



# The Impact of Using Computer Applications Programs as a Tool in Accounting Education on the Performance of the Students of Financial Accounting Course

Ahmad Saleem Tarawneh\*

Department of accounting, Mutah University, Jordan. \*Email: [ahmadtarawneh111@yahoo.com](mailto:ahmadtarawneh111@yahoo.com)

## ABSTRACT

The aim of this study was to identify the impact of using computer applications in accounting education in higher education institutions in Jordan. The study was based on the experimental approach in presenting, analyzing data and drawing forth the results, using a sample of 67 students who were chosen intentionally. The results have showed a statistically significant effect of using computer applications in accounting education on the performance of the students of financial accounting course at Mu'tah University. In the light of the results, some conclusions were drawn, most importantly is that the use of computer technologies and applications is a part of the strategic orientation of education development. Based on the conclusions, the study recommends the need to push for using these techniques in an organized and systematic manner.

**Keywords:** Computer Applications Programs, Accounting Education, Financial Accounting, Performance, Jordan

**JEL Classification:** M41

## 1. INTRODUCTION

Education plays an essential role in the advancement and development of societies and is one of the causes of progress, welfare and well-being at the level of individuals and countries. A country that pays attention to its education system must excel in all political, social, economic fields, regardless of availability or scarcity of other resources (Watty, et al., 2014).

Education is defined as a set of practices done by an individual to acquire skill, knowledge or experience, so it is any action has an impact on the formation of the mind and personality of the individual. The concept of education differs from the concept of learning, learning is a semi-permanent change in the behavior of the individual due to experience and practice (Colak, 2015). Education is broader including two other elements: Determining the behavior to be learned and determining the conditions in which they are made (Maqar, 2017).

Recently, education systems have witnessed an increasing interest from educational institutions of all kinds, which in turn have

sought to keep abreast of developments in all fields in a way that reflects positively on the reality of education (Douhou et al., 2011). Teaching Accounting has not been isolated from this development. Accounting has been significantly affected by this progress, as it has been possible to accomplish all the traditional functions of financial accounting, cost accounting and other accounting disciplines with a high level of accuracy and speed (Teo, 2011). Moreover, it many modern techniques related to these areas have been developed, especially accounting information systems.

The identification of strategies that can be effective in promoting accounting education is achieved by adopting training programs in accounting and practice (Yaftian et al., 2017). Consequently, this will contribute to the development of effective accounting systems, which requires that accounting curricula include the application of modern IT techniques and methods, which have many advantages that make it an ideal way for usage in the educational process.

The current education system in most Arab universities is actively pursuing to provide teaching and learning opportunities, transfer knowledge and develop skills and capabilities that enable the

involvement in work fields in a great deal, thus increasing productivity in a way that reflects the comprehensive development process and the broad progress of the society. The importance of using computers in education has emerged because many Arab studies have demonstrated the widespread use of indoctrination methods in universities that are insufficient to qualify students (Darwaza, 2000).

Education in Jordan has been improving since the middle of the 20<sup>th</sup> century. The efficient education system has played a major role in transforming Jordan to be one of the main reign that occupy high rank in Education Arab world. Jordan has played a key role in the creation and enrichment of Arabic content on the Internet. Jordan has contributed about 75% of the total Arab content, which equals 3% worldwide.

According to the prior research, Jordan has the largest number of research and development researchers per million people among the 57 Organization of Islamic Conference (OIC) member countries. Jordan has about 2000 researchers per million people, while the average in the OECD countries Five hundred researchers per million people (Naim and Ruhman, 2009).

According to Nature periodical, Jordan has the largest number of researchers per million people among the 57 country members in the OIC, Jordan has about 2000 researchers per million people, while the average in the (OIC) countries 500 researchers per million people (OIC, Countries and Territories).

Such development should be accompanied by the relentless pursuit of the development of accounting education through the introduction of new technologies available and the development of programs that will drive this trend. Therefore, this study was conducted to investigate the impact using computer application programs as a tool of accounting education in the performance of students of the course of financial accounting in the accounting department at Mutah University as well as to follow the trend towards the use of modern tools through the methods currently used in the development of accounting education.

Although investigating the impact of adopting modern tools of education on students' performances was covered in many studies, this study seeks after investigating the most modern trends in accounting education that embraced cognitive achievement in an integrated and balanced manner that was limited in prior studies. Moreover, compatibility that focuses not only on the knowledge but also the extends to include how knowledge is used and applied practically in accounting was taken into consideration. Besides that, this study demonstrates the significant impact of the integrated accounting education methods on raising the level of achievement and performance. Hence, this research can provide recommendations based on the findings to the educational institutions with respect to the development of accounting curriculum as well as teaching methods in accounting.

## 2. THEORETICAL BACKGROUND AND PREVIOUS STUDIES

### 2.1. Theoretical Background

It is well known that successive changes in the reality of modern business environment have had an impact on the reality of accounting education. The result of this impact emerged in the need for educational institutions to conform to these changes (Watty, et al., 2014; Stivers, et al., 2011; Walsh, 2007; Krause, 2005). This could be done through the development of accounting curricula and the need to use modern technologies as tools for accounting education, so as to improve the quality of education in line with the standards of international accounting education (Yaftian et al., 2017; Menzies, 2012; Lambert et al., 2008).

Recently, there have been radical changes in the intellectual framework of accounting and the way in which accounting work has been carried out in general. These changes have led to continuous improvement in the quality of outputs, as well as in the pursuit of accounting (Bahadur, 2012). Accounting is no longer just a tool for recording, tabulating and summarizing financial operations. It has become an integrated information system, a means of measuring and delivering accounting data and information to relevant parties (Pittaway and Edwards, 2012).

Accounting is an art that depends on the use of the self-abilities of the accountant in judging many economic and financial events facing the accounting work. It is one of the social sciences that is characterized by its scientific material, which could be accessed through study and experience through different stages of time (Qatananni and Aweys, 2009).

From this point, accounting should have a system to work through it to achieve its required goal and to perform its functions effectively. The modern trend in accounting thought believes that Accounting is an information system consisting of three basic activities: The activity of identification and the activity if recording economic events and the activity of communicating Accounting information to related parties (Kieso et al., 2015).

On the other hand, Al-Futtaimi (2016) pointed out that good planning of educational courses of Accounting and the use of modern teaching methods are essential to the success of accounting education systems, which will increase the quality of its outputs. While the quality of the output of accounting education is a major challenge in an era of economic openness, the quality of these outputs is primarily related to the quality of the components of the accounting education system.

With regard to the practice of accounting work, lately there is an acceleration in use of computer technologies, information technology, communication networks, and preparing, processing, archiving, storing and retrieval of information that is known as information revolution (Sacer and Oluic, 2013). To enhance these practices, it has become necessary to include accounting curricula

using modern techniques and methods, which are ideal for use in the teaching process (Annissette, 2012).

On the other hand, the accounting profession was greatly influenced by the use of computers in as an element of information technology. This was reflected on accounting as a profession that requires procedures and accounting classifications that comply with the requirements of computer work, as well as the requirements of electronic data storage methods, and the requirements of accuracy, speed in retrieval and confidentiality (Al-Fatalawi, 2013).

The reality of accounting education in Jordan with regard to the preparation of its outputs points that there is an indication toward the tendency to prepare a structured and integrated accounting education in higher education institutions in harmony with rapid changes. As well as making fundamental changes in terms of its intellectual framework or in terms of the accounting practice resulting from practice. In other words, experiences that are offered as the output of education should not be theoretically limited, but practical experience should gain more interest (Matar et al., 2015).

Thus, a more effective practical model should be introduced in the reality of accounting education, which aims at bridging the gap between the level of educational achievement that focuses on theoretical content and the level of practical application that focuses on qualifications and skills of the outcomes of the accounting institutions.

## 2.2. Previous Studies

In this section, we will focus on studies related to the subject of the current research, which reflect the impact of the use of computer technology and its software applications in accounting education under the standards of international accounting education and its impact on the level of student achievement, to enrich the current study.

Study of Al-Rifai et al. (2009) aimed at investigating the characteristics of the accounting information and its impact on the use of the computer from the point of view of investors in the Amman Stock Exchange and the extent to which the accounting information system has achieved reliability in processing accounting data and converting it to accounting information. This study followed the analytical description with a sample of 112 investors in the Amman Financial Market, it concluded that the integrated accounting information system requires using modern computer-based technologies that reduce the costs of producing information and save time and efforts to obtain information.

Al-Jalili and Zanoun study (2010) entitled "The use of International Education Standards for Professional Accountants in developing the accounting curriculum for Bachelor stage in Iraq (A model of suggested accounting curriculum for Bachelor stage in Iraq.)" The researchers adopted the descriptive approach to achieve the objectives of the research. They concluded that it is necessary to utilize international education standards to minimize the degree of variance between the theoretical side and the practical side of accounting practice, furthermore they mentioned that it is necessary to link the Accounting curriculum with the practical reality of the profession to build accounting skills.

The study of Siam (2013) focused partly on the obstacles facing electronic accounting education by showing the contribution of e-learning in ensuring the quality of accounting education, and measuring the extent to which the faculty members of the accounting departments in the Jordanian universities are aware of e-learning. The study found that faculty members are aware of the contribution of education in ensuring the quality of accounting education. However, there are many obstacles related to the faculty members and the technical aspects and material availability, which limit the students' skills in using the means of information technology.

While Saleh (2014), tried to develop a proposed framework for the accounting education program in the Arab countries as a cornerstone for the qualification of accountants with the necessary expertise and skills. It also highlighted the most important challenges facing the accounting profession such as identifying the skills of technical information and emerging these techniques in different accounting courses. The study found a weak correlation between the current accounting education programs and the requirements of the labor market in light of the successive developments and the use of information technology in the field of accounting.

The study of Matar et al. (2015), which was characterized by exploring the attitudes of employers and graduates about the availability of the conditions stipulated in the standards of international accounting education among bachelor degree holders in accounting from Jordanian universities with the results of the university proficiency examination, based upon a survey study included a sample consisted of 32 students and 32 employers. The study found that the non-professional knowledge was neglected quantitatively and qualitatively in accounting educational curricula. Although these curricula cover a large percentage of courses and topics, the topics of information technology are not available quantitatively and qualitatively as suggested by the standards.

On the other hand, the study of Aujila and Qunea (2016), showed the contribution of electronic accounting education in developing the skills and abilities of accounting students by highlighting the role of ICT in developing intellectual, technical, personal and administrative skills, as well as the role of communication skills among students. The study concluded that E-learning contributes to increased interaction among students through rapid access to information needed to solve accounting problems.

As well as Rashwan study (2017), which aimed at scientific rooting through identifying the effect of using social networks in the accounting qualification on accounting students professionally to meet the requirements of the labor market. The study followed the descriptive analytical approach on a sample of 239 students, concluding that the use of social networks will contribute to the rehabilitation of the skills of students of accounting scientifically and professionally.

Botes and Sharma study (2017), aimed to gain insights into the gap that persists between management accounting education

(MAE) and practice. MAE is examined from four perspectives of the balanced scorecard (BSC), in terms of what is being taught at tertiary level: Customer satisfaction, learning and growth, internal business and financial. A survey questionnaire was applied to a sample of 600 management accountants selected randomly from a list of practicing management accountants identified by the Chartered Institute of Management Accountants. The study finds support for allegations that a gap exists between MAE and practice and indicates that to address this gap, a holistic focus using the four perspectives of the BSC would be useful to investigate the gap.

Kanapathippillai et al. (2012), in their study entitled “The impact of a computerized consolidation accounting package (CCAP) on student performance,” aimed to investigate the association between the use of a computerized learning tool (specifically designed to teach consolidation accounting) and student performance in the final examination of an undergraduate accounting unit on corporate accounting. A regression model was developed to analyses 1103 observations of assignment and examination scores, collected over three semesters, to test the central proposition that computer assisted learning enhances student learning outcomes and performance in the exam. The results show a positive and significant relationship between the computerized accounting assignment on consolidated accounting (linked to usage of the computerized tool) and the consolidation question in the final examination. The findings suggest that the CCAP assists students to understand the concepts underpinning consolidation accounting.

Richardson et al. (2013), in their study entitled “Students’ perceptions on using iPods in accounting education: A mobile-learning experience,” aimed to assess the benefits derived from the application of mobile devices as part of the students’ online learning experience and the extent to which the perceived benefits are linked to student learning styles. A small group of students enrolled in an exclusively online graduate accounting program were issued with iPods as part of their learning materials. Two data collection instruments were issued: A questionnaire to elicit students’ opinions on the usefulness of the iPod as a tool for learning; and a questionnaire to establish their learning styles. The findings indicate that the primary advantage of iPods lies in its portability, which, in turn, facilitated efficient and effective use of time and study planning. The portability attached to iPods allowed students to take advantage of what otherwise have been down-time, such as commuting. Students with a preference for visual learning rated the iPod as being important to their learning.

Watty et al. (2014), in their study entitled “Towards a Global Model of Accounting Education,” aimed to examine the accounting education systems in three countries – Australia, Japan and Sri Lanka – to inform the development and testing (by application) of a Global Model of Accounting Education. An action research methodology is applied with a case study and model development approach. The case studies reveal variations in accounting education systems, which exist across the three countries examined in this research. Key differences (some significant and others nuanced) were found between accounting education systems and include: Entry requirements to professional programs; accreditation processes; and benchmark discipline standards.

These differences are provided for in the questions that underpin the model developed and applied as a key part of the research.

Yaftian et al. (2017), in their study entitled “Learning computerized consolidation accounting package: Perceptions and motivations” aimed to examine students’ perceptions and motivations about learning computerized consolidation accounting package (CCAP). A survey of 172 students who completed the course was conducted twice, before training and assessment using CCAP and after completing the CCAP-based learning activity and the associated assessment task. The results show that students demonstrate strong positive attitudes towards learning CCAP, and using CCAP elicits active student engagement in the learning processes.

Through the review of previous studies, some of them have sought to indicate the importance of developing accounting education as an integrated system, including research in a specific field such as using the computer as a tool to improve the quality of education. However, most of the studies carried out in the field of computer technology have been used as a tool for accounting education. Most of them agreed on the importance of developing accounting curricula of all kinds, reflecting the students’ cognitive achievement and the performance of accounting practices practically. As these studies examined the subject from different aspects and in different business environments, they were mainly aimed at showing the importance of bridging the gap between the level of theoretical achievement and the practical application of accounting practices in a balanced manner.

### 3. STATEMENT OF PROBLEM

It is well known that the rapid changes in the modern business environment require, in part, educational institutions to keep pace with these changes, by focusing on strengthening the preparation and qualification of the outputs of accounting education in line with the standards of international accounting education.

However, the reality of accounting education in many countries of the world, including Jordan, indicates a clear lack of ability to prepare organized and integrated content of accounting education. This lack is demonstrated in terms of intellectual framework or in terms of the method of practicing accounting work due to neglecting of the use of modern technologies such as computer applications in accounting education. It is also demonstrated by using traditional methods based on indoctrination as the traditional lecture method.

Hence, the problem of the study is summed up by identifying the impact of using computer application programs in accounting education on the performance of students in financial accounting course in comparison with the methods currently used and based on traditional lecturing.

Specifically, the current study will attempt to answer the following question: What is the impact of using computer applications programs in accounting education on the performance of students in financial accounting course compared to the traditional methods currently used and based on traditional lecturing?

#### 4. THE AIM OF THE STUDY

The present study aims to identify the impact of using computer applications programs in accounting education, which is based on the basic activities of financial accounting in line with the standards of international accounting education, and measuring its impact on the performance of students in financial accounting course. It also aims to monitor the reality of accounting education in order to develop it; the possibility of using modern tools and technologies; and keeping abreast of developments in all fields.

#### 5. THE IMPORTANCE OF THE STUDY

This study derives its importance from being one of the studies that seeks to explore the impact of using computer applications programs in accounting education on the performance of students in financial accounting course, moreover it attempts to present modern trends in accounting education that take into account aspects of cognitive achievement in an integrated and balanced manner. The study is extended to include how knowledge is used and applied to practice accounting, as well as to demonstrate the ways in which accounting education positively affects the level of achievement and performance.

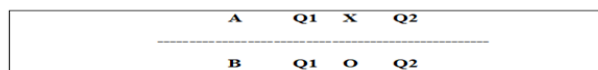
This study also presents and develops a practical model for accounting education, which can contribute to bridging the gap between the level of educational achievement that focuses on the theoretical content, and the level of practical application that focuses on the rehabilitation and skill of the outputs of accounting institutions. As well as it can contribute to reducing the problems and obstacles faced by students during their study of the course when using computer application programs in accounting education, moreover the results of the study will open up new horizons in the ways of preparing and qualifying the outputs of accounting institutions in order to raise the level of performance.

#### 6. STUDY METHODOLOGY

The study used the experimental method utilizing Quasi Experimental Designs to determine the impact of using the computer applications program as an accounting teaching tool in the performance of the students of the financial accounting course in the accounting department of Mutah University through a control group and an experimental group.

##### 6.1. The Study Design

This study adopted quasi-experimental research where the group is treated without treatment of the individuals of the group, because this type of research suits the nature of this study (Al-Batsh and Abu Zainah, 2007).



Where:

A: Refers to the experimental group.

B: Refers the control group.

X: Indicates that experimental total (A) has received experimental treatment.

O: Indicates that the control total (B) has not received experimental treatment.

Q1: Refers to the pre-test of the two groups.

Q2: Refers to the post-test of the two groups.

##### 6.2. Study Hypothesis

To answer the study question, the following hypothesis was formulated:

*“There were no statistically significant differences at ( $\alpha \leq 0.05$ ) between the performance of the students of financial accounting course in the experimental group that used computer applications programs as a method of teaching and the performance of the students of financial accounting course in the control group who used the traditional method based on lecturing.”*

##### 6.3. The Population and the Sample of the Study

The study population consists of the students of Financial Accounting (in English) Course at Accounting Department - Business School in the undergraduate program for the first semester of the academic year 2017/2018 (225), which consists of 98 male students and 127 female students.

The sample of the study deliberately chosen, consisting of 67 students divided into two sections taught by the researcher, and were distributed randomly. The first group represented the control group comprised 32 students, utilizing traditional lecturing. The second group is the experimental group comprised 35 students which is taught using computer accounting software programs. The sample of the study was distributed as shown in Table 1.

##### 6.4. The limits of the study

The study was based on the experimental approach to determine the effect of using computer applications (Quick Book Package) in accounting, which is actually applied as an educational tool in Accounting Department. The study was also limited by the students enrolled in Financial Accounting Course in the Accounting Department - Business School - Mutah University, in the first semester of the academic year 2017/2018.

##### 6.5. Research Procedures

The researcher followed the following steps to complete the study:

1. The curriculum, syllabus, and the content to be taught were identified for the course of Financial Accounting in English for the Bachelor’s Degree in Accounting students – Department of Accounting – Business School at Mutah University, during the first semester 2017/2018.
2. The study plan was identified by determining the content to be presented to each of the two groups (control and experimental)

**Table 1: Distribution of the individuals of the study**

Group	Gender		Total
	Male	Female	
Control group	14	18	32
Experimental group	15	20	35
Sum	29	38	67

during the first 4 weeks over (12) lectures. The study plan is linked to the latest publications taught in the world's top universities by adopting the textbook of Financial Accounting IFRS 3<sup>rd</sup> Edition (Kieso et al., 2017). The material was presented by giving an introduction to accounting covering the concept, hypotheses, principles and accounting standards, and then addressing the three main activities (the activity of determining the financial operations and recording activity of these operations and finally the activity of communicating accounting data and information to the parties Relationship) to the preparation of financial statements.

3. Followed by the practical application during the following 4 weeks for both the control group using traditional lecturing and the experimental group computer applications in accounting.
4. To verify the validity of this plan, the plan was presented to a number of faculty members in the Accounting Department at the Business School, who were previously have training in using the package in teaching Financial Accounting course, after minor adjustments based on the arbitrators' observations, following the basic activities of accounting, the researcher taught the course using computer package (Quick Book) to another section of the study population which is not included in the sample, as an exploratory sample to confirm the process of teaching before applying them to the experimental sample.
5. The sample of the study was randomly divided into two groups to be taught by the researcher. The first division has 32 students and represents the control group. The second division has 35 students and represents the experimental group.
6. The two groups (both control and experimental) were taught for 4 weeks (12 lectures) in the same manner according to the nature of the course.
7. The teaching process was as follows:
  - a. Method of the traditional lecturing: The most common method followed in the teaching of Financial Accounting course, which depends mainly on the presentation of the content in a manner of indoctrination based on traditional tools such as blackboard and limited participation of students, which rely mainly on the conservation and memorization by the student.
  - b. Method of teaching using computer: Teaching using computer applications in accounting through the application of Quick Book, an accounting program has been adopted as a tool for teaching accounting since the first semester of the academic year 2016/2017 in the Accounting Department of the Faculty of Business at Mutah University, Intensive training courses for all teachers in Accounting Department. The application was downloaded to 130 computers in the School's labs that were available to the students continuously. This application is one of the latest and most widespread applications in the world.
8. At the end of the 4<sup>th</sup> week, the pre-test was applied for each of the two groups. To verify the equivalence of the two groups, the mean and standard deviations of the control group and the experimental group were calculated. Table 2 indicates the arithmetical averages and standard deviations of the two groups in the pre-test according to the variable of method of teaching, the results were as follows:

Table 2 indicates that the arithmetic average of the performance of students in the experimental group that include (35) students reached (17.31), with a standard deviation of 2.51, while the arithmetic average of the performance of students in the control group that include (32) students reached (17.03) with a standard deviation of 3.25. The preliminary results indicate the equalization of the control group and the experimental group.

To find out if these differences were statistically significant between these averages, a one-way ANOVA analysis was performed to detect the significance of differences between the averages on pre-test performance. Table 3 shows the analysis of the one-way ANOVA analysis of the scores of the two groups in the pre-test according to the Variable (method of teaching).

Table 3 indicates that there are no statistically significant differences at  $\alpha \leq 0.05$  due to the effect of the method of teaching in the performance of the students of the two groups in the pre-test in Financial Accounting course as the value of  $f = 0.166$  with significance level of 0.691. These results show that the sample of the two groups of the two groups was statistically significant in their mean scores in the pre-test.

## 6.6. Research Tool Development

After teaching Financial Accounting course during the first 4 weeks with 12 lectures in the same way and under the same conditions for the students of the control group and the experimental group, the researcher started the practical application of the software from the 4<sup>th</sup> week to the 8<sup>th</sup> week. The researcher teach the application practically in the traditional way for control group while teaching the experimental group applying computer applications using (Quick Book), which is recently adopted for practical teaching in the Accounting Department.

At the end of the 8<sup>th</sup> week of practical teaching of the application for the two group, the researcher prepared a post-test commensurate with the nature of the course to be the basis for building the test. The researcher, then, prepared a test for each group to be the basis for building the test; the final test includes five questions

**Table 2: Arithmetic averages and standard deviations of the performance of the experimental group and the control group based on the pre-test**

Group	Number	Arithmetic average	Standard deviation
Experimental	35	17.31	2.52
Control	32	17.03	3.25
Total	67	17.17	2.78

**Table 3: Two-way ANOVA analysis of the performance of the students of the two groups in the pre-test**

Source	Sum of squares	df	Mean square	F	Sig.
Method of teaching	1.339	1	1.39	0.166	0.691
Error	5.445	66	8.377		
Total	6.784	67			

covering all aspects of practical application to measure students' achievement in the basic concepts of practical application.

### 6.7. Validity and Reliability if the Tool of the Study

In order to verify the validity of the research tool, the researcher presented it to 10 arbitrators from the teaching staff in the Accounting Department, in order to ensure that the test questions measure the objective for which it was established. The test was modified based on the opinions of the arbitrators in terms of drafting, clarity, difficulty and objectivity. The researcher selected a sample of 40 students from the study population who were taught using computer and were not included in the study sample. Two weeks later, the same test was repeated on the same sample. Under the same conditions, the reliability coefficient was calculated using Pearson correlation coefficient between the first test and the second test. The value of the coefficient was 0.81 which is sufficient to achieve the purposes of the study.

### 6.8. Research Variables

The research includes the following variables:

First: Independent variable: Teaching Method contains two levels:

The first group, which was taught using computer applications.

Second group, which was taught using the traditional way.

Second: Dependent variable: Represents the achievement grades on the post-test.

Third: The common variable: Marks the achievement of the students of the two groups on the pre-test.

### 6.9. Statistical Treatment

The SPSS program was used to analyze the data obtained through the study tools. After the data were entered, the researcher calculated the mean and standard deviations using one-way ANOVA to reveal the results of the pre-test, with the aim of verifying the equivalence of the control group and the experimental group. The analysis of covariance (ANCOVA) was used to detect the results of the post-test, in order to find out the extent of the differences between the arithmetic mean of the achievement of the sample individuals, which is attributed to the teaching method.

## 7. THE RESULTS OF THE STUDY

The results related to the question of the study: What is the impact of using computer applications programs in accounting education on the performance of students in financial accounting course compared to the traditional methods currently used and based on traditional lecturing?

In order to answer the question of the study, the post-test was carried out after the completion of the teaching the control group and the experimental group. The test was developed to be applied to each of the two research groups.

Table 4 shows the statistical averages and standard deviations of the scores of the two groups in the post-test according to the variable of the teaching method. The results were as follows:

Table 4 indicates that the average performance of students in the experimental group which consists of 35 students reached (19.14)

with a standard deviation of 3.47, while the average performance of students in the control group which consists of 35 students (32) reached (17.25) with a standard deviation of 2.12. The results indicate that there are differences in the performance of the two groups of research for the advantage of the experimental group.

To illustrate the significance of the differences between the averages on the performance of the post-test, an ANCOVA was performed. Table 5 shows the analysis of the common variance of the marks of the two groups of students in the post-achievement test according to the variable method of teaching.

Table 5 indicates that there are statistically significant differences at  $\alpha \leq 0.05$  due to the teaching method in the achievement of the students of the two groups of research in the post-test in the Financial Accounting course. The value of  $f = 7.642$ , at a statistical significance level of 0.007 this indicates that the difference is statistically significant for the advantage of the experimental group.

## 8. DISCUSSION AND RECOMMENDATIONS

The results of the ANCOVA for the scores of the students in the two groups of research in the achievement of the post-test according to the variable of teaching method showed that there are statistically significant differences in the performance of the study sample and for the advantage of the experimental group. This result indicates that the students studied Financial Accounting course using computer applications using Quick Book were better than the students who studied the same course in the traditional lecture in the post-test results.

This result could be justified as the students practice accounting directly by using computer application that simulates the actual work environment. This result is consistent with that of Nagi (2013), Watty et al., (2014) and Yeftian et al., (2017) and differ in part with the study of Saleh (2014) and the study of Botes and Sharma (2017).

In addition to the features that are available to the student such as the effectiveness and easiness of use in a timely manner that is

**Table 4: Arithmetic averages and standard deviation of the performance of the experimental group and the control group in the post-test**

Group	Number	Arithmetic average	Standard deviation
Experimental	35	19.14	3.47
Control	32	17.25	2.12
Total	67	18.24	3.04

**Table 5: One-way ANCOVA of the performance of the students of the two groups in the post-test**

Source	Sum of squares	df	Mean square	F	Sig.
Pre-test	114.03	1	114.03	16.81	0.000
Teaching method	51.85	1	51.85	7.642	0.007
Error	434.26	65	6.78		

ANCOVA: Analysis of covariance

reflected positively on the performance in the work of accounting. As well as features that are related to the high capacity of the computer in analysis and registration and classification and tabulation, thus reaching the results related to accounting work in each of its aspects in a way that coincide with known accounting cycle. This result is consistent with Richardson et al. (2013) and Rashwan (2017).

On the other hand, the general trend towards using computers in all areas of life has led to the increasing use of computer in the fields of education. So using computers is restricted to studying some courses, but extended to use it within the university by the student in all aspects such as admission, registration and access to all the facilities and services provided by the university. Moreover, computer were used outside the university to identify employment opportunities, and this result is consistent with the study Matar et al. (2015) and the study of Naji (2013), but differ with the study (Saleh, 2014) in terms of the interrelationship of accounting education programs and the use of information technology in the field of accounting currently applied to labor market requirements.

In addition, computer and its application were adopted in large number of examinations at the university. Some of these exams are: Proficiency tests, Arabic and English languages test level and national requirement course, as well as other exams that apply to the level of requirements of the college and section, Thus, these applications have contributed significantly to the improvement of students' skills in the use of computers in the teaching process. This result is consistent with Kanapathippillai et al. (2012) and Yeftian et al., (2017).

The researcher believes that the positive trend in the Mutah University towards the application of computers in education in general and in business school in particular has a big reflection on the results of the study. Since by providing all the requirements of computer application in education, most of the obstacles and problems that could hinder utilizing the application of computers in education, were diluted. These results were agreed with most studies, especially Saleh (2014) and Botes and Sharma (2017), and Yeftian, et al., (2017).

Based on the results of the study, the researcher referred to some recommendations and proposals that will promote the use of computer applications in education in general and accounting education in particular, such as:

- The use of computer applications in the field of accounting education within the strategic direction of any educational institution seeks to increase the efficiency of the educational process.
- Increasing the number of courses that can be taught using computer applications in a systematic manner taking into account the lack of negative impact on the content of the course.
- Intensive training courses for faculty members, students and supporting administrative bodies contribute to increasing the efficiency of using computer applications.
- Providing technical support and increasing the skills required for using computer, by linking the educational process with computer centers in educational institutions.
- Reviewing the study plans and giving the priority to the courses in which computer applications could be systematically applied.
- Conducting further studies related to the application of computer in the field of education in universities, to cover all aspects related to this field.
- Utilizing the experiences and expertise of educational institutions that have expanded experience in the application of computers in education in order to support the positive aspects and address their weaknesses.

## REFERENCES

- Al-Batsh, M., Abu Zeina, F. (2007), *Research Methodology: Design of Statistical Research and Analysis*. Amman-Jordan: Dar Al-Massira.
- Al-Fatalawi, L. (2013), Accounting and Indicators of Application of Information Technology, *Journal of Baghdad College of Economic Sciences, Special Issue of the College Conference*. p283-302.
- Al-Futtaimi, M. (2016), The Role of Accounting Education in Refining Graduates with the Necessary Skills for the Labor Market, the Arab Conference on Higher Education and the Labor Market. Available from: <http://www.7ou.edu.ly/alsatil/conf42010/1/21.pdf>.
- Al-Jalili, M., Zanoun, A. (2010), The use of international standards for professional accountants in the development of the accounting curriculum for the bachelor stage in Iraq. *Journal of the Development of Rafida*, 32(99), 1-32.
- Al-Rifai, K., Ramhi, N., Jalal, M. (2009), The Impact of Computer Use on the Characteristics of Accounting Information from the Investor's Perspective-Case Study in the Amman Financial Market, 7<sup>th</sup> International Scientific Conference, Faculty of Economics and Administrative Sciences. Jordan: Zarqa National University.
- Annisette, M. (2012), Imperialism and the professions: The education and certification of accountants in Trinidad and Tobago. *Accounting Organizations and Society*, 25(7), 631-659.
- Aujila, M., Qunea, A. (2016), The contribution of electronic accounting education to the development of the skills of the students of accounting departments. *Journal of Accounting and Financial Studies*, 3, 37-47.
- Aujila, M., Qunea, A. (2016), The contribution of electronic accounting education to the development of the skills of the students of accounting departments. *Journal of Accounting and Financial Studies*, 3, 37-47.
- Bahadur, P. (2012), Entrepreneurship education in India: A perspective. *Indian School of Business, Hyderabad*, 67, 32-49.
- Botes, V., Sharma, U. (2017), A gap in management accounting education: Fact or fiction. *Pacific Accounting Review*, 29(1), 107-126.
- Çolak, E. (2015), The effect of cooperative learning on the learning approaches of students with different learning styles. *Eurasian Journal of Educational Research*, 59, 17-34.
- Darwaza, A. (2000), *Theory in Teaching and its Translation in Practice*, I 1. Amman Jordan: Dar Al Shorouk for Publishing and Distribution.
- Douhou, S., Magnus, J.R., van Soest, A. (2011), The perception of small crime. *European Journal of Political Economy*, 27(4), 749-763.
- Kanapathippillai, S., Hasheem, A., Dellaportas, S. (2012), The impact of a computerized consolidation accounting package on student performance. *Asian Review of Accounting*, 20(1), 4-19.
- Kieso, D., Weygandt, J, Kimmel, P. (2015), *Financial Accounting: IFRS Edition*. 3rd ed. 11 River Street, Hoboken: John Wiley & Sons, Inc.
- Krause, K. (2005), The Changing Student Experience: Who's Driving it and Where is it Going? *Proceedings of the Student Experience Conference: Good Practice University*.
- Lambert, R., Tant, K., Watson, J. (2008), Simulated financial dealing



- room: Learning discovery and student accountability. *Accounting and Finance*, 48(3), 461-474.
- Maqar, S. (2017), The Importance of Education in the Transition to a Knowledge Economy, Globalization and the Developments of the Modern World. Available from: <http://www.m.ahewar.org>. [Last accessed on 2018 Feb 01].
- Matar, M., Nour, A., Ramhi, N. (2015), Upgrading the University Accounting Education to Meet the Requirements Stipulated in the Standards of International Accounting Education, the 11th International Professional Scientific Conference.
- Menzies, J. (2012), West meets East: Examining the use of reflective journals in international study programmers. *Journal of International Business Education*, 7, 121-140.
- Nagi, L., (2013), Accounting Environment and Indicators of Adaptation to Information Technology. *Journal of Baghdad College of Economic Sciences*, Special Issue of the College Conference.
- Naim, A., Ruhman, A. (2009), Mapping Scientific Research in Member States of the Organization of Islamic Conference (OIC), Occasional Paper No 17. Organization of Islamic Conference. Countries and Territories, Vol. 11. (2010).
- Pittaway, L., Edwards, C. (2012), Assessment: Examining practice in entrepreneurship education. *Education and Training*, 54(8), 778-800.
- Qatananni, K., Aweys, K. (2006), The Appropriateness of Accounting Curricula in Omani Universities to the Requirements of the Labor Market in Light of the Repercussions of the Financial Crisis, the Second Scientific Conference, Faculty of Economics and Administrative Sciences. Muscat, Oman: Applied Science University.
- Rashwan, M. (2017), The impact of social networks in accounting education on the development of student's skills to suit the requirement of the labor market. *Journal of Dirassat and Abhath*, 8(26), 62-88.
- Richardson, P., Dellaportas, S., Richardson, B. (2013), Student's perceptions on using iPods in accounting education: A mobile-learning experience. *Asian Review of Accounting*, 21(1), 4-26.
- Sacer, I., Oluic, A. (2013), Information technology and accounting information systems' quality in Coruatian middle and large companies. *Journal of Information and Organizational Sciences*, 37(2), 117-126.
- Saleh, A. (2014), Interaction of Modern Trends in Education and Accounting Qualification between the Quality of Accounting Outputs and Labor Market Requirements in Arab Countries in Light of the Trend Towards the Implementation of International Financial Reporting Standards, the First Annual Arab Conference, Baghdad. p16-17.
- Saleh, A., (2014), Interaction of Modern Trends in Education and Accounting Qualification between the Quality of Accounting Outputs and Labor Market Requirements in Arab Countries in Light of the Trend Towards the Implementation of International Financial Reporting Standards, the First Annual Arab Conference, Baghdad. p16-17.
- Siam, W., (2013), Extent of E-learning contribution in quality assurance of higher education "case study of accounting learning in Jordanian universities. *The Arab Journal for Quantity Assurance in Higher Education*, 6(14), 81-99.
- Stivers, B., Onifade, E., Reynolds, R. (2011), Student learning perceptions: Evidence from an introductory accounting course. *Business Education and Accreditation*, 3(1), 9-20.
- Teo, A. (2011), Factor influencing teachers' intention to use technology: Model development and test. *Computer and Education*, 57, 2432-2440.
- Walsh, A. (2007), An exploration of Biggs' constructive alignment in the context of work-based learning. *Assessment and Evaluation in Higher Education*, 32(1), 79-87.
- Watty, K., Sugahara, S., Abayadeer, N., Prera, I., McKay, J. (2014), Towards a global model of accounting education. *Accounting Research Journal*, 27(3), 286-300.
- Yaftian, A., Mirshekary, S., Mihret, D. (2017), Learning commercial computerized accounting programmes. *Accounting Research Journal*, 30(3), 312-332.