learning efforts. Therefore, it is possible to assume teaching practices will be positively related to teaching resources.

Ha1: There is a positive relationship between teaching resources at Libyan universities and the teaching practices used by Libyan accounting educators.

1.6.2 The Effect of Teaching Capabilities on Teaching Practices

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The focus on teaching effectiveness depends on the fact that effective learning is closely associated with effective teaching. According to Crawford (2008) effective teaching portrays the extent to which the instructor is capable to encourage and develop students‟ study skills to promote students‟ understanding. As stated by Fenstermacher and Richardson (2005), there are three elements of good teaching. They are “the logical acts of teaching” (e.g., activities such as demonstrating, explaining, and correcting), “the psychological acts of teaching” (e.g., motivating, encouraging, rewarding), and “the moral acts of teaching” (e.g., exhibiting and fostering honesty, courage, and fairness). Wechsler and Shields (2008) believe that effective teachers are they who come to the classroom with a rich toolkit of knowledge and skills that they utilize following a set of effective practices, and which lead over time to student learning. According to Aregbeyen (2010), elements of

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effective teaching include showing interest and concern in quality of teaching, coming well prepared to class, having an attractive style of presentation, being careful and specific in answering questions, showing respect for students as persons, and discussing recent development in the field. By coming to class well prepared and fully understanding the material to be presented, accounting educators are able to introduce new methods, theories, and philosophies into accounting courses to ensure that students view accounting as an interesting subject in which they will enroll and succeed (Buckhaults & Fisher, 2011).

Mohidin et al. (2009) noted that the educator‟s capabilities play a significant part in determining the effective teaching particularly in accounting subjects. Colbeck et al. (2002) found a positive relationship between capability beliefs (teaching capabilities) and the use of learner-centered education such as group and design projects, and the activities that require helping students to improve their own skills to effectively relate with team members. They also found that lack of confidence in capability to define, identify, and solve ill-defined problems was related with the use of traditional teaching methods such as lecture and textbook problem sets. Abrantes, Seabra, and Lages (2007) found that students prefer interactive and student-focused teaching methods. Instructors‟ personal qualities, teaching capabilities and instructional methods strongly influence perceived learning. Moreover, if students have a strong and open interaction with their educators, they will devote more in the learning process and make a more positive opinion about instructors‟ abilities and their teaching methods. Furthermore, the relationship between teaching capabilities and teaching practices confirms that students benefit from teaching and learning processes that have strong interactions with their educators (Paswan & Young, 2002).

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Therefore, it is possible to assume teaching practices will be positively related to teaching capabilities.

Ha2: There is a positive relationship between teaching capabilities of Libyan accounting educators and their use of teaching practices.

1.6.3 The Effect of Teaching Practices on Competencies Development

It has been widely argued that accounting education has been deficient in equipping students with the requisite set of generic competencies (AICPA, 2012; Hutchinson & Fleischman, 2003; Mohamed & Lashine, 2003), and that instructional methods are too conventional, based merely on knowledge transmission, and heavy reliance on a largely homogeneous set of textbooks, and do not develop students‟ ability to learn skills (Clovey & Oladipo, 2008; Gary, Ellen, & Christopher, 2003). The International Educational Standard (IES, 3) Professional Skills and General Education has been issued in 2003 by the International Federation of Accountants (IFAC, 2008). It indicates that individuals seeking to become professional accountants should acquire the following skills: intellectual, technical, personal, interpersonal and communication, and organizational and business management skills. These skills enable them to function throughout their careers as competent professionals in an increasingly complex and demanding environment. Ramsden (2003) noted that effective teaching creates the environment in which effective learning outcomes for students learning are encouraged and motivated. This therefore, implies that achieving

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deep learning in these ways requires a learner -centered approach, and it also motivates students to learn through the teaching process.

Significant attention has lately been given to the active learning. It is a teaching technique promoted by learner-centered, where students are likely to be active in the learning process by participating in discussion and collaborative activities, whereas passive learning is content-centered instruction involves situations where material is delivered to students by a lecture-based format (Halonen et al., 2002). Furthermore, Main (2009) recommends some strategies that support active learning and should be employed by educators in the accounting classroom, some of which are as follows: debates, business simulations, unstructured problem solving, the case studies, collaborative learning, group research projects, specific real-world business events, technology such as tutorials, visuals (slides, multi-media, video), and computer-based instruction, and fieldwork such as service learning and accounting internships.

Hunt, Haidet, Coverdale, and Richards (2003), found positive learning outcomes related to team learning methods, as compared to traditional lecture-based methods. Anderson and Bauman (2004) discussed the use of low-income taxpayer clinics (LITC) as a form of service learning at the North Carolina-Greensboro University and the Wisconsin-Milwaukee University. They concluded that the service learning LITC experience improved students‟ tax-research, social-awareness, problem-solving, and communication skills. Hwang, Lui, and Tong (2005) sought to investigate the effect of cooperative learning style versus lecture style on student learning outcome at a Hong Kong university. Two faculty members each taught one

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three-hour session on a single topic in either a cooperative learning format or lecture format. The authors reported that using cooperative learning improved student performance. The recent study by Akman and Mugan (2010) aimed to explore the effect of cooperative teaching method versus lecture method on the academic performance of students in financial accounting and managerial accounting courses. Although, the results of this study showed no significant difference in the academic performance of the treatment and control group students in either course using both teaching methods, interviews with some students revealed that they prefer cooperative learning, so they like being a part of the lecture instead of just sitting and listening to the lecturer.

Rainsbury and Malcolm (2003) examined students‟ perception about the impact of the use of a discussion board in an intermediate accounting course in enhancing their learning. They found that discussion board use positively contributed to students‟ perception of increased learning. Arquero, Cardoso and Joyce (2004), investigated the effect of two different case-teaching methods (decision-oriented complex cases) to improve nontechnical skills (communication and problem-solving skills) in a financial statement analysis class. They concluded that the case-teaching methods were useful for improving nontechnical skills. Cabrera et al. (2001) investigated the relationship between instructional practices (Instructor Interaction and Feedback, Collaborative Learning, and Organization and Clarity) and students‟ self-reported development of professional competencies (problem solving skills, group skills, and understanding of engineering as an occupation). They found that instructional practices were significantly and positively associated with the development in all three professional competencies. Weil et al. (2004) investigated

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student's perceptions of using case studies to develop specific competencies. The findings indicated that students perceived that case studies have a positive impact on developing fifteen core competencies. Bozkurt and Ilik (2010) point out that the courses with interactive simulations have a positive effect on students‟ beliefs about physics and physics achievement, because they found that students who studied with simulations are more successful than students who studied with traditional methods. Based on these empirical evidences, it is possible to predict competencies development will be positively related to teaching practices.

Ha3: There is a positive relationship between the teaching practices used by Libyan accounting educators and students‟ self-reported development of core competencies.

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1.6.4 Mediating Role of Teaching Practices

The above research hypotheses offer support for the relationships between the independent variables and the mediator on one side, and between the mediator and the dependent variable on the other side. The expected relationships between independent variables (teaching capabilities and teaching resources) and the dependent variable (development of core competencies) are described below.

Regarding to teaching resources, however, the most keen students will not be motivated if they usually met with unhelpful librarians and administrators, lack of student support services, and uneasy access to essential resources such as computer

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labs, libraries, internet, audio/visual equipments, and so on (Ahmad & Gao, 2004; Colbeck et al., 2002; Massly, 2010). Students‟ perceptions of the accessibility, quantity, and quality of facilities, and teaching resources are likely to influence their opportunities to gain knowledge and develop core competencies.

Development of multimedia classrooms brings the internet, computers, audio, and video to the easy reach of the faculty and students. These are factors that faculty and students nowadays consider necessary. Groves and Zemel (2000) found that teachers perceive that technology (as teaching resource) must have a significant impact on instruction and improves learning, for faculty to adopt its use, albeit the technology must be sufficient and available. According to Luna and McKenzie (1997), in some universities where technology was adopted, teachers believe the integration of technology (as teaching resource) into instruction increases learning performance (gains in knowledge, and skills). Therefore, teaching resources are thought to impact development of core competencies through influencing teaching practices.

Ha4: The effect of teaching resources on development of core competencies in Libyan accounting students is fully mediated by teaching practices.

Regarding to teaching capabilities, however, if students have a strong and open interaction with their educators, they will devote more in the learning process and make a more positive opinion about instructors‟ abilities and their teaching practices (Paswan & Young, 2002). Teacher–Student interaction refers to the opportunity to express ideas, ask questions, and have an open dialogue in class.

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Interactions allow students to practice the free expression of ideas, ask questions, improve class discussion, and develop their own skills, (Paswan & Young, 2002). The relationship between teaching capabilities and teaching practices confirms that students benefit from teaching processes that have strong interactions with their educators. Abrantes et al. (2007) found that students prefer interactive and student-focused teaching practices. Instructors‟ personal qualities, teaching capabilities and instructional methods strongly influence perceived learning (gains in knowledge, and skills). Therefore, teaching capabilities are thought to impact development of core competencies through influencing teaching practices.

Ha5: The effect of teaching capabilities on development of core competencies in Libyan accounting students is fully mediated by teaching practices.

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1.7 Conceptual Framework

The theoretical framework that guided this study is the Motivational Systems Theory (MST) (Ford, 1992). The MST is derived from the Living Systems Framework (LSF) (Ford, 1987) a theory of human functioning and development, which deals with all aspects of human-beings as living systems. The LSF integrates biological, environmental and non-motivational psychological and behavioral processes in understanding person‟s functioning and behavior. In this framework individual‟s actions are seen as a function of the interaction between the person and his/her environment.

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The MST focused on three main elements of motivation. Ford refers to these as personal goals, personal agency beliefs and emotions. Personal goals are identified as beliefs about desired outcomes that person would like to accomplish (Ford, 1992). Personal agency beliefs are person‟s thoughts which relate desired consequence (a goal) to the anticipated consequence if the goal is pursued. The personal agency beliefs are composed of two types: beliefs about capability and context beliefs. Capability beliefs refer to a person‟s evaluation of whether one has the ability and skills to accomplish a goal. Context beliefs refer to a one‟s perceptions of whether their environment will support goal attainment, which will facilitate their acquisition of a particular goal through the provision of resources, social supports and rewards. Context beliefs include one‟s evaluation of the availability of resources, supports and/or barriers that their environment provides in regard to goal attainment. Goals and personal agency believes set the stage for the third component, emotional arousal. Emotions provide insight into a person‟s interaction with their environment and the extent to which they perceive goals as being achievable (Colbeck et al., 2002; Einarson, 2001; Ford, 1992). Emotions influence decision making, learning, and problem solving and consequently provide insight, though not direct information, into desired goals.

Colbeck et al. (2002) used MST as the theoretical foundation in their study as shown in figure 1.1. They conceptualized teaching practices as (lecturers‟ use of traditional methods, or their use of groups/design projects). The authors hypothesized that teaching practices would be influenced by lecturers‟ background, experience, teaching goals, their perception about teaching skills (capability beliefs) and their beliefs about teaching resources and rewards (context beliefs). They found that faculty

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members‟ experience, demographics, and motivational variables (Teaching goals, capability beliefs and context beliefs) were significantly associated with their use of teaching practices.

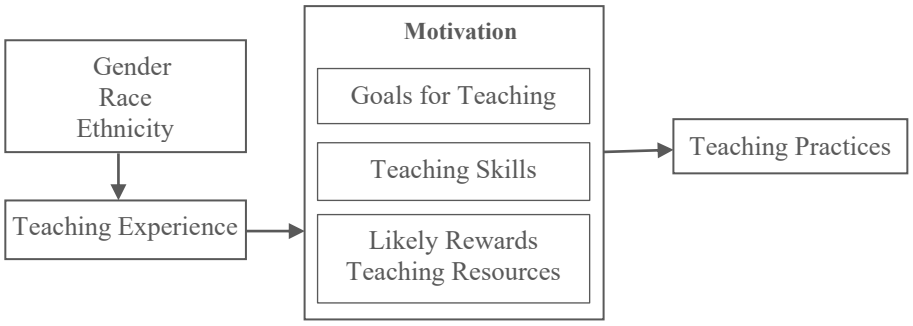


Figure 1.1. Faculty motivation to use alternative teaching practices Model. Adapted from Colbeck et al. (2002).

The study conducted by Richardson (2009) incorporated the MST as a main part of its conceptual framework as shown in figure 1.2. It most closely replicated the Colbeck et al. (2002) study.

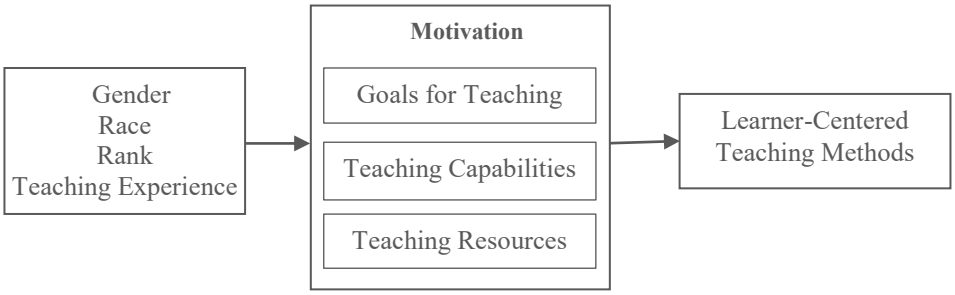


Figure 1.2. Using MST to explore factors that influence teaching strategies. Adapted from Richardson (2009).

The author used the MST to identify how motivational factors; goals for teaching, capability beliefs (Teaching Capabilities) and context beliefs (Teaching

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Resources) contributed to the use of learner-centered teaching methods by educators in undergraduate social work programs. The results indicated that Motivational Systems Theory factors influenced the use of learner-centered teaching methods of undergraduate social work faculty participated in his study. Particularly, teaching goals which were the most significant predictors of the use of learner-centered methods.

Cabrera et al. (2001) used Teaching for Competence Model as shown in figure 1.3, which presumes teaching practices and classroom climate have unique contributions on student development, to investigate the relationship between instructional practices (Instructor Interaction and Feedback, Collaborative Learning, and Organization and Clarity) and students‟ self-reported development of professional competencies (problem solving skills, group skills, and understanding of engineering as an occupation). They found that instructional practices were significantly and positively associated with the development in all three professional competencies.

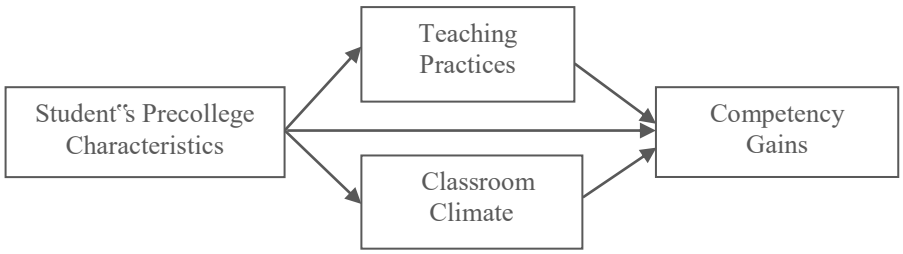


Figure 1.3. Teaching for Competence Model. Adapted from Cabrera et al. (2001)

Based on the three models used in prior research conducted by Richardson (2009), Colbeck et al. (2002) and Cabrera et al. (2001), The conceptual framework for this study was developed and is presented in Figure1.4. Consistent with these studies

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and because the focus of this study is on undergraduate accounting students‟ development of core competencies required in the accounting profession, and how students perceive that the teaching environment at Libyan universities facilitates, supports and motivates accounting students to develop these competencies during their undergraduate degree. The conceptual framework of this study incorporated only context beliefs (teaching practices, teaching resources, and teaching capabilities). In other words this study aims to determine the relationship between motivational factors (context beliefs) and students‟ self-reported development of core competencies.

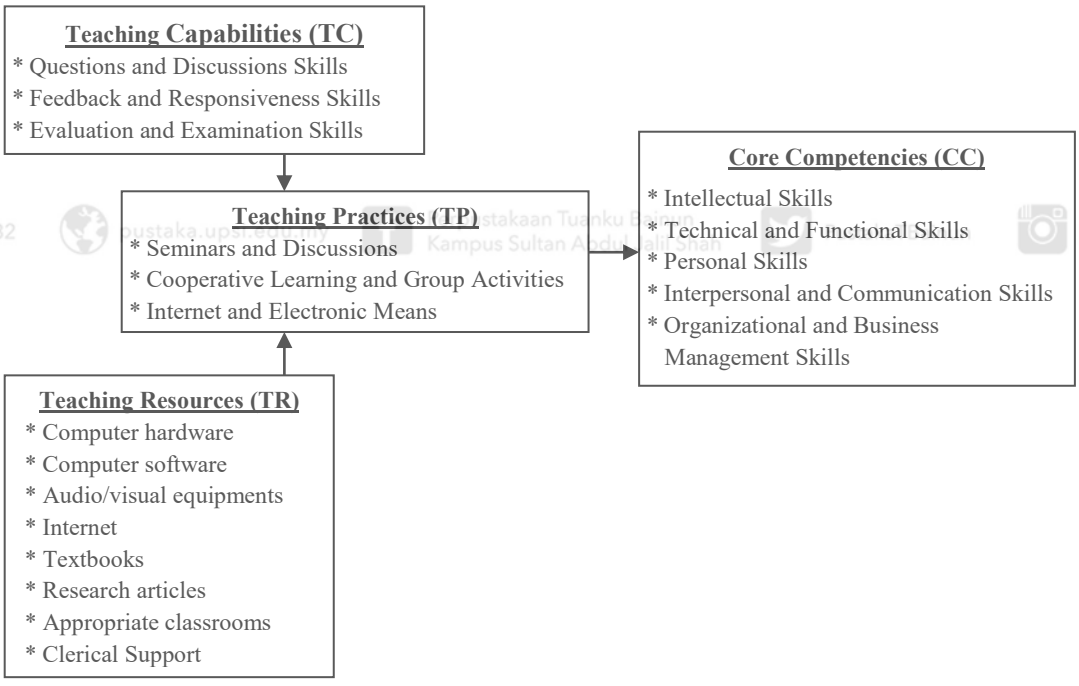


Figure 1.4. Conceptual Framework

For the purpose of this study, it was hypothesized that undergraduate accounting students‟ development of core competencies would be influenced by their perception about accounting faculty members‟ teaching capabilities, teaching

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practices used by those faculty members, and their beliefs about teaching resources in their universities. Accordingly, as it can be seen from Figure 1.4, the dependent variables were the core competencies (CC), which were defined as the desired goal that should be accomplished or obtained by accounting students. Whereas the independent variables were students‟ perceptions about teaching capabilities (TC) and teaching resources (TR), and the mediator variables were students‟ perceptions about teaching practices (TP). Independent and mediator variables were defined as the motivational factors that motivate students to develop (achieve) desired core competencies (desired goal).

1.8 Significance of Study

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The business environment is rapidly changing and with it the accounting profession. Thus, in order to respond to the current and future challenges of existing profession and stakeholders‟ demands, the universities should continue to improve their accounting curriculum and instructional methodologies.

It is important for all stakeholders to understand that accounting graduates are provided with accounting programs that enhance their professional skills when they enter the accounting profession. More research in the area of core competency development can be used to help in continuous improvement in existing accounting programs and in programs that are yet to be developed in the future.

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While much is written (overseas) about the student competency development and faculty classroom practices, there has been a lack of research on Libyan context relating to student competency development, faculty classroom practices, students‟ perceptions on teaching and learning, and factors that influence student competency development such as: teaching practices, teaching skill, and teaching and learning resources (Ahmad & Gao, 2004; Massly, 2010). The aim of this study is to fill this gap and contribute to contemporary research and practice by bringing this deserted area to the attention of overseas academics, and reporting about what is known about the Libyan university teaching-learning process and accounting faculty classroom practices. This study contributes to positive change for students and faculty by providing recent data to facilitate informing and promoting administrative vision, support, and policies involving faculty development, and learner-centered programs to increase student engagement and competency development. The findings of this study may also assist accounting educators and accounting department chairs in promoting changes in the teaching of accounting.

This research aims to contribute to the body of knowledge by investigating the relationships between teaching process and the development of specific competencies identified as desirable for an accounting graduate. Furthermore, the results of this study can be compared to results from similar studies to enhance the existing literature on competency development in professional accounting education.

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1.9 Operational Definitions

The following definitions are provided to ensure understanding of these terms throughout the study:

1. **Core Competencies (CC):** are a unique combination of human skills, knowledge, and technology that provides value and results to the user (AICPA, 2012; IFAC, 2008). The competencies measured in this study are Intellectual Skills (INTS), Technical and Functional Skills (TFS), Personal Skills (PERS), Interpersonal and Communication skills (ICS), Organizational and Business Management Skills (OBMS).
2. **Teaching Practices (TP):** refer to variables under the control of the instructor, involving the conduct and organization of the course, teaching style, resources used by the instructor in the classroom, assignments required of students, testing techniques, and grading policies (Campbell, 2009; Smith, 2006). The teaching practices measured in this study are lecture, seminars and discussions (SD), cooperative learning and group activities (CLG) and, internet and electronic means (IEM).
3. **Teaching Capabilities (TC):** refer to the abilities to perform specific teaching behaviors related to the specific areas such as: course preparation, instructor behavior, managing course materials, and evaluation (Richardson, 2009). The teaching capabilities measured in this study are related to the following areas: questions and discussions Skills (QDS), feedback and responsiveness skills (FRS) and, evaluation and examination skills (EES).

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4. **Teaching Resources (TR):** refer to the material factors that can facilitate the teaching process. Teaching resources are such as: clerical support, computer hardware and software, library resources, audio/visual equipments, and so on (Colbeck et al., 2002; Richardson, 2009). The teaching resources measured in this study are computer hardware, computer software, audio/visual equipment, internet, textbooks, research articles, appropriate classrooms, and Clerical Support.

1.10 Limitation of Study

As with any study, this study has limitations. A main limitation is that the data was collected from the participants via self-report measures. Breakwell, Hammond, and Fife-Schaw (2006) point out that, participants finishing self-report questionnaires could result in "faking good" or demand effects. Demand effects happen when the participants submit responses that they believe will paint an honest picture of themselves. In addition self-report measures might result in the participants offering information that they think the researcher wishes to collect.

The population of this study consisted of all undergraduate accounting students who were in the final year (seventh and eighth semester) in Libyan universities, and because of the lack of sufficient information related to the names and total number of students registered in the final year (seventh and eighth semester), it has been agreed with the heads of accounting departments that questionnaires will be distributed to students who attained advanced accounting courses, such as advanced cost accounting

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or advanced corporate accounting, because students could not register these advanced courses before they pass five to six semesters. As a result, the participants in this study may not be truly representative of the majority of Libyan undergraduate accounting students in the final year. This may limit the ability to generalize the findings.

Another limitation is that, the MST focuses on three main elements of motivation; personal goals, personal agency beliefs and emotions, and the personal agency beliefs are composed of two types beliefs about capability and context beliefs, even though, the focus of this study was only on context beliefs in MST.

Furthermore, the results of this study were limited by the information provided by the participants from the selected universities (students) in Libya at the time the study is conducted.

1.11 Conclusion

Accounting education should promote innovations in teaching approaches to encourage a continuing improvement in the educational process by enhancing a graduate‟s intellectual and personal ability, in preference to the normal „transfer‟ of knowledge. There is significant scope in improving teaching and learning methods in the college environment by adopting innovative instructional methods and by using the classroom more effectively to stimulate discussion and ideas, and to encourage better skills development.

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Many researchers argue that accounting education in Libya is in need of significant changes, and accounting students are not being skilled and prepared adequately for tasks awaiting them in the complex business world. Libyan institutions do not have sufficient qualified accounting academics and educators, and the traditional approach to accounting education is still predominant with the emphasis on the transfer of knowledge. Hence accounting educators must adapt their programs to ensure their students are skilled and prepared to meet the challenges that lie ahead. Research in accounting education discourse has identified what competencies are required of accounting graduates, yet very little research (overseas) and no one (in Libya) has been undertaken on how competencies are perceived to be developed from accounting students. These perspectives are important to ascertain competency development, and the extent to which such development is affected by teaching process.

To date, the researcher has not found any study had utilized the MST to examine to what extent specific core competencies are perceived to be developed by undergraduate accounting students. Therefore, this study aims to use Motivational Systems Theory to identify to what extent teaching practices, teaching capabilities and teaching resources contribute to the students‟ development of core competencies.

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CHAPTER TWO

LITERATURE REVIEW

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2.1 Introduction

Within this chapter is a review of accounting in Libya, followed by a brief of theories that are related to the study, and a review of the literature relevant to accounting education and other variables related to the study.

2.2 Accounting in Libya

This section provides a brief description about Libya followed by a review of accounting profession and accounting education in Libya.

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2.2.1 Country Overview

Libya is a developing Arab country placed in the north-central part of Africa, bordering Algeria and Tunisia in the west, Niger and Chad in the south, Sudan and Egypt in the east, and the Mediterranean Sea in the north. The official name of Libya is The Libyan Arab Republic (LAR). Islam is the state religion and approximately 97% of Libyans are Sunni Muslim. Libya is the fourth largest country in Africa with an area of about 1.8 million square kilometers with a population of 6.5 million (Central Bank of Libya, 2009). It has a Mediterranean Sea coast line of about 1900 kilometers. The official language in Libya is Arabic, whereas English and Italian are used in business and trade as well. The social environment is characterized by the extended family, clan, tribe, village and Islamic religion (Alhmali, 2007).

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The climate of Libya is divided into four regions, which are coastal strip, plateaus directly following the coastal strip, semi-desert region, and Sahara. Most of the lands in Libya are vacant lands which 94.73% desert, 3.94% agricultural, and 0.29% forests. Rainfall is of the stormy type, varying from one year to the other, in its quantities or monthly distribution (General Environment Authority (GEA), 2002).

Historically, Libya was divided into three areas as shown in *Figure 2.1*: Tripolitania in the northwest, Cyrenaica in the northeast, and Fezzan in the south. Libya‟s strategic location in the middle of North Africa, 1,900 kilometers of coastline with the Mediterranean Sea, made it subject to several waves of military invasion, including the Phoenicians, the Greeks, the Romans and the Italians. The Arab Muslims came to Libya in the seventh century, after which Libya stayed under their

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rule for a long time. In 1551 Libya was under the rule of the Ottoman Empire (Turkey) until the Italians invaded Libya in 1911. The Italians colonized Libya for more than 30 years until the Second World War. In 1942, following the defeat of the Italians and their German allies, the France established their administration in Fezzan, while Tripolitania and Cyrenaica were ruled by British. This state continued until the independence of Libya in 1951 (Alhmali, 2007).

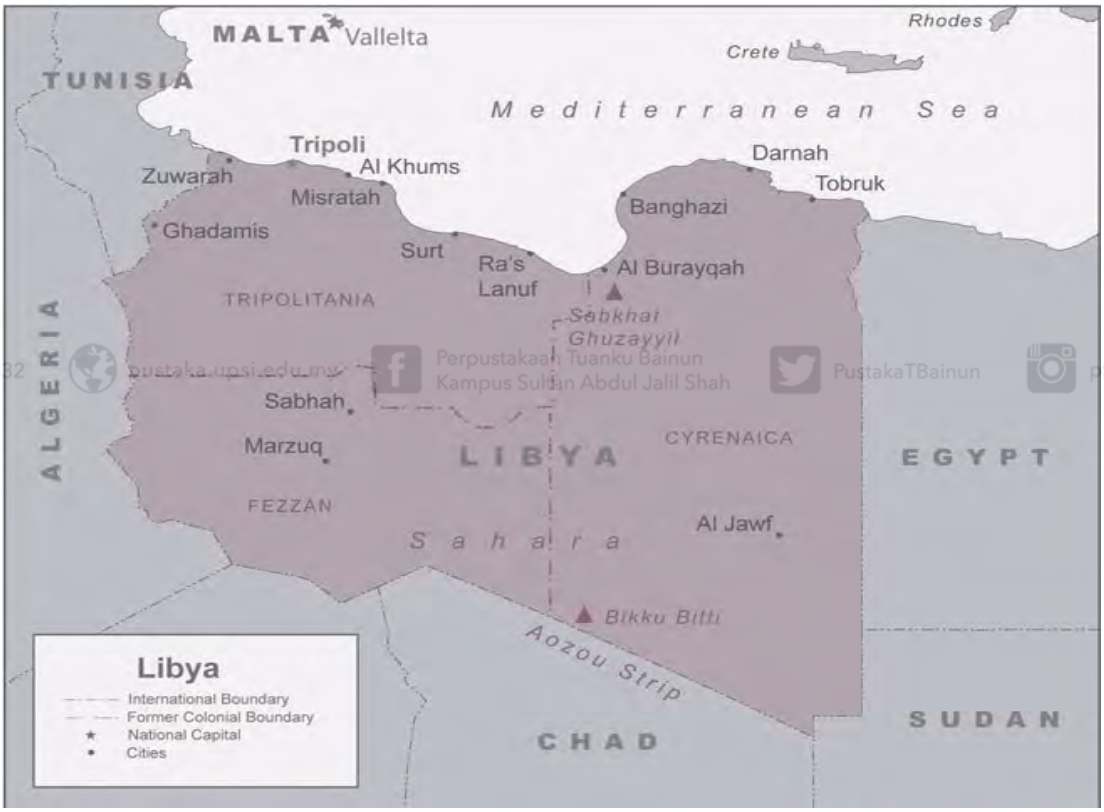


Figure 2.1. Map of Libya

Libya was granted its independence by the United Nations on the 24th December 1951 and became an independent united kingdom ruled by King Al-Sanusi until the first of September 1969, when the monarchy was overthrown by military coup guided by Muamar Al-Gaddafi, who took the power in Libya and proclaimed the Libyan Arab Republic (Alhmali, 2007). The UK and USA military bases in Libya

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were requested to evacuate as soon as possible. They finally evacuated in March and June 1970. Several actions (e.g., nationalizing foreign companies that were operating in Libya, and establishing public-owned enterprises) were taken by the new administration to restructure the economy (Ahmad & Gao, 2004; Alhmali, 2007). Libya was ruled by the military commander Muamar Al-Gaddafi since his military coup in 1969 until 2011, when he was overthrown by 17th February revolution.

Libya was one of the poorest countries in the world when it was granted its independence in 1951, the population was small, poor and illiterate, and with few known natural resources. Rapid development of education was allowed by oil revenues since 1963 causing education to grow at an enormous rate, alongside huge economic and social changes in the country. All Libyans are guaranteed the right to education (Libyan National Commission for Education, 2001). Primary and high schools were established all over the country, and old Quranic schools that had been closed during the struggle of independence were reactivated and new ones established, lending a heavy religious perspective to Libyan education (Alhmali, 2007). The first Libyan university was established in Benghazi in 1955 and there are presently more than ten universities and many higher learning institutes, including training and vocational schools (Arabsheibani & Manfor, 2001; Buzied, 1998).

2.2.2 Accounting Profession in Libya

Libya was under the colonization of the Italians and later the British and French, who did develop the country. However, the Libyans were kept isolated to live their

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conventional life with no education or training programs, and were excluded from the administration and any duties, which might improve their skills. Thereby the need to establish a Libyan profession of accounting was not a matter for local people at that time. Colonizers were accountable for running the country‟s affairs, and their laws and systems were implemented in Libya.

During the Italian occupation, Libya was considered politically and economically as a part of Italy (Bait-EL-Mal, Smith, & Taylor, 1973). Consequently, Italian economic, legal, accounting, and management systems were implemented in Libya. Accounting in Libya stepped its starting point, when Italian income tax was first introduced to Libya in 1923 (Bait-EL-Mal et al., 1973). When this tax law was introduced, Italian accountants were brought to work in Italian enterprises and in Italian government departments, thereby, implementing a copy of the Italian accounting profession in Libya. However, there was no evidence that the Libyans practiced accounting during that period, as the Italians kept their accounting practices to themselves (Bait-EL-Mal et al., 1973; Kilani, 2000).

Buzied (1998) mentioned that while the Italian 1923 tax laws were not designed particularly for Libya there is evidence that these laws lasted 16 years after the country‟s independence in 1951. As a result, tax forms are still prepared according to the 1923 tax laws. Throughout the British and French period, Italians still controlled the majority of the country‟s enterprises, and the Italian 1923 tax laws sustained to be the only tax laws enforced in the country. Hence, there were no significant changes to the accounting profession and accounting practices before the country‟s independence in 1951 (Buzied, 1998).

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When the country gained its independence in 1951, there were no domestic accounting firms in Libya. Most business firms relied on foreign accounting firms from Italy and Britain (Bait-EL-Mal et al., 1973). At that time, there was even a shortage of personnel in the administrative and public services, and the country relied significantly on advisors from the UK, USA and UN to establish accounting systems. In fact, at that time, many foreign agencies from the UK and the USA (e.g., the Libyan Public Development and Stabilization Agency, the Libyan American Reconstruction Commission, the Libyan and American Joint Service) flooded into the country to accomplish various projects. These agencies were all managed by non-Libyans, and the British and the American accounting models were implemented. Accounting systems of these agencies were British and American oriented, making a new western accounting orientation in Libya (Bait-EL-Mal et al., 1973; Buzied, 1998; Kilani, 1988).

Accounting in Libya was influenced by the British and American accounting through their aid agencies, and the Libyans were exposed to British and American accounting whilst working in these organizations. The International accounting firms are another factor, which has influenced the accounting systems in Libya towards the USA and UK orientation. These firms were responsible for auditing foreign aid agencies as well as international companies, which were operating in Libya. According to Bait-El-Mal et al. (1973), foreign influences, particularly from American and British companies, have contributed significantly to the development of accounting in Libya.

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The country‟s reliance on foreign aid continued until the discovery of oil in 1955, which provided Libya with fiscal resources to develop business activities leading to an important development of the economy (Buzied, 1998). As a result, there were increasing requirements from creditors, investors, business managers and governmental agencies for financial information and accounting services. Subsequently, many foreign accounting firms from Egypt, the USA and the UK opened branches in the country, primarily to provide audit services.

According to Buzied (1998), in the beginning of 1970s Libya moved away from the UK and USA colonial system of recognizing and producing professional accountants by putting a strong emphasis on university education and qualifications. Hence, Libya accredited a college degree as a sufficient qualification for professional recognition without requiring additional examinations, subject only to acquire practical experience. With the increase of accounting graduates from the University of Libya and the return of many Libyan students who graduated from overseas in the 1970s, several local accounting firms were established (Buzied, 1998).

Due to the increase of accounting firms and the lack of regulatory in accounting and auditing standards and practices, there was a need to set up a professional organization, which could take the accountability of developing a general structure of accounting in Libya. To meet this demand, Law No. 116 was enacted in 1973, followed by establishment of the Libyan Association of Accountants and Auditors (LAAA) in June 1975 (Ahmad & Gao, 2004). It is the first law to govern accountancy and its related areas. It covers: i) the establishment of the LAAA; ii) registration of accountants; iii) exercise of profession; iv) fees; v) pension and

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contribution fund; vi) obligations of accountants and auditors; vii) penalties; and viii) general and transitional provisions. The LAAA was established in June 1975 with the following objectives (Ahmad & Gao, 2004):

- to organize and improve the conditions of the accounting profession and to raise the standards of accountants and auditors professionally, academically, culturally and politically;
- to organize and participate in conferences and seminars related to accounting internally and externally and to keep in touch with new events, scientific periodicals, lectures and so on;
- to establish a retirement pension fund for its members;
- to increase co-operation between its members and to protect their rights; and
- to take action against members who violate the traditions and ethics of the profession.

The primary professional qualification of accountants in Libya is a membership of the LAAA. Accountants who want to qualify as members must meet the following requirements (Ahmad & Gao, 2004):

- Hold Libyan nationality;
- have a bachelor‟s degree in accounting;
- have five years experience of accountancy-related jobs in an accounting office after obtaining the bachelor‟s degree;
- be active over political and civil rights; and

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- be of good conduct, reputation and respectability, commensurate with the profession.

Buzied (1998) reported that accounting firms in Libya, which must be approved by the LAAA, can offer services in areas such as financial reporting, auditing, tax services, bankruptcy, management consulting, system design and installation. Due to the shortage of expertise and experience in many areas of the services, combined with low demands from companies and organizations for other services, most public accountants are engaged primarily in auditing and financial reporting. Other services are rarely provided.

Libyan accountants are not required to pass an exam to be allowed to practice public accounting and auditing services. Furthermore, access to full membership of the LAAA does not require any study beyond a bachelor‟s degree, only the practical experience. Therefore, after becoming a member of the LAAA no continuing professional training is required. Accordingly, accounting firms usually do not conduct any training programs for their accounting employees. These circumstances bring the competence of Libyan professional accountants into question (Ahmad & Gao, 2004).

2.2.3 Accounting Education in Libya

Prior to Libya‟s independence, there was no formal accounting education or training for local people. During colonization, more than 90% of the population was

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uneducated. A few Libyans had been given the chance to study at the university or to qualify for the recognized profession at the time of independence (Buzied, 1998; Kilani, 1988). The education of accounting in Libya started in 1953, when the School of Public Administration was established to prepare government employees in the field of accounting to be clerks and book-keepers. Whereas at the higher education level, the accounting education started in 1957 by the establishment of the Accounting Department within the Faculty of Economics and Commerce at the University of Libya (Ahmad & Gao, 2004; Buzied, 1998). During the eighties and nineties more consideration was given to higher education, and as a result of that many Accounting Institutions were set up in the country.

According to Kilani (1988), accounting education in Libya was influenced by the British education system from 1957 until 1976. He reported that accounting textbooks in Libyan Universities were mostly British, or were Arabic translations from English. Up to 1970s, the lecturers and teachers were non-Libyans, mostly Egyptians or Syrians educated in Britain, with a few Britons, Canadians and Americans (Bait-EL-Mal et al., 1973). For students studying accounting overseas, the UK and the USA were the major locations. The academic year was a nine-month year. A bachelor‟s degree program was offered over a period of four years.

Since 1976, the Faculty of Economics and Commerce at Garyounis University shifted to the American model, which is based on two sixteen-week semesters instead of a full nine monthly academic year. The only difference between both systems is that the old system was British oriented, whereas the new one is American oriented. Little effort has been made to integrate the accounting education system with Libya‟s

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environment (Buzied, 1998). By the early 1980s, the majority of accounting faculty was Libyans who had graduated from the USA universities; and most textbooks were American, or Arabic books translated from American books, or written by Arabic authors that graduated from the USA (Bakar, 1997).

In both systems, the program focuses greatly on financial accounting topics, in particular on the technical or mechanical aspects of accounting, dealing with external reporting, taxation and external auditing. This focus equips students with professional technical knowledge, as graduates are expected to do accounting jobs with no further professional training (Buzied, 1998).

As mentioned above, the policy of the government was to send students to the USA and the UK to study accounting. Nevertheless, this policy only continued for a short time, before the relationships between Libya and the USA and UK were negatively affected by the political issues. Specifically, the Lockerbie catastrophe had the most negative effect on the Libyan relationship with the USA and the UK. Two Libyans were suspected of committing the crime and the American and British succeeded in convincing the UN Security Council to impose sanctions on Libya from 1992 until 1999. Consequently, the number of students who were sent to the USA and the UK started decreasing sharply particularly in the eighties and nineties. This has produced an immense skills gap and shortage of the number of academic accountants who are teaching in the Libyan universities and institutes which affected negatively the quantity and quality of accounting graduates (Khorwatt, 2006).

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Although huge efforts have been made to implement accounting education reform in developed and developing countries (AECC, 1996; Albrecht & Sack, 2000; Bolt-Lee & Foster, 2003; Lin, Xiong, & Liu, 2005), the accounting education in Libya is outdated and is in need of significant changes (Ahmad & Gao, 2004; Aldarweesh, Agnaya, & Shalabi, 2007; Alddali, 2003; Khalat et al., 2007; Khorwatt, 2006; Kilani, 2000). According to Buzied (1998), accounting education at Libyan institutions has similar characteristics, uses the same textbooks and similar curriculum. The majority of institutions have not made any significant changes to the original imported education system. Most courses on offer are not related to the Libyan environment and have never been subjected to any serious attempts to modify or change in order to be more relevant to the Libyan environment. Ahmed and Gao (2004) noted that accounting practice and accounting education in Libya remain under-developed. They also highlighted other problematic areas of Libya‟s accounting education, including the unsuitability of the syllabuses to the needs of the economy, the shortage of qualified accounting academics and educators, the unsuitable marriage of academic teaching and professional training in the accounting curriculum, and the inadequate accounting research.

Aldarweesh et al. (2007) tried to discover the factors leading to students‟ delay in postgraduate accounting departments in completing their master‟s degree. They found that low levels of students‟ research skills including: intellectual, communication, organizational and technical skills, among other factors contributed to the delay in completion of master‟s degree in Libyan universities. The authors recommended that studies should be carried out to examine the impact of instructional

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methods and curriculum materials on the acquisition of research skills and other abilities that should be achieved by students.

Musa and Almagouri (2007) conducted a study to disclose the reality of Libya‟s accounting education and its impact on the professional qualification of accounting graduates, by recognizing the extent to which the accounting education meets the economic developments and the contemporary needs of the profession. The study concluded that: there is no correlation between accounting programs and the requirements of the accounting profession, which created a gap between the academic and professional field; accounting curriculum is outdated to cope with the contemporary developments in the business environment; and students lack of core competencies that accounting graduates should possess. The researchers argue that there is urgent need to develop a model for the local standards of specifications and capabilities required in the accounting profession, and they recommend that local studies should be conducted to determine the specifications and the most important skills the graduates must attain to be able to perform their functions in the complex business market.

2.3 Theories in Student Development

The effect of education is generally modeled as the acquisition of skills that employers are likely to find useful in the employment of those obtaining a specific level of education. The following are just a few of the many theories that have been proposed to explain the influence of the educational process on student development.

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2.3.1 Astin's Theory of Involvement

Astin proposed a theory known as "theory of involvement" to explain the dynamics of how students change or develop. He suggests five basic postulates about involvement: i) Investment of psychosocial and physical energy; ii) Involvement is continuous, students invest varying energy; iii) Involvement has qualitative and quantitative features; iv) Development directly proportional to quality and quantity of involvement; and v) Educational effectiveness is related to level of student involvement (Pascarella & Terenzini, 2005).

According to Astin (1984), the most vital belief of the Theory of Involvement is that students learn more the more they are involved in both the academic and social aspects of the collegiate experience. An involved student is one who devotes significant energy to academics, spends much time on campus, participates actively in student organizations and activities, and interacts regularly with faculty. In addition, the theory argues that a particular curriculum, to achieve the effects anticipated, must obtain sufficient student effort and investment of energy to bring about the desired learning and development. Simply exposing the student to a particular set of courses may or may not work.

2.3.2 Tinto's Theory of Student Departure

Tinto (1975) postulates that students enter college or university with various individual characteristics -gender, race, academic aptitude, academic achievements,

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family socioeconomic background, and parent educational levels- and different levels of initial commitments to the institution (Tinto, 1975, 1987). These individual entry characteristics are hypothesized to directly influence students‟ departure decisions, as well as students‟ initial commitments to the college and commitment to the goal of graduation and social systems of the college or university. Tinto‟s Model states that, to continue, students need integration into formal (academic performance) and informal (faculty/staff interactions) academic systems and formal (extracurricular activities) and informal (peer-group interactions) social systems. Satisfying and rewarding encounters with the formal and informal academic and social systems of the college are presumed to lead to greater integration in those systems and thus to student retention. Negative interactions and experiences tend to reduce integration, to distance the individual from the academic and social communities of the college, promoting the individual‟s marginality and eventually withdrawal (Tinto, 1975, 1987).

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2.3.3 Pascarella's General Model for Assessing Change

Pascarella and Terenzini have suggested a general causal model that includes more explicit consideration of both an institution‟s structural characteristics and its general environment (Pascarella & Terenzini, 2005). Pascarella and Terenzini suggest that growth is a function of the direct and indirect effects of five major sets of variables: i) Students‟ background and pre college characteristics; ii) The structural and organizational features of the institution-shape; iii) A college‟s or university‟s environment; iv) Interactions with Agents of Socialization (e.g. faculty & peers); and v) Quality of Student Effort. According to the model, student change is seen as a

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function of students‟ background characteristics, interactions with major socializing agents, and the quality of students‟ efforts in learning and developing.

2.3.4 Teaching for Professional Competence Model

Cabrera et al. (2001) developed Teaching for Professional Competence Model based on some models of the impact of college on students, including the model developed by Terenzini, Springer, Pascarella, and Nora (1995) named the Learning Outcomes Model (LOM). The LOM depicts students‟ development as the product of the interaction between a student‟s pre-college characteristics and college experiences. Student pre-college characteristics include gender, ethnicity, socioeconomic status, ability, and educational aspirations. The institutional environment is composed of in-classroom and out-of-classroom activities. Classroom experiences include exposure to the curriculum, teaching practices, and interactions with faculty and among peers. Out-of-classroom experiences include working on and off campus, social interaction, and extra-curricular activities. While both in-classroom and out-of-classroom experiences contribute to student outcomes (Pascarella & Terenzini, 1991), the in-classroom experiences appear to have a stronger effect on student development (Volkwein & Lorang, 1996). Therefore, Cabrera et al. (2001) in their Teaching for Professional Competence Model postulate that gains in students‟ professional competencies is a function of the direct and indirect effects of students‟ pre-college characteristics, teaching practices, and classroom climate. The model also presumed both classroom climate and teaching practices have unique contributions on student skills development, reinforcing one another.

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2.3.5 Open Systems Theory

Training (education) provides knowledge and skills to perform more effectively, satisfy job requirements, and prepare for expected changes that occur in a specific industry. However, training is only an opportunity for learning and what is learned depends on factors such as the design and implementation of the training, the motivation and learning style of the trainees, and the learning environment. Training is also part of an integrated system by which performance is measured against criteria (best practices benchmarks) tied to strategic objectives. Furthermore, for effective training to be accomplished, effective systems must be put in place to address the performance issues (Blanchard & Thacker, 2007).

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According to Katz and Khan‟s Open System Theory (Katz & Kahn, 1978), open systems have a dynamic relationship with their environment, which indicates that in order for the system to remain active it is dependent upon the environment for its inputs, which are then transformed into outputs by the system‟s processes. These outputs then flow back into the environment, which depending on their effectiveness may or may not influence future inputs into the system. The theory also suggests that a close relationship exists between the system‟s structure and its environment. This Open Systems Theory best represents the concept that the relevance of any undergraduate program depends on the competencies provided to satisfy a specific industry, which provides the inputs (describe as specific needs).

The Open System Theory suggests that as long as the demands for inputs (competencies) are generated by stakeholders of the industry then the process of

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education and training takes place to produce individuals with the necessary knowledge and skills (outputs) needed to satisfy the industry. The continuous ability of the system to satisfy the demands of the industry would determine the value or relevance of the accounting programs. Blanchard and Thacker (2007) expressed the view that open systems have a dynamic relationship with their environment and that businesses will continue to depend on input from their environment because of rapid changes. The authors used a conceptualized model of the open system theory to describe how businesses depend on inputs from the environment to identify and implement training needs. Similarly, a system such as higher education must be responsive to the needs and demands of the environment for their inputs in order to create new programs such as accounting programs. This process forces all organizations, including higher education, to constantly realign their activities to meet the changing needs of their specific industry.

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2.3.6 Motivational Systems Theory (MST)

MST (Ford, 1992) is derived from the Living Systems Framework (LSF) (Ford, 1987) a theory of human functioning and development which deals with all aspects of human-beings as living systems. The LSF integrates biological, environmental and non-motivational psychological and behavioral processes in understanding person‟s functioning and behavior. In this framework individual‟s actions are seen as a function of the interaction between the person and his/her environment.

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The plenty of motivational theories has limited the ability to see motivation in an inclusive manner. This problem was addressed by Martin Ford‟s Motivational Systems Theory (MST) (Ford, 1992). The primary theoretical rational for MST was the vital need for a conceptual framework that addresses the consensus, cohesion and integration in the field of motivation. MST attempted to bring cohesion to the 30 field by providing obvious comprehensive conceptualizations of the essential substances and organization of motivational patterns and by presenting how other theories could be understood within this integrative framework (Ford, 1992).

Motivational Systems Theory (Ford, 1992) integrated many theories of motivation. Ford selected 32 motivational theories, identified their limitations and addressed them and incorporated them into a single comprehensive framework. The MST focused on three main elements of motivation. Ford refers to these as personal goals, personal agency beliefs and emotions.

Personal goals are identified as beliefs about desired outcomes that person would like to accomplish. Ford (1992) states that goals are vital because they represent the outcomes a person is trying to achieve and because they direct the means the individual uses to produce these outcomes. As the goals provide a leadership or guide capability in that they direct motivational pattern and how it is pursued. Though, goals should move past “wishful thinking” and must be clear and highly prioritized above other competing goals.

Personal agency beliefs are evaluative thoughts, which relate desired consequence (a goal) to the anticipated consequence if the goal is pursued. The

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personal agency beliefs are composed of two types: beliefs about capability and context beliefs. Capability beliefs refer to a person‟s evaluation of whether one has the ability and skills to accomplish a goal, and are essentially a function of the one‟s subjective assessment of their own capability. Context beliefs refer to a one‟s perceptions of whether their environment will support goal attainment, which will facilitate their acquisition of a particular goal through the provision of resources, rewards, and social supports. Context beliefs include one‟s evaluation of the availability of resources, supports and/or barriers that their environment provides in regard to goal attainment. Capability and context beliefs are significant because individuals‟ perceptions regarding their abilities as well as their perceptions regarding the support of environments to accomplish their goals may serve as catalysts to improve skills and create opportunities. It is also important to reminder that positive capability and context beliefs are inadequate, however, for desired outcomes to occur. Eventually, individuals still should have related skills and a reactive environment (Ford, 1992). Goals and personal agency believes set the stage for the third component emotional arousal.

Emotions provide insights into one‟s interactions with their environment and the degree to which they perceive goals as being achievable (Colbeck et al., 2002; Einarson, 2001; Ford, 1992). Emotions are often temporary and of limited significance in impacting behavior, unless linked to a recent goal to which an individual has attached some importance or value. Emotions influence decision making, learning, and problem solving and consequently provide insights, though not direct information, into desired goals. A desired consequence of motivation is a competence, the

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attainment of personally or generally valued goals in particular context. According to Ford (1992, p. 124):

Achievement/Competence = Motivation (Goals x Emotions x capability believes x Context believes)

This model attempts to provide a comprehensive theory of motivation and proposes that actual achievement and competence are the results of a motivated, skillful, and capable person interacting within a responsive environment. "MST is grounded in the premise that motivation provides the psychological basis for individuals‟ development of competence….and a desired consequence of motivation is achievement, the attainment of a personally or socially valued goal within a specific context." (Colbeck et al., 2002, p. 2).

Colbeck et al. (2002) used MST as the theoretical foundation in their study. In addition to experience and demographics, the study sought to find out if the teaching practices used by engineering faculty members were influenced by three motivation factors (goals, capability beliefs, and context beliefs). Colbeck et al. conceptualized teaching practices as lecturers‟ use of traditional methods, or their use of groups/design projects. The authors hypothesized that teaching practices would be influenced by lecturers‟ background, experience, teaching goals, their perception about teaching skills (capability beliefs) and their beliefs about teaching resources and supports (context beliefs). Colbeck et al. (2002) used a survey instrument to collect data from 426 engineering faculty members from three universities. The results showed that faculty members‟ experience, demographics, and motivational variables

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(Teaching goals, capability beliefs and context beliefs) were significantly associated with their use of teaching practices.

The study conducted by Richardson (2009) also incorporated the MST as a main part of its conceptual framework. It most closely replicated the Colbeck et al. (2002) study. The author used the MST to identify how motivational factors (teaching goals, capability beliefs and context beliefs) contributed to the use of learner-centered teaching practices by educators in undergraduate social work programs. The author hypothesized that teaching goals, capability beliefs about teaching, and perceived adequacy of teaching resources will explain a significant amount of variance in faculty‟s use of learner-centered teaching methods after controlling for teaching experience, gender, race, and rank. A descriptive quantitative research design was employed. Through a web-based survey instrument, 169 undergraduate social work faculty members‟ teaching practices and the factors associated with those practices were investigated. The results indicated that MST factors influenced the use of learner-centered teaching methods of undergraduate social work faculty participated in this study. Particularly, teaching goals, which were the most significant predictors of the use of learner-centered methods.

MST could be useful for understanding the factors that influence undergraduate accounting students‟ development of core competencies. The strength of the MST is that it deals with the lack of cohesion and consensus, problems of conceptual narrowness, and lack of practical utility common to a lot of other theories of motivation. The MST provides a comprehensive conceptual framework by combining the strengths of the other theories of motivation by combining them into a

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logical whole. Furthermore, the MST is grounding in an even broader frame that assesses human functioning from a person-in-environment perspective that supports the values and ideals of the social profession and provides a theoretical and conceptual model consistent with the profession‟s view of human behavior. In addition, by focusing on the process of change, and distinguishing between context characteristics and characteristics of the person, the theory promotes the ability of understanding how various factors influence behavior. Finally, Motivational Systems Theory has empirically been tested in undergraduate education, though not particularly in accounting education. MST‟s comprehensiveness and grounding in a perspective that supports the values and ideals of the social profession make it a perfect model for understanding how various teaching factors (teaching practices, teaching capabilities, and teaching resources) influence the development of core competencies by undergraduate accounting students.

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2.4 Prior Research

The globalization and information technology revolution both restate that accounting education system must provide accounting graduates able to face these dramatic changes. Gabbin (2002) argues that the future of accounting education was at risk as accounting graduates did not possess the essential skills to compete in a complex business world. Teacher-centered teaching methods, such as lecture, are commonly inadequate for achieving the goals of promoting critical thinking or teaching professional values, or other positive student-learning outcomes (Bligh, 2000; Einarson, 2001; Gabbin, 2002).

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2.4.1 The Need for Change in Accounting Education

Business schools and faculties are under pressure to provide the core competencies accounting graduates and future business managers need. It has been widely argued that accounting education has been deficient in equipping students with the requisite set of core competencies (De Villiers, 2010), and that instructional methods are too conventional, based merely on knowledge transmission, and heavy reliance on a largely homogeneous set of textbooks, and do not develop students‟ ability to learn skills (Clovey & Oladipo, 2008; De Villiers, 2010; Main, 2009; Paisey & Paisey, 2010), traditional accounting curriculum has been criticized for being rule-based and demanding rote memorization; with students being trained rather than educated (De Villiers, 2010; Elaokali, 2012; Jackling & De Lange, 2009).

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Accounting practitioners wanted to hire students with broad-based business educational backgrounds along with professional business skills in their major rather than students with an education focused on achieving professional certification (Albrecht & Sack, 2000). Patten and Williams (1990) suggest that the fundamental defect in accounting education is that it has remained static while the profession has changed. They acknowledge that accounting education is becoming increasingly irrelevant and that, if changes are not made, employers will be compelled to turn to graduates in other disciplines.

In accordance with the perceived deficiencies of accounting education, a number of organizations and academics have called for substantial revision in the goals of accounting education and the means by which they should be achieved

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(AECC, 1990; Arthur Andersen & Co. et al., 1989; Bedford et al., 1986). A common recommendation was that instructional methods should focus more on the development of communication, intellectual, and interpersonal skills. In addition it has been suggested that with the emerging of the information age, accounting education should move away from technical rule-based teaching and focus on: using and developing accounting information for economic decision making, and developing lifelong learning skills in accounting students (AECC, 1990; Albrecht & Sack, 2000; Bedford et al., 1986).

Bedford et al. (1986), in their study known as "Bedford Report, 1986" warned on the gap between what accounting students learned in college and what accountants actually did on the job. The researchers reported that current state of most university accounting programs was inadequate to meet the requirements of an expanding complex international marketplace. They noted that accounting graduates were not prepared to communicate effectively, solve problems, and reason logically, and the conventional lecture and demonstration methods used by faculty members had emphasized a traditional approach in which procedures were applied to clear-cut problems with one identified solution, and teaching aims were often short-term, focusing merely on developing the abilities essential to pass the CPA exams. The authors called for significant changes necessary in accounting education due to expected changes in the profession. The emphasis in the classroom should be on "learn to learn", students should be taught the skills and strategies that help them learn more effectively and also, how to use these learning strategies throughout their professional career. According to Bedford et al. (1986), active student involvement in the learning process should be promoted, and effective teaching strategies should be

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encouraged such as; decision-making, role playing, oral and written reports, team research projects, case analysis, internship requirements, peer evaluation, computer-aided instruction, and interaction with practicing accountants.

The Perspectives Paper issued by then the largest eight international firms which provide taxation, auditing, and management counseling services were known as the Big Eight, The paper alleged that the accounting education had failed to emphasize the skills and abilities that accounting graduates needed for success in professional accounting careers (Arthur Andersen & Co. et al., 1989). It notes that accounting students must develop communication, intellectual and interpersonal skills as well as accounting and business knowledge. The Big Eight Firms encouraged use of active learning and team learning opportunities, and they suggest that interaction between educators and practitioners, and integration between courses and departments should be promoted and encouraged, and faculty innovation in teaching strategies should be rewarded and supported.

The Accounting Education Change Commission (1990) argues that academic programs are not meeting the educational needs of accounting students. In its position statement Number one “Objectives of Education for Accountants”, the commission aimed to provide broad guidelines for restructuring accounting programs. The AECC developed a set of competencies needed by accounting graduates, and made recommendations about the skills to be developed in the accounting students, the accounting curriculum components and teaching practices. The commission suggests that the overriding objective of accounting education should be the establishment of a foundation that students could use to develop a program of lifelong learning. This

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foundation includes (AECC, 1990): (1) communication, interpersonal, and intellectual skills; (2) general, organization and business, and accounting knowledge; (3) professional orientation.

The Institute of Management Accountants (IMA) (2010) noted that accountants working in business needed broader business perspectives with emphasis shifting from providing information to using financial information to create competitive advantages. A preparation gap existed between the needs of international, technologically advanced corporations and the accounting skills and knowledge possessed by accounting graduates. Deppe et al. (1991) also indicate that accounting education must change to meet the needs of the changing profession. They suggest that accounting students must develop competencies in seven areas: communication skills, information development and distribution skills, decision-making skills, knowledge of accounting, auditing and tax, knowledge of business and environment, professionalism, and leadership development. Traditional accounting programs that focus on technical skills and memorization of transaction recording procedures may not encourage students to develop competencies such as critical thinking (Fortin & Legault, 2010; Jackling & De Lange, 2009). In the era of ICT, Ling and Nawawi (2010) reported that accounting graduates should possess adequate knowledge and skills in order to meet the demands and challenges of the business world. To become a "knowledge worker", adequate computing and ICT skills are essential; these skills are also an added value in order to compete in the job market. There exists an urgent need to introduce innovations in accounting curriculum and teaching strategies to enhance students" thinking, abstraction, and communication skills, consistent with the goal of lifelong learning (Howieson, 2003).

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Albrecht and Sack (2000) indicated that most accounting curriculum is still outdated, too narrow, and unresponsive to profession needs, accounting pedagogy depends a lot on the lecture method and textbooks, exams still emphasize too much on memorization, and accounting faculty are unresponsive to employers‟ expectations. They recommend that faculty should use case studies, team work, role playing, and special assignments to develop students‟ skills. Ewell (2003) indicated that many employers declare that university graduates know the details of the accounting; however, they lack appropriate advanced communication skills, good teamwork skills, and leadership skills required in today business environment. Incorporating of such skills in accounting programs will enable graduates to the acquisition of skill that are closely aligned with employer expectations. This will ultimately prepare accounting graduates for the expectations of the unpredictable workplace (De Villiers, 2010).

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2.4.2 Competencies Needed for Success in Accounting Profession

The globalization and information technology revolution both restate that accounting education system must provide accounting graduates who are able to face the dramatic changes in the business world. Today, many occupations need individuals who are not merely skillful at the mechanics of accounting but who can also learn new information quickly, write and speak well, solve problems, and work well with others. Gabbin (2002) argues that the future of accounting education was at risk as accounting graduates did not possess the necessary skills to compete in a complex business world.

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Accounting education has periodically come under fire from both professionals and educators for allegedly failing to ensure that students obtain the skills needed to effectively meet the challenges facing them upon graduation (Marshall, Smith, Dombrowski, & Garner, 2012). For instance, as a result of their joint project with the then Big 5 accounting firms and the major professional accounting organizations, Albrecht and Sack (2000) spoke to a gap between the skillset required for effective performance in professional accounting and what was being taught in the classroom. Employers also have indicated that accounting programs adequately address technical skills, but it is the development of non-technical generic skills that continues to be of concern (Jackling & De Lange, 2009).

The purpose of the white paper (Arthur Andersen & Co. et al., 1989) was to identify the skills and knowledge that accounting graduates must possess to be successful in the workplace. The "Big 8" urged that accounting graduates should be proficient in the basic general skills such as problem solving skills, critical thinking skills, and communication skills, in both written and oral venues. They also insist that accounting education "should focus on developing conceptual and analytical skills". In their study, Doney and Lephardt suggested that accounting students need critical thinking and reasoning skills to meet the demands of the accounting profession and assured that accounting education should assist students to develop intellectual skills and master basic principles (Doney & Lephardt, 1993).

In its Position Statement number one, the American Accounting Association developed a comprehensive competency list for accounting graduates as follows: General Knowledge, Intellectual Knowledge, Interpersonal Skills, Communication

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Skills, Organizational and Business Knowledge, Accounting Knowledge, Accounting Skills, and Personal Capacities and Attitudes (Foster & Bolt-Lee, 2002).

The Core Competency Framework for Entry into the Accounting Profession has been developed in 1999 by the American Institute of Certified Public Accountants (AICPA) (2012). The Framework, which is intended to support a typical shift from a content-driven to a skills-based curriculum, identifies three categories of competencies, being; functional competencies, personal competencies, and broad business perspectives competencies. The competencies cover the skills necessary for students to receive a well-rounded accounting education regardless of their choice of career path (AICPA, 2012). The AICPA established the Educational Competency Assessment (ECA) website to help accounting educators integrate these competencies into their classes and curricula. It is a particularly beneficial resource in that each of the competencies in the CCF is detailed into levels of performance. This allows educators to assist student development of the competencies at varying points in their undergraduate degree programs by designing appropriate activities for a particular class (Kaciuba, 2012). Integration of these competencies into classes will allow restoring relevancy into the curriculum and reducing the perceived gap between accounting education and professional practice, and students and professionals may perceive accounting as a more attractive career choice (French & Coppage, 2003). The AICPA Framework is expected to have substantial influence in designing relevant and effective accounting curricula for many tertiary institutions in the future (Kaciuba, 2012).

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The International Educational Standard (IES, 3) Professional Skills and General Education has been issued in 2003 by the International Federation of Accountants (IFAC, 2008). It indicates that Individuals seeking to become professional accountants should acquire the following skills: intellectual, technical, personal, interpersonal and communication, and organizational and business management skills. These skills enable them to function throughout their careers as competent professionals in an increasingly complex and demanding environment. A broad general education can contribute significantly to the acquisition of professional skills. These competencies and skills are important because they enable the professional accountants to make successful use of the knowledge gained through education (Al-Twaijry, 2010; Buckhaults & Fisher, 2011; De Villiers, 2010).

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There is a general consensus on what competencies and skills are necessarily sought to ensure success within the accounting profession, but very few previous studies on how those competencies and skills are being developed. The use of self-assessment has been supported by research as valid for skills measurement, and for providing data on the general outcomes of degree courses (Ramsden, 1998). Boyatzis, Baker, Leonard, Rhee, and Thompson (1995) found that student self-evaluations of change on a range of capabilities corresponded to the changes demonstrated by them on a range of measures that were scored by an independent rater.

Warn and Tranter (2001) used self-assessment by the graduates to examine the extent to which the development of generic competencies in graduates predicted their perceptions of the overall quality of their degree and fitness for purpose of their

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degree for entry into the workplace. The graduates were asked to rate the extent to which their experience at the institution had developed their competencies, rather than the extent to which they possessed the competency. The graduates were asked to rate their development for each competency measure on a five-point scale: “poor development”, “less than adequate development”, “adequate development”, “better than adequate” and, “good development”. The results indicate that the development of competencies was more relevant to perceptions of the fitness for purpose dimension of quality than a global perception of quality.

Whitefield (2003) used a multi-method strategy using the techniques of surveying and interviewing to gain both broad perspectives of the overall level of skills development, and a deeper understanding of how those skills developed. A self-reported four point Likert scale was used for questions about the development of 22 personal and interpersonal skills, in order to obtain an understanding of graduates‟ perceptions of the extent and level of skills development gained during their degree studies. The four points on the scale were identified as “not developed”, “slightly developed”, “moderately developed” and, “considerably developed”. The graduates were asked whether they believed that the accounting degree helped them to develop the necessary personal and interpersonal skills required in their profession. The results of the study indicated that overall graduates believe there has been an opportunity tasks to develop each of identified personal and interpersonal skills through the number of tasks given to them as students.

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2.4.3 Teaching Practices

Accounting has long been taught through conventional teaching practices: teacher-centered and involving lectures and problem-solving by the educator. Course content, materials and performance assessment tools to be used are determined by the educator and transferred to students, mostly by lectures. On the other hand, learner-centered instruction requires students to be engaged actively in the learning process (Dubin-Bryant, 2004). Basically, teaching is transmitting of knowledge from educator‟ materials to students‟ notebooks. However, latest developments in accounting such as increased use of technology, the change in the role of accountants in organizations, and complex accounting practices have encouraged a change in teaching practices.

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Traditional education plays an important role in the educational setting, and this kind of instruction is teacher-centered. Lecturing remains one of the more popular methods to transmit information and ideas by teachers, trainers and speakers. The lecture method usually is one-way communication and allows for little or none audience participation. The result is audience misunderstanding, loss of information and poor retention. Oral presentation to a large group of passive students contributes very little to real learning (Veselinovska et al., 2011).

Lecture is commonly inadequate for achieving the goals of promoting critical thinking or teaching professional values, or other positive student-learning outcomes. Students only receive information without taking into consideration their ability to think. This has pruned the student‟s ability to think and led them to receive instructions without doing any analysis and synthesis (Kitot et al., 2010). However, it

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remains the instructional method used by most of the undergraduate faculty (Braxton, 2008). On the other side, learner-centered instruction requires students to be engaged actively in the learning process and involve in higher order thinking skills such as the ability to analyze, synthesize and evaluate information (Dubin-Bryant, 2004). The traditional accounting teaching model of lecturing, memorization, and exam for content approach needs to be replaced by active-learning activities aimed at enabling students to develop their critical thinking skills as well as written and oral communication skills.

Significant attention has lately been given to the active learning. It is a teaching technique promoted by learner-centered, where students are likely to be active in the learning process by participating in discussion and/or collaborative activities, whereas passive learning is content-centered instruction involves situations where material is delivered to students by a lecture-based format (Halonen et al., 2002).

Akman and Mugan (2010) argue that, in learner-centered instruction students not just listen to the lecture, but they are interested in the topic as well, the development of students skills is more important than the capture of course content, the students use higher-order thinking levels such as analysis, synthesis, and evaluation, and the students are active throughout the lecture either by discussing, reading or writing. Furthermore, Main (2009) recommends some strategies that support active learning and should be employed by educators in the accounting classroom, some of which are as follows: debates, business simulations, unstructured problem solving, the case studies, collaborative learning, specific real-world business

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events, technology such as tutorials, visuals (slides, multi-media, video), and computer-based instruction, and fieldwork such as service learning and accounting internships. As computers offer many opportunities to facilitate lectures in classrooms, one of the significant use areas of computer is the education and training process run by simulations (Zacharia & Anderson, 2003). In the same direction, Nicolescu and Paun, (2009) propose a number of methods to be used to teach practical skills as part of skill-based courses: case studies, simulations, real-life and time case study demonstrations, field trips, involvement of professional bodies, as well as integration of such skills in all courses.

Veselinovska et al., (2011) argue that teaching using experiment or slide demonstration at the beginning of the lesson attracts attention and motivation of students. But, using oral-only lecture bores students and loses their attention to it, because they found that academic achievement in lessons began with experiment or slide demonstration was higher than lesson beginning with lecture method. In addition, Bozkurt and Ilik (2010) point out that the courses with interactive simulations have a positive effect on students‟ beliefs about physics and physics achievement, because they found that students who studied with simulations are more successful than students who studied with traditional methods.

Generally, the results of recent studies regarding the efficacy of teaching practices support active learning methods. Researchers de Caprariis, et al. (2001) argue that lectures lead to the ability to remember facts, whereas discussions produce higher level comprehension. Further, group-oriented discussion methods has shown that team learning and group-student discussions lead to positive student performance

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outcomes, encourage participation, self-confidence and leadership skills (Perkins & Saris, 2001; Yoder & Hochevar, 2005). Hunt, Haidet, Coverdale, and Richards (2003), found positive learning outcomes related to team learning methods, as compared to traditional lecture-based methods. Braun and Simpson (2004) studied the impact of the pause method of stimulating learning in the auditing course. This technique is the process of taking pauses at suitable lecture points to engage students in oral or written communication activities). The authors examined the impact of the pause method on student assessments and exam performance. They concluded that students‟ exam performance was greater when the pause activity was students‟ choice (oral versus written), and they suggest that learning outcomes improve when the active learning environment is consistent with the students‟ preference. McCoskey and Warren (2003) argue that implementing of a service-learning project into accounting classes benefits students, university, community, and accounting profession as a whole. Anderson and Bauman (2004) discussed the use of low-income taxpayer clinics (LITC) as a form of service learning at the North Carolina-Greensboro University and the Wisconsin-Milwaukee University. They concluded that the service learning LITC experience improved students‟ tax-research, social-awareness, problem-solving, and communication skills.

Internship in the academic program serves as the best medium to develop generic skills for students, providing students with the opportunity to translate the knowledge gained into practice through industrial training (Rodzalan & Saat, 2012). Internships have been promoted as a means for enhancing student‟s ability to integrate academic knowledge with practical applications, provide the opportunity for students to apply problem-solving and communication skills, create relevance for past and

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future classroom learning, improve career opportunities after graduation, and develop work-place social relations skills (Beard, 2007; Rodzalan & Saat, 2012). According to Beard (2007), employers have reported lower turnover rates for college hires who have participated in an internship or cooperative education assignment in contrast to college hires who have not completed these experiential learning activities.

Cooperative learning is an instructional technique that requires students to work together in small groups on a planned task. It is a teaching method in which the lecturer determines the organization and content of the lessons, but the interaction between students is a significant part of such a lecture (Ballantine & Larres, 2009). A central characteristic of cooperative learning is the cooperation between the team students, while each student takes personal responsibility for her/his academic performance, the student can achieve the highest benefit from cooperative learning if he/she actively participates in the group work (Lancaster & Strand, 2001).

Ballantine and Larres (2009) argue that the learning environment of accounting students can be extended by cooperative learning, and such an environment develops the learning of basic accounting concepts through increased interaction and also improves skills for professional success. In a major Hong Kong university, Hwang et al. (2005) studied whether the learning outcome of students in a passive learning environment can be improved using cooperative learning. They found that students who were taught by traditional teaching practices were significantly outperformed by their colleagues who were taught using cooperative teaching practices. Ballantine and Larres (2009) compared the perceptions of interpersonal and communication skills enhancement between accounting students who have

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experienced simple group learning and those who have experienced cooperative learning. They found that cooperative learning cohort perceive that their learning experience was significantly more effective at enhancing interpersonal and communication skills than that of the simple group learning cohort.

The recent study by Akman and Mugan (2010) aimed to explore the effect of cooperative teaching method versus lecture method on the academic performance of students in financial accounting and managerial accounting courses. Although, the results of this study showed no significant difference in the academic performance of the treatment and control group students in either course using both teaching methods, interviews with some students revealed that they prefer cooperative learning, so they like being a part of the lecture instead of just sitting and listening to the lecturer. Cooperative learning serves both academic education and professional training in that the skills it enhances can be beneficial to accounting students in their undergraduate studies and in their postgraduate professional accountancy careers (Ballantine & Larres, 2009).

Colbeck et al. (2002) investigated the relationship between instructional practices (Instructor Interaction and Feedback, Collaborative Learning, and Organization and Clarity) and students‟ self-reported development of professional competencies (problem solving skills, group skills, and understanding of engineering as an occupation). They found that instructional practices were significantly and positively associated with the development in all three professional competencies. Arquero et al. (2004), investigated the effect of two different case-teaching methods (decision-oriented complex cases) to improve nontechnical skills (communication and

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problem-solving skills) in a financial statement analysis class. They concluded that the case-teaching methods were useful for improving nontechnical skills.

According to Einarson (2001), the use of learner-centered education has specially been promoted in undergraduate education and faculty members are promoted to utilize learner-centered teaching methods. Learner-centered instruction is well-suited with Chickering and Gamson (1987) seven principles that state that good practice in undergraduate education: i) encourages contact between students and faculty; ii) develops reciprocity and cooperation among students; iii) encourages active learning; iv) gives prompt feedback; v) emphasizes time on task; vi) communicates high expectations; and vii) respects diverse talents and ways of learning.

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As the demand to show accountability in the delivery of accounting services continues to grow, accounting education should become more responsible by demonstrating the effectiveness of teaching and showing the link between teaching and the preparation of accounting graduates. As a result, learner-centered methods are more likely to facilitate students‟ ability to internalize the values of the accounting profession and the use of these methods should be promoted.

2.4.4 Teaching Capabilities

The focus on teaching effectiveness depends on the fact that effective learning is closely associated with effective teaching. The issue on effective teaching has been

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examined by many researchers (Aregbeyen, 2010; Bender, 2003; Berk, 2005; Colker, 2008; Felder & Brent, 1999; Mohidin et al., 2009; Ramsden, 2003). The emphasis of these studies has included the attempt to conceptualize effective teaching and to identify the elements of effective teaching and the common capabilities of effective instructors. National Council for Accreditation of Teacher Education (NCATE) states that faculty members are required to acquire and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn (NCATE, 2008).

As cited in Clemente and Ferrandiz-Vindel (2012), Perrenoud (2004) has elaborated a set of teaching capabilities which he considers to be most important for the student´s competencies development:

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1. Managing the learning progress, acquiring a long term vision of the teaching objectives, establishing a periodic control of capabilities and making decisions about progress.
2. Elaborating and developing differentiation devices, addressing the heterogeneity of a classroom.
3. Involving students in their learning and work, since it is the teacher who has to foster the desire to learn in students, making the relationship with knowledge and the meaning of school work, more explicit.
4. Working in groups, the teacher has to boost permanent teamwork, confronting a crisis of conflict among the many students, jointly analyzing complex and practical situations as well as professional problems.

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5. Using new technologies, for example: the classroom is not the only place where a teacher should impart his knowledge; sending school material via email to students and using multimedia devices in class.
6. Facing the duties and ethical dilemmas of this profession, alerting and warning students about ethnic and social discrimination; creating rules on common living among students, developing a sense of responsibility, solidarity and justice among students, because above all, the teacher is an educator.
7. Organizing one´s own continuous formation, because teachers must be able to explain their practices, establish a control of capabilities and their very own personal formation program; accepting and participating in the formation of their colleagues and exchange experiences with them.

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According to Popoola and Haliso (2009), teaching effectiveness can be seen as the ability of lecturers to instill knowledge and skills in students, as well as change their behaviors for better living. Ramsden (2003) noted that effective teaching creates the environment in which effective learning outcomes for students learning are encouraged and motivated. This therefore, implies that achieving deep learning in these ways require a student-centered approach, and it also motivates students to learn through the teaching process. Socio-constructivist theories prove the importance of interactive forces and community to motivation which in turn links effective teaching with methods of delivery that encourage engagement and discussion (Cannon & Newble, 2000; Dunkin, 1983).

Felder and Brent (1999) define excellent teaching as teaching that leads to effective learning. This means long-lasting acquisition of the knowledge, and

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competencies. According to Crawford (2008) effective teaching portrays the extent to which the instructor is capable to encourage and develop students‟ study skills, and to promote students‟ understanding. Bastick (1995) defines effective teaching as to maximize teacher and student course satisfaction, and student academic attainment. He stated that effective teaching can be measured by using the Three-Ability Framework (3AF) that consists of professional competence, technical skills, and professional attitude.

According to Aregbeyen (2010), elements of effective teaching include showing interest and concern in quality of teaching, coming well prepared to class, having an attractive style of presentation, being careful and specific in answering questions, showing respect for students as persons, and discussing recent development in the field. The study by Berk (2005) indicated strategies to measure effective teaching, including student ratings, peer ratings, self-evaluation, videos, learning outcome measures and teaching portfolios. Colker (2008) reported that teachers claimed that there are four characteristics of an effective instructor which include having a knowledge of subject matter, taking personal interest in every student, establishing a caring or loving atmosphere, and finally to demonstrate enthusiasm with students. As stated by Fenstermacher and Richardson (2005), there are three elements of good teaching. They are “the logical acts of teaching” (e.g., activities such as demonstrating, explaining, and correcting), “the psychological acts of teaching” (e.g., motivating, encouraging, rewarding), and “the moral acts of teaching” (e.g., exhibiting and fostering honesty, courage, and fairness). Wechsler and Shields (2008) believe that effective teachers are they who come to the classroom with a rich toolkit of knowledge and skills that they utilize following a set of effective practices, and which

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lead over time to student learning. Mohidin et al. (2009) noted that the educator‟s capabilities play a significant part in determining the effective teaching particularly in accounting subjects. By coming to class well prepared and fully understanding the material to be presented, accounting educators are able to introduce new methods, theories, and philosophies into accounting courses to ensure that students view accounting as an interesting subject in which they will enroll and succeed (Buckhaults & Fisher, 2011). Accordingly, educators have to better prepare themselves in terms of skills, capabilities and attributes to enable them to face bigger challenge in schools these days (Norwani & Yusof, 2011).

Colbeck et al. (2002) found a positive relationship between capability beliefs and the use of group and design projects, and the activities that require helping students to improve their own skills to effectively relate with team members. They also found that lack of confidence in capability to define, identify, and solve ill-defined problems was related with the use of traditional teaching methods such as lecture and textbook problem sets. Broad, Senik, and Goddard, (2008) Found that availability of IT based support as teaching resource and knowledge support as teaching capability also motivated educators to use IT in their teaching, since some educators argued for the availability and accessibility of the physical facilities as well as knowledge support could motivate them to consider IT in their teaching.

Many faculty developers affirm that most faculty members get little formal preparation in teaching, as an alternative they depend on informal training gained by discussing with colleagues, reading about teaching, observing their own professors, or occasional formal instructional workshops (Colbeck et al., 2002). Accounting faculty

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members are often isolated from business school peers and business professionals. As a result, they are becoming increasingly out of touch with market and competitive expectations (Clovey & Oladipo, 2008). Albrecht and Sack (2000) argued that universities cannot expect faculty members who possess dated knowledge and skills to make the changes desired nowadays. Accounting faculty members were educated in ways that are no longer relevant. It is vital that faculty be given the resources to keep on up to date. This means that they must develop globally, technologically, and have recent and broad business and accounting knowledge. Mahmud, Ismail, Rahman, Kamarudin, and Ruslan (2012) found that majority of the teachers had moderate skills in using Eduwebtv as an educational resource portal. Apart from this, although teachers have knowledge of Eduwebtv and its benefits to both teachers and students, they seem lacking in the skills to fully capitalize on the advantages afforded by this online technology for teaching and learning. Albrecht and Sack (2000) argued that universities that do not devote enough resources for faculty development will find that their faculty members are incapable to make the changes desired these days. Faculty members must stay engaged with the fast-paced changing world of business. They must have residency, internship, consulting, or other real-world experiences that allow them to comprehend the kinds and pace of changes taking place. Furthermore, Norwani and Yusof (2011) argue that faculty members should be provided with best and continuous training, and to encourage them to continuously improve their teaching capabilities, because they will be the ones who will shape the future generations. Institutions must plan timely human resource development programs to maintain and enhance motivation and professionally of their academics. Well-trained skillful and knowledgeable faculty members are required in higher education.

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2.4.5 Teaching Resources

In every institution there are resources other than classrooms that could contribute in no small amount to teaching and learning process. For learning process to take place students should have access to necessary information resources and materials. To ensure some levels of performance, students need to interact with tangible and intangible learning resources. In an academic environment, one of the main sources of teaching and learning is the library. Popoola and Haliso (2009) described library resources as those information materials that are in both electronic and printed formats, such as journals, textbooks, indexes, abstracts, reports, newspapers and magazines, CD-ROM databases, internet/E-mail, diskettes, magnetic disks, video tapes/cassettes, computers, micro forms etc.

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Even if a person has essential skills, it might be difficult to accomplish her/his goals if the environmental context is not helpful, supportive or has insufficient resources. Everything from university administration and management structures, through the infrastructure such as computer labs, libraries and adequate classrooms, will contribute to or prevent motivating students. In some universities, it turns out that syllabi or course descriptions are not available to students. The teachers do not have enough time for consultation, or no offices exist in which to hold such consultation, or office hours are not located. Sometimes lecturers could only be met in the corridor on their way to classes. Even the most enthusiastic students will not be motivated if they usually met with unhelpful librarians and administrators, lack of student support services, and uneasy access to essential resources such as computer labs, libraries, internet, audio/visual equipments, and so on (Ahmad & Gao, 2004; Colbeck et al.,

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05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

2002; Massly, 2010). Students‟ perceptions of the accessibility, quantity, and quality of facilities, and teaching and learning resources are likely to influence their opportunities to gain knowledge and develop core competencies.

Students‟ perceptions about barriers and enablers might impact their motivation to learn. Perceived barriers and enablers are “environmental factors that are thought to impede or facilitate task performance (Lent, Brown, & Hackett, 2000). When students perceive the inadequacy of institutional resources as barriers, they become more frustrated, less motivated to learn, and reduce their efforts because they do not think that extra efforts will be translated into improved performance. So students are less likely to strive for an outcome (Mathieu, Tannenbaum, & Salas, 1992). The opposite effect is when students perceive the adequacy of institutional resources as enablers, they become more motivated to learn, and they believe that their efforts will be facilitated rather than hindered, and they also believe that additional efforts will be translated into improved performance, and developed skills (Lent et al., 2000). Martins and Kellermanns (2004) have found that the attitudes toward and use of new technology are influenced by its perceived value, ease of use, and availability of technical and personal support. Klein, Noe, and Wang (2006) suggested that enhancing students‟ perceptions of enablers and addressing concerns regarding potential barriers are an important strategy for enhancing motivation and facilitating positive learning outcomes.

For effective use of teaching and learning resources by the teaching faculty members and students, Adeoye and Popoola (2011) concluded that there is a need for adequate and current library resources, provision of ICT facilities, and a significant

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level of information literacy amongst the faculty members. According to Renc-Roe (2006) one participant at a workshop on innovative teaching practices argued that how can the teacher remain motivated to apply innovative teaching techniques, methods etc. in the position when the entire atmosphere of the faculty/department is not very encouraging for a creative approach, and when our teaching isn‟t supported by necessary teaching resources. Another lecturer wrote: "a particular challenge is engaging students in meaningful discussions and motivating them to study in an environment that is not conducive to learning (a failed educational system) and where no connection exists between education/degree and future jobs".

Using different teaching practices requires different teaching resources than assigning textbook problem sets and delivering lectures. Faculty members need various types of information resources for teaching and research for the rationales of self-development and impacting knowledge in students. To achieve this, the right teaching and learning resources must be available at the right time in its suitable format. Colbeck et al. (2002) found a positive relationship between perceived adequacy of computer and laboratory support and the use of group and design projects. The authors suggested that laboratory and computer resources that faculty use for their research come in handy when their students are involved in the process of solving ill-defined problems. They also suggested that using different teaching practices however, requires additional administration and clerical support than faculty require for using lectures. The results of Chen (2010) study show that the construct "context" which refers to teachers‟ perceptions about the instructional resources (technological equipment, time, and support) available at the school site, had a moderate influence on teachers‟ use of technology in teaching and learning. Hence, as

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long as adequate resources and support are provided to teachers, technology integration would follow (Chen, 2010). Furthermore, Broad, et al. (2008) identified some key failure factors of the implementation of IT integration in accounting education, including faculty members resistance to the innovation due to the issues such as conflicting demand on faculty members time, unacceptable learning methods to students, long-serving faculty members and their unwillingness to accept other than traditional teaching methods, limited resources in infrastructure, and technology infrastructure problems such as access problems and technical support. On the other hand, Broad et al. (2008) found that availability of IT based support as teaching resource also motivated educators to use IT in their teaching. Some educators argued for the availability and accessibility of the physical facilities as well as knowledge support (teaching capabilities) could motivate them to consider IT in their teaching.

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Through the use of advanced technology, learning can also be different. The process of learning at the university can become significantly richer as students have access to new and different types of knowledge, but this process does not occur at the Libyan universities correctly, as the rate of introduction of new technology into the university is very low, so cannot find a relationship between technical knowledge and learning at most Libyan universities. In addition, there are insufficient libraries and laboratories and; the curricula do not contain programs that can help students acquire core competencies (Elaokali, 2012). It is somewhat possible that accounting departments can supply specific administrative and clerical resources at a minimum cost to facilitate active and collaborative teaching and learning efforts.

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2.5 Conclusion

In undergraduate education, student learning outcomes are influenced by many factors, which motivate them to learn including students‟ learning styles, class size, teaching practices used by faculty, teaching skills and behaviors, institutional resources and facilities devoted to teaching and learning process. Debates exist between the use of learner-centered methods or teacher-centered methods. Although, lecture is the most used method in undergraduate education, this method is inadequate in that it does not encourage higher order thinking skills and is relatively ineffective in teaching values, teaching behavioral skills or changing attitudes. On the contrary, active teaching practices such as a problem based learning and collaborative learning has established effectiveness in improving student learning outcomes, including academic achievement, information retention, and critical thinking skills.

There is a positive relationship found between capability beliefs and the faculty use of learner-centered instruction such as group and design projects, and the activities that require helping students to improve their own skills to effectively relate with team members. Although, a person has essential skills, it might be difficult to accomplish her/his goals if the environmental context is not helpful, supportive or has insufficient resources. Students are likely to be motivated by adequate resources of the teaching and learning process.

As a comprehensive theory of motivation, the MST can be used as a model for understanding how various teaching factors (teaching practices, teaching capabilities,

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and teaching resources) influence the development of core competencies in undergraduate accounting students.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

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This chapter discusses the research design and methodological issues upon which the study based. It includes research design, and describes the populations, sample selection process, instrument development process, data collection procedures, and data analysis procedures of the study.

3.2 Research Design

Research design is a framework or plan for research used as a guide in collection and analyzing data. Choosing research design depends heavily on the type of information

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desired, the availability of resources, the capability of the researcher and the ability to manipulate the independent variables.

According to Blanche, Durrheim, and Painter (2008), research design can be grouped in two main categories: experimental and non-experimental design. The experimental design is concerned with controlling and manipulating the independent variable so that its causal relationship with the dependent variable may be established. The experimental research design is associated with the research in physical and biological sciences. On the other hand, in the non-experimental design, the researcher does not interfere and manipulate the variables under study and this type of design is mainly used in social science studies. However, as this research sets out to examine the level of development of acquired competencies by accounting students at Libyan universities, a non-experimental design was chosen for this study, and illustrated in figure 3.1.

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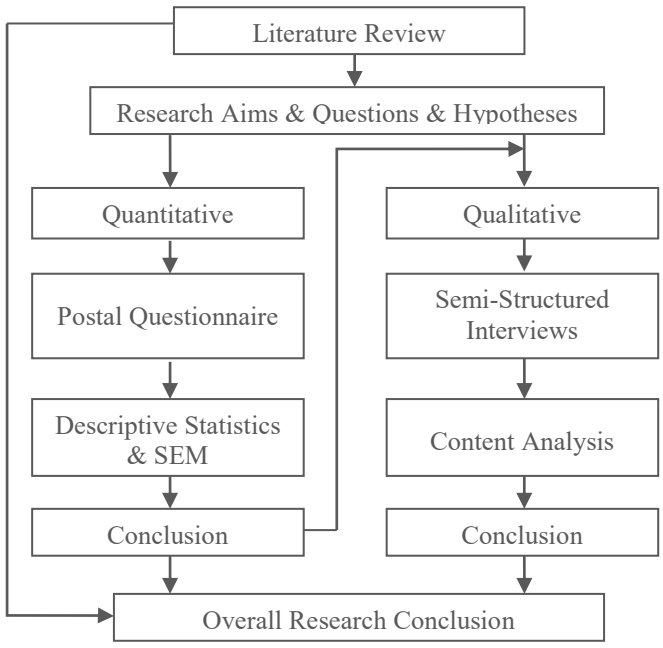


Figure 3.1. Research Process

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The approach adopted in this study was mixed-method which consists of both quantitative and qualitative methods. Quantitative method in this study mainly deals with a postal survey while qualitative method deals with semi-structured interviews. The combination of both methods was used to enhance and create a compliment between the two methods (Rudestam & Newton, 2007).

This methodology is selected because the study uses descriptive and analytical statistics to collect both quantitative and qualitative information. Descriptive statistics assist to summarize the overall tendencies in a study"s data, provides a clearer understanding of how varied the scores might be, and provides insight as to how scores compare to each other (Creswell, 2013). According to Rudestam and Newton (2007) the most common approach of combining qualitative and quantitative methodologies is to assess a large number of participants using standardized scales and measures in a field study followed by conducting open-ended interviews with a subset of the original sample to obtain insights and deeper understanding of the current issues studied.

Survey questionnaires were used in this study supplemented by semi-structured interviews in data collection from the participants. The use of semi-structured interviews seemed to offer the suitable way to add a qualitative dimension to the quantitative data collected by questionnaires.

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3.3 Population and Sampling

The population of the study refers to the entire group of things, events, or people of interest that the researcher wants to investigate and wishes to make inferences (Sekaran, 2013). The population of this study consisted of all undergraduate accounting students who were in their final year (seventh or eighth semester) in Libyan universities. Since College websites of these universities not include total number and names of undergraduate accounting students, phone calls were made to theses colleges to get the information needed. There are approximately 2,700 undergraduate accounting students in the final year at 10 Libyan universities. The final year students were selected because they have a better understanding of the issues relating to the study.

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The sample is a subset or subgroup of the population. It comprises some members selected from it. By studying the sample, the researcher should be able to draw conclusions that are generalizable to the population of study (Sekaran, 2013). It is not always possible to use probability sampling in educational research. Instead, a researcher can use non-probability sampling. In non-probability sampling, the researcher selects individuals because they are available, convenient, and represent some characteristics that the researcher seeks to study (Creswell, 2013). Based on this, and due to insufficient information about the names of students registered in the final year, the sampling of the participants of this study can be considered purposeful and convenience sampling. Purposeful sampling involves seeking out participants who can contribute to the subject area (Creswell, 2013; Sekaran, 2013). In this study, any undergraduate accounting student who attended advanced accounting courses, such as

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advanced cost accounting or advanced corporate accounting was eligible to participate. Accordingly, through contact with accounting department chairs the convenience sampling was then used by distributing the questionnaires to only those who attended just one course. This was a convenience sample because the participants were convenient to the researcher and available for study (Creswell, 2013; Sekaran, 2013).

Again, due to insufficient information about the names of students registered in the final year, questionnaires were distributed to students who attended advanced accounting courses, such as advanced cost accounting or advanced corporate accounting since students could not register these advanced courses before they pass at list six semesters. Additionally, in order to avoid repetition of the questionnaire from the same students, the questionnaires were distributed to only those who attended just one course (advanced corporate accounting) in each university. Furthermore, since this study used Structural Equation Modeling (SEM) for data analysis, the estimations of appropriate sample size for SEM analysis vary. While Tabachnick and Fidell (2012) gave a general rule of thumb in this regard; it is comforting to have at least 300 cases for factor analysis, Comrey and Lee (1992) gave a guideline to sample sizes of "50- very poor; 100 – poor; 200- fair; 300- good; 500- very good; and 1000 or more- excellent"". As the study used SEM for data analysis, to achieve a very good sample size based on the guideline given by Comrey and Lee, 550 questionnaires were distributed in this study. Number of participants and response rates are presented in Table 3.1.

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As can be seen in Table 3.1, out of 550 questionnaires that were distributed among the Libyan undergraduate accounting students at six universities, 370 were returned, giving a response rate of 67.3 per cent. However, after reviewing the 370 received questionnaires, only 306 were usable questionnaires for the final analysis, giving a response rate of 55.6%. Sixty four questionnaires were eliminated from the analysis because of missing a large volume of significant data. All the sixty four questionnaires have been excluded from the analysis because the missing data related directly to testing the research hypotheses. According to Sekaran (2013), response rates using postal surveys are almost always low, a 30% rate is quite acceptable. Thus, the response rate of 55.6% outlined in table 3.1 is typical for postal based surveys and is viewed as "acceptable" (Creswell, 2013).

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Table 3.1
Number of Participants and Response Rates

Description	Number	Rate %
Distributed questionnaires	550	100
Received questionnaires	370	67.3
Usable questionnaires	306	55.6
University		
Tripoli	85	27.8
Benghazi	66	21.6
Misurata	54	17.6
Almergeb	29	9.5
Geryan	45	14.7
Alzawia	27	8.8
Total	306	100.0

Regarding the participants university, the data in Table 3.1 shows that the participants of the sample were studying at six universities in Libya as follows: eighty five students (27.8%) at Tripoli University, sixty six students (21.6%) at Benghazi University, fifty four students (17.6%) at Misurata University, forty five students

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(14.7%) at Geryan University, twenty nine students (9.5%) at Almergeb University, twenty seven students (8.8%) at Alzawia University.

To gain a richer explanation of how and in what context teaching process helped students to develop core competencies, face to face semi-structured interviews were carried out. In the survey stage of data collection participants were asked not to write their names unless they would agree to be interviewed. Some students who answered the questionnaires agreed to be interviewed. Based on this, the sub-samples of the interviews of the study can be considered opportunity samples (Creswell, 2013), interviews were generally conducted with participants that were willing to talk and express themselves freely. The interviewees were selected based on their willingness to be interviewed and to share their learning experiences.

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Table 3.2
Participants in the Semi-Structured Interviews

University	Number	Male	Female
Tripoli	3	2	1
Benghazi	3	3	0
Misurata	4	2	2

The sample consisted of 10 accounting students from three universities as shown in Table 3.2. All the interviewees were in their final year, and were among those who answered the questionnaire and expressed a readiness to participate. Interviews were conducted in Arabic language, and were conducted at the student‟s university. All interviews were tape recorded after the permission was given by all respondents. The three universities were selected, because of Benghazi University and Tripoli University are considered the oldest and biggest universities in Libya, while Misurata University is located in the hometown of the researcher.

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3.4 Questionnaire

Questionnaire is any written instrument that presents respondents with series of questions to which they are to respond either by writing their responds or selecting from among offered answers (Brown, 2005). The most important advantages of using a questionnaire are that it is a quick and economical method of gaining information from a large number of respondents at minimum cost (Cohen, Manion, Morrison, & Morrison, 2007; Denscombe, 2007). Furthermore, responses can be anonymous and not subject to bias caused by researcher subjectivity (Bell, 2005). In contrast, there are some disadvantages in the use of a questionnaire, for instance; limited range of answers, low reply rates, not yielding true reflections of participant‟s thoughts, inability to check incomplete answers or correct misunderstandings (Oppenheim, 2005; Sekaran, 2013).

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The questionnaire of the study was developed to obtain responses to the research questions. The content of the survey items were adapted from surveys identified in the related literature. The instrument matrix is included in Table 3.3. In order to minimize non-response, each effort was made to keep the questionnaire understandable, simple and short.

Table 3.3
Survey Instrument Matrix

Item	Survey Questions	Literature Sources
20 items	Core competencies	(IFAC, 2008)
11items	Teaching Practices	(Campbell, 2009; Smith, 2006)
10 items	Teaching Resources	(Colbeck et al., 2002; Richardson, 2009)
20 items	Teaching Capabilities	SETI-A: (Prieto & Altmaier, 1994; Richardson, 2009; Tollerud, 1990)

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The questionnaire consists of three sections: Section I: Core Competencies to be successful in accounting profession; Section II: Teaching Process which consists three questions related to teaching practices, teaching resources, and teaching capabilities; and Section III: General Information.

3.4.1 Core Competencies

The first section of the survey consists of one question. In this question, there are 20 items related to core competencies required in accounting profession adopted from IFAC (2008) as shown in Table 3.4.

Table 3.4

Core Competencies for Accounting Profession

Item	Competencies
1.	Locate, obtain, organize and understand information from human, print and electronic sources.
2.	Deal with inquiry and research.
3.	Think logically and analytically, and analyzes things critically.
4.	Identify and solve unstructured problems.
5.	Deal with mathematical and statistical applications.
6.	Deal with computer and IT proficiently.
7.	Deal with decision modeling and risk analysis.
8.	Measure and report information.
9.	Initiative, influence and self-learning.
10.	Self-management.
11.	Anticipate and adapt to change.
12.	Consider the implications of professional values, ethics and attitudes in decision making.
13.	Work effectively with others in a consultative process.
14.	Negotiate acceptable solutions and agreements in professional situations.
15.	Present, discuss, report and defend views effectively through formal, informal, written and spoken communication.
16.	Listen and read effectively.
17.	Organize work to meet tight deadlines.
18.	Organize and delegate tasks, to motivate and to develop people.
19.	Select and assign priorities within restricted resources.
20.	Leadership and make decisions.

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Respondents were asked to rate to what extent they believe each of these competencies may have been developed by them whilst undertaking their undergraduate accounting programs on a scale of (1) “Not developed”, to (4) “Considerably developed”. A four point Likert scale was adopted from Whitefield (2003).

3.4.2 Teaching Practices

The second section of the survey consists of three questions. The first question was related to students‟ assessment of the teaching practices used by Libyan accounting educators. For this reason, 11 items related to the specific teaching practices were adapted from Smith (2006) as shown in Table 3.5.

Table 3.5
Teaching Practices

Item	Teaching Practices
1.	Lecture
2.	In-class discussions
3.	Case study in class
4.	Seminars
5.	Small group activities
6.	Cooperative learning
7.	Group research projects
8.	Internet
9.	Computer simulations
10.	Power-point presentations
11.	Teaching videos & CD discs

Respondents were asked to rate accounting faculty use of each method on a scale of (1) “Never”, to (5) “Always”. The validity and reliability of this scale have

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been established through previous research and evaluation of the instrument by an expert panel (Smith, 2006).

3.4.3 Teaching Resources

The second question in second section of the questionnaire was related to students‟ assessment of the adequacy of teaching resources at Libyan universities. For this study, ten types of teaching resources were adapted as shown in Table 3.6 (Colbeck et al., 2002; Richardson, 2009). Respondents were asked to rate the adequacy of each resource at their college or university on a scale of (1) “Not Available”, to (5) “Outstanding”. A Cronbach‟s alpha coefficient of 0.86 was obtained for this scale (Colbeck et al., 2002; Richardson, 2009).

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Table 3.6
Teaching Resources

Item	Teaching Resources
1.	Computer hardware
2.	Computer software
3.	Audio/visual equipment
4.	Internet
5.	Textbooks
6.	Research articles
7.	Appropriate classrooms
8.	Clerical Support
9.	Faculty development
10.	Professional support

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3.4.4 Teaching Capabilities

The third question in second section of the questionnaire was related to students‟ assessment of accounting faculty teaching capabilities. Beliefs about teaching capabilities were measured using the Self-Efficacy Toward Teaching Inventory-Adapted (SETI-A) (Prieto & Altmaier, 1994; Tollerud, 1990). The SETI-A consists of 20 items as shown in Table 3.7 measure accounting faculty teaching capabilities to perform specific teaching behaviors related to the following areas: instructor behavior, and evaluation examination.

Table 3.7
Teaching Capabilities

Item	Teaching Capability
1.	Deliver lectures
2.	Initiate class discussion
3.	Draw students into discussions
4.	Communicate at a level that matches students‟ ability to comprehend
5.	Ask open stimulating questions
6.	Encourage participation of women and minorities in class
7.	Respond to individual differences in an inclusive way
8.	Manage student disagreements with instructor
9.	Communicate consistently both verbally and nonverbally
10.	Show respect for student ideas and abilities
11.	Respond to students‟ questions
12.	Respond in a timely manner to student difficulties
13.	Respond to student emotional reactions in class
14.	Construct essay questions that require integration of content, critical thinking, and self-expression
15.	Score and interpret examinations
16.	Evaluate student assignments
17.	Utilize exams as a learning tool
18.	Provide constructive feedback on exams and assignments
19.	Utilize student evaluations
20.	Utilize self-evaluation in teaching

Respondents were asked to rate the demonstration of each skill or behavior by accounting educators on a scale of (1) “Never”, to (5) “Always”. The validity and reliability for the SETI-A has been established, including a widespread review of the

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literature. The SETI-A‟s internal consistency ranges from 0.93 to 0.96 (McCrea, 2006; Richardson, 2009).

3.4.5 General Information

The third section consists of seven multiple choice questions to collect information regarding students‟ demographic information; gender, age, and name of the university. These data will be used to provide a profile of respondents. This section was put at the end of the survey for two reasons: firstly, to engage students with contents immediately as they read the survey questions; secondly, to take their minds off any pressure in parting with personal details before reading the survey.

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3.5 Pre-Testing of Questionnaire

Remenyi, Williams, Money, and Swartz (2002) recommended that pre-testing of any research survey should be carried out before finally administering the survey, in order to identify any inadequacy in the design and administration of the questionnaire. The authors suggested that the pre-testing could be informal, involving consultation with professional colleagues, experts and friends, or it could be more formal, involving a pilot study with a small cross section of the population to be surveyed. In addition, Sekaran (2013) stressed the importance of pre-testing a questionnaire to ensure that questions are understood by the participants. Accordingly, it is very important that questions do not suffer from ambiguity, should be read smoothly and be easily

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understood. The following reasons were listed by Oppenheim (2005) for pre-testing of research questionnaire:

1. To test the validity and reliability of the questionnaire.
2. To ensure that the questionnaire collects the data needed by the researcher.
3. To confirm that the questionnaire will be accessible to the study participants.
4. To ensure future cooperation with the participants.
5. To test the methodological techniques.

Before commencing the field study, and based on the suggestions by Remenyi et al. (2002) mentioned above, a number of Formal and informal procedures were conducted in pre-testing the questionnaire involved consultation with supervision team, and professional colleagues, and conducting pilot study. In the first stage, the first draft of the questionnaire being developed in the English language, and presented to the supervision team as well to the researcher‟s colleagues (Libyan PhD students and PhD holders in accounting), so that as wide an audience as possible could give their comments on it.

In the second stage, since the participants of this study were accounting students in Libyan universities, the questionnaire was translated into Arabic using back-translation method. In this form of translation, which is also called double translation, there are at least two bilingual individuals who participate independently in the translation process. This process is effective because the instrument goes through a number of filters produced independently by researchers. This translation process includes two steps. In the first step, the version in the original language is

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translated by a first translator into the target language, while a second independent translator takes the results from the previous step and independently translates the instrument back to the original language (Sidani, Guruge, Miranda, Ford-Gilboe, & Varcoe, 2010). Based on Back-translation method, the translation of questionnaire went through two steps; in the first step, the questionnaire was translated to Arabic from English by the researcher and revised by Hassuna Krayem. Mr. Krayem is Libyan PhD student specialized in English language at Universiti Pendidikan Sultan Idris (UPSI). In the second step, the Arabic version of the questionnaire was translated back to English by Mustafa Shokshok. Mr. Shokshok is Libyan PhD student at Universiti Kebangsaan Malaysia (UKM); he lived in Canada for more than five years studying undergraduate degree. After comparing the back translation version of the questionnaire with the original English version, no differences were found.

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To establish the content and face validity of the questionnaire before the pilot study, the Arabic version was reviewed by three accounting PhD students, whose native language is Arabic; Ahmed Ateer and Abdullah Alshwairef at Universiti Sains Malaysia (USM) and Youssef Glailib at Universiti Teknologi MARA (UiTM). The questionnaire was also reviewed by three accounting faculty members (Dr. Saleh Khalat, Dr. Bashir Aldarwish and Dr. Aref Abdulkarim) who have expertise in accounting education research. They were asked to give comments on clarity of the specific items, ease of comprehension, and suggestions for possible change or additional items, etc. They suggested that two items should be dropped from the second question in second section of the questionnaire regarding teaching resources, since those items were related directly to faculty members and it would be difficult for students to answer them. These items are “faculty development” and “professional

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support". No complaints were given about the length of the questionnaire, and about the questionnaire‟s scales. Thus, based on their recommendations, the instrument was adjusted.

In the third stage, the questionnaire was piloted with thirty one Libyan undergraduate accounting students studying at their final year. The pilot instrument along with a cover letter was emailed to forty students in three universities (Misurata, Tripoli and Almergeb). Students‟ emails were obtained from accounting department chairs after phone calls with them. Thirty one of forty participants returned the survey instruments. All returned surveys were usable for data analysis. The participants were also asked to comment on clarity and understandability of survey questions and the additions needed to the questionnaire. After obtaining the surveys, the SPSS-18 data analysis system was used and Cronbach‟s alpha was calculated for each item to determine the internal consistency reliability of the questionnaire.

The reliability statistic Cronbach‟s alpha is reported in Table 3.8. Cronbach‟s alpha is reported for the four scales: core competencies (alpha=0.922), teaching practices (alpha=0.794), teaching resources (alpha=0.862), and teaching capabilities (alpha=0.891).

Table 3.8

Reliability Statistics-Cronbach's Alpha (Pilot Study)

Constructs	Number of Items	Alpha
Core Competencies	20	0.922
Teaching Practices	11	0.794
Teaching Resources	8	0.862
Teaching Capabilities	20	0.891

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The results of the reliability test of pilot study data confirmed that all survey scales display satisfactory level of reliability, indicating that the scales had acceptable internal consistency, and it was reliable for the final data collection.

3.6 Questionnaire Validity and Reliability

When any measurement tool is made, it is vital to know whether this measurement reflects what is planned to be measured. This aspect is known as validity of the measurement. On the other hand, it is also very important to know if this test will provide similar results when it is used on different occasions. This aspect is known as reliability of the measurement.

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3.6.1 Validity

Firstly, validity is an important idea researcher needs to consider when selecting or developing a questionnaire for use (Fraenkel & Wallen, 2009). According to Kumar (2005) the questionnaire‟s validity refers to its ability to measure what is supposed to be measured. Hence, validity depends on the evidences that support the interpretation researcher desires to make regarding data they have collected (Fraenkel & Wallen, 2009).

Content and face validity were considered through the design of the questionnaire. Content validity refers to the extent to which an instrument

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appropriately and comprehensively measures the characteristics or skills it is supposed to measure (Fink, 2010). Whereas, face validity refers to how the instrument appears to measure the subject matter under consideration. According to Fraenkel and Wallen (2009) it is important that an instrument not just precisely measures the variables under consideration (content validity), but appears to be a relevant measure of these variables as well (face validity). A common way to test the content validity of a survey instrument is to have a skilled judge to check the format and the content of a survey instrument and critic whether or not is appropriate (Fraenkel & Wallen, 2009). In this study the content and face validity of the instrument were ensured by the panel in the questionnaire‟ pre-testing stage as mentioned above.

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3.6.2 Reliability

Reliability of the measurement refers to the stability of the results obtained (Fraenkel & Wallen, 2009). According to Saunders, Lewis, and Thornhill (2007) reliability of an instrument indicates the degree to which any measuring procedure reproduces the same results in repeated tests. The most important aim of reliability is to reduce the errors and bias in the research. In an effort to guarantee the reliability of this research, the researcher adopted the methodology that expects to give high reliability; using two methods (questionnaire and interviews) to collect the data. Thus, the threats of unreliability or bias supposed to be at a minimum.

The widely-used reliability measure is Cronbach‟s alpha test; it is a statistic that reflects the homogeneity of the scale. Sekaran (2013) reported that as Cronbach‟s

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alpha is closer to 1.0, the internal consistency reliability is the higher, whereas those less than 0.6 are in general considered to be poor, 0.70 considered as acceptable, and Cronbach"s alpha higher than 0.8 considered to be good. While Nunnally (2001) considered Cronbach"s alpha greater than 0.6 are to be taken as reliable. In social science research contexts, reliability coefficients of 0.70 or more are considered good (Rothbard & Edwards, 2003). In this study, the Alpha Coefficient was used to measure the reliability of the questionnaire on the Statistical Package of Social Science (SPSS-18) computer software.

Since the questionnaire was divided into three sections: the first one was for core competencies, the second one was for teaching process (teaching practices, teaching resources, and teaching capabilities), and the third one was for general information. The reliability was computed for the first and second sections. The aim of this calculation was twofold. Primary, the calculation would give support for the reliability of the survey. Secondly, the calculation could offer information about how the overall reliability was affected by individual items. If any item was significantly lowering the overall reliability, in that case, that item can be removed. Table 3.9 summarized reliability analysis.

Table 3.9
Reliability Statistics-Cronbach's Alpha (Final Data)

Constructs	Number of Items	Alpha
Core Competencies	20	0.856
Teaching Practices	11	0.732
Teaching Resources	8	0.952
Teaching Capabilities	20	0.881

As can be seen from Table 3.9, the results of the reliability analysis confirmed that all survey scales display satisfactory level of reliability, indicating that the scales

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had acceptable internal consistency; Cronbach‟s alpha exceeded the minimum value of 0.70 reported by Hair, William, Babin, and Anderson (2010). Cronbach‟s alpha for core competencies, teaching practices, teaching resources, and teaching capabilities were reported as 0.856, 0.732, 0.952, and 0.881 respectively. Therefore, it can be concluded that the questionnaire has an acceptable level of reliability.

3.7 Personal Interviews

Since the methodology adopted in this study consists of both quantitative and qualitative methods, a survey questionnaire and semi-structured interviews were used in this study as complementary to each other in data collection from the participants. Personal interviews are considered one of the most effective methods of data collection. Through interviews, the researcher has direct contact with the participants to obtain a collection of facts. Semi-structured and depth interviews are used to reveal issues outside the tight constraints of a structured interview survey (Creswell, 2013). Therefore, it was decided to conduct some semi-structured interviews with seven to ten students to gather information and data relevant to the research questions. More particularly, the interview method is designed in order to enhance and supplement the information that was gained from the questionnaires.

Semi-structured method was used because it allows for part of the interview to be structured (where the interviewee is asked questions from a prepared list) and for other parts to be determined by flow of the discussion or responses of the participants. Semi-structured interview is an interview where structured questions can be followed

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up with unstructured interested questions (Sekaran, 2013). Table 3.10 reports which interview questions related to research questions.

Table 3.10
Interview Questions

Item	Interview Questions	RQs
1.	In general, do you believe teaching practices used by Libyan accounting educators may have assisted students to develop core competencies for workplace? Are you satisfied with these teaching practices? Why?	RQ1+5
2.	Please identify any accounting teaching practices which accounting faculty might like to use but not used, perhaps because of limited resources by the college?	RQ2+5
3.	Do you think Libyan accounting faculty members are equipped with the essential teaching capabilities and skills, which might motivate students to develop necessary competencies? Are you satisfied with their teaching capabilities? Why?	RQ1+3
4.	Do you think institutional resources (facilities) that can be used to support the teaching and learning mission, for example, class sizes, electronic capabilities, libraries, classroom materials and clerical support at Libyan universities are adequate and may have assisted students to develop core competencies for workplace? Are you satisfied with these resources? Why?	RQ1+4
5.	Were you motivated to develop core competencies? What factors affected you most to develop these competencies? Can you suggest reasons (barriers) why students are not taking the opportunity to develop core competencies?	RQ1-5
6.	Is there anything you feel that should be done by universities to improve the ability of students to develop core competencies for workplace? Give your suggestions please.	RQ1-5
7.	Have you any additional comments that may be useful to improve accounting education in Libya?	RQ1-5

The following general procedures were adopted. For each interview, the researcher:

1. explained to each interviewee how he was selected to be one of the participants and the significance of her/his contribution to this study.
2. encouraged the interviewees to answer the questions of the interview. In this regard, the researcher reassured them that their information will be dealt with complete confidentiality.

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3. asked each interviewee for the permission to record their responses.
4. asked the same questions, and in the same manner, to each interviewee. In this vein, all the questions were prepared in advance according to the information obtained from the questionnaires.
5. tried to avoid the possibility of affecting the responses of any interviewee. The researcher allowed each interviewee to take their time, and to answer the question freely without intervention from the researcher avoiding any likelihood of encouraging or discouraging any kinds of responses by indications or facial expressions. The researcher also avoided giving any opinion on investigated issues. Furthermore, when the student did not like to answer any particular question, he was not pressed to do so.

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Each interview lasted approximately half an hour to one hour and was taken place in a spare office within the university. After conducting the interviews, each interview was later written up on the same day. In this vein, all the notes that were written during each interview along with the taped responses were properly referenced and written up in an organized way that simplifies the analysis.

3.8 Data Collection

In order to identify the aims of the research, this study was conducted using both; an initial postal survey and supplemented by semi-structured interviews. The surveys were either directly distributed by the researcher or mailed for redistributing after consulting with the administrators at the sample universities. A brief oral introduction

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of the study and its purposes was given when the survey was distributed by the researcher with the consent of department chairpersons or instructors before distributing questionnaires to the participants. Furthermore, my personal hand-phone number and e-mail address were included into the cover letter, so the researcher could be contacted if necessary.

The second step of the empirical study seeks to obtain a more in-depth understanding of how current status of the teaching process at Libyan institutions contributes to accounting students‟ development of core competencies. Thus, it was decided to carry out some semi-structured interviews with seven to ten students. This qualitative information may enhance the credibility and reliability of the research findings. The selection of interviewees was voluntary and by departments of accounting. Telephone call was made to each interviewee after selecting the sample of students to be interviewed, to ensure that they are willing to participate in this study. The selected students were given a promise of confidentiality in terms of their individual information to encourage them to participate in the study. Accordingly, the analyses of their interviews were not attributed to their own names.

3.9 Data Analysis

Upon completion of the survey data collection, the data were entered to SPSS program version 18 for data screening and descriptive analysis, while for hypotheses testing, Structural Equation Modeling (SEM) was employed using Analysis of Moment Structures (AMOS) version 18.

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3.9.1 Factor Analysis

According to Hair et al., (2010) factor analysis‟s primary use is to classify the underlying structures or communalities in the data. Sekaran (2003) argues that factor analysis is used to assess the validity of survey items, by determining if the items are measuring the concept thought to measure. Factor analysis was used in this study to test the construct validity of all variables.

Kaiser Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett‟s test of Sphericity were used to assess the sampling adequacy of the data. The minimum acceptable value of 0.6 was adopted for KMO and Bartlett‟s test of Sphericity with $p<0.05$, while for communality of items and to test the overall significance of correlation among items minimum value of 0.5 was used. Furthermore, principle component analysis (PCA) and varimax rotation method were used as extraction method, which tries to maximize a variable-factor correlation for obvious separation of the factor. For factor analysis extraction, eigenvalues of factors should be 1.0 or more to be accepted. Moreover, factor loading values of 0.5 or above are considered significant (Hair et al., 2010). Thus, value of 0.5 was considered as the minimum requirement of factor loading in this study.

3.9.2 Descriptive Statistics

Data from survey responses were analyzed using descriptive statistical procedures. Descriptive statistics are used to summarize and describe the features of the sample

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data such as frequencies, percentages, means, standard deviations, and ranges. Analyzing averages and a measure of response variability will enable the researcher to interpret the relative important scores for each item. Statistical calculations were performed on a personal computer using (SPSS) version 18.

For research question one, researcher used data obtained by the survey Q1 in first section, where participants were asked to rate to what extent they believe each of specific 20 competencies (see Table 3.4) may have been developed by them whilst undertaking their undergraduate accounting programs on a scale of 1 representing "Not developed" to 4 representing "Considerably developed". These data were analyzed through descriptive statistical methods with frequencies, percentages, means, and standard deviations calculated.

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To answer the research question two, researcher used data obtained by the survey Q1 in second section, where participants were asked to rate the extent to which each of specific 11 teaching practices (see Table 3.5) were being used by Libyan accounting educators in accounting courses, utilizing a five-point Likert-type scale to the relative usage of each method with 1 representing "Never" to 5 representing "Always". These data were analyzed through descriptive statistical methods with frequencies, percentages, means, and standard deviations calculated. Analyzing averages and a measure of response variability enabled the researcher to interpret the level of usage of each teaching method. Means were ranked by highest to lowest to indicate the most effective teaching practices were being used by Libyan accounting educators.

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To answer the research question three, researcher used data obtained by the survey Q2 in second section, where participants were asked to rate the adequacy of each of specific eight teaching resources at their colleges (see Table 3.6), utilizing a five-point Likert-type scale to the relative adequacy of each item with 1 representing "Not available" to 5 representing "Outstanding". These data were analyzed through descriptive statistical methods with frequencies, percentages, means, and standard deviations calculated. Analyzing averages and a measure of response variability enabled the researcher to interpret the level of adequacy of each teaching resource. Means were ranked by highest to lowest to indicate the most teaching resources were available at Libyan universities.

To answer the research question four, the researcher used data obtained by the survey Q3 in second section, where participants were asked to rate the extent to which each of specific 20 teaching behaviors and skills (see Table 3.7) were being demonstrated by Libyan accounting educators in accounting classrooms, utilizing a five-point Likert-type scale to the relative usage of each behavior or skill with 1 representing "Never" to 5 representing "Always". These data were analyzed through descriptive statistical methods with frequencies, percentages, means, and standard deviations calculated. Analyzing averages and a measure of response variability enabled the researcher to interpret the level of usage of each teaching behavior or skill. Means were ranked by highest to lowest to indicate the most behaviors or skills were being used by Libyan accounting educators.

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3.9.3 Interpretive Analysis Approach

In terms of interviews of the study, semi-structured interview was selected because it allows the researcher to lead the interviewees to a focused and organized inquiry on the proposed topic. Still it gives the interviewees some power, space and flexibility in articulating their feelings and opinions. The focus in the semi-structured interviews is on getting interviewees to talk freely regarding the issues that have previously been well defined in the questionnaires but within the predetermined list of themes arranged by the researcher.

The follow up interviews were conducted during December 2011 and January 2012. Since students were busy preparing for the final examinations, a great amount of effort was necessary for arranging the interview schedules. Once the researcher managed to contact the interviewees, their schedules were set up as suitably as possible for them. Each interview lasted approximately half an hour to one hour and was taken place in a spare office within the university. After conducting the interviews, each interview was later written up on the same day. In this vein, all the notes that were written during each interview along with the taped responses were properly referenced and written up in an organized way that simplifies the analysis. The analysis of data gained from the interviews included summarization, classification and interpretation of the data. The interpretive analysis approach was used to analyze the interviews‟ data. Interpretation is about making inferences, developing insights, attaching significance, refining understandings, drawing conclusions, and extrapolating lessons (Cohen et al., 2007).

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The approach of content analysis was used in analyzing interview data. This approach was used to analyze the written materials in order to classify specific characteristics of the material. According to Cohen et al. (2007), there are three approaches could be used in analyzing text; the word count, identifying units, and identifying categories. In this study, the identifying categories approach was used.

Responses to semi-structured interviews with student were analyzed as follows. The data analysis started with data separation followed by the identification of the categories. Each transcript was checked and carefully read, significant key words were highlighted and the important ideas were summarized and kept in the right margin of the transcript for later coding. After the transcriptions were re-read carefully, the data have yielded a set of key themes or categories and sub-categories that could together clarify the situation and contribute towards drawing a broad understanding of how and in what context teaching process helped students to develop core competencies. Four main themes emerged from the interview data analysis as follows:

1. The role of teaching practices in skills development.
2. The role of teaching capabilities in skills development.
3. The role of teaching resources in skills development.
4. Students‟ suggestions for improvement.

When reading the transcripts, the most important task was to build categories and sub-categories into clusters through coding and labeling to give meaning to the data. Labels or codes were attached to groups of varying paragraphs, sentences, or

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phrases connected to a specific setting. At this stage, the focus was placed not on the words but on their meanings. Different levels of analysis were reflected by codes. Some arose at the first reading and others were created in the second and third reading of the notes. Codes were created representing the key variables related to the study as well as the aims and research questions. Other categories or subcategories were subsequently created when they appeared to be needed to accommodate the data. For example, “lack of communications skills with students” was extracted to represent discussions of the role of teaching capabilities in skills development. Consequently, “lack of communications skills with students” became a subcategory of “teaching-learning difficulties”. After categorizing all the data, each transcript was reread and subcategorized whenever relevant. This procedure was repeated until all the data had been done satisfactorily.

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To achieve better reliability of both categorization and coding, coding was checked by asking a postgraduate student in accounting to code two interviews to see whether he gave the same codes for the same categories. Through discussion, the researcher and postgraduate student concluded that both of their coding fit into a structure. Furthermore, to overcome problems of the trustworthiness of data interpretation, different actions were made to achieve validity. Using the term "trustworthiness" is more appropriate than reliability and validity, which are used for quantitative data (Cohen et al., 2007). Moreover, the authors point out that trustworthiness includes four main criteria: “Applicability, truth value, consistency and objectivity”. Thus, in analyzing and interpreting the interview data, these views were taken into consideration. In addition, responses were sorted into as many categories as needed in order not to lose the real meaning of the data. In addition,

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attempts were taken to interpret the responses holistically and try to find proof of meaning in different examples. During interpretation of the data, to avoid personal bias and to minimize any personal prejudice, the interviewees were asked to check whether the categories and interpretation assigned to their answers agreed with the meaning behind them. All interviewees agreed that their responses matched the assigned categories. The interview data obtained included a rich source of comments, criticism, concerns, and suggestions.

3.9.4 Structural Equation Modeling (SEM)

To answer the research questions five and six, and to test research hypotheses, a Structural Equation Modeling (SEM) was employed in this study. SEM is a set of techniques that can be used to examine the relationships between dependent and independent variables. The full SEM model consists of two parts; the measurement model and the structural model (Byrne, 2010). While the measurement model depicts the relationship between the latent or unobserved factors, and their observed measures or indicators, the structural model specifies the causal relations between the latent variables in the proposed model (Hair et al., 2010).

According to Byrne (Byrne, 2010), SEM differentiates from other multivariate statistical techniques: a) SEM is confirmatory in nature than exploratory, data analysis is used for inferential purposes rather than descriptive, c) it provides explicit estimates of measurement error, and d) SEM can be used with both observed and unobserved

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(latent) variables. Hence, SEM has become popular technique to be used in non-experimental research designs.

In order to study the number of unobserved or latent constructs based on the observable indicators and to assess the adequacy of individual items for the latent factors or constructs, confirmatory factor analysis (CFA) was used as statistical technique. In SEM, the measurement model is assessed through CFA. The most important advantage of CFA is its efficacy in examining the construct validity of an anticipated measurement model.

In conducting SEM analysis and prior to getting started with interpretation of the structural equation models, the following procedures are necessary: a) specification of the proposed model, b) identification, c) estimation, and d) evaluation of the model fit (Byrne, 2010).

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3.9.4.1 Parameter Estimation Method

When conducting a CFA, the maximum likelihood (ML) method of estimating model parameters is most often used. Parameters include factor loadings, factor variance, and error variance (Byrne, 2010). Based on maximizing the likelihood (probability), ML makes that the observed covariances are drawn from a population assumed to be the same as that reflected in the coefficient estimates. That is, ML picks estimates which have the greatest chance of reproducing the observed data (Brown, 2006). Although, ML is by far the most common used and is the default option for estimation of

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parameters with continuous factor indicators, it is not appropriate to use with ordinal data (Byrne, 2010).

3.9.4.2 Model Evaluation

Evaluating the fit of the SEM model requires the examination of multiple indicators, as there is no single index or indicator considered to be appropriate for this evaluation. Fit indices can be generally characterized as falling under three categories: absolute fit, fit adjusting for model parsimony, and comparative or incremental fit. Since each category of index presents different information about model fit, Brown (2006) recommends that when evaluating the fit of their models, researchers are advised to report at least one index from each category.

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i. Absolute Fit

The most commonly used absolute fit index is Chi square (χ^2). It "assesses the magnitude of discrepancy between the sample and fitted covariance matrices" (Brown, 2006). However, chi square is sensitive to sample size in that, given a large enough sample, chi square will almost always be significant no matter the results of the CFA (Hair et al., 2010). In an attempt to make it less dependent on sample size, the Normed chi-square (χ^2/df) is the chi-square fit index divided by degrees of freedom. This index takes into account the complication of the model. When assessing χ^2/df, it has been suggested that acceptable are; $1.0 < \chi^2/df < 3.0$ (Brown, 2006).

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The standardized root mean square residual (SRMR) is another index that falls in this category. Theoretically, the SRMR can be viewed as the average discrepancy between the correlations predicted by the model and the correlations observed in the input matrix. Accordingly, it is derived from a residual correlation matrix. In the same way, the root mean square residual (RMR), reflects the average discrepancy between predicted and observed covariances. The SRMR and RMR can get a range of values between 0.0 and 1.0, with 0.0 signifying an ideal fit. Hence, the smaller the RMR and SRMR, the better the model fit (Brown, 2006).

ii. Parsimony Correction

Root mean square error of approximation (RMSEA) is a widely used and recommended index from this category (Hair et al., 2010). It assesses the extent to which a model fits reasonably well in the population. Likewise the SRMR, RMSEA values of 0 show perfect fit, and values less than .05 indicate good fit, and values as high as .08 represent reasonable errors of approximation in the population, and those greater than .10 indicate poor fit (Byrne, 2010). MacCallum, Browne, and Sugawara (1996) strongly urged the use of confidence intervals when reporting the RMSEA. The confidence interval indicates the precision of the RMSEA point estimate. AMOS reports a 90% interval around the RMSEA value. As well as reporting a confidence interval around the RMSEA value, there is another index that tests for the closeness of fit (PCLOSE). It tests the hypothesis that the RMSEA is "good" in the population .The p-value for this test should be > .50 (Byrne, 2010).

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iii. Comparative Fit

Comparative fit indices (incremental fit indices) evaluate the fit of a user-specified solution in relation to a more restricted, nested baseline model. Typically, compare the chi square value to a baseline model in which the null hypothesis that there is zero correlation between variables. Some indices from this category have been found to be amongst the best indices that have been introduced in the literature. The comparative fit index (CFI) is one of these indices. The CFI has a range of possible value of 0.0 to 1.0, with value closer to 1.0 indicating good model fit.

The Tucker–Lewis index (TLI) is another accepted and commonly well-behaved index falling under this category. Also, the TLI has features that compensate for the effect of model complexity; likewise the RMSEA, the TLI includes a penalty function for adding freely estimated parameters that do not markedly improve the fit of the model. The TLI is interpreted similarly to the CFI in that values approaching 1.0 are indicating a good model fit. Although a value > .90 of CFI or TLI was originally considered representative of a well-fitting model, an adjusted cutoff value close to .95 has recently been advised (Brown, 2006).

In this study, and based on recommendations in the literature, the CFAs conducted used Maximum likelihood estimation (ML) method for estimation of parameters. Table 3.11 summarized the goodness of fit indices that were used when assessing the fit of the models including: Normed chi-square (x^2/df), root mean square residual (RMR), comparative fit index (CFI), Tucker-Lewis index (TLI), and root

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mean square error of approximation (RMSEA). These fit indices were selected on the basis of their popularity in the applied literature (Brown, 2006).

Table 3.11
Model Fit Indices

Measure of fit	Acceptable range
x^2/df	1 to 3
RMR	≤0.06
CFI	≥0.95
TLI	≥0.95
RMSEA	≤0.05

3.9.4.3 Construct Reliability (CR)

Since a Structural Equation Modeling (SEM) was employed in this study, and because measurement errors are used in SEM, construct reliability (CR) was used. It has been argued that measures of consistency among observed variables are more accurate using alternative reliability estimate than Cronbach‟s alpha (Hair et al., 2010). Although, Cronbach‟s alpha coefficient remains a commonly applied estimate, it may understate reliability. In conjunction with SEM models, construct reliability (CR) value is often used. While CR value of .7 or greater suggests good reliability, CR values between .6 and .7 may be acceptable (Hair et al, 2010). Construct reliability (CR) is computed by following formula: $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + (\sum e_i)}$, where (λ_i) represents the standardized factor loadings for each construct and (e_i) represent error variance terms for the same construct. High construct reliability reflects the existence of the internal consistency among observed variables, in other words, the all measures consistently represent the same latent construct. Therefore, reliability analysis was made for all

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variables under this study using both Cronbach‟s alpha coefficient and construct reliability.

3.9.4.4 Construct Validity

To assess construct validity, the researcher will examine convergent and discriminant validity. Convergent validity examines whether the respective indicators are measuring the construct they are supposed to measure. Convergent validity issues indicate that the variables do not correlate well with each other within their latent factor. In other words, the latent factor is not well explained by its observed variables. According to Hair et al. (2010), several methods are available to establish convergent validity, such as factor loadings (λ), average variance extracted (AVE) and, construct reliability (CR).

The size of factor loadings (λ), or standardized loading estimates, and average variance extracted (AVE) should be 0.5 or greater, and ideally, 0.7 or greater. Average variance extracted (AVE) is calculated by following formula: $\mathbf{AVE} = \frac{\sum \boldsymbol{\lambda}^2}{\mathbf{n}}$, where $\boldsymbol{\lambda}$ represents the standardized factor loading and **n** represents the number of scale items. Furthermore, another indicator of convergent validity is the scale reliability. Although, Cronbach‟s alpha coefficient remains a commonly applied estimate, it may understate reliability. In conjunction with SEM models, construct reliability (CR) value is often used.

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Discriminant validity examines whether individual indicators can adequately distinguish between different constructs. Discriminant validity issues indicate that the variables correlate more highly with variables outside their latent factor than with the variables within their latent factor. In other words, the latent factor is better explained by other indicators (from a different latent factor), than by its own observed indicators. According to Hair et al. (2010), evidence of discriminant validity is provided when average variance extracted (AVE) for any two factors are higher than the squared of the correlation estimate between the two factors.

3.9.5 Proposed SEM Model

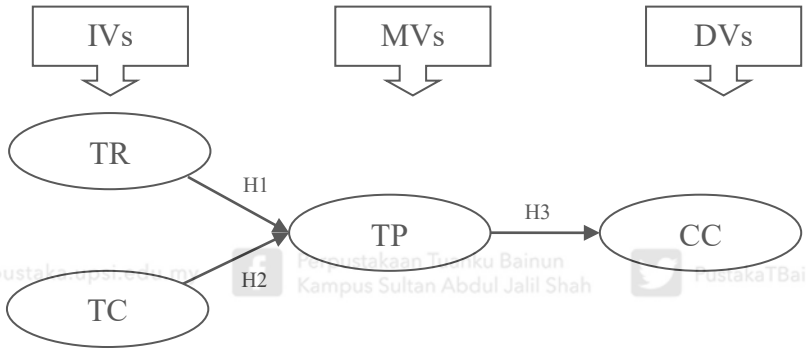
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SEM is usually accompanied by various types of path diagrams that offer a pictorial illustration of the model (Byrne, 2010). As described by Byrne, three symbols commonly used in path diagrams: a) squares or rectangles represent measured or observed variables, b) ovals or circles are used to represent unobserved or latent variables, c) the relationships between variables are represented by lines in the diagram. No line between two variables indicates that no relationship has been hypothesized. A direct relationship between two variables is represented by a line with one arrow - the variable that is being pointed to, is the endogenous or dependent variable, whereas, the other is the exogenous or independent variable. Lines with arrows on both ends indicate a non-directional relationship between the variables: it is similar to a correlation. Additionally, all endogenous variables in the model have arrows labeled with E or D. An E signifies error and is assigned to the measurement variables. D‟s are disturbances and are related to the latent variables.

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This study was conducted to examine the structural relationships among constructs of core competencies, teaching practices, teaching capabilities, and teaching resources. Figure 3.2 simplified the path diagram of latent variables in the proposed model for investigating these relationships, while Figure 3.3 describes the path diagram of the full structural model of the relationships between constructs of teaching practices, teaching capabilities, and teaching resources, and competency development that was studied in this research.



Note: IVs = Independent Variables; MVs = Mediator Variables; DVs = Dependent Variables; TR = Teaching Resources; TC = Teaching Capabilities; TP= Teaching Practices; CC = Core Competencies.

Figure 3.2. Proposed SEM Model of Latent Variables

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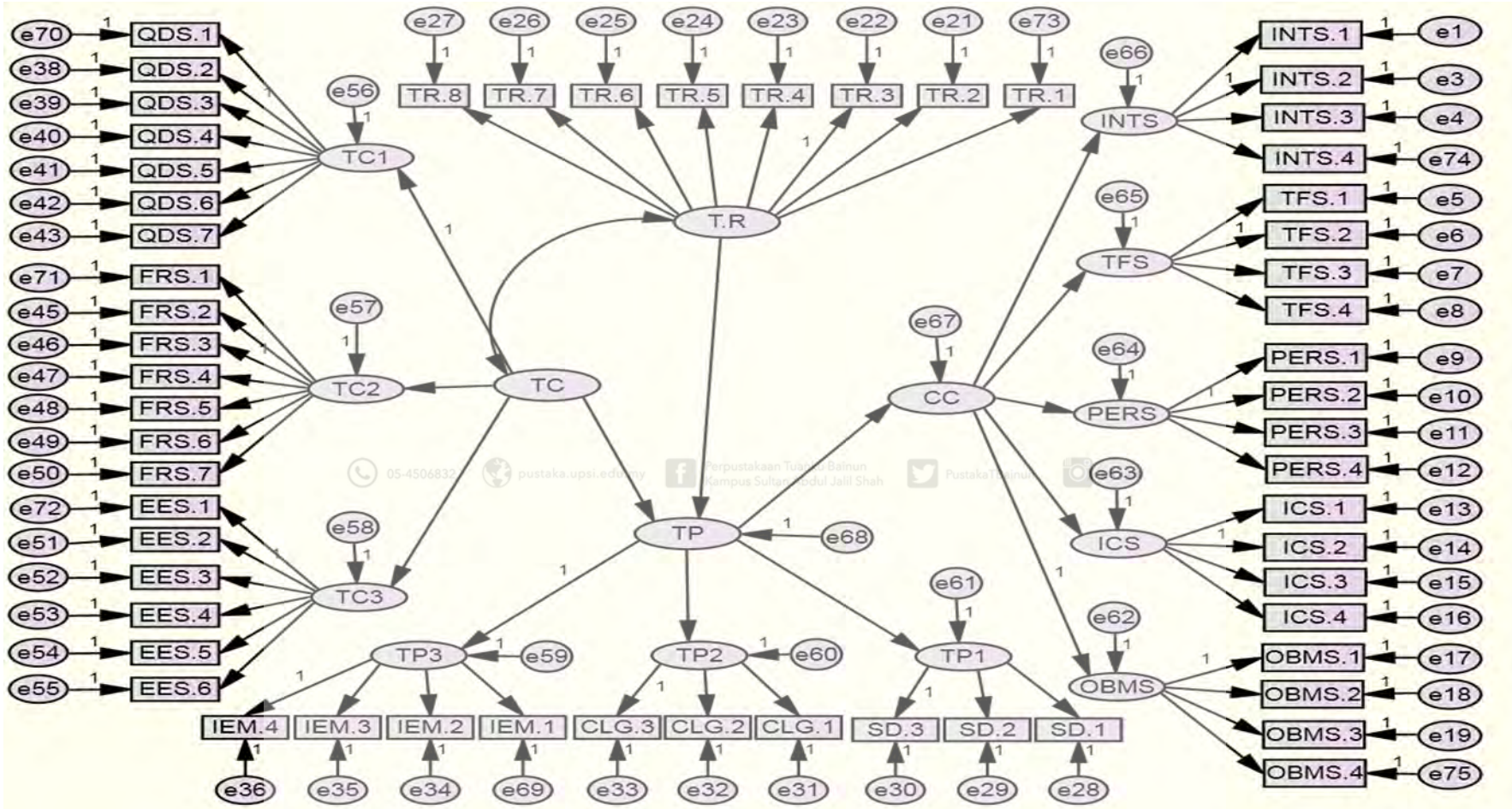


Figure 3.3 Full Structural Model of the Study

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3.10 Conclusion

This chapter describes the methods and procedures used for the research. For the aims and objectives of this study, a non-experimental research design is most appropriate. For this research, quantitative and qualitative approaches were used, because it helps to enhance the researcher‟s understanding and provides more reliable information for the situation studied. The analyses of the results of preliminary data collection are presented in detail in chapters 4 and 5.

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CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

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The purpose of this chapter is to provide results from a survey questionnaire sent out by the researcher to investigate to what extent specific core competencies are perceived to be developed by Libyan undergraduate accounting students, and to determine the relationships between teaching practices, teaching resources, and teaching capabilities and, the development of core competencies. To support the results of the questionnaire and to add further dimensions to those results obtained in the analysis of the quantitative data, this chapter provides the results from semi-structured interviews conducted by the researcher. Firstly, it presents the profile of the participants; secondly, it indicates the results of the factor analysis technique; thirdly, it provides the results of descriptive analysis supported by qualitative data analysis; fourthly, this chapter indicates the results of the measurement and structural model testing. Finally, conclusion of the chapter was reported.

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4.2 Respondents' Gender

A multiple choice format was used for the general information in Section III to collect information regarding respondents‟ demographic information; gender, age, and name of the university. These data were used to provide a profile of respondents. Data was analyzed through descriptive statistical methods with frequencies and means. Table 4.1 contained gender of the participants of the study. From the Table 4.1, it was obvious that more than two-fifth of the participants were male with approximately 63.1% (193 students) as compared to female respondents with 36.9% (131 students).

Table 4.1
Respondents' Gender

Items	Frequency	Percentage
Male	193	63.1
Female	113	36.9
Total	306	100.0

4.3 Respondents' Age

In terms of age of participants, the questionnaire information indicates that it ranged from under twenty one to thirty. As can be seen from Table 4.2, the majority of the participants -two hundred and fifty eight participants- (84.34%) were aged between twenty one and twenty five, thirty seven participants (12.1%) were aged between twenty six and thirty, and only 3.6% of the participants (11 students) were under twenty one years of age.

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Table 4.2
Respondents' Age

Items	Frequency	Percentage
Under 21	11	3.6
21-25	258	84.3
26-30	37	12.1
Total	306	100.0

4.4 Goodness of Measures

This section summarizes the results of validity and reliability analyses to evaluate the goodness of measures of study constructs (Sekaran, 2013). In this study, an exploratory factor analysis was used to test the validity and uni-dimensionality of measures of all variables under study. Using Cronbach's alpha tests, the reliability of empirical measurements under the study were assessed (Nunnally, 1978). The results of factor analyses are summarized as follows:

4.4.1 Factor Analysis

Factor analysis was computed to all four main variables under study; core competencies, teaching practices, teaching resources, and teaching capabilities.

4.4.1.1 Factor Analysis for Core Competencies

Factor analysis was done on twenty items, which were used to measure the level of development of listed competencies by undergraduate accounting students. The results of factor analysis are depicted in Table 4.3.

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Table 4.3
Rotated Factor Loading For Core Competencies

Item No.		Component				
		1	2	3	4	5
INTS	Intellectual Skills:					
INTS.1	Locate, obtain, organize and understand information from human, print and electronic sources.	.805				
INTS.3	Think logically and analytically, and analyzes things critically.	.840				
INTS.4	Identify and solve unstructured problems.	.839				
TFS	Technical and Functional Skills:					
TFS.1	Deal with mathematical and statistical applications.		.777			
TFS.2	Deal with computer and IT proficiently.		.738			
TFS.3	Deal with decision modeling and risk analysis.		.820			
TFS.4	Measure and report information		.822			
PERS	Personal Skills:					
PERS.1	Initiative, influence and self-learning.			.822		
PERS.2	Self-management.			.728		
PERS.3	Anticipate and adapt to change.			.761		
PERS.4	Consider the implications of professional values, ethics and attitudes in decision making			.810		
ICS	Interpersonal and Communication skills:					
ICS.1	Work effectively with others in a consultative process.				.796	
ICS.2	Negotiate acceptable solutions and agreements in professional situations.				.835	
ICS.3	Present, discuss, report and defend views effectively through formal, informal, written and spoken communication				.822	
ICS.4	Listen and read effectively.				.749	
OBMS	Organizational and Business Management Skills:					
OBMS.1	Organize work to meet tight deadlines.					.814
OBMS.2	Organize and delegate tasks, to motivate and to develop people.					.770
OBMS.3	Select and assign priorities within restricted resources.					.824
	Eigenvalues	5.281	2.221	1.867	1.750	1.312
	Percentage of Variance Explained	33.745	10.575	9.211	8.291	6.867
	Total of Variance Explained (%)					69.062
	Kaiser-Meyer-Olkin (KMO)					.827
	Bartlett's test of Sphericity					2275.513**

Note: N=306, **p<0.01

In the first run of factor analysis, items INTS.2 and OBMS.4 were found to have communality values of .415, .471 respectively, which were less than 0.50. Item INTS.2 was dropped from subsequent run. Communality table in the second run showed that the item OBMS.4 still had communality value (.474) less than .50, and so it was dropped from subsequent run. In the third run, all remaining items had communality values more than recommended value 0.50, with KMO value of 0.827

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(above the recommended at least value 0.60), and Bartlett‟s test of Sphericity was significant (p<.01). Hence, the items were appropriate for factor analysis.

As can be seen from Table 4.3, all items were loaded on five factors as conceptualized with eigenvalues more than 1.0. The five factors cumulatively captured 69.062% of total variance in the data (exceeded the recommended level of 60%). Further, the loading values of all items were more than the minimum value of .50, which was adopted by the researcher, and ranged from .728 to .840. Since each factor contained the original items, the dimensions names were retained same as intellectual skills, technical and functional skills, personal skills, interpersonal and communication skills, and organizational and business management skills, with eigenvalues of 5.821, 2.221, 1.867, 1.750, and 1.312 respectively.

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4.4.1.2 Factor Analysis for Teaching Practices

Factor analysis was done on eleven items, which were used to measure the level of use of listed eleven teaching practices by Libyan accounting faculty as perceived by undergraduate accounting students. The results of factor analysis are depicted in Table 4.4. In the first run of factor analysis, items LEC (lecture) and IEM.1 (internet) were found to have communality values of .118, .380 respectively, which were less than 0.50. Item LEC was dropped from subsequent run. Communality table in the second run showed that the item IEM.1 still had a communality value (.380) less than .50, and so it was dropped from subsequent run. In the third run, all remaining items had communality values more than recommended value 0.50, with KMO value of 0.697

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(above the recommended at least value 0.60), and Bartlett‟s test of Sphericity was significant (p<.01). Thus, the items were appropriate for factor analysis.

Table 4.4
Rotated Factor Loading For Teaching Practices

Item No.		Component		
		1	2	3
SD	Seminars and Discussions			
SD.1	Seminars	.804		
SD.2	In-class discussions	.837		
SD.3	Case study in class	.775		
CLG	Cooperative Learning and Group activities			
CLG.2	Cooperative learning		.776	
CLG.3	Group research projects		.846	
CLG.1	Small group activities		.821	
IEM	Internet and Electronic Means			
IEM.2	Computer simulations			.844
IEM.3	Power-point presentations			.835
IEM.4	Teaching videos & CD discs			.797
	Eigenvalues	2.714	1.748	1.676
	Percentage of Variance Explained	30.159	19.427	18.617
	Total of Variance Explained (%)			68.204
	Kaiser-Meyer-Olkin (KMO)			.697
	Bartlett's test of Sphericity			759.270**

Note: N=306, **p<0.01

Table 4.4 showed also that all items were loaded on three factors as conceptualized with eigenvalues more than 1.0. The three factors cumulatively captured 68.204% of total variance in the data (exceeded the recommended level of 60%). Further, the loading values of all items were more than the minimum value of .50, and ranged from .775 to .846. Since each factor contained the original items, the dimensions names were retained same as seminars and discussions, cooperative learning and group activities, and Internet and electronic means, with eigenvalues of 2.714, 1.748, and 1.676 respectively.

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4.4.1.3 Factor Analysis for Teaching Resources

Factor analysis was done on eight items, which were used to measure the level of adequacy of listed eight teaching resources at Libyan universities as perceived by undergraduate accounting students. Table 4.5 presented the results of factor analysis.

Table 4.5

Component Factor Loading For Teaching Resources

Item No.	Teaching resources	Component
TR.1	Computer hardware	.895
TR.2	Computer software	.836
TR.3	Audio/visual equipments	.886
TR.4	Internet	.880
TR.5	Textbooks	.855
TR.6	Research articles	.867
TR.7	Appropriate classrooms	.892
TR.8	Clerical Support	.841
	Eigenvalues	6.042
	Percentage of Variance Explained	75.531
	Total of Variance Explained (%)	75.531
	Kaiser-Meyer-Olkin (KMO)	.951
	Bartlett's test of Sphericity	2232.159**

Note: N=306, **p<0.01

In the first run of factor analysis, all items loaded in only single factor which explained 75,5% of total variance, with KMO value of .951, and significant Bartlett's test of Sphericity (p<.01). In addition, all items had communality values more than recommended value 0.50. Factor loading for the eight items ranged between .836 and .895.

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4.4.1.4 Factor Analysis for Teaching Capabilities

Factor analysis was done on twenty items, which were used to measure the level of use of listed twenty teaching capabilities by Libyan accounting Faculty as perceived by undergraduate accounting students. The results of factor analysis are showed in Table 4.6.

Table 4.6

Rotated Factor Loading For Teaching Capabilities

Item No.		Component		
		1	2	3
QDS	Question and discussions Skills			
QDS.2	Initiate class discussion.	.820		
QDS.3	Draw students into discussions.	.871		
QDS.4	Communicate at a level that matches students‟ ability to comprehend.	.856		
QDS.5	Ask open, stimulating questions.	.855		
QDS.6	Communicate consistently both verbally and nonverbally.	.858		
QDS.7	Construct essay questions that require integration of content, critical thinking, and self-expression.	.832		
FRS	Feedback and Responsiveness Skills			
FRS.2	Respond to individual differences in an inclusive way		.815	
FRS.3	Manage student disagreements with instructor.		.786	
FRS.4	Show respect for student ideas and abilities.		.789	
FRS.5	Respond to students‟ questions.		.799	
FRS.6	Respond in a timely manner to student difficulties.		.746	
FRS.7	Respond to student emotional reactions in class.		.790	
EES	Evaluation and Examination Skills			
EES.1	Score and interpret examinations.			.814
EES.2	Evaluate student assignments.			.761
EES.3	Utilize exams as a learning tool.			.851
EES.4	Provide constructive feedback on exams and assignments.			.754
EES.6	Utilize self-evaluation in teaching.			.816
	Eigenvalues	5.974	3.313	2.387
	Percentage of Variance Explained	35.140	19.490	14.044
	Total of Variance Explained (%)			68.674
	Kaiser-Meyer-Olkin (KMO)			.899
	Bartlett's test of Sphericity			3116.449**

Note: N=306, **p<0.01

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In the first run of factor analysis, items QDS.1 (deliver lecture), FRS.1 (encourage participation of women and minorities in class) and, EES.5 (utilize student evaluations) were found to have a communality values of .278, .294, and .385 respectively, which were less than 0.50. Item QDS.1 was dropped from subsequent run. Communality table in the second run showed that the items FRS.1 and EES.5 still have communality value of .294, and .385 respectively, which less than .50, and so they were dropped from subsequent run. In the third run, all remaining items had communality values more than recommended value 0.50, with KMO value of 0.899 (above the recommended at least value 0.60), and Bartlett‟s test of Sphericity was significant ($p<.01$). Thus, the items were appropriate for factor analysis.

Table 4.6 showed also that all items were loaded on three factors not as conceptualized two factors, with eigenvalues more than 1.0. The three factors cumulatively captured 68.674% of total variance in the data (above the recommended level of 60%). Further, the loading values of all items were more than the minimum value of 0.50, and ranged from .746 to .858. Since items of the first conceptualized factor were loaded in two factors, only items of the second conceptualized were loaded in the same factor, accordingly, the dimensions names were renamed as question and discussions skills, feedback and responsiveness skills and, evaluation and examination skills. The eigenvalues of these factors were 5.974, 3.313, and 2.387 respectively.

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4.5 Descriptive Analysis

In this section, survey responses were analyzed using descriptive statistics such as frequencies, percentages, means, and standard deviations. Descriptive statistics are used to summarize and describe the features of the sample data. Analyzing averages and a measure of response variability enables the researcher to interpret the relative important scores for each item. The results of descriptive analysis were supported by qualitative data analysis. The interviews conducted with accounting students discussed the following:

- Their views about the role of accounting programs in students‟ skills development.
- Their opinions concerning teaching practices used by their accounting educators.
- How they perceive the adequacy of teaching resources at their universities.
- Their views about teaching capabilities of accounting educators.
- Teaching-learning difficulties.
- Their suggestions for student development.

The results will be answering research questions one until research question four.

4.5.1 Accounting Core Competencies

The first question in the first section of the survey was used to examine students‟ core competencies development. Participants were asked to indicate to what extent they

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believed each of the 20 listed core competencies was developed while undertaking the degree on a scale of (1) "Not developed", to (4) "Considerably developed". The results are presented in Table 4.7.

Regarding to the results of respond categories "moderately developed" through to "considerably developed", it can be seen from Table 4.7 that competencies of "work effectively with others in a consultative process" (80.4%), "initiative, influence and self-learning" (78.8%), "consider the implications of professional values, ethics and attitudes in decision making" (78.9%), "measure and report information" (76.8%), and "listen and read effectively" (75.8%) were highly rated. Core competencies believed to have been developed but with a bit lower percentage were "deal with computer and IT proficiently" (73.9%), "deal with mathematical and statistical applications" (70.6%), and "deal with inquiry and research" (69.2%). Table 4.7 provided also the overall ranking of the perceived level of development of core competencies. Perceptions of most highly developed competencies amongst undergraduate accounting students participated in this study included "work effectively with others in a consultative process", "consider the implications of professional values", "initiative, influence and self-learning", "measure and report information", and "listen and read effectively" with means and standard deviations (3.24, .759), (3.10, .718), (3.09, .712), (3.07, .758), and (3.05, .771) respectively. On the other hand, competencies given lower rankings by students included "identify and solve unstructured problems", "think logically and analytically, and analyzes things critically", "select and assign priorities within restricted resources", and "leadership and make decisions", with means and standard deviations (2.19, .731), (2.42, .735),

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(2.42, .683), and (2.52, .798) respectively. This may be due to the fact that those skills may be considered to be more "advanced".

Table 4.7

Core Competencies by Percent, Means and Standard Deviations

Item ID	Competencies	Not Developed %	Slightly Developed %	Moderately Developed %	Considerably Developed %	Mean	Std. D
INTS	Intellectual Skills:					2.57	.577
INTS.1	Locate, obtain, organize and understand information from human, print and electronic sources.	0.0	35.3	50.0	14.7	2.79	.678
INTS.2	Deal with inquiry and research.	4.6	26.1	48.0	21.2	2.86	.800
INTS.3	Think logically and analytically, and analyzes things critically.	10.5	40.8	44.4	4.2	2.42	.735
INTS.4	Identify and solve unstructured problems.	17.3	48.0	33.6	1.6	2.19	.731
TFS	Technical and Functional Skills:					2.89	.577
TFS.1	Deal with mathematical and statistical applications.	2.0	27.5	47.1	23.5	2.92	.764
TFS.2	Deal with computer and IT proficiently.	0.7	25.5	45.8	28.1	3.01	.751
TFS.3	Deal with decision modeling and risk analysis.	4.6	36.6	58.8	0.0	2.54	.584
TFS.4	Measure and report information.	1.0	22.2	45.1	31.7	3.08	.758
PERS	Personal Skills:					2.96	.557
PERS.1	Initiative, influence and self-learning.	0.0	21.2	48.7	30.1	3.09	.712
PERS.2	Self-management.	0.0	32.4	49.7	18.0	2.86	.696
PERS.3	Anticipate and adapt to change.	0.0	32.0	54.9	13.1	2.81	.645
PERS.4	Consider the implications of professional values, ethics and attitudes in decision making.	0.0	22.2	47.7	31.2	3.10	.718
ICS	Interpersonal and Communication skills:					2.94	.607
ICS.1	Work effectively with others in a consultative process.	0.0	19.6	36.9	43.5	3.24	.759
ICS.2	Negotiate acceptable solutions and agreements in professional situations.	1.0	31.4	45.1	22.5	2.89	.754
ICS.3	Present, discuss, report and defend views effectively through formal, informal, written and spoken communication.	4.9	33.0	57.2	4.9	2.62	.658
ICS.4	Listen and read effectively.	1.6	22.5	45.4	30.4	3.05	.771
OBMS	Organizational and Business Management Skills:					2.59	.588
OBMS.1	Organize work to meet tight deadlines.	4.6	35.9	46.1	13.4	2.68	.760
OBMS.2	Organize and delegate tasks, to motivate and to develop people.	3.6	36.9	41.2	18.3	2.74	.795
OBMS.3	Select and assign priorities within restricted resources.	10.5	37.9	51.0	0.7	2.42	.683
OBMS.4	Leadership and make decisions.	9.8	38.2	42.5	9.5	2.52	.798

Finally, regarding to the dimensions, the overall ranking of the level of self-reported development of five groups of skills ranged from up to slightly developed to less than moderately developed. Personal skills, and interpersonal and communication

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skills perceived to have been the most developed by accounting students with means and standard deviations (2.96, .557) and (2.94, .607) respectively, followed by technical and functional skills with mean and standard deviation (2.89, .577). Whereas, intellectual skills, and organizational and business management skills perceived to have been the least developed by accounting students with means and standard deviations (2.57, .577) and (2.59, .588) respectively.

In second stage of the study, views were addressed in more depth to achieve a wider understanding of the findings of the questionnaires. The analysis of the qualitative data in this section was directed to ascertain the role of accounting programs in students‟ skills development.

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Since many of the class activities in accounting are considered to develop professional skills such as working in groups, writing, research and analysis, accounting faculty members should have a role in the development of students‟ skills entering the accounting profession, participants were asked to recall any techniques of teaching used by their accounting faculty that they believed led to competencies being developed. The common theme with all respondents was that studying in groups and carrying out group assignments developed many of the competencies.

Generally, respondents believed the accounting programs provided to some extent adequate opportunities for competencies development. It was up to each student to make the decision to take the chance that was offered, and many students seemed to do this. Participants believed that assignments and tutorial works facilitated skills development. For instance, on group assignment, participants believed students would

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take part through group interactions whereby discussing the topic of the assignment would lead to better approach to complete the assignment. Assignments, tutorial work and lectures are anticipated to develop personal and interpersonal and communication skills. Comments included:

> I think the accounting programs did give some opportunities to develop some of the core competencies required in workplace throughout case studies, group/team projects, written and oral presentations, as part of the assessment. It is just a matter of whether student to make the decision to take some of these opportunities. If students do not take benefit of the opportunities offered to them then it's going to be more difficult in the workplace. [5]
>
> In seminars and open discussions, students have the opportunity to ask questions and get immediate feedback on the topic discussed. I think interaction with others is the choice of you as a student; failure to interact with others may slow down the development of communication skills. [2]
>
> Many subject materials involved written and oral presentations gave me the opportunity to practice writing… by tutorial participation, I can say I had the opportunity to develop communication skills, personal skills, and ability to argue points and understand of others' points of view. [4]
>
> Just attending the lecture of course is going to require us to listen effectively, grasp knowledge, collaborate and communicate with classmates in our assignments, definitely, be motivated… absolutely I had some opportunities to develop my skills such as oral and written communication, ability to solve problems and deal with others. [6]
>
> Working with other students on assignments and with several persons has helped me to improve my communication skills… Different activities and tutorials taught us listening skills, the basic skills of teamwork, and so forth. [3]

Some students believed that opportunities to develop skills are undertaken sometimes without students realizing that it is happening to them, as the following comments reveal:

> I'm not sure that students are consciously doing it but I think that in some cases it is occurring whether they wish it to or not… in others maybe it is unimportant because maybe they're not putting their efforts and time in some of the tasks. [5]
>
> I believe some students do and others don't… however, by the completion of the assignments, I think students are engaging in at least the chance for developing personal or interpersonal skills. It obvious

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> when the task requires students to do case work… they will be exposed to having to deal with a number of these situations… so it doesn‟t mean that students consciously sit and say well we‟re now developing some personal skills or interpersonal skills here. [2]

Students were also asked whether they were motivated to develop core competencies. Some respondents reported that it was up to the student to be self-motivated and get things finished. While some students reported they were stimulated before they enter the college as accounting was the choice they wanted to pursue, the others believed that some lecturers taught them to be self-motivated through some of the everyday tasks and assignments that were given to them. Instances included having enthusiastic educators who made lessons exciting or gave students the freedom to make decisions within a group tasks. Sometimes being in a group provided them the encouragement to finish the work and do well. One student reported that without motivation, students will not complete the course:

> I believe when somebody here at university for a purpose, I think if he‟s not motivated in some extent, he‟s not focused on what he‟s doing, he tend to leave… wouldn‟t go all the way… I think some faculty classes were stimulating and their encouragement and personal interest outside the classroom even more valuable. [2]
>
> Yes, I have been motivated to some extent, some courses I studied using cooperative learning style such as group research projects, and seminars have significantly contributed to the development of my research skills, presentation skills, and teamwork skills. [10]

> Yes, some lecturers had a role in motivating me. For instance, some accounting lecturers used cooperative learning in teaching by requesting students to do group research projects and present them in the classroom. I think this technique contributed to the development of my communication skills, presentation skills, leadership skills, and research skills. [1]

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4.5.2 Teaching Practices Used by Libyan Accounting Faculty

The first question in the second section of the survey was used to examine students‟ perception about the teaching practices used by Libyan accounting educators. Students were asked to rate accounting faculty use of eleven teaching practices on a scale of (1) “Never”, to (5) “Always”. Table 4.8 provided the percentages, means, and standard deviations related to Libyan accounting students‟ perceptions of their accounting educators‟ use of teaching practices.

Table 4.8

Teaching Practices by Percent, Means and Standard Deviations

Item ID	Teaching method used	Never %	Rarely %	Occasionally %	Frequently %	Always %	Mean	Std. D
TM.1	Lecture	0.0	0.0	0.0	68.0	32.0	4.32	.467
SD	Seminars and discussions						3.18	.548
SD.1	Seminars	0.0	15.0	53.6	31.4	0.0	3.16	.662
SD.2	In-class discussions	0.0	19.6	33.0	47.4	0.0	3.28	.771
SD.3	Case study in class	0.0	11.8	66.3	21.9	0.0	3.10	.572
CLG	Cooperative learning and group activities						3.05	.586
CLG.1	Small group activities	0.0	23.5	48.7	27.8	0.0	3.04	.716
CLG.2	Cooperative learning	0.0	28.1	52.6	19.4	0.0	2.91	.684
CLG.3	Group research projects	0.0	19.6	41.5	38.9	0.0	3.19	.741
IEM	Internet and electronic means						2.23	.535
IEM.1	Internet	20.3	60.8	19.0	0.0	0.0	1.99	.627
IEM.2	Computer simulations	5.9	64.1	18.6	11.4	0.0	2.36	.760
IEM.3	Power-point presentations	2.6	55.9	42.8	6.6	0.0	2.41	.584
IEM.4	Teaching videos & CD discs	19.6	43.8	39.2	2.3	0.0	2.18	.832

Referring to Table 4.8, the entire sample (100%) of participants responded they believe that their accounting educators always (32%) or frequently (68%) used lecturing. In terms of the first dimension “seminar and discussion”, the majority of the participants (80.4% to 88.2%) indicated that their accounting educators frequently or

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occasionally used casework in class, seminars, and in-class discussions as teaching practices.

Regarding to second dimension “cooperative learning and group activities”, as can be seen from Table 4.8, 76.5%, 72%, and 80.4% of participants indicated that accounting educators occasionally or frequently used small group activities, cooperative learning, and group research projects respectively. With regard to third dimension “internet and electronic means”, Table 4.8 indicated that although, 19% of participant students reported that accounting educators occasionally used internet as teaching method, approximately 81% indicated they rarely or never used internet in teaching accounting. Data in Table 4.8 revealed that three-fifth of the sample believed that computer simulations (70%), and teaching videos and CD discs (63, 4%) were rarely or never used as teaching method by their accounting educators. While more than fifty per cent (58.5%) of the sample reported that their educators rarely or never used power-point presentations, the rest of the sample believed that this method was occasionally or frequently used in class as teaching method.

From Table 4.8, it could be concluded that majority of Libyan accounting students participated in this study believed that their accounting educators used lecture as main teaching method with mean and standard deviation (4.32, .467), followed by in-class discussions, group research projects, and seminars with means and standard deviations (3.28, .771), (3.19, .741), and (3.16, .662) respectively. On the other hand, as can be seen from Table 4.8, the teaching technique least used by those accounting faculty was the internet with mean and standard deviation (1.99, .627), followed by teaching videos & CD discs, computer simulations, and Power-point presentations

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with means and standard deviations (2.18, .832), (2.36, .760), and (2.41, .584) respectively. Finally, regarding to the dimensions, the overall ranking of the use of three groups of teaching practices ranged from up to rarely to occasionally use. With exception to the lecturing, seminars and discussions, and cooperative learning and group activities perceived to have been the most teaching practices used by accounting educators with means and standard deviations (3.18, .548) and (3.05, .586) respectively. Whereas, Internet and electronic means perceived to have been the least teaching practices used by accounting educators with mean and standard deviation (2.57, .577).

In second stage of the study, views were addressed in more depth to achieve a wider understanding of the findings of the questionnaires. The analysis of the qualitative data in this section was directed to obtain the views of students relating the teaching practices practiced by their accounting educators.

Many of teaching practices such as computer simulation, power point presentations, internet, and teaching videos are considered to develop professional skills such as working in groups, writing, research, and analysis. Lack of teaching capabilities may impede faculty members of using such techniques. Hence, students were asked to identify any accounting teaching practices which accounting faculty might like to use but not used, perhaps because they lack of teaching capabilities. Some respondents claim that lack of teaching capabilities and unwillingness of some lecturers may impede them of using such techniques as one student commented:

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> I think the lack of some teaching capabilities as well as to unwillingness of some lecturers contributed to non-use of alternative techniques of teaching, because some of them was lecturing for a long time… has the same curriculum for a long time… especially senior lecturers usually do not tend to change… because the change requires time and effort to develop their skills to fit new teaching practices... therefore, the desire of the lecturer and their skills may be the reason beyond non-use of new teaching practices. [6]

As mentioned above, many of teaching techniques such as computer simulation, power point presentations, internet, and teaching videos are considered to develop professional skills such as working in groups, writing, research, and analysis. Lack of teaching resources may impede faculty members of using such techniques. Hence, students were asked to identify any accounting teaching practices which accounting faculty might like to use but not used, perhaps because of limited resources by the college. Most of the interviewees agreed that lack of resources had a big role in the non-use of other techniques by lecturers as some students commented:

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> I think teaching resources had a big role in the non-use of other techniques by lecturers, for example, computers at the college are old and outdated... no data show... no Internet… this contributed to the non-use of these techniques by lecturers in teaching and communication with students. [7]

> Yes, there are some faculty members who had the necessary skills to use some advanced teaching practices. However, such practices need teaching resources, which were not available at university. [10]

> Lack of equipped library with internet, books, and scientific journals may was an obstacle to some faculty members to use individual and group research projects as teaching practices. Such techniques may contribute to the development of students‟ skills, such as teamwork skills, communication skills, and inquiry and research skills, especially from electronic sources. [8]

In terms of teaching practices, students were also given the opportunity to relate insights and suggestions that might be helpful in the improvement and development of core competencies acquisition. Some students believe that practical workshops and seminars could help competencies development, because these

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workshops and seminars will help students focus on behavioral skills. This means that more time should be allocated despite a limited timetable. Some students also believed that it will be beneficial for students to complete an industry project that will allow them to observe and be aware of practical applications of some behavioral skills. The general consensus of students is described by the following comment:

> I would like more seminars… more workshops… I believe seminars and workshops are the place where we can practice the practical work… learn new ideas and gain skills… students focus on discussion and getting immediate feedback and answers to practical solutions. [7]

> I think it would be valuable for students obtaining work experience before they graduate… doing a project in industry even at a very small level… so they can connect between what they are studying and the real world out there… and the reality. [3]

> I would like to do more research assignments as against exams… it is better to limit exams and tests…I think a case study would be fine… accounting faculty should also be encouraged to use variety techniques of teaching such as case studies, computer simulation, presentation, discussions, and individual and group research projects. [5]

> It was a general observation but I frequently noted that… a number of students would be hesitant to talk up and voice out their ideas and thoughts … they could be brilliant… but they are very shy… thus it was very difficult to get class participation out of them… naturally they wouldn‟t volunteer themselves… so maybe find ways to encourage them speaking up… but if lecturer made the class participation mandatory, then they would have to… [9]

> I believe faculty members should concentrate more on cooperative learning, by forcing students to work collaboratively to develop the necessary skills such as teamwork skills, decision modeling skills, communication skills, leadership skills, ... etc. [10]

4.5.3 Teaching Resources at Libyan Universities

Since the third aim of the study was to investigate the adequacy of teaching resources at Libyan universities, the second question in the second section of the survey was used to examine students‟ perception about the adequacy of teaching resources at their

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universities. Students were asked to rate adequacy of teaching resources on a scale of (1) “Not available”, to (5) “Outstanding”. Table 4.9 presented the percentages, means, and standard deviations related to Libyan accounting students‟ perceptions of adequacy of teaching resources at Libyan universities.

Table 4.9

Teaching Resources by Percent, Means and Standard Deviations

Item ID	Teaching resources	Not Available %	Inadequate %	Satisfactory %	Good %	Outstanding %	Mean	Std. D
TR.1	Computer hardware	0.0	23.9	34.3	35.9	5.9	3.24	.883
TR.2	Computer software	7.2	31.0	45.8	15.4	0.7	2.71	.835
TR.3	Audio/visual equipments	19.9	36.9	43.1	0.0	0.0	2.23	.761
TR.4	Internet	17.6	36.9	36.3	9.2	0.0	2.37	.878
TR.5	Textbooks	0.0	25.0	35.0	34.4	5.6	3.20	.882
TR.6	Research articles	7.5	39.5	34.0	6.5	0.0	2.63	.859
TR.7	Appropriate classrooms	0.0	28.0	31.5	34.0	6.5	3.19	.922
TR.8	Clerical Support	9.2	35.3	25.2	28.1	2.3	2.79	1.025

The results in the Table 4.9 revealed that a slight majority of participants ranked the adequacy of computer hardware (76.1%), textbooks (75%), and appropriate classrooms (72%) as satisfactory, good or outstanding. More than fifty percent of participants ranked the following resources as either satisfactory or good: computer software (61.2%) and clerical support (53.3%). Almost 56% and 54% of the sample reported the adequacy of both internet and audio/visual equipments as not available or inadequate.

Regarding to means and standard deviations in Table 4.9, it is obvious that the majority of participants perceived only three of eight types of teaching resources

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(computer hardware, textbooks, and appropriate classrooms) are available as either satisfactory, good, or outstanding with means and standard deviations (3.24, .883), (3.20, .882), and (3.319, .922) respectively. On the other side, the most teaching resources are not available or inadequate as seen by accounting students participated in this study were the audio/visual equipments and internet with means and standard deviations (2.23, .761) and (2.37, .878) respectively, followed by research articles, computer software, and clerical support with means and standard deviations (2.63, .859), (2.71, .835), and (2.79, 1.025) respectively.

In second stage of the study, views were addressed in more depth to achieve a wider understanding of the findings of the questionnaires. The analysis of the qualitative data in this section was directed to ascertain the adequacy of teaching and learning resources at Libyan universities.

During the interviews, students were asked to give their perceptions about the adequacy of teaching and learning resources at Libyan universities including: whether institutional resources (facilities) that can be used to support the teaching and learning mission, for example, class sizes, electronic capabilities, libraries, classroom materials and clerical support are adequate and appropriate and may have assisted students to develop core competencies required on the workplace, and whether these resources motivated accounting educators to use alternative teaching practices in their classrooms. The analyses indicate that all respondents were highly critical of the teaching and learning facilities provided by their universities. Most of the students interviewed emphasized the need to provide more teaching and learning resources as the existing resources are inadequate at all.

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The library which is considered the pillar of learning at the university is a traditional and non-equipped with essential resources, there is no internet as well. Representative insights are as follows:

> Not appropriate and insufficient... I think they are obstacle in the way of students‟ development… I believe if the university has good and adequate teaching and learning resources, the level of students‟ development was much better than as it is now… the library is very traditional with some computers and no internet… no audio and visual equipments…. [1]
>
> We don‟t even have accounting journals in the library of the university.... I like reading journals… these journals help us in learning accounting… [3]
>
> Teaching and learning resources are insufficient... no internet… no online subscription for e-journals and e-books…. books in the library are not enough and outdated, working hours of the library is not enough as well. [5]
>
> There is no comprehensive library… working hours of the library are not enough… and no internet access... most of students rely on their own efforts in searching for books and journals from outside the campus… students go to internet cafes to get the e-journals or some information from the net. [7]
>
> Existing library is a traditional and non-equipped... the books in library are old and insufficient… and there are no sufficient scientific periodicals… there are no enough places where to study… Computer labs used only in general courses… [10]

Classrooms are also not appropriate for learning environment as two students commented:

> Classrooms are not equipped with appropriate teaching and learning resources… no data show… just whiteboard... I believe that to learn new skills, students need to have such facilities… some classrooms are without even air-conditioners… that exhausts the instructors and students in the summer… [1]
>
> Computers and visual equipments are not available… we don‟t even have data show in the classrooms... and no internet… …I think these tools are helpful in learning accounting… in general, library and classrooms are not motivating students to study and gain knowledge and skills. [8]

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Some respondents reported that most students face some difficulties talking and discussing with their lecturers outside the classroom, because most lecturers do not have their own offices. One student commented:

> No clerical support for faculty members… no private offices for educators where students can discuss with educators outside the classroom… and they do not allocate enough time for that… the public services at the university are inadequate too. [2]

In terms of teaching resources, students were also given the opportunity to relate insights and suggestions that might be helpful in the improvement and development of core competencies acquisition. All students believe that Libyan universities lack the essential teaching and learning resources, emphasizing the need to provide more modern teaching and learning resources, in order to improve teaching and learning process. The general consensus of students is described by the following comments:

> By providing necessary teaching and learning resources such as textbooks, periodicals, internet, data show, e-library, and appropriate classrooms… I think lecturers can get the opportunity to use these tools in teaching... students as well can use such resources to enhance their skills development. [1]

> Since the existing library is a traditional and non-equipped... I think it is imperative to build integrated libraries cross Libyan universities… the books in the library should be updated and sufficient… e-journals should be available and accessible by lecturers and students as well… should be enough computers… [3]

> Equipping classrooms with appropriate teaching and learning resources and technology provides opportunities for faculty members to use diversity of teaching practices. Students also will be motivated to put more efforts for learning trough library resources. [4]

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4.5.4 Teaching Capabilities of Libyan Accounting Faculty

Since the third aim of the study was to investigate to what extent Libyan accounting educators are equipped with teaching capabilities as perceived by accounting students, the third question in the second section of the survey was used to examine students‟ perception about their accounting educators‟ teaching capabilities. 20 items as shown in Table 4.10 measured students‟ perception about accounting faculty teaching capabilities to perform specific teaching behaviors related to the following areas: question and discussions capabilities, feedback and responsiveness capabilities, and evaluation and examination capabilities. Respondents were asked to rate the demonstration of each skill or behavior by their accounting educators on a scale of (1) “Never”, to (5) “Always”. Table 4.10 summarizes the percentages, means, and standard deviations related to Libyan accounting students‟ perceptions of their accounting educators‟ teaching capabilities.

The results in Table 4.10 revealed that “deliver lectures” was frequently or always demonstrated by accounting educators, as reported by the entire sample (100%). Furthermore, up to four-fifth of the participants ranked following capabilities as either frequently or always were demonstrated by their accounting educators; “initiate class discussion”, “ask open stimulating questions”, “manage student disagreements with instructor”, “show respect for student ideas and abilities”, “score and interpret examinations”, and “evaluate student assignments” as either frequently or always were demonstrated by their accounting educators.

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Table 4.10

Teaching Capabilities by Percent, Means and Standard Deviations

Item ID	Teaching Capabilities	Never %	Rarely %	Occasionally %	Frequently %	Always %	Mean	Std. D
QDS	Question and Discussions Skills						3.23	.655
QDS.1	Deliver lectures.	0.0	0.0	39.6	39.5	20.9	3.81	.756
QDS.2	Initiate class discussion.	0.0	14.1	39.5	38.9	7.5	3.40	.821
QDS.3	Draw students into discussions.	0.0	26.5	53.3	20.3	0.0	2.94	.682
QDS.4	Communicate at a level that matches students‟ ability to comprehend.	0.0	26.8	47.1	21.9	4.2	3.04	.811
QDS.5	Ask open, stimulating questions.	0.0	21.9	37.6	31.4	9.2	3.28	.908
QDS.6	Communicate consistently both verbally and nonverbally.	0.0	18.6	42.2	29.7	9.5	3.30	.880
QDS.7	Construct essay questions that require integration of content, critical thinking, and self-expression.	0.0	35.3	45.8	16.0	2.9	2.87	.784
FRS	Feedback and Responsiveness Skills						3.13	.626
FRS.1	Encourage participation of women and minorities in class.	0.0	15.0	35.6	26.5	22.9	3.57	1.003
FRS.2	Respond to individual differences in an inclusive way.	0.0	24.2	44.4	20.9	10.5	3.18	.917
FRS.3	Manage student disagreements with instructor.	0.0	17.6	48.4	18.0	16.0	3.32	.946
FRS.4	Show respect for student ideas and abilities.	0.0	13.4	52.0	23.2	11.4	3.33	.848
FRS.5	Respond to students‟ questions.	0.0	32.0	52.6	15.4	0.0	2.83	.669
FRS.6	Respond in a timely manner to student difficulties.	0.0	33.0	49.3	17.6	0.0	2.85	.696
FRS.7	Respond to student emotional reactions in class.	0.0	35.6	46.1	18.3	0.0	2.83	.715
EES	Evaluation and Examination Skills						2.78	.624
EES.1	Score and interpret examinations.	0.0	12.7	35.6	40.5	11.1	3.50	.854
EES.2	Evaluate student assignments.	0.0	14.0	38.2	37.3	10.5	3.44	.860
EES.3	Utilize exams as a learning tool.	5.9	22.5	41.2	28.4	2.0	2.98	.909
EES.4	Provide constructive feedback on exams and assignments.	6.9	35.6	46.7	10.8	0.0	2.61	.769
EES.5	Utilize student evaluations.	24.8	51.0	24.2	0.0	0.0	1.99	.701
EES.6	Utilize self-evaluation in teaching.	17.6	47.7	34.6	0.0	0.0	2.17	.704

As can be seen from Table 4.10, more than four-fifth of the participants reported that the following two capabilities: “respond to students‟ question” (87.6%) and “respond in a timely manner to student difficulties” (82.7%) were rarely or occasionally demonstrated by their accounting faculty. Although, 24.2% and 35.3% of the participants ranked both “utilize student evaluations” and “utilize self-evaluation in teaching” respectively as either frequently or always were demonstrated by their

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accounting educators, other participants (75.8% and 65.5%) claimed that both of these capabilities were never or rarely used by their educators.

Regarding to means and standard deviations, it is obvious from Table 4.10 that the most five teaching capabilities used by Libyan accounting educators were as follows: “deliver lectures”, “encourage participation of women and minorities in class”, “score and interpret examinations”, “evaluate student assignments”, and “initiate class discussion” with means and standard deviations (3.81, .756), (3.57, 1.003), (3.50, .854), (3.44, .860), and (3.40, .821) respectively. On the other side, the least two teaching capabilities used by Libyan accounting educators were as follows: “utilize student evaluations” and “utilize self-evaluation in teaching”, with means and standard deviations (1.99, .701) and (2.17, .704) respectively, followed by “provide constructive feedback on exams and assignments”, with mean and standard deviation 2.61, .769 respectively.

Finally, regarding to the overall ranking of the level of students‟ perception about accounting faculty to perform specific teaching behaviors related to three dimensions such as question and discussions skills, feedback and responsiveness skills, and evaluation and examination skills ranged from up to rarely to occasionally performed. While questions and discussions skills and, feedback and responsiveness skills perceived to have been the most teaching capabilities performed by accounting educators with means and standard deviations (3.23, .655) and (3.13, .626) respectively, the evaluation and examination skills perceived to have been the least teaching capabilities performed by accounting educators with mean and standard deviation (2.78, .624).

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In second stage of the study, views were addressed in more depth to achieve a wider understanding of the findings of the questionnaires. The analysis of the qualitative data in this section was directed to ascertain teaching capabilities as perceived by accounting students, in terms of how lecturers are capable and effective.

During the interviews, students were asked to provide information about their accounting educators including: whether Libyan accounting faculty members are equipped with the essential teaching capabilities and skills, which might motivate accounting students to develop necessary competencies, and whether they are satisfied with their teaching capabilities. Students also were asked to give their perceptions about teaching-learning difficulties they think that impeded learning.

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There are different views about to essential teaching capabilities and skills of Libyan accounting faculty members. Some students believe Libyan accounting educators are capable and they managed to motivate students to skills development. Others reported that they are not satisfied with the level of their educators‟ teaching capabilities. For example some interviewees believed that some accounting faculty members were very keen and enthusiastic, offered opportunities for questions and discussions inside and outside class times, and their classes always were interesting. While others had a perception that the level of teaching skills and behaviors displayed by their accounting educators were satisfactory but need to be improved. Some students‟ comments include the following:

> I think accounting faculty had the capacity and skills to teach effectively... some lecturers always like to encourage students and push

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> them to further learning and gaining basic skills. They're at a satisfactory level but need to be improved. [1]
>
> It's not ideal but… need more improvement… communication with students outside the class is great… I think it's just developing. [8]
>
> I think they had the skills that… oral communication… and … I think they're trying to improve their personal communications… and that comes with experience… so yes, there is improvement… [3]
>
> In my view they had good teaching skills… did their best to develop themselves… when you get in touch with some lecturers you notice that they are in constant development… this improvement maybe due to the years of teaching practice. [9]

Conversely, other students believed that while only a few accounting faculty members were enthusiastic, interesting and had good teaching skills, other faculty members themselves lacked communication and interpersonal skills. Interviewees commented that:

> I believe accounting lecturers should be more friendly and open-minded of all students... they must leave their personal likes and dislikes at their homes... to be honest… generally… most lecturers do not have sufficient skills and abilities… that may push students to gain necessary skills… for accounting profession. [10]
>
> Things in the class sometimes don't work as planned… some lecturers not accepting... even when they know they are wrong… faculty members need to be flexible and frequently re-evaluating their teaching techniques and changing when things aren't working… they should care about what they are teaching and those they are teaching as well... some of the accounting faculty members were very dry in the presentation of the material… unluckily, this reflected in non-interaction of students with lecturers. [3]
>
> I think a few of lecturers were enthusiastic and had good teaching skills... they may were qualified and had master or doctoral degrees… but a lot of them did not know how to deal with students effectively… because they lacked interpersonal and communication skills. [4]
>
> Just very few of accounting lecturers had high teaching skills… some lecturers for more than five semesters were teaching… same material… same teaching style… did not change… did not develop themselves… I can say the majority of them had low to medium teaching skills. [6]

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Students were also asked to give their perceptions about teaching-learning difficulties such as negative behaviors by their accounting faculty they think that impeded learning. Some respondents reported several behaviors they believe are negative including lack of respect for students, inadequate preparation/organization, failure to provide timely feedback and responsiveness, lack of communication skills, and testing/assessment mistakes.

There are a number of responses that pointed to the lack of lecturer respect for students. Some students‟ comments include the following:

> Respectful is the key. If educators treat students as friends, they will act like friends. If they treat them like enemy, they will act like enemy. [3]
>
> To be honest some faculty members lack of respect for students. What I mean by this is telling students again and again how poorly they are doing, how little they know, or how bad they are. I think the attitude of the lecturer toward his/her students mostly determines what he/she gets from them. [10]
>
> I think some educators badly behave toward students when they think all students should be punished because of the others who do not react well in the class. It is important to drive students to be successful without crossing over into disrespect. [5]
>
> Some lecturers seem to delight in showing off how stupid are students more than showing off how smart they are. I think humiliation and punishment should not be in the classroom. [2]

There are also a number of responses that pointed to inadequate preparation and organization as negative behaviors. Some interviewees reported that many lecturers sometimes come unprepared for a class, and this may shows a lack of respect for students. Indeed, lack of preparation frustrates students. Representative insights are:

> Inadequate preparation and/or disorganization… not having an obvious plan for every class session… not having teaching materials prepared for use in class… students believe that their time is precious… students

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> do not appreciate their time being wasted by disorganized or unprepared lecturers. [4]
>
> I think poor organization or preparation leads to a lot of lost opportunities of learning. A lecturer who is unprepared is not capable to leverage students‟ competencies as well as someone who is more prepared and organized. Class time is valuable… unfortunately… some educators don‟t always appreciate it. Some of them come late to class or leave it earlier, while others come unprepared, and so on… [6]
>
> In several situations some faculty members just reads from the book and has nothing else to say. This leads to boring delivery. Furthermore, the lecturer lacks credibility because the students do not believe the lecturer really knows the topic and instead is just reading it. [9]

The following responses indicate negative consequences related to failure of some lecturers to provide timely feedback and interact with students in and outside the classroom because of rigidity and inflexibility of educators. Some respondents reported that most students face some difficulties talking and discussing with lecturers outside the classroom, as most lecturers do not have their own offices, and they are not very keen to allocate enough time for students‟ discussion as well. While other students cited difficulty with lecturers in terms of deficiencies in communications skills. Representative insights are:

> Many faculty members are putting up an invisible wall that they don‟t wish to be disturbed by students‟ questions. I mean they are too busy or unavailable to interact with students especially outside the class. [2]
>
> Most students fail to engage educators outside of class... not holding office hours at suitable times... not being in the office when they said they would... doing other things when students are waiting to talk to them… refusing to help students in need. [10]
>
> while many lecturers make themselves available to students outside of class through established office hours… others lack of flexibility… don‟t provide sufficient opportunities for students to interact with them outside the classroom setting... aren‟t accessible outside of class… do not have their own offices. [5]
>
> Sometimes we feel the lecturer does not connect to us in the class… may give prepared lectures but not at all connect to the class… not speaking clearly… speaking too quickly… no interchange between the students and lecturer … this makes the students think the lecturer and lecture is boring… [3]

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> I think some faculty members are not able to communicate at the student‟s learning level… not explaining material in a different…not listening to students‟ questions… sometimes it is difficult to effectively understand what was said in the classroom. [6]
>
> Some lecturers lack the ability to direct a class discussion… in order to develop clear lines of communication between the students and lecturer… at the same time the lecturers should listen to students… respond to their questions… and… question their opinions. [4]

The following responses pointed to assessment mistakes including students‟ perception that some faculty members frequently focus on tests without considering whether learning is taking place. Interviewees‟ comments are as follows:

> Sometimes testing isn‟t matching the lectures. I always get frustrated and my friends too when the exams are not testing what the class has been about…or… when the lecturer trying to embarrass students or trick them in class. [8]
>
> I think it is true; the way lecturers test dictates the way students learn. Hence, if lecturers actually want to teach effectively and test students fairly, they should spend more time writing examinations so that their exams are testing what they want to test. [2]
>
> Many lecturers choose poor exam questions, poor homework questions, not being clear in their lectures, not listening to student needs, and not providing constructive feedback on exams and assignments. In order to curry favor with students, some lecturers make exams too easy. I think it is better to make exams that test the material and challenge the students in the same time. [7]

In terms of teaching capabilities, students were also given the opportunity to relate insights and suggestions that might be helpful in the improvement and development of core competencies acquisition. Most of the respondents agreed that some of Libyan accounting faculty members lack essential teaching skills, emphasizing the need to provide more programs for faculty development, in order to improve teaching and learning process. Students‟ comments include the following:

> In order to be effective lecturers, Libyan accounting faculty must be willing to learn new teaching skills… to keep pace with a rapidly

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> changing world… they have to prepare themselves well to be competent... [10]
> I think computer literacy is essential competency in this era… students as well as faculty members should make more efforts to improve their skills in computer literacy... [6]
>
> Accounting faculty members should be encouraged to improve their teaching skills and capabilities by attending training courses in teaching, conferences and seminars... awarding faculty members on their efforts and innovations in teaching and research…[3]
>
> Focus should be on training accounting faculty members in order to keep pace with recent developments and use of new technologies in teaching… clerical and fiscal support for faculty members is essential…[4]

4.6 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was performed to estimate the relationship between each unobserved (latent) variable and its related items. CFA in the measurement models seeks to further evaluate convergent and discriminate validity properties of the scale (Brown, 2006).

4.6.1 Confirmatory Factor Analysis for Core Competencies (CC)

Confirmatory factor analysis (CFA) was performed to test the measurement model of the core competency (CC) scale. Confirmatory factor analysis for core competencies (CC) was conducted with Intellectual Skills (INTS), Technical and Functional Skills (TFS), Personal Skills (PERS), Interpersonal and Communication skills (ICS), Organizational and Business Management Skills (OBMS) as latent or unobserved variables. The hypothesized First-Order CFA model for CC is illustrated in figure 4.1.

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While latent variables are shown in ellipses, the observed variables are shown in rectangles and, error terms are shown in circles.

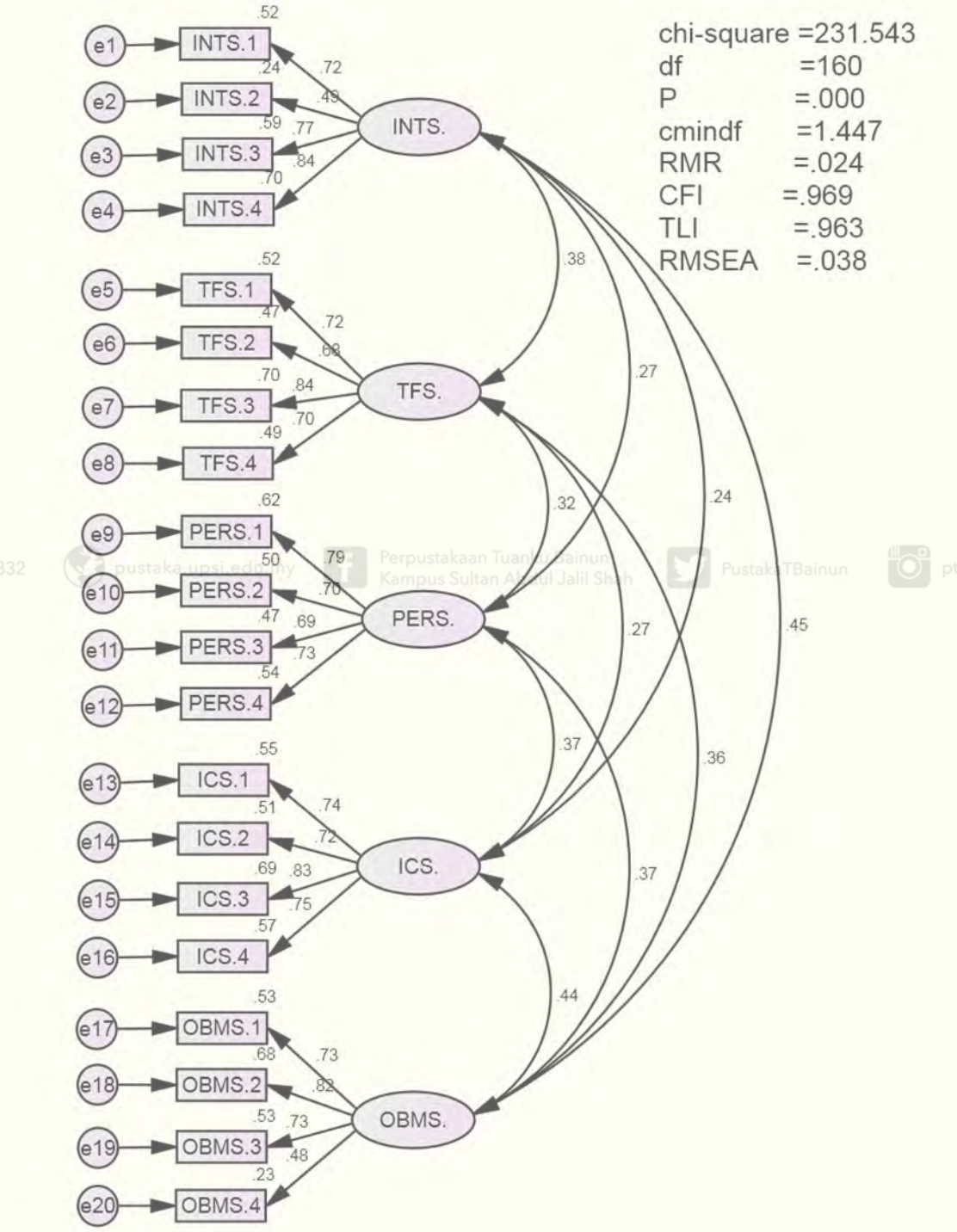


Figure 4.1. First-Order CFA of the Core Competencies (CC) Model

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Confirmatory factor analysis (CFA) was conducted on five-factor core competencies (CC) model to estimate the relationship between latent variables and related items. Table 4.11, shows the result of the First-Order CFA of CC model. The fit indices for the hypothesized model indicated a good fit with normed chi-square (x^2/df) = 1.447, root mean square residual (RMR) = 0.024, comparative fit index (CFI) = 0.969, Tucker-Lewis index (TLI) = 0.963, root mean square error of approximation (RMSEA) = 0.038, and HI 90 of RMSEA = .049.

Table 4.11

First Order - CFA of Core Competencies Model

Items	Loading	SE	R^2	AVE	CR
INTS.1	.72	.22	.52	.51	.88
INTS.2	.49	.49	.24		
INTS.3	.77	.22	.59		
INTS.4	.84	.16	.70		
TFS.1	.72	.28	.52	.54	.90
TFS.2	.68	.30	.47		
TFS.3	.84	.10	.70		
TFS.4	.70	.29	.49		
PERS.1	.79	.19	.62	.53	.90
PERS.2	.71	.24	.50		
PERS.3	.69	.22	.47		
PERS.4	.73	.24	.54		
ICS.1	.74	.26	.55	.58	.91
ICS.2	.72	.28	.51		
ICS.3	.83	.13	.69		
ICS.4	.75	.26	.57		
OBMS.1	.73	.27	.53	.49	.87
OBMS.2	.82	.20	.68		
OBMS.3	.73	.22	.53		
OBMS.4	.48	.49	.23		

x^2/df = 1.447, RMR = 0.024, CFI = 0.969, TLI = 0.963, RMSEA = 0.038

In terms of assessing convergent validity, that examines whether the respective indicators are measuring the construct they are supposed to measure, according to Hair et al. (2010), several methods are available to establish convergent validity, such as factor loadings (λ), average variance extracted (AVE) and, construct reliability (CR). Factor loadings should be significant and exceed 0.5 and ideally, 0.7 or higher.

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The average variance extracted (AVE) also should exceed 0.5. While CR value of .7 or greater suggests good reliability, CR values between .6 and .7 may be acceptable (Hair et al, 2010). As can be seen from Table 4.11 that all item factor loadings of the five factors exceeded the minimum of 0.5, except factor loading of INTS.2 (deal with inquiry and research) and OBMS.4 (leadership and make decisions) which were .49 and .48 respectively. The AVE for all scale items also exceeded 0.5 except for the organizational and business management skills (OBMS) scale, which is .49. Internal consistency of all factors was computed using construct reliability (CR). Table 4.11 also shows that the CR ranged from 0.87 to 0.91, meeting the recommended guidelines. Hence, convergent validity is supported for all core competencies measurement model except the organizational and business management skills (OBMS) scale. Further examination indicated that OBMS.4 (Leadership and make decisions) is a major source of lacking convergent validity, as its low λ (0.48) and low squared multiple correlation (R^2 = 0.23) contributes to the low AVE (0.49) for this construct.

Table 4.12

Correlations and Square of Correlation – Core Competencies Model

Construct Pairs	Correlation	Square of Correlation (SC)	Discriminant Validity
INTS <--> TFS	.381	0.145	SC < AVE
INTS <--> ICS	.237	0.056	SC < AVE
INTS <--> OBMS	.451	0.203	SC < AVE
INTS <--> PERS	.266	0.071	SC < AVE
TFS <--> ICS	.269	0.072	SC < AVE
TFS <--> OBMS	.357	0.127	SC < AVE
TFS <--> PERS	.317	0.100	SC < AVE
ICS <--> OBMS	.442	0.195	SC < AVE
ICS <--> PERS	.374	0.140	SC < AVE
OBMS <--> PERS	.367	0.135	SC < AVE

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With regard to discriminant validity, according to Hair et al. (2010), evidence of discriminant validity is provided when average variance extracted (AVE) for any two factors are higher than the squared of the correlation estimate between the two factors. As can be seen from Table 4.11, all average variance extracted (AVE) for the constructs are higher than their corresponding square of correlations shown in Table 4.12, indicating that discriminant validity is supported between all construct pairs of core competencies model.

In order to establish convergent validity for OBMS scale, and to improve the reliability and convergent validity of the measurement model of core competencies, and because of both items INTS2 and OBMS.4 have low factor loadings (λ = .49, .48) and, low squared multiple correlation (R^2 = .24, .23) respectively. Hence, these items were dropped from subsequent analysis. A confirmatory factor analysis is therefore performed again with the elimination of INTS2 and OBMS.4. The modified core competencies model which is depicted in Figure 4.2 indicated a good fit in indices model fit.

Table 4.13 shows the result of the First-Order CFA of modified CC model; the Chi-square results [χ^2 = 190.149; df = 125; p < .000] were statistically significant, which indicated a lack of absolute statistical model fit, another statistical index less sensitive to sample size, provided a good fit CMIN/DF = 1.521. In addition, the other indices showed a good fit too, such as RMR = 0.022, CFI = 0.970, TLI = 0.963, RMSEA = 0.041, and HI 90 of RMSEA = .53.

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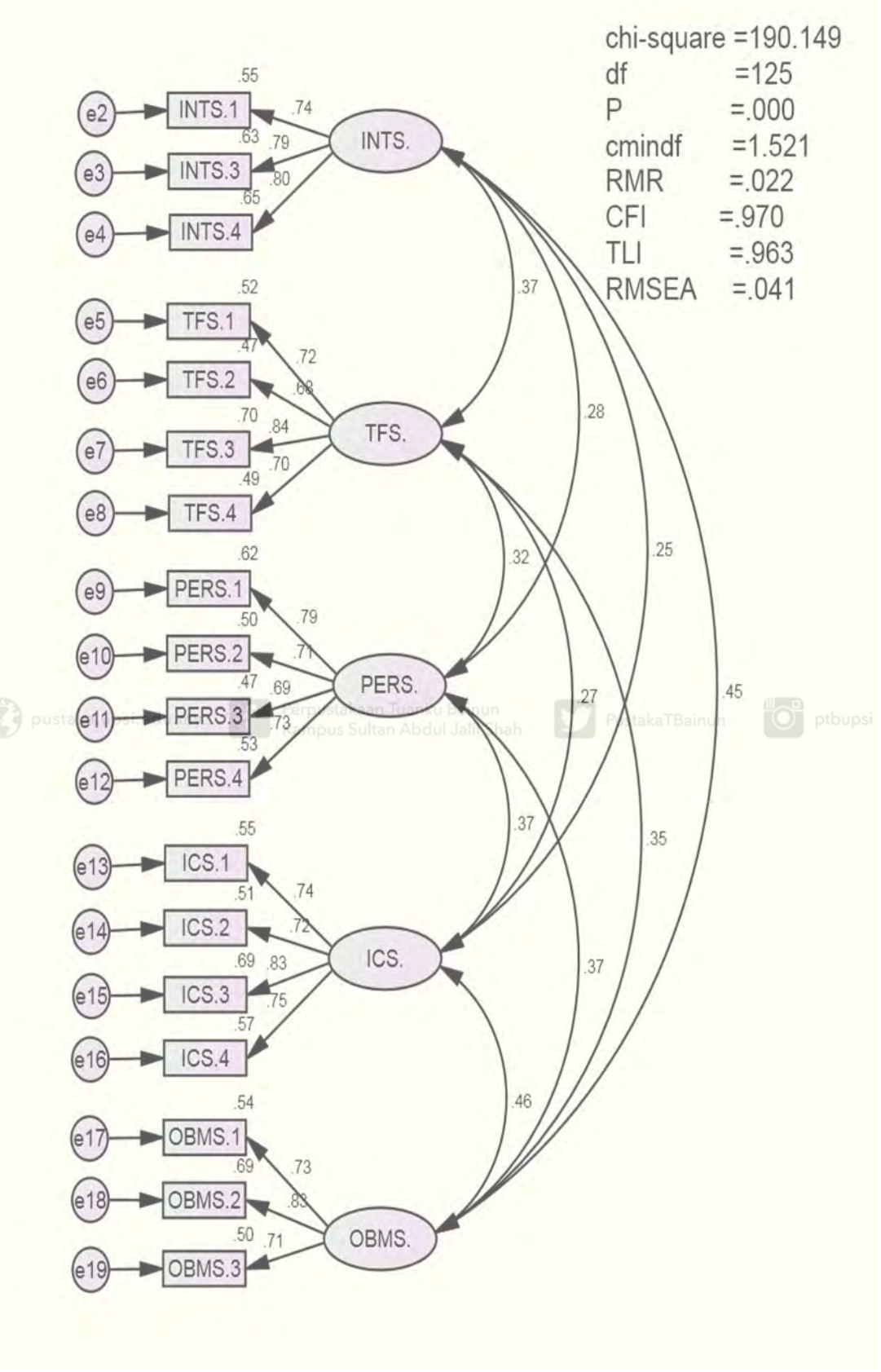


Figure 4.2 First-Order CFA of the Modified Core Competencies Model

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Table 4.13

First Order - CFA of Modified Core Competencies Model

Items	Loading	SE	R^2	AVE	CR
INTS.1	.74	.21	.55	.61	.90
INTS.3	.79	.20	.63		
INTS.4	.80	.19	.65		
TFS.1	.72	.28	.52	.54	.90
TFS.2	.68	.30	.47		
TFS.3	.84	.10	.70		
TFS.4	.70	.29	.49		
PERS.1	.79	.19	.62	.53	.90
PERS.2	.71	.24	.50		
PERS.3	.69	.22	.47		
PERS.4	.73	.24	.53		
ICS.1	.74	.26	.55	.58	.91
ICS.2	.72	.28	.51		
ICS.3	.83	.14	.69		
ICS.4	.75	.26	.57		
OBMS.1	.73	.27	.54	.58	.88
OBMS.2	.83	.19	.69		
OBMS.3	.71	.23	.50		
$x^2/df = 1.521$, RMR = 0.022, CFI = 0.970, TLI = 0.963, RMSEA = 0.041					

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In terms of assessing convergent validity, as can be seen from Table 4.13, all item factor loadings of the five factors exceeded the minimum of 0.5, and the AVE for all scale items also exceeded 0.5. Table 4.13 also shows that the CR ranged from 0.88 to 0.91, meeting the recommended guidelines. Hence, convergent validity is supported for all modified core competencies measurement model.

With regard to discriminant validity, according to Hair et al. (2010), evidence of discriminant validity is provided when average variance extracted (AVE) for any two factors are higher than the squared of the correlation estimate between the two factors. As can be seen from Table 4.13, all average variance extracted (AVE) for the constructs are higher than their corresponding square of correlations shown in Table 4.14 indicating that discriminant validity is supported between all construct pairs of core competencies model.

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Table 4.14

Correlations and Square of Correlation – Modified CC Model

Construct Pairs	Correlation	Square of Correlation (SC)	Discriminant Validity
INTS <--> TFS	.368	0.135	SC < AVE
INTS <--> ICS	.245	0.060	SC < AVE
INTS <--> OBMS	.449	0.202	SC < AVE
INTS <--> PERS	.284	0.081	SC < AVE
TFS <--> ICS	.269	0.072	SC < AVE
TFS <--> OBMS	.353	0.127	SC < AVE
TFS <--> PERS	.317	0.125	SC < AVE
ICS <--> OBMS	.460	0.212	SC < AVE
ICS <--> PERS	.374	0.140	SC < AVE
OBMS <--> PERS	.365	0.133	SC < AVE

After testing for multi-dimensionality of core competencies (CC) model and, since the hypothesis of the study was based on the second order factor (CC comprises of INTS, TFS, PERS, ICS and, OBMS) instead of lower order factor (INTS, TFS, PERS, ICS and, OBMS), a second order CFA for core competencies (CC) was carried out. The model is graphically illustrated in Figure 4.3, and the results are shown in Table 4.15.

Second order CFA was conducted to ensure the multi-dimensionality of core competencies (CC) model. This model assumes that the paths from higher order factor (CC) to INTS, TFS, PERS, ICS, and OBMS are constrained to have the same estimated parameter. In other words, Intellectual Skills (INTS), Technical and Functional Skills (TFS), Personal Skills (PERS), Interpersonal and Communication skills (ICS), Organizational and Business Management Skills (OBMS) have the same contribution to the presence of higher order factor of core competencies (CC).

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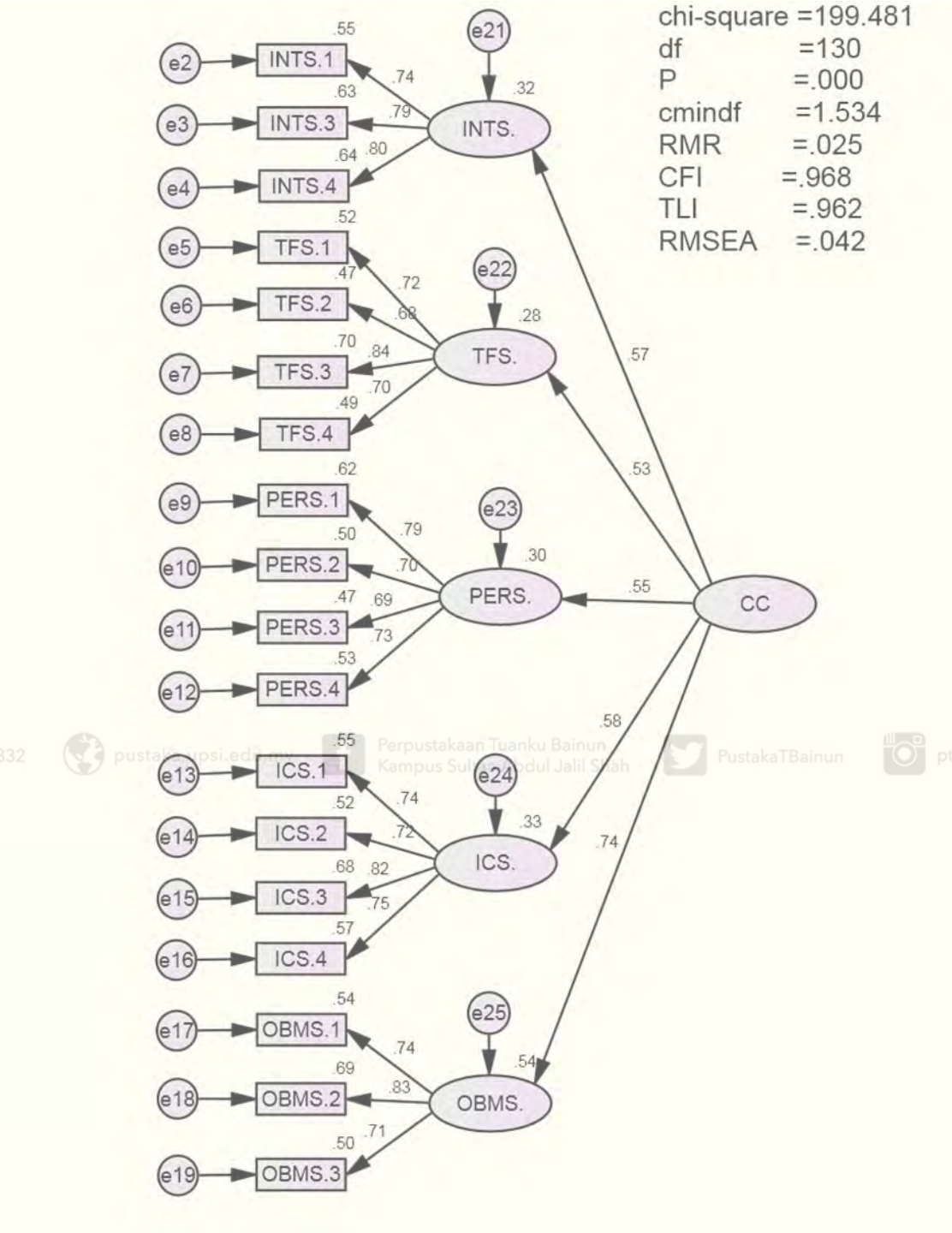


Figure 4.3. Second-Order CFA of the Core Competencies (CC) Model

The second order CFA for core competencies (CC) model resulted in acceptable levels of fit as shown in Table 4.15. While the Chi-square results [χ^2 = 199.481; df = 130; p < .000] were statistically significant, which indicated a lack of absolute statistical model fit, the other indices showed a good fit too, such as χ^2/df =

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1.534; RMR = 0.025; CFI = 0.968; TLI= 0.962 and; RMSEA = 0.042, and HI 90 of RMSEA = .053. All factor loading (λ) are also statistically significant at p<.001, providing evidence of convergent validity. Moreover, the squared multiple correlations of most scale items are considerably large.

Table 4.15

Second Order - CFA of Core Competencies Model

Items	Loading	R^2
INTS.1	.74	.55
INTS.3	.79	.63
INTS.4	.80	.64
TFS.1	.72	.52
TFS.2	.68	.47
TFS.3	.84	.70
TFS.4	.70	.49
PERS.1	.79	.62
PERS.2	.70	.50
PERS.3	.69	.47
PERS.4	.73	.53
ICS.1	.74	.55
ICS.2	.72	.52
ICS.3	.82	.68
ICS.4	.75	.57
OBMS.1	.74	.54
OBMS.2	.83	.69
OBMS.3	.71	.50
Higher- Order		
INTS	.57	.32
TFS	.53	.28
PERS	.55	.30
ICS	.58	.33
OBMS	.74	.54
x^2/df = 1.534, RMR = 0.025, CFI = 0.968, TLI = 0.962, RMSEA = 0.042		

The standardized loading (λ) depicted in the Table 4.15 also indicated that the organizational and Business Management Skills (OBMS) has the highest contribution to the second-order factor of core competencies (λ = .74) followed by Interpersonal and Communication skills (ICS), and Intellectual Skills (INTS) (λ = .58 and λ = .57) respectively. Furthermore, the squared multiple correlations for OBMS was the highest (R^2 = .54) among other latent variables. These finding suggest the high

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explanatory of Organizational and Business Management Skills in the presence of core competencies.

4.6.2 Confirmatory Factor Analysis for Teaching Practices (TP)

Confirmatory factor analysis (CFA) was performed to test the measurement model of the teaching practices (TP) scale. Confirmatory factor analysis for teaching practices (TP) was conducted with Seminars and discussions (SD), Cooperative learning and group activities (CLG) and, Internet and electronic means (IEM) as latent or unobserved variables. The hypothesized First-Order CFA model for TP is illustrated in Figure 4.4. While latent variables are shown in ellipses, the observed variables are shown in rectangles and, error terms are shown in circles.

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Confirmatory factor analysis (CFA) was conducted on three-factor teaching practices (TP) model to estimate the relationship between latent variables and related items. Table 4.16 shows the result of the First-Order CFA of TP model. Although, the Chi-square results [$\chi^2 = 54.143$; $df = 32$; $p < .009$] were statistically significant, which indicated a lack of absolute statistical model fit, another statistical index less sensitive to sample size, provided a good fit (CMIN/DF = 1.692). In addition, the other indices showed a good fit too, such as RMR = 0.023; CFI = 0.973; TLI= 0.962 and; RMSEA = 0.048, and HI 90 of RMSEA = .069.

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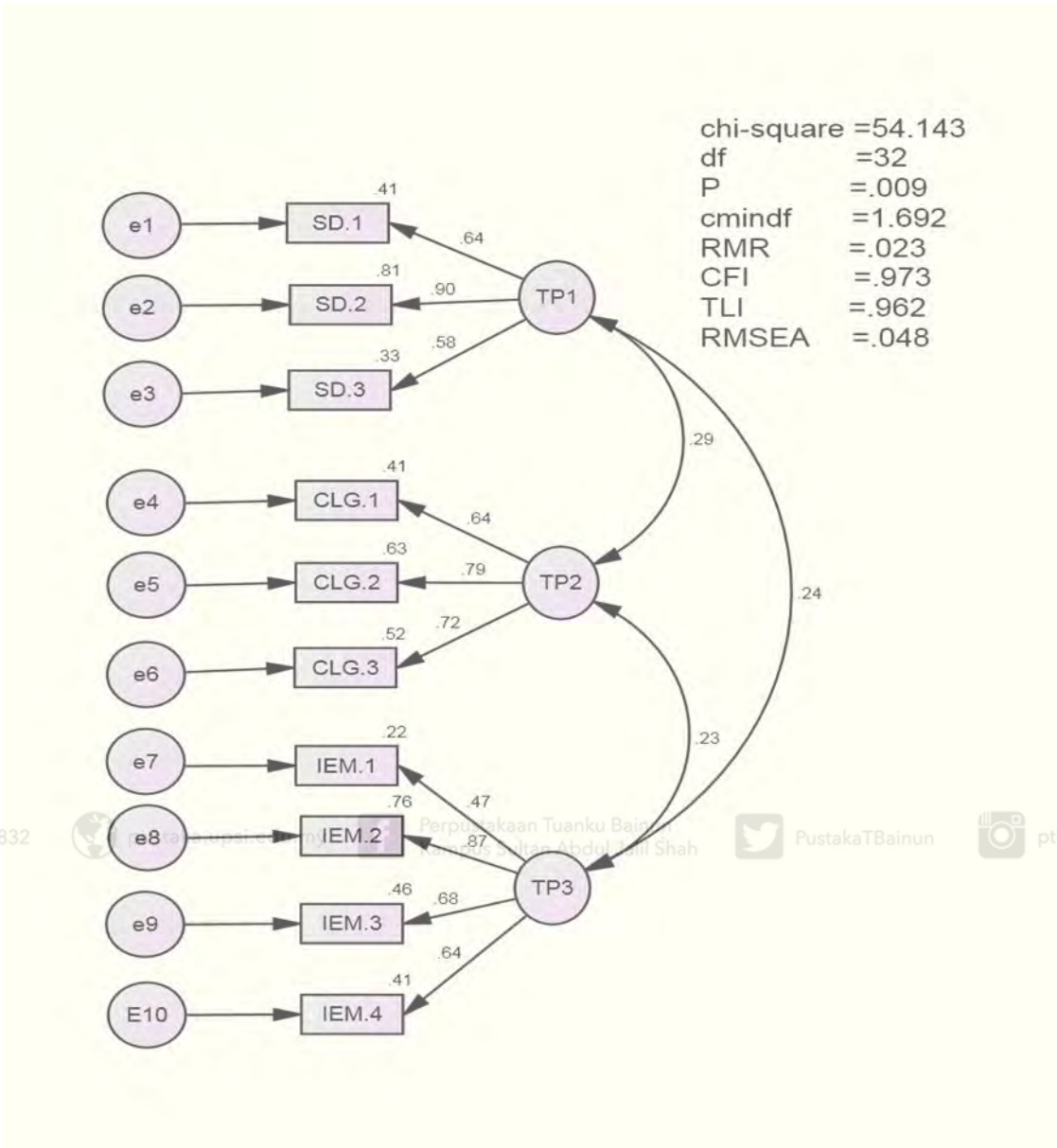


Figure 4.4. First-Order CFA of the Teaching Practices (TP) Model

In terms of assessing convergent validity, Table 4.16 indicates that all item factor loadings of the three factors exceeded the minimum of 0.5, except for IEM.1 (internet) which was (λ = .47). The AVE for all scale items also exceeded 0.5, except for the internet and electronic means (IEM) scale, which was .46. Internal consistency of all factors was computed using construct reliability (CR). Table 4.16 also shows that the CR ranged from 0.86 to 0.88, meeting the recommended guidelines. Hence,

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convergent validity is supported for all teaching practices measurement model except the internet and electronic means (IEM) scale. Further examination indicated that IEM.1 (Teaching videos & CD discs) is a major source of lacking convergent validity, as it has the lowest factor loading ($\lambda = 0.47$), and the lowest squared multiple correlation ($R^2 = 0.21$) contributing to the low AVE (0.49) for this construct. In addition, since standardized residual covariances (SRC) with values > 2.58 were considered to be large and could be eliminated (Byrne, 2010), standardized residual covariances (SRC) for this model were examined, and the SRC (2.770) associated with item IEM.1 was found exceeding the critical score (2.58). This issue may also result in the failure to support convergent validity. Hence, in order to establish convergent validity for IEM scale, the item IEM.1 was dropped from subsequent analysis. After removing the IEM.1, the AVE of IEM scale improved from .46 to .54.

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Table 4.16

First Order - CFA of Teaching Practices Model

Items	Loading	SE	R^2	AVE	CR
SD.1	.64	.26	.41	.52	.88
SD.2	.90	.11	.81		
SD.3	.58	.22	.33		
CLG.1	.64	.30	.41	.52	.86
CLG.2	.79	.17	.63		
CLG.3	.72	.26	.52		
IEM.1	.47	.31	.22	.46	.87
IEM.2	.87	.14	.76		
IEM.3	.68	.18	.46		
IEM.4	.64	.40	.41		
$x^2/df = 1.692$, RMR = 0.023, CFI = 0.973, TLI = 0.962, RMSEA = 0.048					

With regard to discriminant validity, according to Hair et al. (2010), evidence of discriminant validity is provided when average variance extracted (AVE) for any two factors are higher than the squared of the correlation estimate between the two

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factors. As can be seen from Table 4.16 all average variance extracted (AVE) for the constructs were higher than their corresponding square of correlations shown in Table 4.17, indicating that there are no problems with discriminant validity between all construct pairs of teaching practices model.

Table 4.17

Correlations and Square of Correlation – Teaching Practices Model

Construct Pairs	Correlation	Square of Correlation (SC)	AVE	Discriminant Validity
SD <--> CLG	.295	0.087	.52	SC < AVE
SD <--> IEM	.235	0.056	.52	SC < AVE
CLG <-->IEM	.236	0.071	.54	SC < AVE

Upon the elimination of IEM1 (Teaching videos & CD discs), a confirmatory factor analysis is performed again on TP measurement model. The modified teaching practices measurement model which is depicted in Figure 4.5 indicated a good fit with deletion of IEM1. Table 4.18 shows the result of the First-Order CFA of modified TP model; Chi-square results [χ^2 = 35.188; df = 24; p < .066] were statistically insignificant, which indicated a good absolute statistical model fit, the other indices also showed a good fit, such as χ^2/df = 1.466; RMR = 0.019; CFI = 0.985; TLI= 0.977 and; RMSEA = 0.039, and HI 90 of RMSEA = .065.

Table 4.18

First Order - CFA of Modified Teaching Practices Model

Items	Loading	SE	R^2	AVE	CR
SD.1	.64	.26	.41	.52	.88
SD.2	.90	.11	.81		
SD.3	.58	.22	.33		
CLG.1	.64	.30	.41	.52	.86
CLG.2	.79	.17	.63		
CLG.3	.72	.26	.52		
IEM.2	.86	.15	.74	.54	.87
IEM.3	.69	.18	.47		
IEM.4	.65	.40	.42		

x^2/df = 1.466, RMR = 0.019, CFI = 0.985, TLI = 0.977, RMSEA = 0.039

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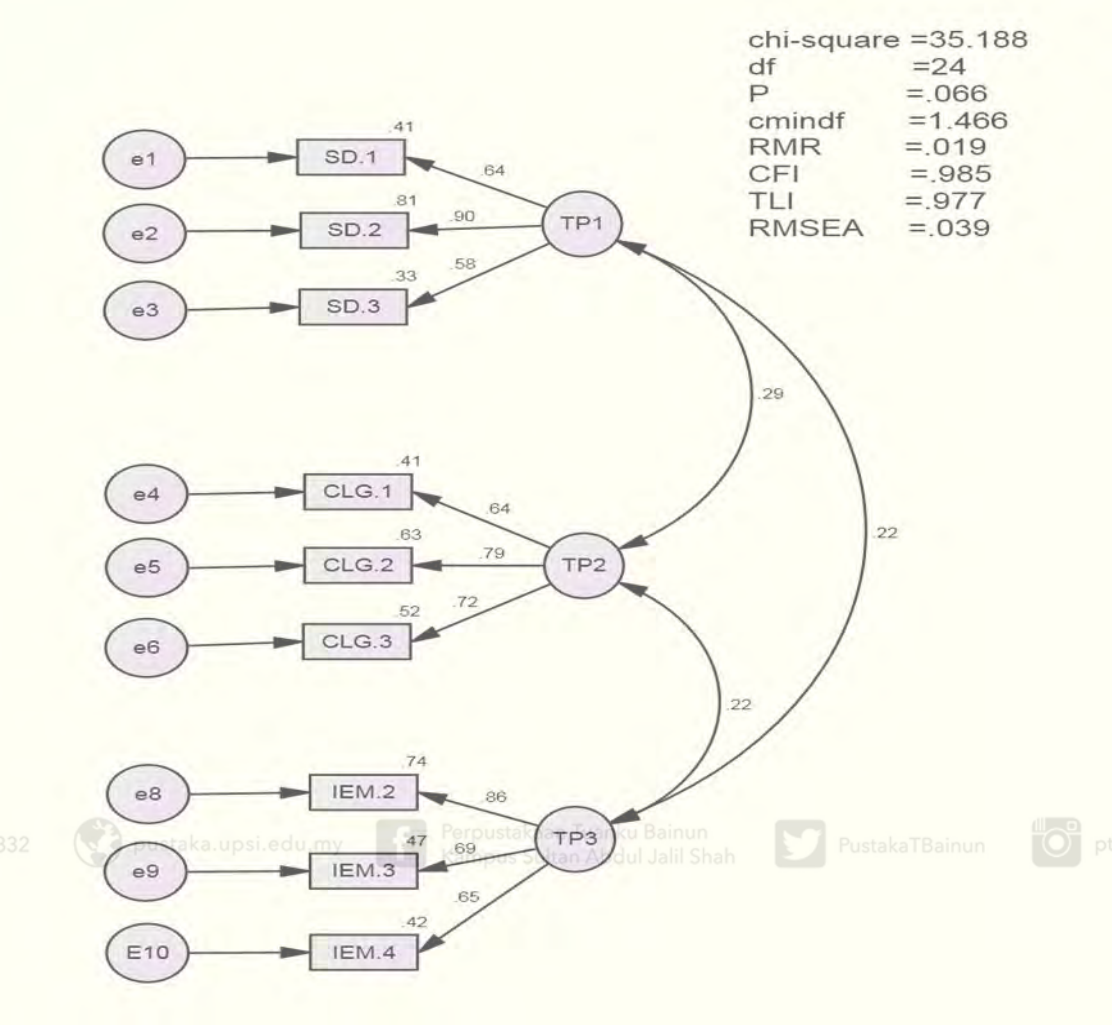


Figure 4.5. First-Order CFA of the Modified Teaching Practices Model

In terms of assessing convergent validity, Table 4.18 indicated that all item factor loadings of the three factors exceeded the minimum of 0.5; in addition, the AVE for all scale items also exceeded 0.5. Internal consistency of all factors was computed using construct reliability (CR). Table 4.18 also shows that CR of Seminars and discussions (SD), Cooperative learning and group activities (CLG) and, Internet and electronic means (IEM) scales were 0.88, 0.86 0.87 respectively, meeting the recommended guidelines. Therefore, convergent validity is supported for modified teaching practices measurement model.

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With regard to discriminant validity, according to Hair et al. (2010), evidence of discriminant validity is provided when average variance extracted (AVE) for any two factors are higher than the squared of the correlation estimate between the two factors. As can be seen from Table 4.18 all average variance extracted (AVE) for the constructs were higher than their corresponding square of correlations shown in Table 4.19 indicating that discriminant validity is supported between all construct pairs of teaching practices model.

Table 4.19

Correlations and Square of Correlation – Modified Teaching Practices Model

Construct Pairs	Correlation	Square of Correlation (SC)	AVE	Discriminant Validity
SD <--> CLG	.294	0.086	.52	SC < AVE
SD <--> IEM	.217	0.047	.52	SC < AVE
CLG <-->IEM	.222	0.049	.54	SC < AVE

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After testing for multi-dimensionality of teaching practices (TP) model and, since the hypothesis of the study was based on the second order factor teaching practices (TP) which comprises of Seminars and discussions (SD), Cooperative learning and group activities (CLG) and, Internet and electronic means (IEM) instead of lower order factor. Accordingly, second order CFA for teaching practices (TP) was carried out.

Second order CFA was conducted to ensure the multi-dimensionality of teaching practices (TP) model. A schematic representation of this model is illustrated in Figure 4.6. This model assumes that the paths from second order factor TP to DS, CLG, and, IEM are constrained to have the same estimated parameter. In other words, Seminars and discussions (SD), Cooperative learning and group activities (CLG) and,

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Internet and electronic means (IEM) have the same contribution to the presence of second order factor of teaching practices (TP).

With this regard, the model resulted in acceptable levels of fit as shown in Table 4.20. Chi-square results [χ^2 = 35.188; df = 24; p < .066] were statistically insignificant, which indicated a good absolute statistical model fit, another statistical index less sensitive to sample size, also provided a good fit (CMIN/DF = 1.466). In addition, the other indices showed a good fit too, such as RMR = 0.019; CFI = 0.985; TLI= 0.977 and; RMSEA = 0.039, and HI 90 of RMSEA = .065. All factor loadings (λ) are also statistically significant at p<.001, ranging from .58 to .90, providing evidence of convergent validity. Moreover, the squared multiple correlations of most scale items are considerably large, ranging from .41 to .81. No post-hoc modifications were conducted because of the good fit of the data to the model.

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Table 4.20

Second Order – CFA of Modified Teaching Practices Model

Items	Loading	R^2
SD.1	.64	.41
SD.2	.90	.81
SD.3	.58	.33
CLG.1	.64	.41
CLG.2	.79	.63
CLG.3	.72	.52
IEM.2	.86	.74
IEM.3	.69	.47
IEM.4	.65	.42
Higher- Order		
SD	.55	.30
CLG	.54	.29
IEM	.41	.16
x^2/df = 1.466, RMR = 0.019, CFI = 0.985, TLI = 0.977, RMSEA = 0.039		

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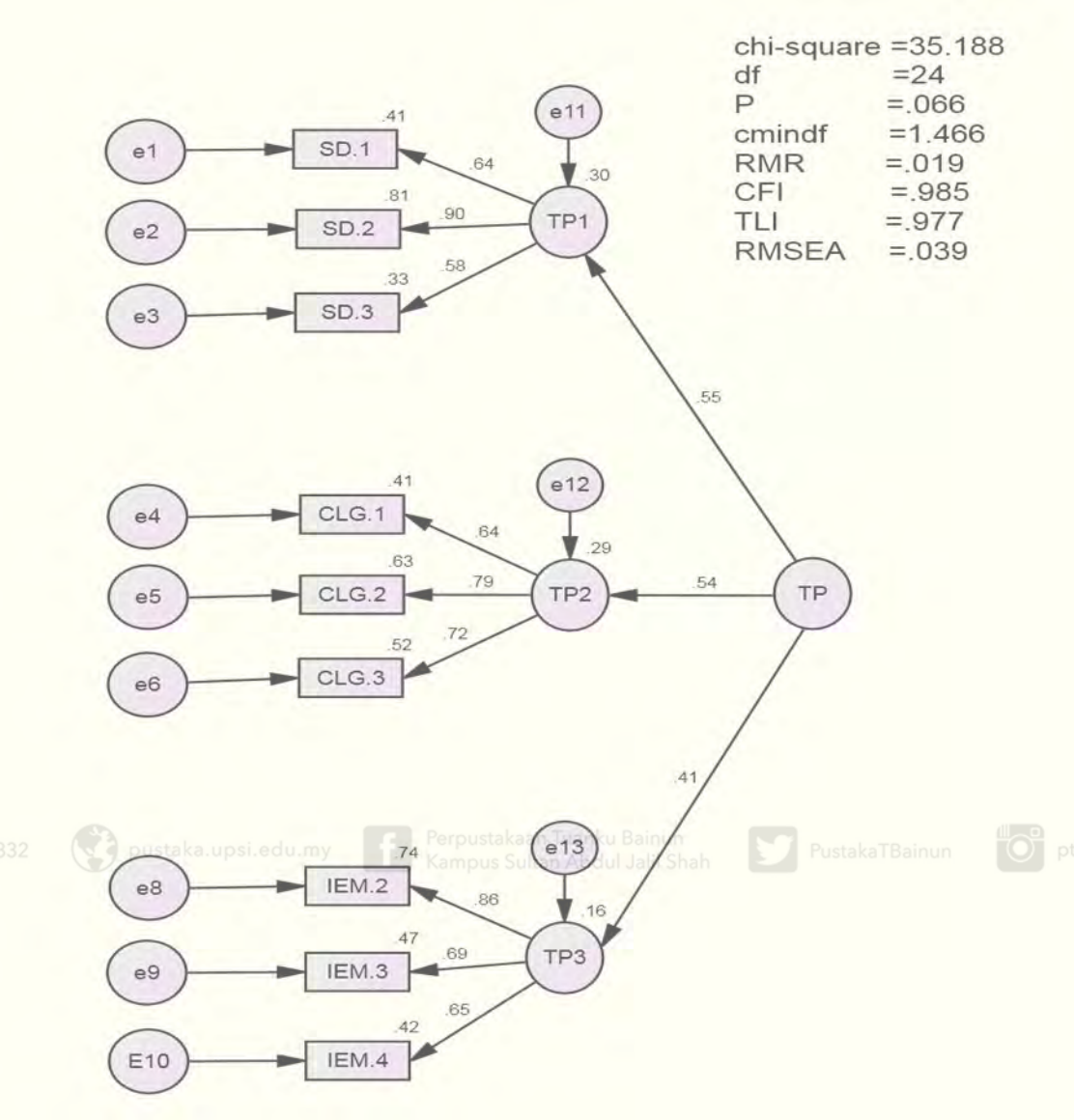


Figure 4.6. Second-Order CFA of the Modified Teaching Practices Model

The standardized loading depicted in the Table 4.20 also indicated that Seminars and discussions (SD) has the highest contribution to the second-order factor of core competencies (λ = .55) followed by cooperative learning and group activities (CLG) (λ = .54). Furthermore, the squared multiple correlations for SD are the highest (R^2 = .30) compared to internet and electronic means (IEM), which has the lowest one (R^2 = .16). These finding suggest the high explanatory of seminars and discussions in the presence of core competencies.

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4.6.3 Confirmatory Factor Analysis for Teaching Resources (TR)

Confirmatory factor analysis (CFA) was performed to test the unidimensionality of the teaching resources (TR) variable with eight items. The hypothesized model for TR is illustrated in Figure 4.7. While latent variable is shown in ellipse, the observed variables are shown in rectangles and, error terms are shown in circles.

CFA was conducted on unidimensional teaching resources (TR) model to estimate the relationship between latent variable and related items. Table 4.21 shows the result of CFA of TR model. Although, the Chi-square results [$\chi^2 = 61.487$; df = 20; $p < .000$] were statistically significant, which indicated a lack of absolute statistical model fit, another statistical index less sensitive to sample size, did not provide an adequate fit (CMIN/DF = 3.074). In addition, some other indices showed good fit, such as RMR = 0.016; CFI = 0.981; and TLI= 0.974. Also one other index did not indicate an acceptable data-model fit (RMSEA = 0.082, and HI 90 of RMSEA = .106). Therefore, the fit indices were on the edge of an adequate fit at best. For these reasons, and in order to improve the measurement model fit, some post-hoc modifications were conducted.

Table 4.21
CFA of Teaching Resources Model

Items	Loading	SE	R^2	AVE	CR
TR.1	.88	.17	.78	.72	.95
TR.2	.81	.24	.65		
TR.3	.87	.14	.76		
TR.4	.86	.20	.75		
TR.5	.83	.24	.69		
TR.6	.85	.21	.72		
TR.7	.88	.20	.77		
TR.8	.81	.36	.66		
= x^2/df = 3.074, RMR = 0.016, CFI = 0.981, TLI = 0.974, RMSEA = 0.082					

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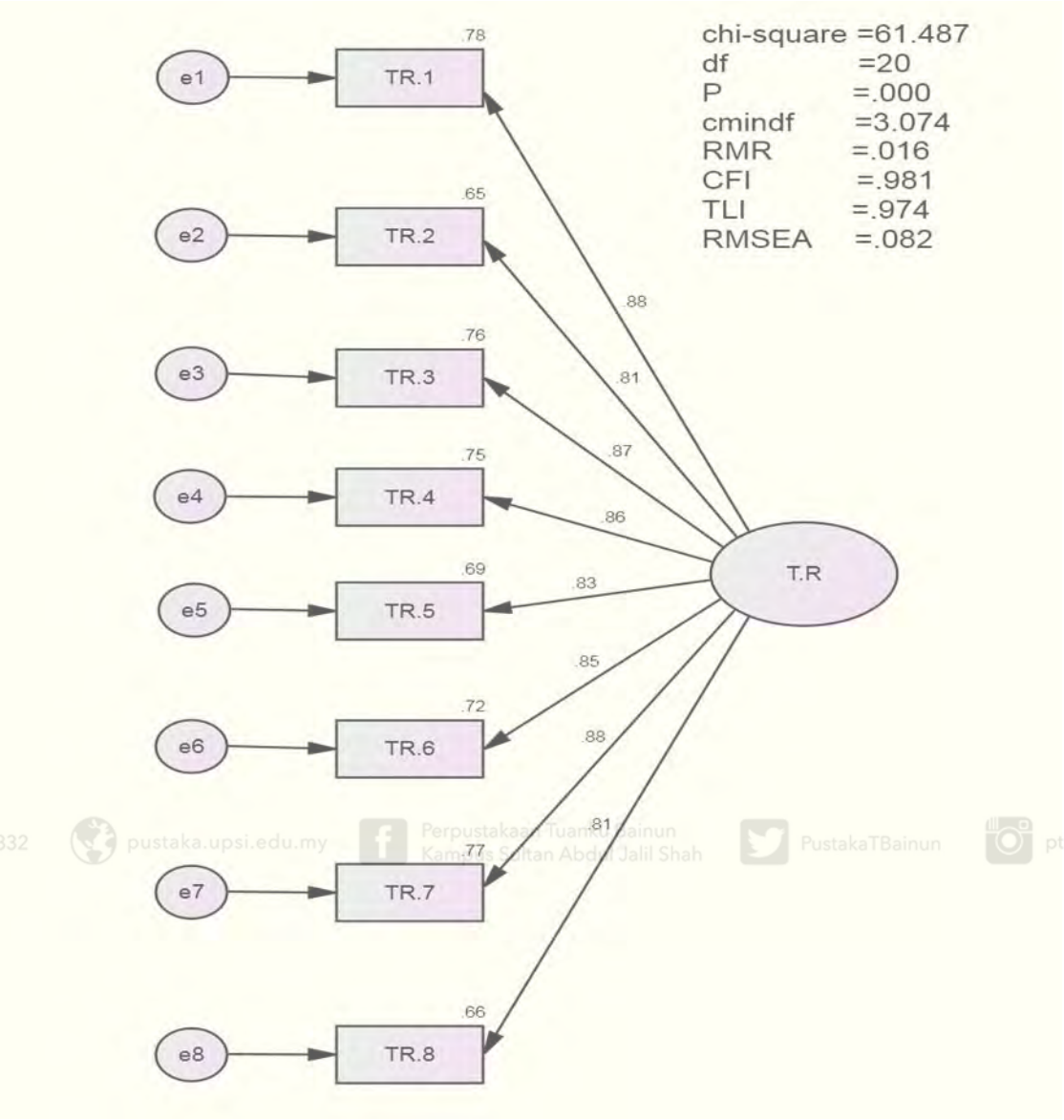


Figure 4.7. CFA of the Teaching Resources (TR) Model

The researcher used modification indices and theoretical consistency to adjust the model by removing item TR4 (Internet). The reason for removing this item is that, this item shared covariance on both TR3 (Audio/visual equipments) and TR7 (Appropriate classrooms) with large modification indices (M.I. = 14.955 and M.I. = 11.093). A confirmatory factor analysis is therefore performed again with the elimination of TR4 (Internet). The modified teaching resources model which is depicted in Figure 4.5 indicated a good fit in indices model fit with deletion of TR4.

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As shown in Table 4.22 the modified TR model resulted in a good fit. Although, the Chi-square results [χ^2 = 29.167; df = 14; p < .010] were statistically significant, which indicated a lack of absolute statistical model fit, another statistical index less sensitive to sample size, provided an adequate fit (CMIN/DF = 2.083). In addition, the other indices showed a good fit too, such as RMR = 0.012; CFI = 0.992; TLI= 0.988 and; RMSEA = 0.060, and HI 90 of RMSEA = .090.

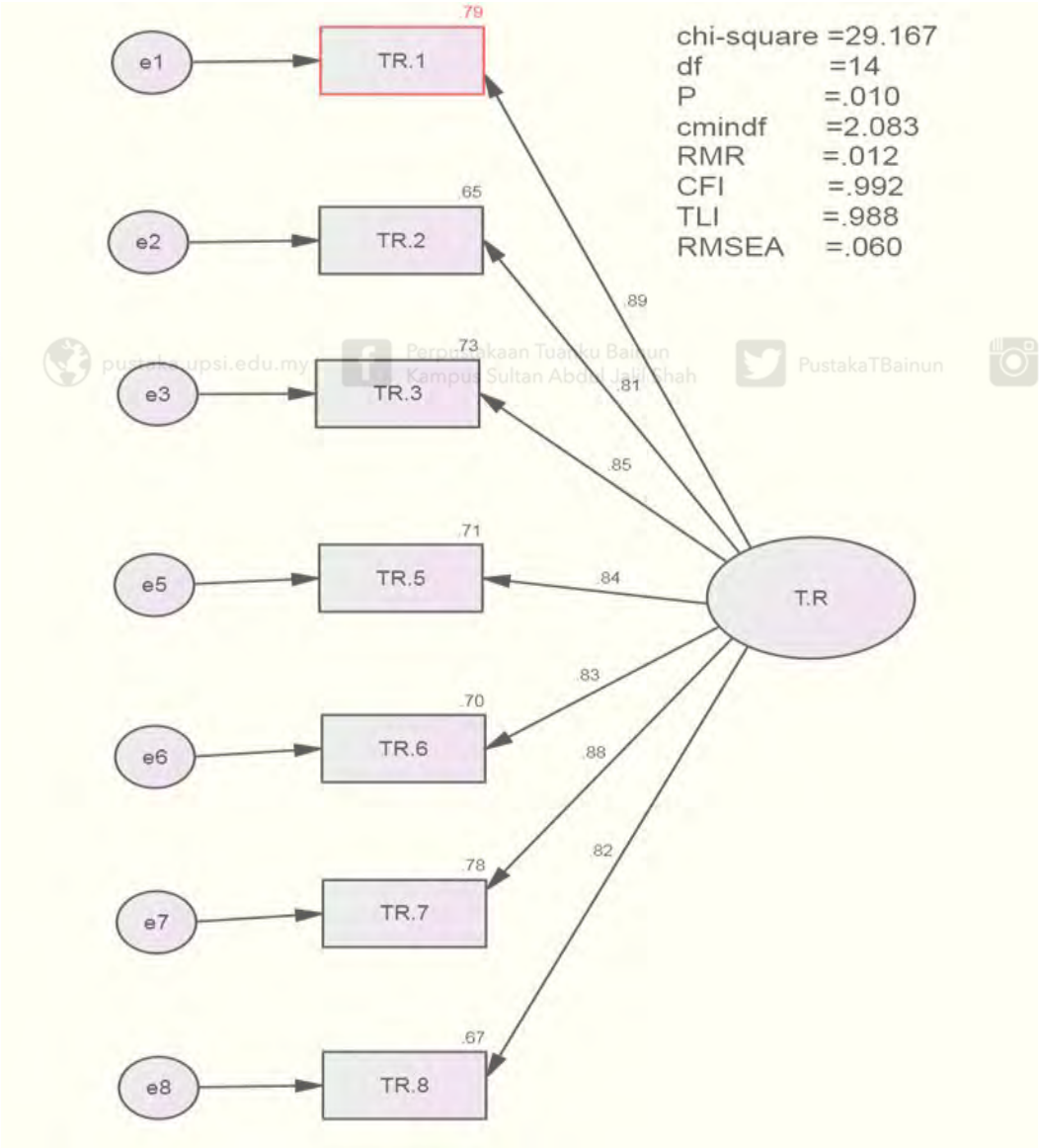


Figure 4.8. CFA of Modified Teaching Resources (TR) Model

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Table 4.22

CFA of Modified Teaching Resources Model

Items	Loading	SE	R^2	AVE	CR
TR.1	.89	.17	.79	.72	.95
TR.2	.81	.24	.65		
TR.3	.85	.14	.73		
TR.5	.84	.24	.71		
TR.6	.83	.21	.70		
TR.7	.88	.20	.78		
TR.8	.82	.36	.67		
Modified Model = $x^2/df = 2.083$, RMR = 0.012, CFI = 0.992, TLI = 0.988, RMSEA = 0.060					

Modified Model = Original Model without R4.

In terms of assessing convergent validity, Table 4.22 indicates that all item factor loadings were statistically significant ranging from .81 to .89, exceeding the minimum of 0.5. The AVE for the scale items was .72, it also exceeded minimum of 0.5. Internal consistency of all items was computed using construct reliability (CR); it was 0.95 exceeding the recommended guidelines. Hence, convergent validity and discriminant validity were assured for modified teaching resources measurement model.

The standardized loadings depicted in Table 4.22 also indicated that TR1 (λ = .89) and TR7 (λ = .88) have the highest contribution to the latent variable of teaching resources (TR). Moreover, the squared multiple correlations of all scale items are considerably large ranging from .65 to .79.

4.6.4 Confirmatory Factor Analysis for Teaching Capabilities (TC)

Confirmatory factor analysis (CFA) was performed to test the measurement model of the teaching capabilities (TC) scale. Confirmatory factor analysis for teaching

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capabilities (TC) was conducted with Question and discussions Skills (QDS), Feedback and Responsiveness Skills (FRS) and, Evaluation and Examination Skills (EES) as latent or unobserved variables. The hypothesized First-Order CFA model for TC is displayed in Figure 4.9. While latent variables are shown in ellipses, the observed variables are shown in rectangles and, error terms are shown in circles.

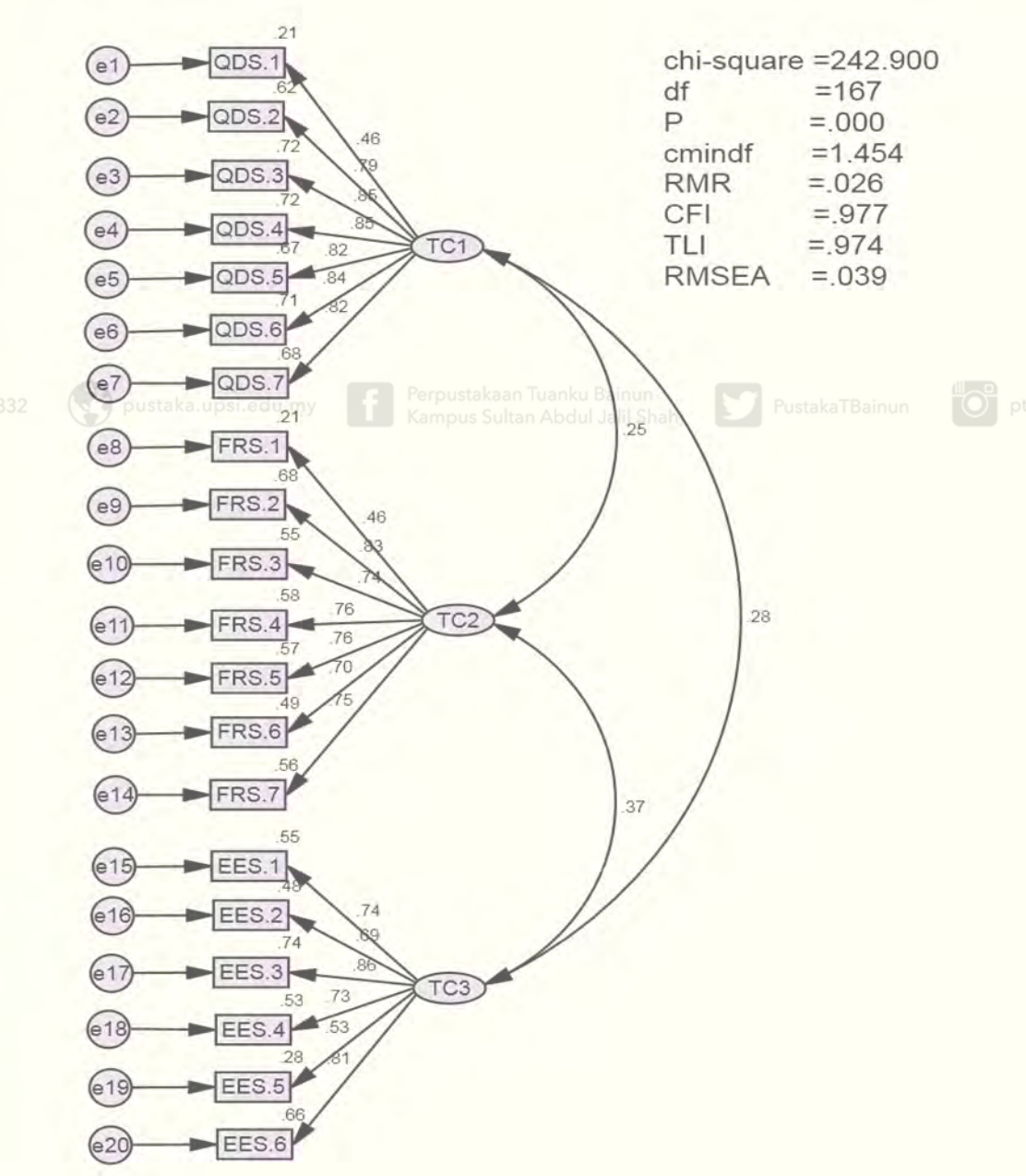


Figure 4.9. First-Order CFA of the Teaching Capabilities (TC) Model

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Confirmatory factor analysis (CFA) was conducted on three-factor teaching capabilities (TC) model to estimate the relationship between latent variables and related items. Table 4.23 shows the result of the First-Order CFA of TC model. While, the Chi-square results [$\chi^2 = 242.900$; df = 167; $p < .000$] were statistically significant, which indicated a lack of absolute statistical model fit, another statistical index less sensitive to sample size, provided a good fit (CMIN/DF = 1.454). In addition, the other indices showed a good fit too, such as RMR = 0.026; CFI = 0.977; TLI= 0.974 and; RMSEA = 0.039, and HI 90 of RMSEA = .049.

Table 4.23

First-Order CFA of Teaching Capabilities Model

Items	Loading (λ)	SE	R^2	AVE	CR
QDS.1	.46	.45	.21	.62	.95
QDS.2	.79	.25	.62		
QDS.3	.85	.13	.72		
QDS.4	.85	.18	.72		
QDS.5	.82	.27	.67		
QDS.6	.84	.23	.71		
QDS.7	.82	.20	.68		
FRS.1	.46	.79	.21	.52	.92
FRS.2	.83	.27	.68		
FRS.3	.74	.40	.55		
FRS.4	.76	.30	.58		
FRS.5	.76	.19	.57		
FRS.6	.70	.25	.49		
FRS.7	.75	.22	.56		
EES.1	.74	.33	.55	.54	.92
EES.2	.69	.39	.48		
EES.3	.86	.22	.74		
EES.4	.73	.28	.53		
EES.5	.53	.35	.28		
EES.6	.81	.17	.66		
x^2/df = 1.454, RMR = 0.026, CFI = 0.977, TLI = 0.974, RMSEA = 0.039					

In terms of assessing convergent validity, based on measurement model of teaching capabilities described above, all factor loadings for most scale items (shown

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in Table 4.23) meet the requirement for convergent validity, except for items QDS.1 and FRS.1 as both of them exceptionally have the lowest factor loading ($\lambda = .46$), and the lowest squared multiple correlation ($R^2 = .21$) as well. Convergent validity thus, was not supported for QDS and FRS scales.

In order to establish convergent validity for QDS and FRS scales, and to improve the reliability and convergent validity of the measurement model of teaching capabilities, and because of both items QDS.1 and FRS.1 have low factor loading and low squared multiple correlation ($\lambda = .46$; $R^2 = .21$). Hence, these items were dropped from subsequent analysis, and confirmatory factor analysis is therefore performed again with the elimination of items QDS.1 and FRS.1. The modified teaching capabilities model which is depicted in Figure 4.10 indicated good fit indices.

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As shown in Table 4.24 the modified TC model resulted in a good fit. While, the Chi-square results [$\chi^2 = 201.562$; $df = 132$; $p < .000$] were statistically significant, which indicated a lack of absolute statistical model fit, another statistical index less sensitive to sample size, provided a good fit (CMIN/DF = 1.527). In addition, the other indices showed a good fit too, such as RMR = 0.024; CFI = 0.978; TLI= 0.974 and; RMSEA = 0.042, and HI 90 of RMSEA = .053.

In terms of assessing convergent validity, Table 4.24 indicated that all factor loading estimates are statistically significant and exceeded the minimum of 0.5, and the AVE for all scale items also exceeded 0.5. Internal consistency of all factors was computed using construct reliability (CR). As can be seen from Table 4.24 there is some improvement in the reliability of question and discussions skills (QDS) scale

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(CR = 0.96) and feedback and responsiveness skills (FRS) scale (CR = 0.94) in this modified TC model compared to the original TC model, exceeding the recommended guidelines. Hence, convergent validity was assured for modified teaching capabilities measurement model.

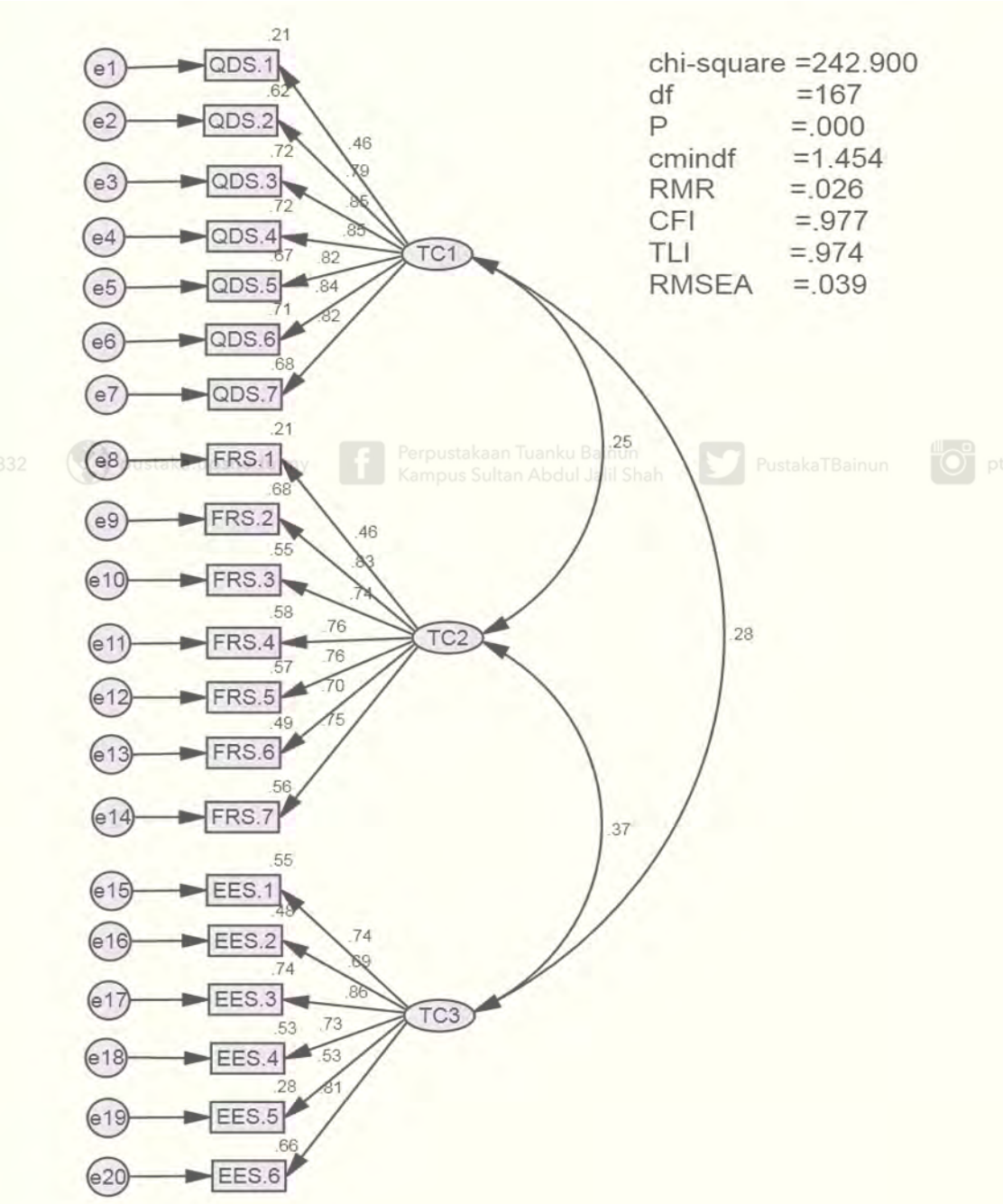


Figure 4.10. First-Order CFA of Modified Teaching Capabilities (TC) Model

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Table 4.24
First Order - CFA of Modified Teaching Capabilities Model

Items	Loading (λ)	SE	R^2	AVE	CR
QDS.2	.79	.25	.62	.69	.96
QDS.3	.85	.13	.72		
QDS.4	.85	.18	.72		
QDS.5	.82	.27	.67		
QDS.6	.84	.23	.71		
QDS.7	.82	.20	.67		
FRS.2	.83	.27	.68	.57	.94
FRS.3	.74	.40	.55		
FRS.4	.76	.30	.58		
FRS.5	.76	.19	.57		
FRS.6	.70	.25	.49		
FRS.7	.75	.22	.56		
EES.1	.74	.33	.54	.54	.92
EES.2	.69	.39	.48		
EES.3	.86	.22	.74		
EES.4	.73	.28	.53		
EES.5	.53	.35	.28		
EES.6	.81	.17	.66		

$x^2/df = 1.527$, RMR = 0.024, CFI = 0.978, TLI = 0.974, RMSEA = 0.042

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With regard to discriminant validity, according to Hair et al. (2010), evidence of discriminant validity is provided (supported) when average variance extracted (AVE) for any two factors are higher than the squared of the correlation estimate between the two factors. As can be seen from Table 4.24 all average variance extracted (AVE) for the constructs were higher than their corresponding square of correlations shown in Table 4.25 indicating that there are no problems with discriminant validity. Therefore, discriminant validity is supported between all construct pairs of teaching capabilities model.

Table 4.25
Correlations and Square of Correlation –Teaching Capabilities Constructs

Construct Pairs	Correlation	Square of Correlation (SC)	AVE	Discriminant Validity
QDS<--> FRS	.250	0.063	.69	SC < AVE
QDS<--> EES	.283	0.080	.57	SC < AVE
FRS <--> EES	.366	0.134	.54	SC < AVE

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After testing for multi-dimensionality of teaching capabilities (TC) model and, since the hypothesis of the study was based on the second order factor teaching capabilities (TC) which comprises of Question and discussions Skills (QDS), Feedback and Responsiveness Skills (FRS) and, Evaluation and Examination Skills (EES) instead of lower order factor. Accordingly, second order CFA for teaching capabilities (TC) was carried out.

Second order CFA was conducted to ensure the multi-dimensionality of teaching capabilities (TC) model as illustrated in Figure4.11. This model assumes that the paths from higher order factor (TC) to QDS, FRS, and, EES are constrained to have the same estimated parameter. In other words, Question and discussions Skills (QDS), Feedback and Responsiveness Skills (FRS) and, Evaluation and Examination Skills (EES) have the same contribution to the presence of higher order factor of teaching capabilities (TC). Table 4.26 shows the results of Second-Order CFA of Teaching Capabilities model.

As shown in Table 4.26, the Second-Order CFA of Teaching Capabilities model yielded the same acceptable levels of fit in modified first-order TC model. While Chi-square results [χ^2 = 201.562; df = 132; p < .000] were statistically significant, which indicated a lack of an absolute statistical model fit, the other indices showed a good fit, such as χ^2/ df = 1.527; RMR = 0.024; CFI = 0.978; TLI = 0.974 and; RMSEA = 0.042, and HI 90 of RMSEA = .053. All factor loadings (λ) are also statistically significant and exceeded the minimum of 0.5, providing evidence of convergent validity. Moreover, the squared multiple correlations of most scale items

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are considerably large. No post-hoc modifications were conducted because of the good fit of the data to the model.

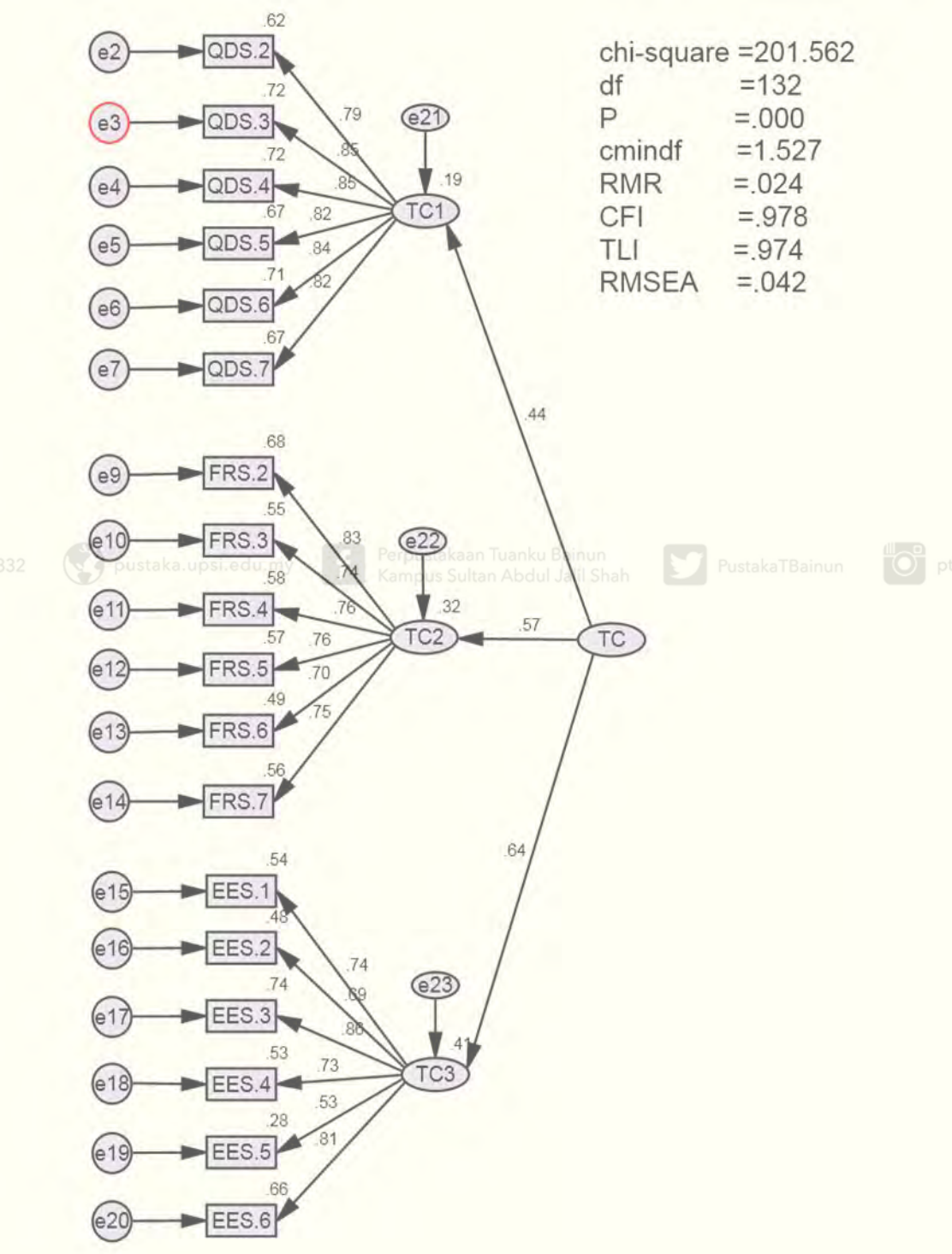


Figure 4.11. Second-Order CFA of Teaching Capabilities Model

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Table 4.26

Second Order CFA of Teaching Capabilities Model

Items	Loading (λ)	R^2	AVE	CR
QDS.2	.79	.62	.69	.96
QDS.3	.85	.72		
QDS.4	.85	.72		
QDS.5	.82	.67		
QDS.6	.84	.71		
QDS.7	.82	.67		
FRS.2	.83	.68	.57	.94
FRS.3	.74	.55		
FRS.4	.76	.58		
FRS.5	.76	.57		
FRS.6	.70	.49		
FRS.7	.75	.56		
EES.1	.74	.54	.54	.92
EES.2	.69	.48		
EES.3	.86	.74		
EES.4	.73	.53		
EES.5	.53	.28		
EES.6	.81	.66		
Higher- Order				
QDS	.44	.19		
FRS	.57	.32		
EES	.64	.41		
$x^2/df = 1.527$, RMR = 0.024, CFI = 0.978, TLI = 0.974, RMSEA = 0.042				

The standardized loading depicted in the Table 4.26 also indicated that Evaluation and Examination Skills (EES) has the highest contribution to the second order factor of teaching capabilities (λ = .64) followed by Feedback and Responsiveness Skills (λ = .57). Furthermore, the squared multiple correlations for EES were the highest (R^2 = .42) compared to Question and Discussions Skills, which has the lowest one (R^2 = .19). These finding suggest the high explanatory of Evaluation and Examination Skills in the presence of Teaching Capabilities.

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4.7 Full Measurement Model

The measurement model is a SEM model that deals with the unobserved or latent variables and their indicators. Based on CFA results, the measurement model represents unmeasured covariance between each possible pair of unobserved variables: straight arrows from the unobserved variables to their indicators, straight arrows from the error and disturbance terms to their particular variables, and two-headed arrows connecting the unobserved variables.

The measurement model is assessed by depicting the relationships among independent variables, mediators, and dependent variables, based on their CFA structures. A diagrammatic representation of the measurement model is presented in figure 4.12. The results of this model are shown in Table 4.27. The model fit indices indicated a good fit except for the Chi-square results (χ^2 = 1966.658; df = 1529; p = .000) which were statistically significant. In addition, the other indices showed acceptable levels of fit; x^2/df = 1.286, RMR = 0.027, CFI = 0.951, TLI = 0.947, RMSEA = 0.031, and HI 90 of RMSEA = .035.

In terms of assessing convergent validity, using factor loadings which should be significant and exceed 0.5, in addition to the average variance extracted (AVE) also should exceed 0.5. Table 4.27 indicated that all item factor loadings exceeded the minimum of 0.5, except for items QDS.1, FRS.1, IEM.1, INTS.2, and OBMS.4 as they have exceptionally low factor loadings λ = .46, .46, .47, .49, and .48, respectively, and low squared multiple correlations R^2 = .21, .21, .22, .24, and .23, respectively. Convergent validity thus, was not supported for full measurement model.

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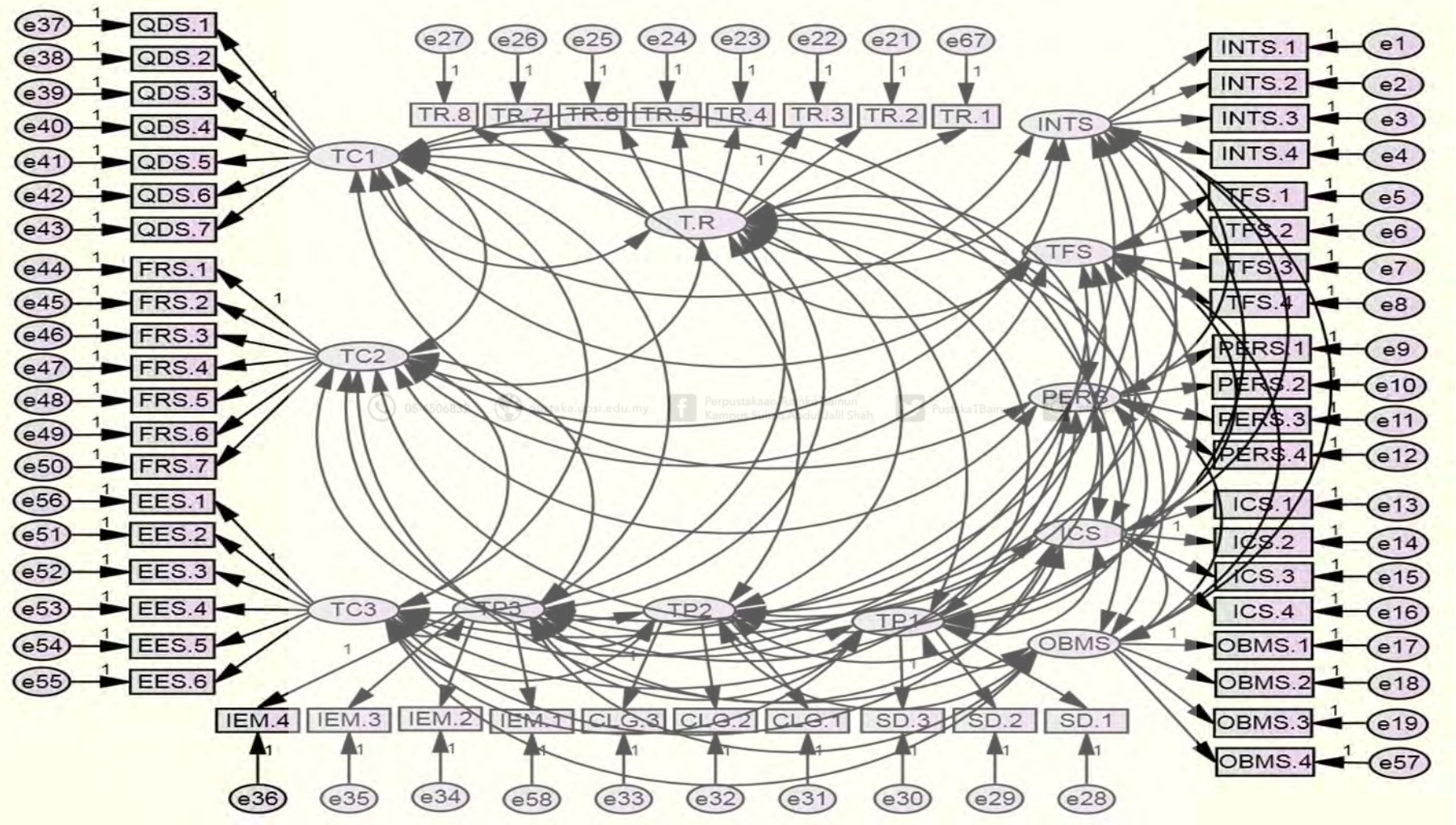


Figure 4.12. CFA of Full Measurement Model

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Table 4.27

CFA of Full Measurement Model

Items	Loading (λ)	R^2	Items	Loading (λ)	R^2
QDS.1	**.46**	**.21**	INTS.1	.73	.54
QDS.2	.79	.62	**INTS.2**	**.49**	**.24**
QDS.3	.85	.72	INTS.3	.78	.60
QDS.4	.85	.72	INTS.4	.82	.68
QDS.5	.82	.67	TFS.1	.72	.52
QDS.6	.84	.71	TFS.2	.68	.47
QDS.7	.82	.68	TFS.3	.84	.70
FRS.1	**.46**	**.21**	TFS.4	.70	.48
FRS.2	.83	.68	PERS.1	.78	.61
FRS.3	.74	.55	PERS.2	.70	.49
FRS.4	.76	.58	PERS.3	.69	.48
FRS.5	.76	.57	PERS.4	.74	.54
FRS.6	.70	.49	ICS.1	.74	.55
FRS.7	.75	.56	ICS.2	.71	.51
EES.1	.75	.56	ICS.3	.84	.70
EES.2	.70	.49	ICS.4	.75	.56
EES.3	.86	.73	OBMS.1	.72	.52
EES.4	.73	.53	OBMS.2	.83	.68
EES.5	.52	.27	OBMS.3	.72	.52
EES.6	.81	.65	**OBMS.4**	**.48**	**.23**
SD.1	.63	.40	TR.1	.88	.77
SD.2	.92	.84	TR.2	.81	.65
SD.3	.56	.32	TR.3	.87	.73
CLG.1	.64	.41	TR.4	.86	.75
CLG.2	.78	.61	TR.5	.83	.70
CLG.3	.74	.54	TR.6	.85	.70
IEM.1	**.47**	**.22**	TR.7	.88	.77
IEM.2	.87	.75	TR.8	.81	.67
IEM.3	.68	.46			
IEM.4	.65	.42			
$x^2/df = 1.286$, RMR = 0.027, CFI = 0.951, TLI = 0.947, RMSEA = 0.031					

In order to establish convergent validity for full measurement model, and to improve the reliability of this model, variables were checked for low factor loading (λ) and low squared multiple correlations (R^2). The variables QDS.1, FRS.1, IEM.1, INTS.2, and OBMS.4 were removed one at time. In addition, modification indices (MIs) indicated that the largest MI value was 34.417, which relates to an error

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covariance between item EES.1 (Score and interpret examinations) and item EES.2 (Evaluate student assignments) (Byrne, 2010). The researcher used modification indices and theoretical consistency to adjust the model by removing item EES.1 (Score and interpret examinations) as well. The reason for removing this item is that, this item shared covariance on both EES.2 (Evaluate student assignments) and QDS.5 (Ask open, stimulating questions) with large modification indices (M.I. = 34.417 and M.I. = 10.628) respectively.

An additional CFA was performed based on post-hoc modifications made to original full measurement model (Model.0). As can be seen from Table 4.28, the goodness-of-fit indices for the modified full measurement model (Model.1) were greatly improved from those produced by the hypothesized model (Model.0). In reviewing the goodness-of-fit statistics presented in Table 4.28, it can be observed that the estimation of model.1 resulted in overall fit of $x^2/df = 1.259$, with the RMR dropping slightly to 0.025, and RMSEA to 0.029, besides, the CFI has considerably increased to 0.963, and the TLI to 0.959. In reviewing the modification indices (MIs) associated with Model.1, they indicated that the largest MI values relate to item TR4 (Internet). This item shared covariance on both TR3 (Audio/visual equipments) and TR7 (Appropriate classrooms) with large modification indices (M.I. = 14.955 and M.I. = 11.093) respectively. Since freeing the parameter should be supported by empirical, conceptual, or practical considerations (Brown, 2006). Thus, the researcher used modification indices and theoretical consistency to adjust the model by removing item TR4 (Internet). With these changes made, additional CFA was performed. The modified full measurement model (Model.2) is graphically presented in figure 4.13.

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Table 4.28

Comparison of Goodness-of-Fit Indices for Hypothesized and Modified Full Measurement Models

Model.0	$x^2/df = 1.286$, RMR = 0.027, CFI = 0.951, TLI = 0.947, RMSEA = 0.031
Model.1	$x^2/df = 1.259$, RMR = 0.025, CFI = 0.963, TLI = 0.959, RMSEA = 0.029
Model.2	$x^2/df = 1.239$, RMR = 0.025, CFI = 0.965, TLI = 0.962, RMSEA = 0.028

Model.1 = Model.0 without (QDS.1, FRS.1, IEM.1, INTS.2, OBMS.4, and EES.1)
Model.2 = Model.1 without (TR.4)

As can be seen from Table 4.28, the goodness-of-fit indices for the modified full measurement model (Model.2) were greatly improved from those produced by the modified full measurement model (Model.1). Although, the fit of the Model.2 can be considered to be good, Model.2 nevertheless reflects a sensible fit to data, as judged by CFI and the other indexes. Furthermore, in comparison with model.1, the x^2/df has dropped to 1.239 (from 1.259), there was no change in the RMR (0.025), the CFI has increased to 0.965 (from 0.963), the TLI has increased to 0.962 (from 0.959), and RMSEA has slightly dropped to 0.028 (from 0.029). The indices from Model.2 provided an evidence of a very good fit of data. It is important to note that the modifications made to the full measurement model were very similar to those made during the modification of core competencies, teaching practices, teaching resources, and teaching capabilities measurement scales. The factor loadings (λ) and squared multiple correlations (R^2) for the modified model (Model.2) are detailed in Table 4.29.

As can be seen from Table 4.29, all factor loadings (λ) are statistically significant and exceeded the minimum of 0.5, providing evidence of convergent validity. Moreover, the squared multiple correlations of most scale items are considerably large. No post-hoc modifications were conducted because of the good fit of the data to the model.

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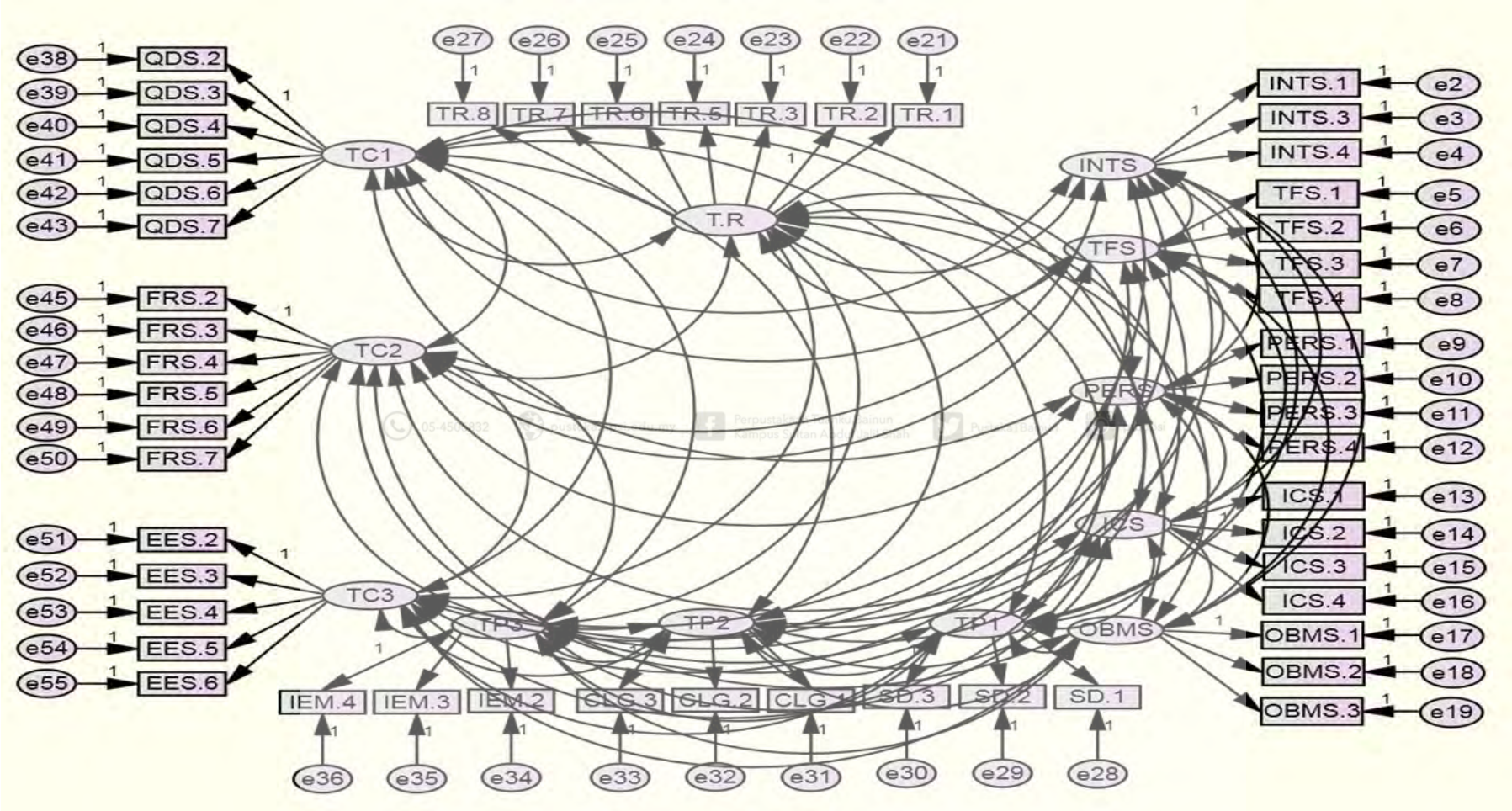


Figure 4.13. CFA of Modified Full Measurement Model (Model.2)

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Table 4.29

The Factor Loadings (λ) and Squared Multiple Correlations (R^2) for the Modified Measurement Model (Model.2)

Items	Loading (λ)	R^2	Items	Loading (λ)	R^2
QDS.2	.79	.62	INTS.1	.73	.54
QDS.3	.85	.72	INTS.3	.78	.60
QDS.4	.85	.72	INTS.4	.82	.67
QDS.5	.82	.67	TFS.1	.72	.52
QDS.6	.84	.71	TFS.2	.68	.47
QDS.7	.82	.68	TFS.3	.84	.70
FRS.2	.82	.68	TFS.4	.70	.48
FRS.3	.74	.55	PERS.1	.78	.61
FRS.4	.76	.58	PERS.2	.70	.49
FRS.5	.76	.57	PERS.3	.69	.48
FRS.6	.70	.49	PERS.4	.74	.54
FRS.7	.75	.56	ICS.1	.74	.55
EES.2	.65	.42	ICS.2	.71	.51
EES.3	.87	.75	ICS.3	.84	.70
EES.4	.74	.54	ICS.4	.75	.56
EES.5	.53	.28	OBMS.1	.73	.53
EES.6	.82	.68	OBMS.2	.84	.70
SD.1	.63	.40	OBMS.3	.70	.49
SD.2	.92	.84	TR.1	.89	.79
SD.3	.56	.32	TR.2	.81	.65
CLG.1	.64	.41	TR.3	.86	.73
CLG.2	.78	.61	TR.5	.84	.70
CLG.3	.74	.54	TR.6	.84	.70
IEM.2	.86	.74	TR.7	.88	.77
IEM.3	.69	.47	TR.8	.82	.67
IEM.4	.65	.42			

4.8 Structural Model

Since the measurement model was supported via a good fit, structure model for this study was then used to investigate the relationships among variables in order to answer research question five and research question six. A structural model consists of the set of exogenous variables (independent variables) and endogenous variables (dependent variables) with the direct effects (straight arrows) connecting them, any

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correlations among the exogenous variable or indicators, and the error terms for these variables (reflecting the effects of unmeasured variables not in the model). The primary target of this study was to investigate the structural relationship among development of core competencies (CC), teaching practices (TP), perceived adequacy of teaching resources (TR), and teaching capabilities (TC). The full Hypothesized Structural Model is graphically illustrated in Figure 4.14.

The hypothesized model proposed that TR and TC had a statistically significant and positive relationship with TP; it also proposed that while TP had a statistically significant and positive relationship with CC, it mediate the effect of TR and TC on CC as well. The full structural equation model as depicted in Figure 4.14 included 58 observed variables, 15 latent variables, and 71 error terms. The goodness-of-fit statistics for this model were: (χ^2 = 2022.023; df = 1580; p = .000); x^2/df = 1.280, RMR = 0.031, CFI = 0.951, TLI = 0.949, RMSEA = 0.030 and HI 90 of RMSEA = .034, indicating an acceptable model fit.

In terms of assessing convergent validity, the same procedures utilized in the CFA analyses, variables were checked for low factor loading (λ) and low squared multiple correlations (R^2). Table 4.30 indicated that all item factor loadings exceeded the minimum of 0.5, except for items QDS.1, FRS.1, IEM.1, INTS.2, and OBMS.4 as they have exceptionally low factor loading λ = .46, .46, .47, .49, and .48, respectively, and low squared multiple correlations R^2 = .21, .21, .22, .24, and .23, respectively. With these findings the convergent validity was not supported for full structural model. Hence, these variables were removed one at time.

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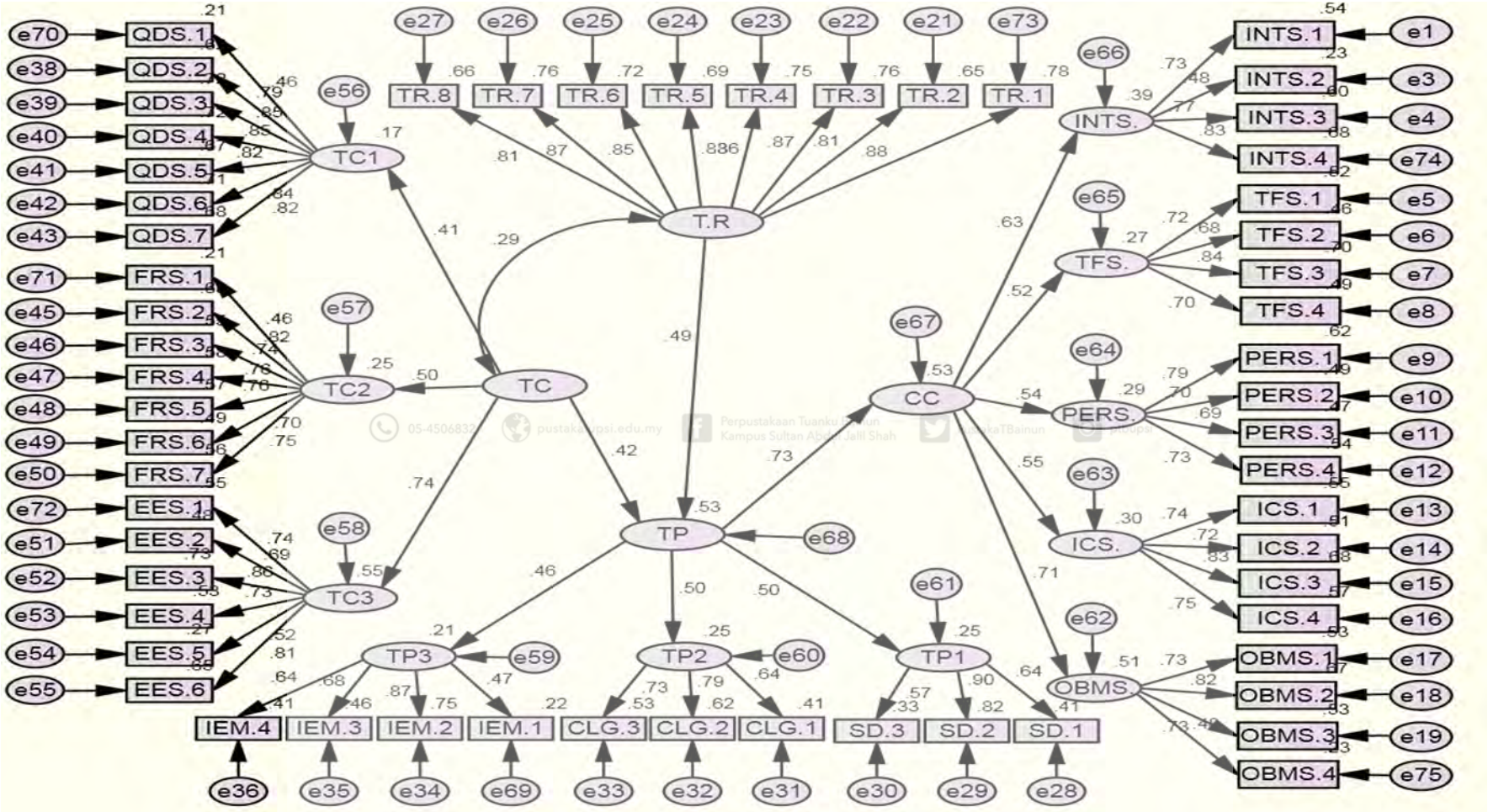


Figure 4.14. Full Hypothesized Structural Model

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Table 4.30

Factor Loadings (λ) and Squared Multiple Correlations (R^2) for the Hypothesized Structural Model (Model.0)

Items	Loading (λ)	R^2	Items	Loading (λ)	R^2
QDS.1	**.46**	**.21**	INTS.1	.73	.54
QDS.2	.79	.62	**INTS.2**	**.49**	.24
QDS.3	.85	.72	INTS.3	.78	.60
QDS.4	.85	.72	INTS.4	.82	.68
QDS.5	.82	.67	TFS.1	.72	.52
QDS.6	.84	.71	TFS.2	.68	.47
QDS.7	.82	.68	TFS.3	.84	.70
FRS.1	**.46**	**.21**	TFS.4	.70	.48
FRS.2	.83	.68	PERS.1	.78	.61
FRS.3	.74	.55	PERS.2	.70	.49
FRS.4	.76	.58	PERS.3	.69	.48
FRS.5	.76	.57	PERS.4	.74	.54
FRS.6	.70	.49	ICS.1	.74	.55
FRS.7	.75	.56	ICS.2	.71	.51
EES.1	.75	.56	ICS.3	.84	.70
EES.2	.70	.49	ICS.4	.75	.56
EES.3	.86	.73	OBMS.1	.72	.52
EES.4	.73	.53	OBMS.2	.83	.68
EES.5	.52	.27	OBMS.3	.72	.52
EES.6	.81	.65	**OBMS.4**	**.48**	.23
SD.1	.63	.40	TR.1	.88	.77
SD.2	.92	.84	TR.2	.81	.65
SD.3	.56	.32	TR.3	.87	.73
CLG.1	.64	.41	TR.4	.86	.75
CLG.2	.78	.61	TR.5	.83	.70
CLG.3	.74	.54	TR.6	.85	.70
IEM.1	**.47**	**.22**	TR.7	.88	.77
IEM.2	.87	.75	TR.8	.81	.67
IEM.3	.68	.46			
IEM.4	.65	.42			

In reviewing the modification indices (MIs) associated with hypothesized model (Model.0), it was obvious that the largest MI values were related to item EES.1 (Score and interpret examinations) and item TR4 (Internet). While item EES.1 shared covariance on both EES.2 (Evaluate student assignments) and QDS.5 (Ask open, stimulating questions) with large modification indices (M.I. = 34.417 and M.I. =

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10.628) respectively, the item TR4 shared covariance on both TR3 (Audio/visual equipments) and TR7 (Appropriate classrooms) with large modification indices (M.I. = 14.955 and M.I. = 11.093) respectively. Since freeing these parameters should be supported by empirical, conceptual, or practical considerations (Brown, 2006). Thus, the researcher used modification indices and theoretical consistency to adjust the model by removing these items EES.1 (Score and interpret examinations) and TR4 (Internet). With these changes made, additional CFA was performed. The modified full structural model (Model.1) is graphically presented in Figure 4.15.

As can be seen from Table 4.31, the goodness-of-fit indices for the modified full structural model (Model.1) were greatly improved from those produced by the hypothesized model (Model.0). Although, the fit of the Model.1 can be considered to be good, Model.1 nevertheless reflects a reasonable fit to data, as judged by CFI and the other indexes. Furthermore, in comparison with model.0, the x^2/df has dropped to 1.232 (from 1.280), the RMR has slightly dropped to 0.030 (from 0.031), the CFI has considerably increased to 0.965 (from 0.951), the TLI has also considerably increased to 0.963 (from 0.949), and RMSEA has dropped to 0.028 (from 0.030). The indices from Model.1 provided an evidence of a very good fit of data.

Table 4.31

Comparison of Goodness-of-Fit Indices for Hypothesized and Modified Full structural Models

Model.0	$x^2/df = 1.280$, RMR = 0.031, CFI = 0.951, TLI = 0.949, RMSEA = 0.030
Model.1	$x^2/df = 1.232$, RMR = 0.030, CFI = 0.965, TLI = 0.963, RMSEA = 0.028

Model.1 = Model.0 without (QDS.1, FRS.1, IEM.1, INTS.2, OBMS.4, EES.1, and TR.4)

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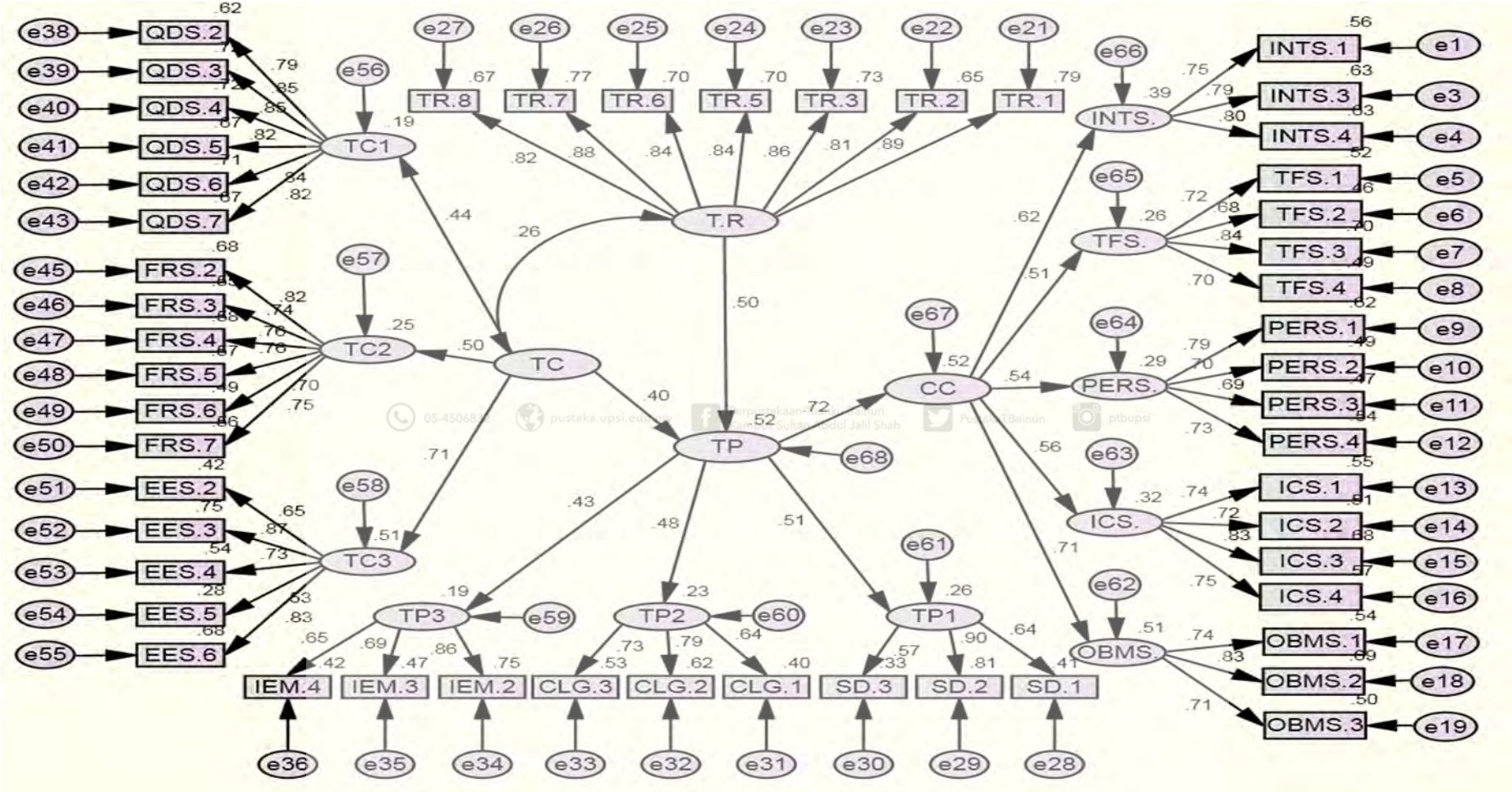


Figure 4.15. Modified Full Structural Model (Model.1)

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Table 4.32

Factor Loadings (λ) and Squared Multiple Correlations (R²) for Modified Structural Model (Model.1)

Items	Loading (λ)	R²	Items	Loading (λ)	R²
QDS.2	.79	.62	INTS.1	.75	.56
QDS.3	.85	.72	INTS.3	.79	.63
QDS.4	.85	.72	INTS.4	.80	.63
QDS.5	.82	.67	TFS.1	.72	.52
QDS.6	.84	.71	TFS.2	.68	.46
QDS.7	.82	.67	TFS.3	.84	.70
FRS.2	.82	.68	TFS.4	.70	.49
FRS.3	.74	.55	PERS.1	.79	.62
FRS.4	.76	.58	PERS.2	.70	.49
FRS.5	.76	.57	PERS.3	.69	.47
FRS.6	.70	.49	PERS.4	.73	.54
FRS.7	.75	.56	ICS.1	.74	.55
EES.2	.65	.42	ICS.2	.72	.51
EES.3	.87	.75	ICS.3	.83	.68
EES.4	.73	.54	ICS.4	.75	.57
EES.5	**.53**	**.28**	OBMS.1	.74	.54
EES.6	.83	.68	OBMS.2	.83	.69
SD.1	.64	.41	OBMS.3	.71	.50
SD.2	**.90**	**.81**	TR.1	.89	.79
SD.3	.57	.33	TR.2	.81	.65
CLG.1	.64	.40	TR.3	.86	.73
CLG.2	.79	.62	TR.5	.84	.70
CLG.3	.73	.53	TR.6	.84	.70
IEM.2	.86	.75	TR.7	.88	.77
IEM.3	.69	.47	TR.8	.82	.67
IEM.4	.65	.42			

It is important to note that the modifications made to the full structural model were same to those made during the modification of core competencies, teaching practices, teaching resources, and teaching capabilities measurement scales. The factor loadings (λ) and squared multiple correlations (R²) for the modified model (Model.1) are detailed in Table 4.32, indicating that All factor loadings (λ) are statistically significant, ranging from .53 to .92, providing evidence of convergent validity. Moreover, the squared multiple correlations of most scale items are considerably

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large, ranging from .28 to .81. No post-hoc modifications were conducted because of the good fit of the data to the model.

Thus far, in conducting confirmatory factor analysis for measurement models, the modification related to model fit has focused only on the addition or elimination of parameters to the model. Yet, another side to the question of fit, mainly as it relates to a full model, is the extent to which certain originally specified structural paths could be irrelevant to the model as indicated by their statistical non-significance (Byrne, 2010). In reviewing the structural parameter estimates for modified structural model (Model.1) as shown in Table 4.33, it can be seen that all paths parameters are significant. Thus, Model.1 was labeled as the final modified full structural model.

Table 4.33
Parameter Estimates of Modified Structural Model (Model.1)

Path	Path coefficient (β)	C.R.	p-value
TR ---> TP	0.503	4.232	.000***
TC ---> TP	0.402	2.926	.003**
TP ---> CC	0.725	4.220	.000***

Notes: *p < 0.05; ** p < 0.01; *** p < 0.001; C.R. = critical ratio.

As modified full structural model.1 represents the final full structural model to be tested in this study, hereafter, the correlation analysis and testing the hypotheses. The final structural model (Model.1) is portrayed in Figure 4.15.

4.9 Correlation Analysis

The calculation of Pearson correlation coefficients was utilized to gain better understanding of the relationship between the latent variables in the study. In addition,

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the correlation analysis could also detect the existence of multicollinearity among the variables. In this study, the following guidelines suggested by Cohen et al. (2007) were adopted in interpreting correlation: values of r = ± .10 to ± .29; r = ± .30 to ± .49 and; r = ± .50 to ± 1.0, will be interpreted respectively as small (weak), medium, or large (strong) correlation between two variables. Nevertheless, the correlation values higher than 0.8 should be interpreted with cautions as they might indicate the presence of multicollinearity that could result in the bias findings (Hair et al., 2010).

Table 4.34Table 4.34 contains the results of the Pearson correlation. All of the four latent variables involved in the model were significantly and positively correlated with one another (r = range from .290 to .668). It is evident that there is quite strong correlation between teaching practices (TP) and core competencies (CC) at significant level of 0.01 (r = .668). Furthermore, there is also a strong correlation between teaching practices (TP) and teaching capabilities (TC) at significant level of 0.01 (r = .575). In addition, the results indicated that there are medium correlations between core competencies (CC) and both of teaching resources (TR) and teaching capabilities (TC). Multicollinearity was not an issue in this study, as no two variables were correlated beyond the .90 limit.

Table 4.34

Correlations – Modified Structural Model Constructs (Model.1)

	CC	TP	TR	TC
CC	1.00			
TP	.668***	1.00		
TR	.450***	.436***	1.00	
TC	.436***	.575**	.290**	1.00

** Correlation is significant at the 0.01 level (2-tailed)

*** Correlation is significant at the 0.001 level (2-tailed)

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4.10 Testing the Hypotheses

The main target of this study was to examine the relationships between teaching process presented by teaching capabilities, teaching resources, teaching practices, and the development of core competencies in accounting profession.

The final structural model (Model.1) portrayed in Figure 4.15 describes the relationships between teaching practices (TP), teaching capabilities (TC), teaching resources (TR), and core competencies (CC). Based on the model, five (5) hypotheses are put forth for examination. The first two hypotheses state that teaching resources (TR) and teaching capabilities (TC) directly and positively influence teaching practices (TP). While the third hypothesis states that teaching practices (TP) directly and positively influence core competencies (CC), the fourth and fifth hypotheses state that teaching practices (TP) mediate the relationship between teaching capabilities (TC) and teaching resources (TR), and core competencies (CC).

In this study, the hypotheses were examined by confirming the existence of a statistically significant relationship in the predicted direction. Table 4.35 summarizes the results of hypotheses tests. Later in this section, a statistical analysis of research hypotheses will follow.

Table 4.35

Summary of the Hypotheses Tests

Hypotheses	Path	Path coefficient (β)	t- value	Results	R^2
H1	TR ---> TP	0.503	4.232 ***	Supported	
H2	TC ---> TP	0.402	2.926 **	Supported	
H3	TP ---> CC	0.725	4.220 ***	Supported	
H4	TC--->TP--->CC				
H5	TR--->TP--->CC				
	CC				.52
	TP				.52

Notes: **p < 0.01; ***p < 0.001

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Ha1: There is a positive relationship between adequacy of teaching resources at Libyan universities and the teaching practices used by Libyan accounting educators.

As seen in Table 4.35, the structural model revealed that teaching resources (TR) is positively and significantly related to teaching practices (TP) ($\beta = 0.503$; $\rho = 0.001$). Thus, Ha1 is supported by data.

Ha2: There is a positive relationship between teaching capabilities of Libyan accounting educators and their use of teaching practices.

As seen in Table 4.35, the structural model revealed that teaching capabilities (TC) is positively and significantly related to teaching practices (TP) ($\beta = 0.402$; $\rho = 0.01$). Thus, Ha2 is supported by data.

Furthermore, examination of the squared multiple correlations (R^2s) shown in Table 4.35 revealed that more than half of the variance ($R^2 = 0.52$) in teaching practices (TP) is explained by the direct effects of teaching capabilities (TC) and teaching resources (TR). The results also showed that teaching practices had significant relationship with teaching resources ($\beta = 0.503$; $\rho = 0.001$) stronger than with teaching capabilities ($\beta = 0.402$; $\rho = 0.01$).

Ha3: There is a positive relationship between the teaching practices used by Libyan accounting educators and students‟ self-reported development of core competencies.

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Referring to the results in Table 4.35, the structural model in this study revealed a strong relationship between teaching practices and core competencies, as teaching practices (TP) is positively and significantly related to core competencies (CC) ($\beta = 0.725$; $\rho = 0.001$). Thus, Ha3 is supported by data. The examination of the squared multiple correlations (R^2s) shown in Table 4.35, revealed that up to fifty per cent of the variance ($R^2 = 0.52$) in core competencies (CC) is explained by the direct effect of teaching practices (TP) and the indirect effects of teaching capabilities (TC) and teaching resources (TR).

Ha4: The effect of teaching capabilities on development of core competencies in Libyan accounting students is fully mediated by teaching practices.

Ha5: The effect of teaching resources on development of core competencies in Libyan accounting students is fully mediated by teaching practices.

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Research hypotheses Ha4 and Ha5 predicted that teaching practices would fully mediate the effects of teaching capabilities and teaching resources on development of core competencies in Libyan accounting students, accordingly, the original research model assumed a full mediation effect of teaching practices. In order to test this assumption, a mediation analysis was conducted.

As conceptualized in the original research model (Figure 1.1), the effects of teaching capabilities (TC) and teaching resources (TR) on core competencies (CC) are mediated by teaching practices (TP). To test this mediation effect, four rules of mediation were followed (De Caprariis et al., 2001). For example, in order for TP to mediate the effect of TC on CC, the following four conditions must hold true: i)

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the TC → CC path should be significant; ii) the TC → TP path should be significant; iii) the TP → CC path should be significant after controlling TC and; iv) the TC → CC path should become insignificant after controlling TP. In other words, the initial research model with full mediation effects of teaching practices needed to be compared with a no-mediation model and a partial mediation model in order to test the mediation effect. For instance, in the no-mediation model an additional path from TC to CC was included while omitting the initially assumed TP → CC path, whereas in a partial mediation model, an additional TC → CC path has been included. The results of these analyses are shown in Table 4.36.

Table 4.36

Structural Models of Alternative Models

Paths	Full Mediation R^2 & β	Partial Mediation R^2 & β	No Mediation R^2 & β
CC (R^2)	.52	.46	.34
TP (R^2)	.52	.44	.52
TC ---> TP	.402**	.351*	.446**
TR ---> TP	.503***	.479***	.465***
TP ---> CC	.725***	.545*	N/A
TC ---> CC	N/A	.130 n.s	.389***
TR ---> CC	N/A	.102 n.s	.346***

Notes: *p < 0.05; **p < 0.01; ***p < 0.001;n.s.: non-significant

As indicated in Table 4.36, the mediation analysis performed on core competencies (CC) revealed support for the original full mediation effect. Both partial mediation and no-mediation models have explained less variation in core competencies (R^2 = .46 and R^2 = .34) respectively, than the full mediation model (R^2 = .52). In no-mediation model, the direct effects of independent variables; teaching capabilities (TC → CC; β = 0.389; ρ = 0.001) and teaching resources (TR → CC; β = 0.346; ρ = 0.001) on core competencies were statistically significant. This fact was

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supported by the medium correlations between core competencies and both of teaching capabilities (r = .436) and teaching resources (r = .450) as shown in Table 4.34. As can be seen in Table 4.36, the significant direct effects of independent variables TC → CC and TR → CC in no-mediation model, in the partial mediation model became insignificant. Hence, it could be interpreted that teaching practices fully mediated the relationship between teaching capabilities and core competencies and, the relationship between teaching resources and core competencies as well. Thus, Ha4 and Ha5 are supported by data. This suggests also that the original full mediation effect of TC and TR on CC through TP should be kept.

4.11 Conclusion

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Descriptive statistics revealed that the perceptions of most highly developed competencies amongst undergraduate accounting students participated in this study included “work effectively with others in a consultative process”, “consider the implications of professional values”, “initiative, influence and self-learning”, “measure and report information”, and “Listen and read effectively”. On the other hand, competencies given lower rankings by students included “identify and solve unstructured problems”, “think logically and analytically, and analyzes things critically”, “Select and assign priorities within restricted resources”, and “Leadership and make decisions”. This may be due to the fact that those skills may be considered to be more advanced. Descriptive statistics also revealed that the majority of Libyan accounting students in this study believed that their accounting educators used lecture, as main teaching method followed by in-class discussions, group research projects,

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and seminars. On the other hand, the teaching technique least used by those accounting faculty was the internet with mean and standard deviation followed by Teaching videos & CD discs, computer simulations, and Power-point presentations, with means and standard deviations. Regarding teaching resources at Libyan universities, descriptive statistics revealed that the majority of participants perceived only three of eight types of teaching resources (computer hardware, textbooks, and appropriate classrooms) are available as either, satisfactory, good, or outstanding. On the other side, the most teaching resources are not available or inadequate were the audio/visual equipments and internet followed by research articles, computer software, and clerical support. Descriptive statistics also revealed that the most five teaching capabilities used by Libyan accounting educators were as follows: “deliver lectures”, “encourage participation of women and minorities in class”, “score and interpret examinations”, “evaluate student assignments”, and “initiate class discussion”. On the other side, the least two teaching capabilities used by Libyan accounting educators were as follows: “utilize student evaluations” and “utilize self-evaluation in teaching”, followed by “provide constructive feedback on exams and assignments”.

The findings of the interviews reported in this chapter revealed that qualitative analysis supported the results gained from the quantitative. However, they also yielded a much wider and deeper understanding of how accounting students perceive teaching and learning process helped them to develop necessary skills. Some respondents believe the accounting programs provided them to some extent with adequate opportunities for competencies development. While others indicate that students were motivated by their educators to develop some skills such as research

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skills, team work skills, personal and interpersonal skills, communication skills …etc. In addition, many respondents attribute non-use of new teaching practices to the lack of essential teaching and learning resources such as computer labs, library, internet and appropriate classrooms at Libyan universities. While others believe that the unwillingness of the faculty members and their teaching skills may be the reason beyond non-use of such teaching practices as well to teaching tools. Furthermore, while some students were satisfied with their accounting educators‟ teaching skills, other students were not satisfied, and they believe that some faculty members lacked the ability to communicate effectively with students. There was consensus among students that there is no sufficient and appropriate teaching and learning resources at Libyan universities, emphasizing the need to provide more teaching and learning resources.

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Based on hypotheses tests, the study found that teaching practices fully mediated the relationships between teaching resources, teaching capabilities and core competencies, the study also found a positive relationship between teaching capabilities and teaching practices used by accounting faculty, teaching resources is positively and significantly related to teaching practices, and a positive relationship also was found between teaching practices used by accounting faculty and students‟ self-reported development of core competencies.

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CHAPTER FIVE

DISCUSSIONS AND CONCLUSIONS

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5.1 Introduction

In this chapter, important findings of the study are summarized, followed by contributions and implications of the study. Then, suggestions for future research are proposed.

5.2 Discussion of Findings

The students are the direct beneficiary of the accounting degree and are able to estimate the extent to which the teaching process engenders core competencies required at workplace. Consequently, a questionnaire was sent to undergraduate accounting students who in their final year to elicit responses on their experience of

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the accounting degree and to what extent they believe it developed core competencies, and to determine the mediating effect of teaching practices on the relationships between teaching resources, teaching capabilities, and the development of the core competencies. Ten students voluntary participated further in face-to-face interviews in order to provide the depth of understanding that could not be determined from the questionnaire information. Major findings of this study were summarized as follow:

It is apparent from the descriptive statistics that all students participated in this study believe they had been given at least some opportunities to develop the skills of "work effectively with others in a consultative process", "consider the implications of professional values", "initiative, influence and self-learning", "measure and report information", and "listen and read effectively". These skills are ranked in the top five by students. On the other hand, most of students believe the skills of "identify and solve unstructured problems", "think logically and analytically, and analyzes things critically", "select and assign priorities within restricted resources", "leadership and make decisions", and "Deal with decision modeling and risk analysis" are not developed or slightly developed. These competencies are ranked the lowest by students.

Further investigation, in the interviews, revealed that several students believe their accounting faculty offered some opportunities to students to develop core competencies through various teaching practices. However, responsibility for learning is placed on the students, who must seize each opportunity. Some respondents report that it was up to the student to be self-motivated and get things finished. While some students reported they were stimulated before they enter the college as accounting was

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the choice they wanted to pursue, the others believed that some lecturers taught them to be self-motivated through some of the everyday tasks and assignments that were given to them. Instances included having enthusiastic educators who made lessons exciting or gave students the freedom to make decisions within a group tasks. Sometimes being in a group provides students the encouragement to finish the work and do well. Furthermore, some students believe that opportunities to develop skills are undertaken sometimes without students realizing that it is happening to them. The development of skills is happening implicitly. This is consistent with some faculty members who do not specify in subject materials explicit references to a variety of skills, nor conveying this to students in their lectures.

Table 5.1 is presented to show students‟ perceptions about their core competency development levels. Table 5.1 illustrates the extent to which students believe core competencies required at workplace are developed whilst undertaking the degree. Level I lists the competencies which students believe are mostly developed. Level II lists the competencies which students believe are moderately developed and Level III lists the competencies which students believe are not developed or slightly developed.

One main finding that emerges from the questionnaire results and discussion with students is that students had been given at least some opportunities to skills development. The benefits of participation in the class discussions, team projects, and other activities increased students‟ level of awareness and understanding of some skills such as communication skills, personal and interpersonal skills, team work skills…etc. Some commented that their written skills in the first year were not as good

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as their written skills in the final year, and attributed this to practice. In addition, some of these core competencies may be considered more complex higher order skills, especially the types of skills that appear at level III. Developing the skills at this level, may challenge both educators and students who have limited time and teaching and learning resources such as in Libyan universities. On the contrary, the skills at the level I are mostly easily accommodated through participation in class discussions and content delivery.

Table 5.1

Competency Development Levels of the Libyan Undergraduate Accounting Students

Level I "well developed"	Work effectively with others in a consultative process. Consider the implications of professional values. Initiative, influence and self-learning. Measure and report information. Listen and read effectively.
Level II "moderately Developed"	Deal with computer and IT proficiently. Deal with mathematical and statistical applications. Negotiate acceptable solutions and agreements in professional situations. Deal with inquiry and research. Self-management. Anticipate and adapt to change. Locate … and understand information from human, print and electronic sources. Organize and delegate tasks, to motivate and to develop people. Organize work to meet tight deadlines. Present…report… defend views … through formal… written… communication.
Level III "not developed or slightly developed"	Deal with decision modeling and risk analysis. Leadership and make decisions. Select and assign priorities within restricted resources. Think logically and analytically, and analyzes things critically. Identify and solve unstructured problems.

Finally, regarding to the dimensions, the overall ranking of the level of self-reported development of five groups of skills ranged from up to slightly developed to less than moderately developed. Personal skills, and interpersonal and communication skills perceived to have been the most developed by accounting students with means and standard deviations (2.96, .557) and (2.89, .577) respectively, followed by technical and functional skills with mean and standard deviation (2.94, .607). Whereas, intellectual skills, and organizational and business management skills

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perceived to have been the least developed by accounting students with means and standard deviations (2.57, .577) and (2.59, .588) respectively.

With exception to the low improvement in self-reported development of core competencies such as personal skills, interpersonal and communication skills, technical and functional skills, the finding of this study is consistent with previous local studies (Ahmad & Gao, 2004; Alhanoun, 2004; Khalat et al., 2007; Kilani, 2000; Massly, 2010; Musa & Almagouri, 2007). For example, Kilani (2000) found that the teaching practices used by accounting faculty still one-way direction, and it does not cultivate in students the needed skills. Alhanoun (2004) concluded that accounting students in Libya were not being exposed to real world skills. According to Ahmad and Gao (2004), in Libyan accounting education, there is no evidence of sufficient attention being given to general skills and professional values as defined by (IFAC) (1996). Khalat et al., (2007) indicated that the curriculum did not develop logical thinking and critical analysis of students because it was relying on traditional teaching practices. There is no focus on teaching communication and report writing skills, which weakens the ability of graduates to deliver accounting information to users. Massly (2010) also found that the pedagogy used by accounting educators at Libyan institutions depends on the traditional methods which often rely more on memorization than creativity, which in turn does not develop logical thinking and critical analysis skills in students.

Since the findings of this study indicate that the participants perceived that the accounting programs had helped them to develop core competencies to some degree, however, self-reported development of five groups of skills ranged from slightly

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developed to less than moderately developed. Accordingly, and in spite of the findings of this study, it can be concluded that Libyan institutions‟ programs still are not adequately developing in accounting students the competencies needed to be successful in the accounting profession. To this end, Libyan universities should provide accounting undergraduate students with more opportunities to develop core competencies to keep pace and cope with business and professional developments, by adapting new strategies to help students become independent, life-long learners.

The findings of this study also revealed that the majority of participants believe that their accounting educators utilized learner-centered teaching practices to some degree. However, in terms of the use of lecture, the entire sample (100%) of participants responded they believe that their accounting educators always (32%) or frequently (68%) used lecturing. Based on descriptive statistics, it can concluded that the majority of Libyan accounting students in this study believe that their accounting educators used lecture, as main teaching method followed by in-class discussions, and group research projects. These teaching practices are ranked in the top three by students. On the other hand, most of students believe the teaching practices of “internet”, “teaching videos and CD discs”, “computer simulations”, and “Power-point presentations” are never or rarely used by their accounting faculty. These teaching practices are ranked the lowest by students.

Regarding to the dimensions, the overall ranking of the use of three groups of teaching practices ranged from up to rarely to occasionally use. With exception to the lecturing, seminars and discussions, and cooperative learning and group activities perceived to have been the most teaching practices used by accounting educators.

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Whereas, Internet and electronic means perceived to have been the least teaching practices used by accounting educators.

Further investigation, in the interviews, revealed that students believe that there are several teaching practices that accounting faculty would like to use such as: computer simulation, power point presentations, internet, and teaching videos. However, some students attributed non-use of those techniques to the lack of essential teaching and learning resources such as computer labs, library, internet and appropriate classrooms at Libyan universities. While others believe that the unwillingness of the faculty members and their teaching skills may be the reason beyond non-use of new teaching practices.

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Table 5.2 is presented to show students‟ perceptions about their accounting educators‟ levels of use of teaching practices that have emerged from the survey results in Table 4.8. Table 5.2 illustrates the extent to which students believe their accounting educators used alternative teaching practices whilst teaching them accounting. Level I lists the teaching practices which students believe are always or frequently used by accounting faculty. Level II lists the teaching practices which students believe are occasionally used and Level III lists the teaching practices which students believe are rarely or never used.

One main finding that emerges from the questionnaire results and discussion with students is that students reported a high level application of teacher-centered methods than learner-centered practices by ranking lecture as the most teaching method used by their educators. They also responded that their accounting educators

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never or rarely used internet and electronic means such as teaching videos and CD discs, computer simulations, and power-point presentations in teaching accounting. As the learner-centered teaching practices need some special facilities such as labs, internet, computers, and so on, indeed, lack of these facilities will hinder the use of such teaching practices. Also, because the noticeable lack of teaching and learning resources at Libyan universities, it was expected that Libyan accounting educators would utilize high level of teacher-centered teaching practices.

Table 5.2

Libyan Accounting Educators' Levels of Use of Teaching Practices

Level I "Always or frequently used"	Lecture
Level II "Occasionally used"	In-class discussions Group research projects Seminars Case study in class Small group activities
Level III "Rarely or never used"	Cooperative learning Power-point presentations Computer simulations Teaching videos & CD discs Internet

The finding of this study is consistent with previous local studies (Ahmad & Gao, 2004; Alhanoun, 2004; Khalat et al., 2007; Kilani, 2000; Massly, 2010; Musa & Almagouri, 2007). For example, Kilani (2000) who examined the suitability of accounting education to the needs of economic developments in Libya. He found that the instructional methods used by accounting faculty still one-way direction, and it does not cultivate in students the needed skills. Alhanoun (2004), who intended to identify the reasons behind the lack of knowledge and skills among the Libyan accounting graduates, concluded that students were not being exposed to real world skills and there is no evidence of using a variety of instructional strategies in delivering the accounting curriculum. According to Ahmad and Gao (2004), the

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traditional teaching approach to accounting education is still predominant in this country, with the emphasis on the transfer of knowledge. In addition, Massly (2010) also found that the pedagogy used by accounting educators at Libyan institutions depends on the traditional methods which often rely more on memorization than creativity.

Accordingly, in spite of the fact that the majority of participants indicated that their accounting educators utilized learner-centered teaching practices to some degree, however, it can be concluded that the traditional teaching approach is still predominant by Libyan accounting educators. The researcher attributes the low use of learner-centered teaching practices by Libyan accounting educators to teaching resources limitations. It is found that most of Libyan universities lack the necessary modern teaching resources such as labs, audio/visual equipments, e-libraries, internet, and other facilities which could encourage faculty members to use innovative teaching practices.

To this end, Libyan universities should provide accounting undergraduate students with more opportunities to be future accountants who are equipped with core competencies to complete the requirements of a complex business environment. To do so, French and Coppage (2003) suggest that the significance of applying innovative instructional methods need fully student participation in classes. In addition, as the business environment continues to change rapidly, accounting instructors need to develop strategic plans to reduce the gap between the skills current students obtain at the university and the essential skills needed in the workplace. Hence accounting

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educators must adapt their programs with effective teaching strategies to ensure that their students are skilled and prepared to meet the challenges that lie ahead.

Students‟ perceptions of the accessibility, quantity, and quality of facilities, and teaching and learning resources are likely to influence their opportunities to gain knowledge and develop core competencies. The current data represent only three of eight types of teaching resources (computer hardware, textbooks, and appropriate classrooms) are available as either satisfactory or good. These teaching resources are ranked in the top three by students. On the other hand, most of students believe the teaching resources of “audio/visual equipments”, “internet”, “research articles”, “computer software”, and “clerical support”, are inadequate or not available. These teaching resources are ranked the lowest by students.

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Further investigation, in the interviews, revealed that there is consensus among Libyan accounting students that there is no sufficient and appropriate teaching and learning resources at Libyan universities, emphasizing the need to provide more teaching and learning resources. In addition, when students were asked to what extent they believe existing teaching and learning resources may have motivated students to develop core competencies required on the workplace. They reported that learning resources such as library and classrooms in general are not satisfactory and not motivating students to gain knowledge and skills.

Table 5.3 is presented to show students‟ perceptions about levels of adequacy of teaching resources at Libyan universities. Table 5.3 illustrates the extent to which students believe teaching and learning resources are adequate at Libyan universities.

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Level I lists the teaching resources which students believe are outstanding. Level II lists the teaching resources which students believe are satisfactory or good, and Level III lists the teaching resources which students believe are inadequate or not available.

Table 5.3

Levels of Adequacy of Teaching Resources at Libyan Universities

Level I "outstanding"	----
Level II "Satisfactory or good"	Computer hardware Textbooks Appropriate classrooms
Level III "Inadequate or not available"	Clerical Support Computer software Research articles Internet Audio/visual equipments

One main finding that emerges from the questionnaire results and discussion with students is that, students emphasize the need to provide more teaching and learning resources as the existing resources are inadequate at all. These findings appear to be consistent with previous local studies (Massly, 2010; Musa & Almagouri, 2007). For example, Musa and Almagouri (2007) concluded that there is no association between accounting programs and the requirements of the accounting profession, which created a gap between the academic and professional field. This happens because the traditional teaching approach at Libyan universities was used to transmit classroom material to students, and most of Libyan universities lack the necessary modern teaching resources, such as computers, data shows, Internet, e-libraries, and appropriate classrooms equipped with the necessary tools for the educational process. Massly (2010) also found that accounting colleges in Libya lack adequate institutional resources that support learning and teaching process, such as; labs, e-libraries, internet, and other facilities which could encourage faculty members to use innovative teaching practices.

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Accordingly, although, the findings of current study indicate that some of teaching resources are readily available at Libyan universities such as computer hardware, textbooks, and appropriate classrooms. Nevertheless, these findings also indicate the fact that most of Libyan universities are constrained by lack of sufficient teaching resources, such as computer labs, audio/visual equipments, e-libraries, internet, and other facilities which could encourage faculty members to use innovative teaching practices. Libyan university administrators and decision-makers should use these results to improve the effectiveness of teaching and learning resources. This could be done by providing enough financial support, infrastructure, collections, and technology for the universities libraries so that both library resources and digital resources are provided for the use of students and faculty members. While the world is shifting from manual systems to digital system, most libraries in Libyan universities continue to use manual library systems using print-on-paper resources. This explains why Libyan universities should try their best in making their libraries equipped with essential teaching and learning resources, so that adequate materials would be provided for both the educators and students. Teaching and learning resources when sufficiently provided and used would generate great critical thinkers and well taught graduates in Libyan universities. Hence, these findings suggest the need for the provision of extra sufficient modern teaching resources. These findings also support the results of question two, which indicate that the internet and electronic means such as teaching videos and CD discs, computer simulations, and power-point presentations were perceived to have been the least teaching practices used by accounting educators. Based on these findings, it can be concluded that there is a relationship between teaching recourses and the use of variety of teaching practices.

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A person may have goals, but sees them unattainable if he or she does not have the personal ability to achieve them. Mohidin et al. (2009) noted that the educator‟s capabilities play a significant part in determining the effective teaching particularly in accounting subjects. Descriptive statistics revealed that the most three teaching capabilities effectively performed by Libyan accounting educators are "deliver lectures", "encourage participation of women and minorities in class", and "score and interpret examinations". These capabilities are ranked in the top three by students. On the other hand, capabilities of "utilize student evaluations", "utilize self-evaluation in teaching", "provide constructive feedback on exams and assignments", "respond to students‟ questions", "respond to student emotional reactions in class", and "respond in a timely manner to student difficulties" are never or rarely used by their accounting faculty. These teaching practices are ranked the lowest by students. Table 5.4 is presented to show students‟ perceptions about their accounting educators‟ levels of use of teaching capabilities.

Table 5.4

Libyan accounting Educators‟ Levels of Use of Teaching Capabilities

Level I "Always or frequently used"	Deliver lectures Encourage participation of women and minorities in class Score and interpret examinations
Level II "Occasionally used"	Evaluate student assignments. Initiate class discussion Show respect for student ideas and abilities Manage student disagreements with instructor Communicate consistently both verbally and nonverbally Ask open, stimulating questions Respond to individual differences in an inclusive way Communicate at a level that matches students‟ ability to comprehend Utilize exams as a learning tool. Draw students into discussions
Level III "Rarely or never used"	Construct essay questions… integration of content… and self-expression Respond in a timely manner to student difficulties Respond to student emotional reactions in class Respond to students‟ questions Provide constructive feedback on exams and assignments Utilize self-evaluation in teaching Utilize student evaluations

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Table 5.4 illustrates the extent to which students believe their accounting educators used some teaching capabilities and behaviors whilst teaching them accounting. Level I lists the teaching capabilities which students believe are always or frequently used by accounting faculty. Level II lists the teaching capabilities which students believe are occasionally used and, Level III lists the teaching capabilities which students believe are rarely or never used by accounting faculty.

Regarding to the overall ranking of the level of students‟ perceptions about accounting faculty use of specific teaching behaviors related to the three dimensions; questions and discussions skills, feedback and responsiveness skills, and evaluation and examination skills ranged from up to rarely to occasionally use by accounting faculty. While questions and discussions skills, and feedback and responsiveness skills are perceived to have been the most teaching capabilities performed by accounting educators with means and standard deviations (3.23, .655) and (3.13, .626) respectively, the evaluation and examination skills are perceived to have been the least teaching capabilities performed by accounting educators with mean and standard deviation (2.78, .624).

Further investigation, in the interviews, revealed that participants in this study reported different views about the essential teaching capabilities and skills of Libyan accounting faculty members. Some students believe Libyan accounting educators are capable and they managed to motivate students to skills development. Others reported that they are not satisfied with the level of their educators‟ teaching capabilities. For example some student believe that some accounting faculty members were very keen and enthusiastic, offered opportunities for questions and discussions inside and

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outside class times, and their classes always were interesting. While others had a perception that the level of teaching skills and behaviors displayed by their accounting educators were satisfactory but need to be improved.

Interestingly, it was revealed also from data provided in the interviews that many students pointed to some negatives associated with accounting faculty teaching behaviors, students think that impeded their learning. Some respondents believe that some faculty members lack of respect for students; do not treat students as friends and badly behave toward students. While other respondents note inadequate preparation and organization; many lecturers sometimes come unprepared for a class and just read from the book and have nothing else to say. Another group reported that some accounting educators failed to provide timely feedback and connect with students in and outside the classroom; not holding office hours at suitable times and are not accessible outside of classrooms. Other students characterized the problem as some accounting educators lacked communication skills; some faculty members are not able to communicate at the student‟s learning level, and some lack the ability to develop clear lines of communication between the students and lecturer. Another group reported that some accounting faculty often focus on tests without considering whether learning is taking place; sometimes testing not matching the lectures, many lecturers choose poor exam questions, poor homework questions and, not being clear in their lectures.

Some interviewees were mindful of the fact that a number of accounting faculty are new to the accounting education and are continually learning and practicing teaching skills. Students further commented that as new faculty gain

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experience in the teaching and become more comfortable with teaching processes they try to focus more on students as well as to use other teaching techniques than lecture. Consequently, they encourage students to exert some energy and discuss in the class. The researcher emphasizes that accounting faculty need to be aware of the responsibilities of this role, competent and well-trained in teaching, in order to leave a positive impression on the students that would motivate them to be more effective in learning. This highlights the need for the professional development of faculty members to facilitate them to find new ways to engage students in learning.

With exception to some improvements that found by this study in teaching capabilities of Libyan accounting faculty, the findings of this study is consistent with previous local study conducted by Ahmad and Gao (2004). The authors noted that the Libyan universities do not have sufficient qualified accounting academics and educators, fail to incorporate systematic academic teaching and professional training to accounting students, and lack accounting research to support effective teaching and learning process.

These findings therefore, suggest that those preparing future accounting faculty and academic administrators should pay particular attention to students‟ perception about their accounting faculty teaching capabilities. Formal communication and interpersonal skills are important for effective teaching. These skills can help lecturers to communicate their knowledge, using a variety of teaching strategies, interacting with students during, before and after class as well. These findings therefore, suggest that current and future accounting faculty development

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efforts should focus on development of interpersonal and communication skills as well as to technical skills.

Consistent with the literature, the findings of this study indicated that teaching resources is positively and significantly related to teaching practices. For instance, Colbeck et al. (2002) hypothesized that teaching practices would be influenced by lecturers‟ beliefs about teaching resources and supports (context beliefs). They found that faculty members‟ experience, demographics, and motivational variables (Teaching goals, capability beliefs and context beliefs) were significantly associated with their use of teaching practices. Furthermore, while this finding is consistent with results of the study conducted by Colbeck et al. (2002), this result contradicts with the study conducted by Richardson (2009). It most closely replicated the Colbeck et al. (2002) study. The author used the Motivational Systems Theory (MST) to identify how motivational factors (teaching goals, capability beliefs and context beliefs) contributed to the use of learner-centered teaching practices by educators in undergraduate social work programs. The results indicated that teaching goals were the only significant predictors of the use of learner-centered practices. In other words, Richardson (2009) did not find any significant relationship between teaching resources and the use of learner-centered practices.

The findings also indicated that teaching capabilities is positively and significantly related to teaching practices. It is clear that educators must have the ability (teaching capabilities) and the willingness to implement alternative teaching practices that enhance learning outcomes. These findings are congruent with the literature. For example, Colbeck et al. (2002) conceptualized teaching practices as

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(lecturers‟ use of traditional methods, or their use of groups/design projects). The authors hypothesized that teaching practices would be influenced by lecturers‟ background, experience, teaching goals, their perception about teaching skills (capability beliefs) and their beliefs about teaching resources and supports (context beliefs). They found that faculty members‟ experience, demographics, and motivational variables (Teaching goals, capability beliefs and context beliefs) were significantly associated with their use of teaching practices. Furthermore, while this finding is consistent with results of the study conducted by Colbeck et al. (2002), this result contradicts with the study conducted by Richardson (2009). It most closely replicated the Colbeck et al. (2002) study. The author used the Motivational Systems Theory (MST) to identify how motivational factors (teaching goals, capability beliefs and context beliefs) contributed to the use of learner-centered teaching practices by educators in undergraduate social work programs. The results indicated that teaching goals were the only significant predictors of the use of learner-centered practices. In other words, Richardson (2009) did not find any significant relationship between teaching capabilities and the use of learner-centered practices.

Because teaching practices is positively associated with teaching capabilities affect, this relationship appears to be significant in the students‟ evaluations of instructors‟ abilities and their teaching practices. Abrantes et al. (2007) found that students prefer interactive and student-focused teaching practices. Instructors‟ personal qualities, teaching capabilities and instructional methods strongly influence perceived learning. Moreover, if students have a strong and open interaction with their educators, they will devote more in the learning process and make a more positive opinion about instructors‟ abilities and their teaching practices. The relationship

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between teaching capabilities and teaching practices confirms that students benefit from teaching and learning processes that have strong interactions with their educators (Paswan & Young, 2002).

This study found a strong significant relationship between teaching practices and core competencies. These findings support the research hypothesis H3 which stated "there is a positive relationship between the teaching practices used by Libyan accounting educators and students" self-reported development of core competencies." These findings appear to be consistent with previous studies (Abrantes et al., 2007; Anderson & Bauman, 2004; Arquero et al., 2004; Cabrera et al., 2001; Clinton & Kohlmeyer, 2005; Colbeck, Cabrera, & Terenzini, 1999; Hwang et al., 2005; Weil et al., 2004). For example, Cabrera et al., (2001) investigated the relationship between instructional practices (Instructor Interaction and Feedback, Collaborative Learning, and Organization and Clarity) and students" self-reported development of core competencies (problem solving skills, group skills, and understanding of engineering as an occupation). They found that instructional practices were significantly and positively associated with the development in all three professional competencies. Weil et al., (2004) investigated student" perceptions of using case studies to develop specific competencies. The findings indicated that students perceived that case studies have a positive impact in developing fifteen core competencies. Clinton and Kohlmeyer (2005) investigated the impact of cooperative learning (using group quizzes) on learning outcomes. They conducted two experiments in four sections of a cost accounting course. One experiment (n = 146) compared the results from one semester (spring) that used group quizzes against results in the previous semester (fall) that did not use group quizzes. The authors found that using group quizzes helped

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students to improve problem-solving skills. Based on these findings, it can be concluded that the more educators interacted with students, using different instructional practices such as seminars and frequent in-class discussions, and provided opportunities for students to work together in small group activities and group research projects, the more students improved in intellectual skills, technical and functional skills, personal skills, interpersonal and communication skills and, organizational and business management skills.

The mediation analysis performed on core competencies indicated that both partial mediation and no-mediation models have explained less variation in core competencies than the full mediation model. In no-mediation model, the direct effect of teaching capabilities on core competencies was statistically significant; this significant direct effect became insignificant in the partial mediation model. Hence, it could be concluded that teaching practices fully mediated the relationship between teaching capabilities and core competencies.

The mediation analysis performed on core competencies also indicated that both partial mediation and no-mediation models have explained less variation in core competencies than the full mediation model. In no-mediation model, the direct effect of teaching resources on core competencies was statistically significant; this significant direct effect became insignificant in the partial mediation model. Hence, it could be concluded that teaching practices fully mediated the relationship between teaching resources and core competencies.

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Accounting educators must accept the accountability of providing students with essential skills and focus on teaching practices that highlight and include the most effective elements for student learning. Educators should concern themselves with a dual purpose: imparting knowledge and developing the competencies required in today‟s dynamic business environment. Utilizing teaching styles and methods, and providing adequate teaching and learning resources could have the greatest and most permanent impact on accounting students learning. Teaching and learning resources when sufficiently provided and used would generate great critical thinkers and well taught graduates in Libyan universities.

5.3 Contributions and Implications

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This study provides insights to understand the relationship between teaching process factors and competency development in undergraduate accounting education. A major implication of the study is the need for accounting programs and accounting faculty members to give greater attention to the relationship between teaching capabilities, teaching resources, and teaching practices, and how these elements enhance the teaching and learning process and competency development in accounting education.

Awareness of and focus on competency development in students as teaching goals could help accounting faculty to identify the possible differences between what they seek to accomplish as accounting educators and what they actually do. Accounting educators must therefore accept the accountability of providing students with these essential skills and focus on teaching practices that highlight and include

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the most effective elements for student learning. Educators should concern themselves with a dual purpose: imparting knowledge and developing the competencies required in today‟s dynamic business environment. In addition, since many Libyan accounting faculty lack formal training in how to teach or the efficiency of challenging teaching practices, accounting programs could be encouraged to promote faculty development programs that emphasize the significance of identifying capabilities for effective teaching to increase faculty members‟ awareness of how their capabilities for teaching may influence or impede their use of learner-centered teaching practices.

The findings of this study also indicated the need to enhance the availability of all teaching and learning resources in Libyan universities. It is important to note that the areas in which accounting students had the highest perceptions of adequacy of teaching and learning resources related to computer hardware, textbooks, and appropriate classrooms. Yet, any commitment by undergraduate accounting education to promote the use of learner-centered teaching practices should incorporate the provision of essential teaching resources which may include additional clerical support, computer labs, audio/visual equipments, e-libraries, internet, and other facilities which could encourage faculty members to use innovative teaching practices. Libyan university administrators and decision-makers should use these results to improve the effectiveness of teaching and learning resources. This could be done by providing enough financial support, infrastructure, collections, and technology for the universities libraries so that both library resources and digital resources are provided for the use of students and faculty members. While the world is shifting from manual systems to digital system, most libraries in Libyan universities continue to use manual library systems using print-on-paper resources. This explains why Libyan universities

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should try their best in making their libraries equipped with essential teaching and learning resources, so that adequate materials would be provided for both the educators and students.

Finally, the results of this study will contribute to positive change for students and faculty by providing recent data to facilitate informing and promoting administrative vision, support, and policies involving faculty development, and learner-centered programs to increase student engagement and competency development. The findings of this study may also assist accounting educators and accounting department chairs by expanding their understanding of promoting changes in accounting education in Libya. Furthermore, since there has been a lack of research on Libyan context relating to student competency development and faculty classroom practices, this study contributed to current research and practice by filling this gap and bringing this deserted area (accounting education in Libya) to the attention of overseas academics, and reporting about what is known about the Libyan university teaching-learning process and accounting faculty classroom practices. This research contributed also to the body of knowledge by investigating the relationships between teaching process and the development of specific competencies identified as essential for an accounting graduate. In addition, the results of this study can be compared to results from similar studies to enhance the existing literature on competency development in professional accounting education. However, the study can also form the basis for further analysis to understand the relationship between teaching process factors and competency development in other disciplines.

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5.4 Suggestions for Future Studies

This study has investigated the relationships between teaching process and core competencies development of undergraduate accounting students in Libya. The findings of this study that should be interpreted with care due to its limitations provide a foundation for future research in the area of accounting education. First, future research should include surveys with a larger number of students, in addition to interviewing a greater number of students. This will not only facilitate to generalize the results, but also to provide a more in-depth understanding of how teaching process influence the development of core competencies. Additionally, it is important to determine the extent to which the use of accounting curriculum helped students to develop the competencies needed in the accounting profession. The model of this research was restricted to test the effects of teaching process (teaching practices, teaching resources, and teaching capabilities) on core competencies development of undergraduate accounting students. Future research by incorporating of accounting curriculum in the model may provide further insights into how core competencies development is facilitated.

The findings of this study indicate that there is a relationship between faculty members‟ general teaching and use of learner-centered teaching practices. Future research can investigate further into the relationship between the specific course taught and likelihood of faculty members‟ use of learner-centered practices. This may be a significant area of study since some areas of accounting education may align more naturally with learner-centered instructions than other areas. This study also found that Libyan accounting faculty members were low to medium in their ability to

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perform various teaching behaviors as perceived by their students. This finding could be further explored by incorporating perceptions of accounting faculty about their teaching capabilities. In other words, do accounting faculty members‟ perceptions of their teaching capabilities differ from their students‟ perceptions? It is also recommended that further research should be conducted on accounting faculty development programs in Libya.

The results of this study also point to the need to enhance the availability of all teaching resources, because it was found that most of Libyan universities lack the necessary modern teaching resources such as labs, audio/visual equipments, e-libraries, internet, and other facilities which could encourage faculty members to use innovative teaching practices. Although these findings provide some information related to the availability and accessibility of teaching and learning resources at Libyan universities, future work is needed to investigate the reasons beyond the lack of teaching and learning resources, and to assess the quality of available resources in relation to the needs of teaching and learning process. Finally, consideration can be given to examining the wide applicability of this study model in other discipline areas.

5.5 Conclusion

Descriptive and interviews analyses led to key findings indicating that Libyan institutions‟ programs still are not adequately developing in students the core competencies needed in the accounting profession. A low level application of learner-centered practices was found among Libyan accounting faculty members, most

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Libyan accounting faculty members lack essential teaching capabilities, and most Libyan universities lack essential teaching resources. Using structural equation modeling (SEM), the study found that teaching practices fully mediated the relationships between teaching resources, teaching capabilities and core competencies. Positive relationships were identified between teaching capabilities and teaching practices, between teaching resources and teaching practices, and between teaching practices and core competencies. The main implication arising from the results of this study is the need to encourage more learner-centered teaching practices. Essential teaching resources should be made available at Libyan universities. Libyan accounting academics need to take initiatives to improve their teaching capabilities to ensure positive development of accounting students‟ core competencies. Based on study findings, some future studies were suggested.

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APPENDIX A: SURVEY INSTRUMENT

Thank you for agreeing to participate in this project. Your responses will be used and handled with strict confidentiality. The survey will take 15-20 minutes to complete.

SECTION I: Core Competencies

In answering this section, please consider any teaching strategies or techniques that were/are used by accounting educators for tutorials, assignments (or other assessment), seminars, workshops, or lectures. Decide to what extent you believe each skill may have been developed by you whilst undertaking your accounting degree, using a rating scale of 1 to 4 as following:

Not Developed	Slightly Developed	Moderately Developed	Considerably Developed
1	2	3	4

Question One: To what extent do you believe each of the following competencies may have been developed by you whilst undertaking your accounting program?

	The accounting degree developed skills in me to be able to:				
1	locate, obtain, organize and understand information from human, print and electronic sources.	1	2	3	4
2	deal with inquiry and research.	1	2	3	4
3	think logically and analytically, and analyzes things critically	1	2	3	4
4	identify and solve unstructured problems.	1	2	3	4
5	deal with mathematical and statistical applications	1	2	3	4
6	deal with computer and IT proficiently	1	2	3	4
7	deal with decision modeling and risk analysis.	1	2	3	4
8	measure and report information.	1	2	3	4
9	initiative, influence and self-learning.	1	2	3	4
10	Self-management.	1	2	3	4
11	anticipate and adapt to change.	1	2	3	4
12	consider the implications of professional values, ethics and attitudes in decision making.	1	2	3	4
13	work effectively with others in a consultative process.	1	2	3	4

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14	negotiate acceptable solutions and agreements in professional situations.	1	2	3	4
15	present, discuss, report and defend views effectively through formal, informal, written and spoken communication.	1	2	3	4
16	listen and read effectively.	1	2	3	4
17	organize work to meet tight deadlines.	1	2	3	4
18	organize and delegate tasks, to motivate and to develop people.	1	2	3	4
19	select and assign priorities within restricted resources.	1	2	3	4
20	leadership and make decisions.	1	2	3	4

SECTION II: Teaching Process

A. Teaching Practices Used in Classes

For items 1 to 11 please circle the number that indicates your level of agreement with the statements using a rating scale of 1 to 5;

Never	Rarely	Occasionally	Frequently	Always
1	2	3	4	5

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Question one: To what extent are accounting educators using each of the following teaching practices in accounting courses?

Item	Teaching practices					
1	Lecture	1	2	3	4	5
2	In-class discussions	1	2	3	4	5
3	In-class experimental exercises	1	2	3	4	5
4	Case study in class	1	2	3	4	5
5	Computer simulations	1	2	3	4	5
6	Independent research projects	1	2	3	4	5
7	Cooperative learning	1	2	3	4	5
8	Internet	1	2	3	4	5
9	Power-point slides	1	2	3	4	5
10	Overhead projector	1	2	3	4	5
11	Audio & Video tapes	1	2	3	4	5

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B. Teaching Resources

For items 1 to 10 please circle the number that indicates the level of adequacy of each resource using a rating scale of 1 to 5;

Not Available	Inadequate	Satisfactory	Good	Outstanding
1	2	3	4	5

Question two: The following are items relate to specific teaching resources. Please indicate the adequacy of each item at your college or university?

Item	Teaching Resource					
1	Computer hardware	1	2	3	4	5
2	Computer software	1	2	3	4	5
3	Audio/visual equipment	1	2	3	4	5
4	Internet	1	2	3	4	5
5	Textbooks	1	2	3	4	5
6	Research articles	1	2	3	4	5
7	Appropriate classrooms	1	2	3	4	5
8	Clerical Support	1	2	3	4	5

C. Teaching Capabilities

For items 1 to 20 please circle the number that indicates your level of agreement with the statements using a rating scale of 1 to 5;

Never	Rarely	Occasionally	Frequently	Always
1	2	3	4	5

Question three: To what extent are accounting educators demonstrating each of the following teaching skills and behaviors while they are teaching accounting courses?

item	Teaching Capabilities					
1	Deliver lectures	1	2	3	4	5
2	Initiate class discussion	1	2	3	4	5
3	Draw students into discussions	1	2	3	4	5
4	Communicate at a level that matches students‟ ability to comprehend	1	2	3	4	5
5	Ask open, stimulating questions	1	2	3	4	5
6	Encourage participation of women and minorities in class	1	2	3	4	5
7	Respond to individual differences in an inclusive way	1	2	3	4	5
8	Manage student disagreements with instructor	1	2	3	4	5

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item	Teaching Capabilities					
9	Communicate consistently both verbally and nonverbally	1	2	3	4	5
10	Show respect for student ideas and abilities	1	2	3	4	5
11	Respond to students‟ questions	1	2	3	4	5
12	Respond in a timely manner to student difficulties	1	2	3	4	5
13	Respond to student emotional reactions in class	1	2	3	4	5
14	Construct essay questions that require integration of content, critical thinking, and self-expression	1	2	3	4	5
15	Score and interpret examinations	1	2	3	4	5
16	Evaluate student assignments	1	2	3	4	5
17	Utilize exams as a learning tool	1	2	3	4	5
18	Provide constructive feedback on exams and assignments	1	2	3	4	5
19	Utilize student evaluations	1	2	3	4	5
20	Utilize self-evaluation in teaching	1	2	3	4	5

SECTION III: DEMOGRAPHIC INFORMATION

The following demographic information is personal, but will allow the researcher to compare results by respondent profiles. Remember all information you provide is entirely anonymous.

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Please select the most appropriate answer that best describes you.

1. Gender: Male ☐ Female ☐
2. Age: Under 21 ☐ 21-25 ☐
   26-30 ☐ 31 or older ☐

3. Name of your university is...

a. Tripoli ☐ b. Garyounis ☐ c. Misurata ☐

d. Almergeb ☐ e. Geryan ☐ f. Zawia ☐

g. Other ……..

Thank you for your time and cooperation. Please return the completed questionnaire in the postage-paid envelope provided

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APPENDIX B: COVER LETTER

To the potential respondent

I am currently conducting doctoral research on Improving Accounting Education in Libya at the Business and Economics Faculty – University Pendadican Sultan Idris, Malaysia (UPSI). I am conducting a survey to determine how accounting students at Libyan universities perceive that may have developed core competencies desired at the accounting profession whilst undertaking their accounting degree, and how teaching practices, teaching capability, and teaching resources may have contributed to the development of these competencies.

The information you provide will be valuable in the development of Libyan accounting education for future students, which takes into consideration those competencies that may have been neglected in the past and skills that have been promoted through your personal involvement with this degree. Your opinion is important as a preliminary step towards the assessment of the status of the accounting education in Libya and the ways of its improvement. Your responses to the questions in the questionnaire will be treated as confidential and anonymous and will be reported only in the form of statistical analyses that do not reveal your own personal views.

I will be extremely grateful if you could spare the time to complete the enclosed questionnaire as soon as possible and return it to me in the postage-stamped and addressed envelope provided. Your participation in this study is highly appreciated, and your response is crucial to the analysis and results.

Please accept my thanks for your anticipated cooperation.

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