

The Use of Information Technology in Accounting Education

Accounting Postgraduates at the Faculty of Economics of Tripoli's University

"A case study"

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Abstract in Arabic

ملخص الدراسة باللغة العربية

تقنية المعلومات صارت معلم مهم من معالم الحياة المعاصرة في كل المجالات من ترفيه واقتصاد وتعليم وغير ذلك. ليبيا التي تصنف كدولة نامية رغم ثروتها الكبيرة، وهي كما أظهرتها دراسات سابقة تعاني من ضعف كبير في بنيتها التعليمية وإهمال في الجانب التقني في مجال التعليم، إلا أنه الإحصائيات الحديثة أكدت على إزدياد عدد مستخدمي الانترنت فيها بشكل متسارع، وهذا ما أثار عدة أسئلة عن واقع استخدام تقنية المعلومات في العملية التعليمية. هذه الدراسة تصنف كدراسة حالة لأنها إختصت بدراسة مجموعة واحدة، وهي طلبة الدراسات العليا في تخصص المحاسبة بكلية الإقتصاد جامعة طرابلس كعينة من مؤسساتنا التعليمية في ليبيا. تحاول هذه الدراسة ومن خلال الحالة المستهدفة أن تلقي الضوء على واقع استخدام تقنية المعلومات في التعليم المحاسبي.

نتائج الدراسة التي اعتمدت إستقصاء شارك فيها 72% من الطلبة الدارسين خلال السنة الدراسية 2014-2015 والبالغ عددهم تفيد بأن معدل استخدام الانترنت مرتفع بين الطلبة المشاركين، وأن نسبة عالية منهم تستخدم تقنية المعلومات من انترنت وتطبيقات أوفيس في العملية الدراسية. كما تفيد الدراسة أن هناك جهود وإن كانت محدودة من قبل بعض أعضاء هيئة التدريس لتحفيز الطلبة بحيث يتم استخدام تقنية المعلومات في البرنامج الدراسي. أيضا توصلت الدراسة ومن خلال معدلات الإنحدار المتعدد، إلى أن عامل "مهاراة استخدام الكمبيوتر" يؤثر بمعنوية في مدى استخدام القدرات التقنية الشخصية في اداء الواجبات البيتية والأوراق البحثية. أما وضع الطالب من حيث العمل كموظف أم لا فقد ظهر أنه عامل يؤثر بمعنوية هامشية سواء على استخدام القدرات التقنية في اداء الواجبات والأوراق البحثية أو على ما إذا كان الطالب يستخدم الانترنت في برنامجه الدراسي أم لا.

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Abstract

The revolution of Information technology overwhelmed all the aspects of our everyday lives. IT is used in all sectors of industries and services including education. Libya is a developing country in which the education system is suffering a lot of problems, although the use of technology by Libyans is increasing rapidly. This case study three aspects of IT use within the group of accounting postgraduates at the Faculty of Economics of the University of Tripoli. It tries to cast light on: first students' qualification and IT accessibility; the extent to which IT is used in the educational process and the factors explaining the use of IT by students. Descriptive statistics and regression analysis are both used to find answers for the three research questions. Results show that IT is used considerably but in its simplest forms and the role of lecturers in encouraging this use is still very limited. Results also show that only two factors that may affect the employment of IT in the studying program. The first factor is the personal computer skills and the second is whether a student is being employed or not.

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Introduction:

Using Information Technology (herein after "IT") in higher education has become a usual aspect in all disciplines of education including accounting. Ahadiat (2008) suggests several examples from US business and accounting institutes which indicate this fact. For instance, business students of the Association to Advance Collegiate School of Business International are required to use the appropriate instructional technologies amongst their learning experiences. The American Institute of Certified Public Accountants (AICPA) also proposes that potential accounting professionals must attain the essential skills to effectively and efficiently use technology tools. In today's world the IT for accounting education may include a fair number of tools and techniques that may differ from country to another according to many factors, such as the level of education, technology, economy, etc. Using IT in higher education has been a subject of large number of studies, although a very limited number is made about Libya. This study will consider the employment of IT in order to get the Master's degree of accounting from the Faculty of Economics at the University of Tripoli (herein after "FEUT").

Literature Review:

At first, it worth to mention that, to the researchers extent of knowledge, there is no literature on using IT in accounting education in the Libyan environment. However, some studies referred to later in "*Problem statement and research questions*" pointed out the significant need for IT in accounting education in Libya and the clear neglect on this side.

Studies related to this study may be selected upon different criteria. However, the researchers decided to concentrate only on one angle which is the use of IT in accounting education and that can add some useful insights to the very subject to the current study. Al-Khadash and Al-Beshtawi (2009) aimed to investigate students' attitudes toward learning computer skills in an accounting course. They used a multiple-choice-question survey aimed at a group of student who had just finished a course of computer skills in accounting. Their results showed an overall positive attitude towards using computers, and that the only effective factor behind this attitude was students' previous experience with computers. Other factors namely, gender, age, grade point average proved to be insignificant. Ahadiat (2008) examined the extent to which accounting academics have adopted the use of technology in accounting education. His results showed that the use of technology in teaching was confined to IT whereas audio technology was seldom used.

The most popular applications of IT were e-mail, the Internet, word processing, spreadsheets, presentations, and data analysis. Ahadiat also examined whether differences exist among faculty by teaching area, academic rank, course level, AACSB accreditation, years of

teaching experience, age, and gender. Only the first, second and fourth factors were significant one. Chen et al (2013) examines whether the effectiveness of online accounting education relative to traditional in-class delivery depends upon the level of the course. They found on the level of advanced courses the outcomes were significantly more positive for traditional classroom environments than for online, while the delivery mode was not significant in principles courses. Laing (2010) examined the effectiveness of mnemonic devices to enhance learning in first year accounting at university. His findings were consistent with prior research which indicates that mnemonic devices can accelerate the rate at which new information is acquired and enhance formal reasoning.

In Egypt, Dahawy et al (2005) examined the technology acceptance within the CPA trainees of the Institute of Management Development of the American University in Cairo. They proved that the acceptance using technology in teaching is highly dependent on the perceived ease of use and perceived usefulness of the tool. Still, prefer a hybrid model that combines both traditional and unconventional tools and techniques. Some important factors involved and representing key issues here included

Dahmsh et al (2004) examined the relevance of the accounting educational system in Jordan for the requirements of IFAC related to IT. Their results showed that this system is not efficient in satisfying such requirements and is not in conformity with market developments. Finally, on the Libyan environment Elkaseh et al (2015) examined the acceptance of E-learning as a tool for teaching and learning in Libyan higher education. They found that for teachers perceived enjoyment has significant effect on their perceived ease of use and perceived usefulness of e-learning. For students, on the other hand, perceived enjoyment has a significant direct effect on students' perceived ease of use only. The results also reveal that social influence has a direct effect on students' perceived ease of use and perceived usefulness of e-learning, but no significant direct effect on the teachers' perceived ease of use and perceived usefulness of e-learning. Although their study on higher education was general.

IT used in accounting education

Amid this increasingly developing IT world, there are various applications that can be suggested for the benefit of accounting education ranging from the simplest to the most intricate. Examples of simple applications can be Office applications such as Word, Excel and PowerPoint. Although Word and PowerPoint can be very useful for postgraduates to word-process and present their papers and homework, they may not be of special importance for accounting. Excel, on the other hand, is well known for its ability to handle numerical information and do simple data analysis. In addition to Office applications, Ahadiat (2008) set more techniques such as data analysis software (e.g. SPSS and SAS), Course-specific computer teleconferences, Electronic lists for discussions with colleagues, Multimedia for in-class presentation, Multimedia for students' individualized learning. More advanced aspect of using technology in accounting education is "Integrative Business Simulations" discussed by Riley et al (2013).

For the purpose of the current study, we chose to design our questionnaire around what we think is familiar and usual applications in the context of our universities.

Problem statement and research questions:

Libya is a rich country which suffered a forty two years of dictatorship leading it to be classified as a developing country despite its enormous wealth. The education system of Libya is behind educational systems of its rivals in the MENA region. Several studies on accounting education in Libya(e.g. Abu-Faris, 2007; Assheri, 2007; Alfatiemy et al,2012; Zekri, 2013; Al-Azerk & Ali, 2014; El-Magouri, 2008) agreed on that accounting education in Libyan universities clearly lack IT facilitation and the use of technology in the educational process. However, according to the latest statistics, the number of Internet users in Libya as of Dec 31, 2014 is 1,362,604 users (21.3% of the population). Furthermore, in the last years Libya has become the tenth biggest user of Facebook in the Arab World, and 95th globally (Forjani, 2015). The number of Fb users is 781,700 (Internet World Stats, 2015).Furthermore, none of the studies above provide any insights into this IT side.

According to the aforementioned contradictions, the current study raises the three following exploratory questions regarding postgraduate accounting students at FEUT: RQ.1 To what extent FEUT accounting postgraduates are IT qualified and facilitated? RQ.2 To what extent IT is used by accounting postgraduates in their studying? RQ.3 what are the explanatory variables of the using IT in studying accounting?

METHODOLOGY:

This work may be classified as an exploratory case study supplemented by a questionnaire.

The case: "The case" in a case study is the situation, individual, group or organization that the researchers are interested in (Rissanen, 2014).In the current study our case is the group of accounting postgraduates enrolled the academic year 2014-15 at the FEUT. The number of students of this group is 81 students, of whom 59 participated in our questionnaire (72.8%).

Analysis: our analysis employs two main tools: descriptive frequencies and logistic regression models. On the other hand, regarding the research questions, the study is divided into two sections: First section is about the personal abilities and skills of the students and the facilities available, while the second section is set to explore to what extent IT is used during the courses. The second analysis tool "logistic regression" is only a supportive tool used in the second section of analysis.

Table1: Case Characteristics

Sex	Male	50	84.7%
	Female	9	15.3%
Age	20-25	11	10.9%
	26-30	26	25.7%
	31-35	13	12.9%
	35-40	3	3.0%
	> 40	5	5.0%
Residents of Tripoli	Resident of Tripoli	23	22.8%
	Other	34	33.7%
Level of English	Very simple	15	14.9%
	Simple	5	5.0%
	Good	28	27.7%
	Very good	10	9.9%
Employment	Employed	23	22.8%
	Not	34	33.7%

ANALYSIS:

First: Descriptive frequencies analysis

In this part of analysis we provide some descriptive facts that are aimed to provide answers (ARQ.1 and ARQ.2) to two research questions RQ.1 and RQ.2 respectively: *ARQ.1 Students' personal abilities, skills and IT facilities, ARQ.2 the extent of using IT in the learning process.*

ARQ.1 Students' personal abilities, skills and IT facilities

1.1 computer accessibility an important part of the questionnaire was employed to help in exploring and assessing the general level of the students' knowledge and abilities with IT. Answers on this part of questionnaire are depicted through the several following tables. However, it should be noticed that the questions were variously designed, which required to display them in several tables.

Responses in Table 2 show that only one student does not have essential knowledge of using computer and that the vast majority of them have their own personal computers. Furthermore a substantial part of them attended training courses and quite similar percentage used computer at work.

Table2: Computer accessibility

Question	Answer		%	
	Yes	No	Yes	No
Do you have essential knowledge to use computer?	58	1	98.3	1.7
Do you own a PC?	54	5	91.5	8.5
Have you been in any computer training courses?	41	18	69.5	30.5
Do you use computer at work?	42	15	71.2	25.4

Following this there was a question about the place where students might have learnt computer. About one third of the respondents said they learnt only at training centers. However, as many as nearly 19% (10.2+8.5) learnt computer at training centers with either workplace or both workplace and home. Another substantial proportion is those who learnt computer only at home (25.4%), while the ones who learnt only at work place were merely 10.2.

Table3: Place where students have learned computer:

	Frequency	Percent
Workplace	6	10.2
Home and Workplace	3	5.1
and Training center Home, workplace	5	8.5
and Training center Workplace	6	10.2
Home	15	25.4
Home and Training center	1	1.7
School	3	5.1
Training center	20	33.9
Total	59	100.0

1.2 Computer skills: as Office is a pack of applications exists to support the use of Windows and proved to be very useful for studying and work purpose. There was a question on which Office applications students are able to use. Answers showed that Word is on the top skills with nearly all of them think they are able to deal with Word. However, 30.4% of respondents are good with only Word, while a close number of them are good with both Word and Excel. The highest percentage of approximately 34% represents students have the ability to deal with three applications together (Word, Excel and Power Point).

Table 4: Office Skills:

Application	Count	%
Word only	17	30.4%
Excel only	1	1.8%
Excel, PP (Power Point), and word	20	35.7%
Excel and Word	16	28.6%
Word and PP	2	3.6%
Total	56	100.0%

1.2 Internet accessibility: having access to the internet is increasingly becoming one of the basic needs in modern societies with disputed benefits.

People can get such access at different places of which we chose home, workplace, University and café to survey about. As can be seen in Table (4) 91% (54 students) access the internet from home, while 42% (25) could access at workplace. However, most of the respondents have access through more than one place. For example, 27.1% can access the internet from both home and workplace. This may raise a question on the role of the university in providing internet to students. In fact, the University of Tripoli "UT" like other Libyan public universities do not have computer clusters, except those small ones available at computer departments. In 2015, the UT started public internet WIFI service around its campuses, although it is clear that there are many technical problems prevent students from utilizing it so far.

Table 5: Internet accessibility

Place of access	Count	%
Home	24	40.7
Café	1	1.7
Home, Café	4	6.8
Workplace	4	6.8
Home, Workplace	16	27.1
Home, University	4	6.8
Home, University, Workplace	2	3.4
Home, Café, Workplace	1	1.7
Home, University, Café, workplace	2	3.4
Total	59	100.0

Another question related to the internet accessibility was on the rate of using internet. Answers showed nearly half of students rated their use as "average", whereas just above a quarter of them think that they are intensive users.

Table 6: Rate of using the internet

Rate of use	Count	%
Average	28	47.5
Limited	13	22.0
Intensive	17	28.8
Total	58	100.0

Actual purposes of using the Internet by students are a question for which answers are summarized in Table (6). None of the respondents use the internet solely for studying as 74.1% (56.9+17.2) uses it in addition to a combination of various purposes including studying, socializing, email, and general knowledge. Another proportion of 19% do not use for studying. In addition to this and noticeably, 6.9% say they use it only for email.

Table7: Purposes of using internet

Purpose	count	%
Study purposes, Socializing, Email, General knowledge.	33	56.9%
Study +Email, General Knowledge	10	17.2%
Socializing, General Knowledge	11	19.0%
Email only	4	6.9%
	58	100.0

ARQ.2 The extent of using IT in the learning process

2.1 Using Email: Email is one of the oldest and most popular Internet applications that can be used for various reasons work, social and academic. Therefore, students can use email to communicate with their co-students, lecturers or academics from other universities, whether this use is of their choice or obligatory. Therefore, our questionnaire contained some questions on this.

Table 8: purposes of using email

Purpose	Yes	No	%	%
Do you communicate with co-students via email?	47	11	81.0	19.0
Do you communicate with lecturers via email?	34	24	58.6	41.4
Do lecturers oblige you to contact them via email?	14	42	25.0	75.0

2.2 Visiting stock markets and annual reports online Teaching accounting at the postgraduate level requires bringing students closer to reality. In order to achieve these lecturers may ask students to visit websites of stock markets and to read public companies' annual reports online. Only 19 (11.2%) students who appear to have interest in Annual reports, 11 of whom (6.5%) visit them for doing working papers. Furthermore, a less percent of students (9.5% -16 students) visit stock markets online, of which only 7 students do this for studying purposes.

2.3 Using Facebook From the researchers' point of view Facebook (herein after "Fb") may be a prime factor of the increasing number of IT users in Libya, simply because being on Fb requires people to be online and use technology.

Results show that 52 out of 59 students use Facebook of which 49 exploit it for study purposes. This result is consistent with what we mentioned in our introduction on the high percentage of Fb in Libya, although it indicates that this percentage is much higher within students.

Table 9: Using Facebook

	Yes	No	%	%
Do you use Fb?	52	6	89.7	10.3
Do you use Fb for study purposes?	49	3	94.2	5.8

This section on Fb also explores the side of using it for study purposes. Participating students were questioned on five possible types of Fb pages that maybe visited and beneficial. Results show that nearly one third of respondents who use Fb deal only with their faculty and department pages. Another third visit the same pages but in addition to specialized pages of accounting. A percentage of 16.3% confine their academic Fb use to visiting to specialized pages. The remaining participants (18.4%) employ Fb in communicating with co-students and other study purposes other than what we mentioned above.

Table 10: Facebook pages.

Page	count	%
Faculty and department pages.	17	34.7
Accounting specialized page	8	16.3
Faculty and department pages and Acc Specialized page	15	30.6
Course group and other study purposes	9	18.4

2.4 University website: Amid this increasing peoples usage of Internet, University websites is a main and crucial link between universities and their students. Our results show that a reasonable percentage of 76.3% of respondents to our questionnaire use the university website. A question that may be raised following this result is what about the remaining percentage of 20.3%? A possible answer is that they could be substituting it for the university page on Facebook.

For the rate of visiting the university's website, participants say that only a minority of 17% who visit website continuously, while most to them visit it occasionally.

Table 11: UT and FEUT's website

		C	%
Do you visit the university's website?	Yes	47	79.7
	No	12	20.3
		59	100

Table 12: Rate of visiting website

Rate	Count	%
Continuously	8	17.0
Occasionally	26	55.3
Rarely	13	27.7
	47	100

The most common purpose of visiting the university's website is registering at each new semester (38 students). A second purpose is exam results (30 students) a percentage of 24% Visit University's website for three purposes combined.

Table 13: Purposes of visiting the website

Purpose	Count	%
Registration only	14	31.8
Registration, Results, lectures timetable	24	54.5
Results, contacting lecturers, complaints.	6	13.6
	44	100

Responses to our questionnaire also show that 98% of respondents prefer to access Internet more intensively, whereas 86.4% of them need more support from university.

Table 14: Perception of more university's role

Question	Yes	No	%	
Do you prefer to use Internet more intensively?	58	1	98.3	1.7
Do you need more university support with Internet?	51	1	86.4	13.6

2.5 Role of lecturers: A substantial part of our questionnaire is designed around the potential role of lecturers in encouraging students to use IT. Questions were set to reflect some of various ways in which lecturers can do this.

Students were first asked whether they were obliged by their lecturers to word process homework. Answers were "sometimes" from 54.2% of participants and "Always" from 27.1% of them. Excel which is considered to be a good practical application for accounting practices was "sometimes" required to be used according to 37% of respondents, whereas 63% were "Never" asked to do so. In addition to Excel, accounting students can use other software for data analysis such as SPSS, SAS and Minitab.

Answers on questions on whether lecturers do oblige students to employ such software were "Never" for 51.8% of respondents and "Sometimes" for 39.3% of them.

PowerPoint, is considered very useful for presentations was "Never" required by lecturers according to 51.8% of respondents, whereas 39.3% of them say that they were "Sometimes" asked to use it.

Table 15: Obligation by lecturer to use Office.

Question	Never		Sometimes		Always	
	Count	Percentage	Count	Percentage	Count	Percentage
Are you obliged to word process your work?	11	18.6%	32	54.2%	16	27.1%
Are asked to use Excel?	34	63.0%	20	37.0%	0	0.0%
Are you asked to use data analysis software?	29	51.8%	22	39.3%	5	8.9%
Are you required to use PowerPoint?	27	51.9%	23	44.2%	2	3.8%

Question was also about the role of lecturers in encouraging students to use the internet. The number of students who said they were obliged by their lectures to surf the internet were 28 (47%). Nearly half of these (46.4%) do this only to find research papers, while who surf the internet for research papers in total are 18 (13+5+4, 78.6%), although a proportion of them have other purposes such as data collection (17.9%) and communication (14.3%). The percentage of 47% indicates that lecturers need to push students to benefit more from internet and guide them to gaining the greatest value.

Table 16: Internet use guided by lecturers

Purpose	Count	Percentage
Research papers	13	46.4%
Research papers, data collection	5	17.9%
Research papers and communication	4	14.3%
Communication (email, university web, co-student)	5	17.9%
data collection	1	3.6%
	28	100.0%

Another indication of the extent of using IT by accounting postgraduates could be understood by the answer on a question whether they rely on IT personal skills and abilities for doing their homework and assignments. Results show that 20% of the respondents "Never" do

their work by themselves, which means they ask for help in using IT, whereas 47.3% of them rely on themselves "Sometimes". This result, to some extent, conforms to the aforementioned claim of students on their computer skills.

Table 17:

	Never		Sometimes		Always	
How often you rely on your computer abilities in doing your assignments?	11	20%	26	47.3%	18	32.7%

Second: Logistic Regression Analysis (ARQ.3)

This second section of analysis employs two types of logistic regression analysis: binary logistic regression and ordinal logistic regression. However, both models are used here to support the answer of the third research question "RQ 3". The two models examine some explanatory variables behind the extent of using IT in studying accounting. Each logistic model is represented by a logit in the following general form:

$$Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon_i$$

Suggested Independent variables (Predictors) as the regression analysis in this study is used as a supporting and a complement tool of analysis, it should be made clear here that the predicting variables examined here are constructed from our questionnaire on the basis of the relevance of data to what is thought to be answer to the third research question "RQ 3". This research is considered to an exploratory case study and is not designed to test a theory, therefore, our choice of these variables were merely what is could be extracted from our questionnaire. However, existing literature can provide sufficient theory behind the factors affecting the use IT in the educational system of some developing countries (e.g. Mohammadi (2015), Allahwiah&Tarawneh (2015), Aljaraideh&shdooh(2014) and Elkaseh et al (2015)).

Computer Skills: previous research proved the existence of positive relationship between having computer and the adoption of IT (Mohammadi, 2015). Students with computer skills are expected to be more willing to use internet for study purposes and to depend on themselves in doing their homework and papers. This variable is coded *Comsk* and measured as an ordinal variable (1, 2, 3, and 4).

English language: as English is the and prime and key language for using information technology, we assume that being good at English is a positive factor in using IT by postgraduate accounting students (see Dahawy et al, 2005 and Mohammadi, 2015).

This variable is coded *Elang* and measured as an ordinal variable (1, 2, 3, and 4).

Residence in a city: a report by the UNESCO in 2013 states that Remote and rural regions of many Arab countries are typically most disadvantaged in the establishment of any type of supporting infrastructure to support Internet connectivity (UNESCO, 2013). In fact, Libya is no exception of this. Thus we suggest that being a resident in Tripoli increase the chances of using IT for studying purposes.

This variable is coded *City* and measured as a binary variable for being a resident in Tripoli or not (0/1).

Employment: The point of view behind this variable is that being employed while studying for MA gives students more accessibility to IT facilities, increase their chances training and get more computers skilled. Therefore, it is assumed here that such students would be using internet for studying purposes and depending themselves in using IT for homework and papers. Employment is represented by “Emp”, a dummy variable of (0/1).

Age: Although theory behind the association between "age" and the adoption of IT is not sufficiently strong, this variable is frequently considered in this type of research. The point is that young people are more willing to use IT than older ones. Several studies such as Dahawy et al (2005) Redmann&Kotrlik (2009), Allahawiah&Tarawneh (2015), Mohammadi (2015) proved significant negative relationship between age and the adoption of IT, although Al-Khadash& Al-Beshtawi did not find it be significant. This variable is measured as ordinal (1, 2, 3, and 4) representing four age categories.

Model 1: Binary logistic regression model

A binary logistic regression is a regression model in which the dependent variable is a binary (dummy) variable 0/1, whereas the independent ones can be of many types. The advantage of logistic regression is that no complex assumptions (such as linearity) are made on its variables. However, multi-collinearity should not exist between its dependent variables (see Menard, 2010 for assumptions).

This model is set here to examine the effect of several potential factors which were thought by the researchers to have effect on using IT. To try finding answer for third research question two logistic models are tested. The first model is with a dummy dependent variable of

whether the internet is used in studying or not. The second one is with an ordinal dependent variable measures levels of Independent variables are the most ones thought to be related to models from the answered questionnaire.

$$Z_1 = \beta_0 + \beta_1 Comsk + \beta_3 Elang + \beta_4 City + \beta_2 Emp + \beta_5 Age$$

Where:

Z_1 , The log of the probability of being a user of internet for purposes of studying to probability

of not being (dummy variable 0/1). i.e $\log\left(\frac{P(category_i)}{P(category_j)}\right)$

Table 18:

	B	S.E.	Wald	Sig.	Exp(B)
Comsk	.070	.349	.040	.841	1.073
Elang	.370	.303	1.496	.221	1.448
City	.200	.702	.081	.775	1.222
Emp	1.121	.661	2.879	.090	3.067
Age	-.253	.280	.817	.366	.776
Constant	-1.704	1.497	1.295	.255	.182

According to the results in Table (18), the model may be rewritten as the following:

$$Z_1 = -1.06 + 0.07Comsk + 0.37Elang + 0.20City + 1.12Emp - 0.25Age$$

The results show that none of variables suggested significantly explain the choice of using internet by postgraduate accounting students for studying purposes. However, one should notice that employment status is a marginally significant factor.

Model 2: An ordinal logistic model

Ordinal logistic regression or (ordinal regression) is used to predict an ordinal dependent variable given one or more independent variables. For example we could use ordinal logistic regression to for a variable measured on a 5-point Likert scale, based on some independent variables either continuous, categorical or ordinal)see Menard, 2010 for assumptions)

$$Z_2 = \beta_0 + \beta_1 Comsk + \beta_2 Emp + \beta_3 Elang + \beta_4 Age$$

Where:

Z_2 Is an ordinal dependent variable that measures the extent of using personal IT abilities and skills in doing homework and research papers. Independent variables are the same as above but with eliminating the *City* variable.

Table 19

		Estimate	Std. Error	Wald	Df	Sig.	%95Confidence Interval	
							Lower Bound	Upper Bound
Threshold	DIYN = 1	-2.201-	1.274	2.982	1	.084	-4.699-	.297
	DIYN = 2	.499	1.235	.163	1	.686	-1.922-	2.920
Location	Comsk=1.00	-2.668-	1.403	3.619	1	.057	-5.417-	.081
	Comsk=2.00	-2.831-	.853	11.013	1	.001	-4.503-	-1.159-
	Comsk=3.00	-1.907-	.792	5.797	1	.016	-3.459-	-.355-
	Elang=1.00	.595	.950	.392	1	.531	-1.268-	2.458
	Elang=2.00	.875	1.214	.520	1	.471	-1.504-	3.253
	Elang=3.00	.610	.819	.554	1	.457	-.995-	2.214
	Emp = 1	1.304	.644	4.104	1	.043	.042	2.566
	Age=2.00	.284	.999	.081	1	.776	-1.674	2.243
	Age=3.00	.571	1.009	.320	1	.571	-1.407	2.549

Results in depicted in Table (19) show that: there are two variables which have significance effect on students to depend on their personal IT abilities to achieve assignments, namely Comsk and “Emp” which represent student’s computer skills and employment status respectively.

Additional information on the model:

The models chi square = 22.891 with significance of 0.018. Pearson's and Deviance Chi square are highly insignificant (0.507 and 505 respectively). These statistics are intended to test whether the observed data are consistent with the fitted model.

Conclusion

This study explored the role of information technology in the accounting education program of postgraduates through three main axes: students' qualification and IT accessibility; the extent to which IT is used in the educational process and the factors explaining the use of IT by students. Consisting with these three axes the researchers put three main research questions to be answered through a closed-ended questionnaire. In answering the first research question we conclude that the vast majority of postgraduates have essential knowledge of using computer and have their own computers. Furthermore, the most familiar Office application to them is "Word" and less than that is "Excel". We also found that the training courses had important contribution

in qualifying them. As university is still short of IT facilities, most of students find computer and internet accessibility at home and workplace.

For the second research question, sub-questions were set around the use of both internet and computer for studying purposes. Results show that nearly all students use the internet and that there are two prior purposes of this use: studying and socializing; while nearly all of these users are also Facebook users. University's website turned out to be a popular place to visit on the internet almost for registration and results. About the role of lecturers in pushing students towards using IT in learning, the trend of results shows that students are not "always" (just "sometimes") asked to word process their homework, and are rarely asked to use Excel, software for data analysis, or PowerPoint for presentation. Results also show that just one third of respondents rely on themselves on doing their work using IT. Finally about the third research question RQ.3, results show that only being employed for accounting postgraduate is a marginally significant factor in deciding the use of the internet by postgraduates for studying purposes. On the other hand, being a computer-skilled was a significant factor in extent of using their own abilities in doing homework and assignments; in addition to "being employed" was a marginally significant factor again.

Recommendation for future research:

We recommend that similar research to be done on the level of undergraduates, and more research on current situation of IT facilities in Libyan universities. Furthermore, exploring the perception of IT in learning accounting and the role of academics in introduce it more active teaching. Researchers may also with a much larger sample study relationship between the ability and the extent of using IT and various effecting factors suggested in previous research. Finally, it is a good idea to explore the situation of IT in the accounting profession in Libya.

List of Citations:

- Ahadiat, N. (2008). Technologies Used in Accounting Education: A Study of Frequency of Use among Faculty. *Journal of Education for Business*, 83(3), 123-134.
- Alfatiemy, N., and Yosof, r. (2012). The impact of Teaching Resources on the use of Different Teaching Methods; Libyan Accounting Graduates, Perceptions. *International Journal Of Economics Business and Management Studies*, Vol 1 (3) PP 76-85
- Al-Khadash and Al-Bishtawi, (2009) Attitudes toward learning accounting by computers: The impact on perceived Skills. *Journal of Accounting and Taxation Vol.1 (1)*, pp 001-007.
- Allahawiah. S., Tarawneh. S. (2015). Factors Affecting Information And Communication Technology (Ict) Use By Southern Colleges Teachers In Balqa Applied University. *The WEI International Academic Conference Proceedings*, 2015. Barcelona, Spain.
- Chen, Clement C., Keith T. Jones, and Keith A. Moreland. (2013) "Online Accounting Education versus In-class Delivery: Does Course Level Matter?" *Issues in Accounting Education* 28(1), 1-16.
- Dahawy, K. Tooma, E &Kamel, S (2005), The Use of Information Technology in Teaching Accounting in Egypt: The case of Beckercenviser; *Communication of the HMA Vol. T, No. 3 pp176-192*
- Elkaseh, A., Wong, k., and Fung, C. (2015). The Acceptance of E-learning as a Tool for Teaching and Learning in Libyan Higher Education. *IPASJ International Journal of Information Technology*. Vol. 3(4).
- Fornaji, H. (2015). Libya is 95th biggest Facebook user, 10th in Arab world. *Libya Herald Journal*, August 2015.

Harrison, B., Redmann, D., & Kotrlik, J. (2000). The value and usefulness of information technology in Family and Consumer Sciences education as perceived by secondary FACS teachers. *Journal of Family and Consumer Sciences* 18(1), 1-8.

Internet World Stats. (2015). Internet Usage Statistics for Africa. International Data base "Internet World Stats". Retrieved in 16 July 2015.

Laing, G. (2010). An empirical test of mnemonic devices to improve learning in elementary accounting. *Journal of Education For Business*, 85(6), 349-358

Menard, Scott. (2010). *Logistic Regression: From Introductory to Advanced Concepts and Applications*. Thousand Oaks, CA: Sage.

Mohammadi, S. (2015). An Evaluation Of The Factors Associated With The Usage Of Information Technology In Sport Organizations. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*. February 2015 RJPBCS 6 (1) P. 1696

Riley, R., Cadotte, E., Bonney, F.L. and MacGuire, C.C. (2013). Using a Business Simulation to Enhance Accounting Education. *Issues in Accounting Education*, 28 (4).

References in Arabic Language:

AbuFaris R. (2007). Professional Accounting Education and the ways of developing. "التعليم المحاسبي المهني، الواقع وسبل التطوير". The 2nd Conference on the Accounting Education, 2007. The Libyan Academy for Higher Studies. Tripoli, Libya.

AlAzerk and Ali (2014). Improving the quality of accounting education from the perspective of academics, an explanatory study. "تحسين نوعية التعليم المحاسبي من وجهة نظر الأكاديميين". *Al-Ostaath journal*, Spring 2014.

AlMagouri, N. (2008). Narrowing the gap between the accounting education program and the requirements of the profession's market .

"تضييق الفجوة بين برنامج التعليم المحاسبي ومتطلبات السوق المهني". Unpublished MA dissertation, Azzawia University.

Assheri, A. (2007). [Accounting Education between theory and practice]. The 2nd Conference on the Accounting Education "التعليم المحاسبي بين الواقع النظري والتطبيق" 2007. The Libyan Academy for Higher Studies. Tripoli, Libya.

Dahmsh, N., Daas, G., Abu-Zr, A. (2004). [Information systems and technology for accounting education in the Jordanian universities] "أنظمة وتكنولوجيا المعلومات في التعليم المحاسبي في الجامعات الاردنية" The 1st Conference of Accounting Department at Mouta University, 2004. Mouta, Jordan.

Zekri, M. (2013). [Challenges and problems facing the comprehensive quality of accounting education in Libya] "التحديات والمشاكل المعاصرة التي تواجه الجودة الشاملة للتعليم المحاسبي في ليبيا" The 5th Conference of the Arab Organization for Quality Assurance in Education, December, 2013. Tunis.