IMPACT THE OF ADEQUACY OF TEACHING METHODS ON ACCOUNTING EDUCATION QUALITY ACCORDING TO INTERNATIONAL EDUCATION STANDARDS AND NATIONAL REQUIREMENTS: A SURVEY OF SAUDI UNIVERSITIES

Adeeb Abdulwahab Qasem Alhebri,

Assistant Professor of Accounting,
King Khalid University (KSA),
Ibb University, Yemen.

ABSTRACT

This study aim to determine the impact of teaching methods – i.e. Cooperative Learning, Brainstorming and Problem-Solving-Based Learning –on the quality of accounting education at Saudi universities according to International Education Standards (IESs) and the benchmarks of the National Commission for Academic Accreditation and Assessment (NCAAA) in Saudi Arabia. The study data were collected from a random sample of senior level students of the Department of Accounting at three universities in Saudi Arabia, using a questionnaire prepared for this purpose and included the key elements of the variables of the study. The results confirmed good adequacy of Cooperative Learning and Problem-Solving-Based Learning, and low adequacy of Brainstorming. The study also revealed a medium impact of Cooperative Learning on the quality of accounting education, and aweak impact of Problem-Solving-Based Learning and Brainstorming.

Keywords: Cooperative Learning, Brainstorming, Problem-Solving-Based Learning (PSBL), Accounting Education Quality (AEQ)

INTRODUCTION:

Accounting education aims ideally to produce accountants who are able to practice accounting with high professional standards. Although this goal often represents the strategy and vision of accounting departments at many universities, professional practice has come up with many criticisms of accounting education programs all over the world. Studies have revealed big shortcomings of the accounting education programs to fulfil the requirements of the profession, particularly in light of the modern business environment – which is characterized by dynamism, competitiveness and dominance of information technology and telecommunications on financial transactions (Albrech& Sack, 2000; Nelson et al., 2002; Burnett, 2003; Bui & Porter, 2010; Alwayiga et al., 2010; Coetsee, 2010; Lindsay, 2012; Tucker & Schategger, 2016).These studies have confirmed that there is some sort of agreement between employers and accounting practitioners that accounting education does not adequately meet the requirements of labor market, and that there is a gap between education and professional practice. This gap is basically due to the focus of accounting education programs on knowledge quantitate at the expense of neglecting several skills which have become necessary requirements of the accounting profession, and have been confirmed in many studies. For example, two studies (Cuawford et al., 2011; Kendly & Jacklug, 2011) pointed out the necessity for accounting education programs to include several practice-oriented skills. Thibocleav et al. (2012) also stressed on the importance to focus on advanced skills during the design and development of accounting educational programs. Also, Freck & Rocker (2010) confirmed the importance of critical thinking and written and oral communication skills in accounting education programs. Jackling & Long (2009) concluded that skills such as teamwork, leadership, communicative and interpersonal skills, are necessary for accounting graduates.

The link between professional efficiency and a number of necessary skills (in addition to accounting knowledge) was suggested over thirty years ago by Bedford Committee: The committee recommended that accounting education curricula be redesigned in such a way as to enable students to practice analysis and self-learning, handle issues from non-traditional dimensions, and use logical thinking to devise solutions to accounting problems (AAA, 1986).Perhaps, this recommendation confirms that accounting education programs cannot be regarded as purely cognitive programs in so much as these programs are meant to serve a specific profession. Therefore, it is necessary to develop these programs according to the requirement of the accounting profession, in terms of required knowledge or skills, while at the same time updating them in harmony with on-going changes in such requirements. As a profession, accounting essentially involves artistic qualities that depend on accountant's subjective capabilities to make judgment on economic events as expressed by a number of financial transactions, and to deal with them accordingly. But it is also a science with its own theories, rules and applications that have accumulated over the years. Meanwhile, compared to other professions, accounting is unique in that it is needed by labor market and existing and growing business organizations, and hence it is incumbent on the accounting profession to meet this need.

Academic criticism and practical drawbacks prompted several professional institutions to pay attention to accounting education with an aim to set forth rules and conditions to regulate and standardize accounting education, and put forward general requirements for accounting education programs. One of the most important and most conspicuous of these endeavors is the attempt by International Accounting Education Standards Board (IAESB) – affiliated to International Federation of Accounting (IFAC) – to issue a number of standards, known as International Education Standards (IESs),which laid down the international foundations for accountant's teaching and skill-development, and set up the rules upon which higher education institutions and universities rely for designing and implementing accounting education programs (www.ifac.org).These standards help in the development of guidelines to change and manage the accounting education process at educational institutions in various countries. IFAC highlights the importance of these standards in reducing international differences over the training and work of accountants (particularly in our globalized world), facilitating the

movement of chartered accountants, and providing specific standards to measure the commitment of educational institutions to IESs requirements (IFAC, 2015). IAESB issued eight IESs standards: i.e., IES1 addresses primary requirements of accounting education programs; IES2-6 are concerned with the development of general accounting education; IES7 is related to continuous professional education; and IES8 pertains to the professional requirements of auditors (IFAC, 2015). Therefore, IESs deal with three aspects: accounting education programs, Initial Professional Development (IPD) of future accountants, and continued professional development of existing accountants and auditors.

There is no doubt that IESs, particularly those related future accountants' IPD, have provided clear guidelines on professional requirements an accounting student should acquire during university study, by explaining learning outputs of accounting education programs and classifying them into three basic domains: i.e., technical competence, professional skills, and professional values, ethics and attitudes. In addition, IES6 provides a brief explication on evaluation of the adequacy of knowledge acquisition to professional practice. However, the feasibility of IESs contributions remains dependent on the teaching methods used by universities for accounting education. Traditional educational methods are not reliable enough to produce a graduate accountant able on practice the professions efficiently as stipulated by the aforementioned requirements, because such methods do not take into consideration what is known among educational circles as 'transferable skills' – i.e. a concept which means that the skills acquired by student during educational stages can be relevant at recruitment (Nassar et al, 2013). Therefore, universities should adopt teaching methods and practices that take into consideration the importance to meet IESs requirements. In this regard, Lubbe (2014) indicates that the development of accounting education should involve the teaching of accounting students at classrooms by using modern teaching methods that are capable of delivery of the necessary knowledge and various skills of the accounting profession. Additionally, Pitulice & Manea (2015) emphasize that the issue of education technology was one of the most important themes investigated by accounting research focusing on accounting education in Romania during the past four years. Araugo & Júnior (2012) opine that it is crucially important to develop the teaching methods used in accounting education to meet the professional needs to deal with all sorts of accounting events.

This study seeks to investigate and determine the effect of application of PSBL, Cooperative Learning, and Brainstorming – the three being among the most important modern teaching methods – on accounting education in light of IESs requirements on one hand, and the educational quality requirements set by NCAAA Benchmark 4 on the other hand. NCAAA Benchmark 4 concentrates on teaching and learning, and classifies the process into five dimensions: knowledge, cognitive skills, interpersonal skills and responsibility, and telecommunications, information technology and psychomotor skills[*] (http://www.ncaaa.org.sa).

Therefore, it can be said that the current study is one of the first to deal with the issue of accounting education quality (AEQ) in developing countries. It attempts to determine the quantitative impact of three of the most common teaching methods on such quality from two perspectives, i.e. an international perspective related to IESs requirements, and a national perspective involving NCAAA benchmarks. Moreover, the study tries to provide guideline son the most important obstacles that encounter the application of these teaching methods.

LITERATURE REVIEW:

Numerous studies have addressed modern teaching strategies and methods, and investigated their impact on university education in general and on accounting education in particular. Some such studies are presented below under four categories based on the teaching methods investigated here. In addition, the brief presentation below includes also studies on quality and accounting education.

[*] (psychomotor skills are outside the accounting field and it will therefore be excluded in this study)

PSBL IN ACCOUNTING EDUCATION:

Since the seventies of the last century, studies began to show interest in PSBL as one of the effective strategies to improve knowledge acquisition of students of various educational stages, including the university level. Yunis et al. (2006) emphasized that problem-solving skills were among the most important skills sought for by students of Malaysian universities. Martin et al. (2012) revealed that PSBL played a prominent role in students' achievement in science and mathematics. Andis & Heather (2011) maintained that PSBL had a positive and effective role in classrooms with large numbers compared to small groups. Core et al. (2014) found that that PSBL application in teaching assisted students to achieve their educational goals. Ferreira & Trudel (2012) showed that PSBL supported students' tendency toward studying science and mathematics. As regards accounting, the American Institute of Certified Public Accountants (AICPA) confirms that for a long time professional accountants have been requesting to respond to the need to set up principles and techniques which would enable accountants to solve problems and make professional judgement; hence, individuals who will join the profession should be exposed to the teaching methods of problem-solving and creative thinking during their university education.[1]Several studies have shown that 60-70% of accounting students and experienced professionals prefer the problem-solving approach in accounting education and in professional practice (Arunachalam et al., 1997; Baldwin & Reckers, 1984; Collins & Milliron, 1987; Henry, 2004; Kovar et al., 2003; Loo, 2002; Summers et al., 2000; Wheeler, 2001). A study by Lightner et al. (2007) stressed on the necessity for accounting education to move away from the conventional lecture to modern teaching methods, such as PSBL. Also, Pitulice & Manea (2015) emphasized that PSBL and Cooperative Learning were the most prominent teaching methods on which accounting research focused while dealing with the issue of accounting education.

Halabi et al. (2005) intended to compare between two important approaches in accounting education – i.e. Worked Examples and PSBL – and the results revealed that there were no substantial differences between them in case there was previous experience; however, the results showed that Worked Examples Approach was superior in case there was no previous experience. In a survey of 768 accounting programs in the United States, Lusher (2006) attempted to review the content and structure of assessment plans in accounting education, by focusing on essential work place skills – including problem-solving skills. The results confirmed that accounting teacher normally included these skills among the learning outcomes of their educational programs, and they differed greatly in terms of the evaluations methods used to determine students' assimilation of these skills which are critical for their future professional careers. Hann (2011) concluded that there was a relationship between problem-solving skills and accounting performance, and that this relationship was influenced greatly by cognitive misfit.

On their part, Calk &Carr (2011) see the problem-solving technique as one of the most important educational practices that could make accountants more adapted with the subsequent changes in accounting standards and make it very easy to integrate professional accounting practices in accounting classroom. Based on a case study that used directed questions after the application of PSBL in seven classes at Queans land University of Technology, Stanley & Steven (2012) revealed that PSBL led to supporting the learning-by-doing approach, which, in turn, led to better results in accounting education.

Based on the discussion above, the research efforts on PSBL in relation to accounting can be classified into two groups. The first focused on highlighting the importance of PSBL in accounting education from philosophical, theoretical perspective, or based on the degree of satisfaction of accounting students, teachers and accounting practitioners (Arunachalam et al., 1997; Baldwin &Reckers, 1984; Collins & Milliron, 1987; Henry, 2004; Kovar et al., 2003; Loo, 2002; Summers et al., 2000; Wheeler, 2001; Lightner et al., 2007; Pitulice & Manea, 2015; Calk &Carr, 2011) whereas the second group attempted to demonstrate that there was a relationship between PSBL and some variables related to accounting education, such as accounting performance, evaluation structure and

[1]http://www.aicpa-ca.org/library/ecc/ecc_learning/ecc_learning_exhibits.asp

plans, and Learning-by-doing approach (Halabi et al., 2005; Lusher, 2006; Hann, 2011; Stanley & Steven, 2012). However, the studies of both groups did not address the impact of PSBL on AEQ according to specific criteria, which is what this study tries to investigate.

COOPERATIVE LEARNING IN ACCOUNTING EDUCATION:

Studies on Cooperative Learning in accounting education extend over two decades. Tackett et al. (2001) maintain that the various approaches of Cooperative Learning have played an important role in accounting education at US universities during the nineties of the last century. Other studies (Cottel & Millis, 1992; McCombs & Van Syckle, 1994; Elliott & Jacobson, 2002) developed various perceptions of Cooperative Learning in accounting discipline. Paisey & Paisey (2010) offered the idea of "education with work placement". Woodley et al. (2011) presented some successful experiments of "work-integrated learning" as a form of Cooperative Learning, conducted on students of College of Law and Business at the University of Victoria (USA). Woodley & Tam (2011) described and analyzed the positive effects of this educational strategy on business management students in Hong Kong.

In an attempt to build a mathematical model that could interpret the level of satisfaction with Cooperative Learning programs, a study by Liu (2012) explored how Cooperative Learning in accounting education can contribute to satisfying students about the practice of what they have learned at work environment. The study included 192 students in 14 CPA training facilities in south China. It concluded that there was a high satisfaction level with Cooperative Learning programs, particularly with regard to CPA certification, compared to university education. Opdecam & Everaert (2012) showed that there was an impact of team learning method on students' achievement, compared to traditional, lecture-based education, the study, which was conducted on freshman Financial Accounting students, revealed that students were satisfied with the team learning method.

Moreover, using comparison between a group of students taught using Cooperative Learning and another group taught using traditional education, Hwang et al. (2005; 2008) found that Cooperative Learning had more impact on students' performance than traditional education did. The methodology of comparison between groups to explore effects on students' performance was also adopted by several studies, like Gabbin& Wood (2008), Hosal-Akman&Simga-Mugan (2010) and Lancaster & Strand (2001), which came up with varied results. While Hosal-Akman & Simga-Mugan (2010) confirmed that Cooperative Learning had an effect on students' performance, Gabbin & Wood (2008) and Lancaster & Strand (2001) indicated nil difference between the group of accounting students taught by Cooperative Learning and the group taught by traditional methods of accounting education.

A study by van der Laan Smith & Spindle (2007) tried to determine the effect of group formation in Cooperative Learning environment on accounting education. Baird & Munir (2015) aimed to determine the efficiency of seminar-based Cooperative Learning technique on accounting education: the study data were collected by comparing junior level accounting students with other students taught using other teaching methods; and the results confirmed that Cooperative Learning had a positive role in activating profession-oriented accounting performance skills in students.

A review of the accounting research efforts in relation to the subject of Cooperative Learning would show that Cooperative Learning was addressed as an independent variable that influenced a dependent variable defined in terms of either students' satisfaction or improvement of students' achievement. Although these variables are important – particularly students' achievement – for judging the quality of accounting education, they remain one of several dimensions of overall quality. Therefore, previous studies have not dealt with many other dimensions of quality set forth by IESs and NCAAA, which this study seeks to determine.

BRAINSTORMING IN ACCOUNTING EDUCATION:

Education methods literature has produced numerous studies that addressed Brainstorming from both theoretical and applied perspectives, and highlighted its importance in and impact on various variables influencing the educational process. Mentzeret al. (2015) believed that Brainstorming was one of the most important skills that should be promoted among students at early school stages, and that it was one of the most teaching techniques to support exchange of ideas. Smith & Kohn (2011) revealed that brainstorming sessions added quantity, variation and novelty to the ideas put forward in relation to a specific problem. Zarif & Adulmateen (2013) confirmed that Brainstorming had an effect on effective fulfilment of learning outcomes in students. In their study which targeted the analysis of alternative methods to teach Business English, Sim & Pop (2012) added that Brainstorming could be widely used in teaching and practical problem solving, since it had a great potential to push forward creative thinking, ratiocination, analytic faculties, and intellectual makeup.

Oliver & Coyte (2011) opine that Brainstorming becomes more positive when teaching in groups. In a presentation of the results of their discussion of financial education practices, Grifoni & Messy (2012) confirmed that Brainstorming could be used during identification, assessment and planning initiatives and available resources. Carter et al. (2016) regarded Brainstorming as an interactive strategy that could help students to develop social and cultural skills in classroom.

Studies on Brainstorming have gone beyond education, and extended to the practical application of this technique to solve practical problems at business organizations. Several studies have reported the wide range of using Brainstorming as a learning technique to solve problems facing business organizations during the implementation of various activities (Subramainiam, 2011; Lin, 2012; Mortlock, 2015). Cockrell et al. (2013) maintained that Brainstorming sessions were not limited to educational environment only but could also assist to direct efforts toward fulfilment of common goals of organizations, and to Support the restructuring rewards towards the team reward. Messmer (2006) stressed on the importance of Brainstorming sessions to create initiatives or look for new operations inside enterprise in a way that would encourage employees at all levels to maintain teamwork spirit, and make managers listen to individual employees.

Regarding the field of accounting, regardless of the emphasis by Auditing Standards Board in the list of Statement of Auditing Standard No. 99 (SAS99)– Consideration of Fraud in a Financial Statement Audit – that Brainstorming sessions improve the quality of professional judgment in relation to fraud when audit team members address the auditing process[2], accounting literature is almost devoid of studies dealing with the effects of Brainstorming on accounting education. Therefore, and based on previous education literature, the current study attempts to determine the effect of Brainstorming on AEQ in accordance with the requirements of IESs and NCAAA.

ACCOUNTING EDUCATION QUALITY (AEQ):

Studies on accounting education did not pay much attention to quality. A great part of these studies focused on determination of factors that affected on the scientific performance. A number of studies (D, Souza & Maheshwari, 2011; Papageorgiou & Halabi, 2014; Mohrweirse, 2010; Guney, 2009; and Duff, 2004) revealed that there were many factors influencing accounting education, like age, gender, previous accounting knowledge, mathematical background, and academic capacities. Besides, Halabi et al. (2010) added computer-based education as one of the factors that affected scientific performance. All above studies defined scientific performance in terms of accounting knowledge inculcated in courses. Although this knowledge is important, it cannot be taken as the only AEQ criterion.

Other studies made shy attempts to define AEQ, such as the study by Dandago & Shaari (2013) which defined AEQ as the extent of engagement of academic curricula and scientific research with the practical reality, and confirmed on the weakness of AEQ in Malaysian universities through data collected from non-structured personal interviews. Moreover, Fatima et al. (2007)

[2]http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00316.pdf

emphasized that the issue that affected AEQ most was that the changes taking place in accounting practice were not paralleled by correspondent changes in accounting education. Watty (2005) relied on the concept of 'fitness for purpose', which construes AEQ as the graduate accountant's ability to get and deal with a job placement. Wrigh & Chalmer (2010) provided a hazy definition of AEQ in scientific research: to them, high quality research is that which contributes to enhancement of students' knowledge. Using a survey of a sample of accounting graduates and senior level students, Abayadeera & Watty (2016) concluded that there were many general skills needed by graduates but not taught at universities: this drawback is considered one of the most important reasons behind AEQ low level. However, these studies failed to provide an acceptable definition of AEQ according to a well-known framework. In the current study, we try to provide an acceptable framework based on IESs and NCAAA Benchmarks.

HYPOTHESES:

According to NCAAA vision, which is compliant with international views concerning the quality of higher education, quality in educational institutions is recognized in terms of four dimensions: knowledge, cognitive skills, interpersonal skills and responsibility, and telecommunications and information technology. Deriving from previous studies, the following hypotheses have been formulated:

H_1: There is a significant correlation between PSBL, Cooperative Learning and Brainstorming and accounting knowledge.

H_2: There is a significant correlation between PSBL, Cooperative Learning and Brainstorming and accounting cognitive skills.

H_3: There is a significant correlation between PSBL, Cooperative Learning and Brainstorming and interpersonal skills and responsibility necessary for the accounting profession.

H_4: There is a significant correlation between PSBL, Cooperative Learning and Brainstorming and telecommunications and information technology necessary for the accounting profession.

METHODOLOGY:

Data:

The study derived its primary data from a field survey (questionnaire) of senior level undergraduate accounting students from accounting departments at three universities in Saudi Arabia, i.e. King Abdulaziz University, Najran University, and King Khaled University. The study sample covered 320 senior students. Senior level students were selected because such students were supposed to have completed more than 100 study hours – i.e. obtained a comprehensive accounting background, including major subjects of the discipline– in addition to 30-60 hours of summer training (during which they were supposed to have come in touch with professional accountants, and managed to form a picture of the practical world of accounting profession). Besides, such students were taught by a big number of teachers, and were exposed to multiple and various teaching methods and techniques, including the three teaching methods under investigation.

Instrument:

The study relied on questionnaire. The questionnaire form started with a friendly message to participants, explaining to them the significance of the study and its value for accounting education. Then, the questionnaire was divided into three parts. PartI explained the concepts included in the questionnaire, in case a participant was not familiar with any of them – i.e. brief definitions of teaching methods referred to in the questionnaire –so as to ensure students' understanding of the questions while responding to the items. Part II was devoted to demographic data of respondents. Part III included the main questions of the questionnaire. It was sub-divided into two sections: Section (i) was allocated for the three teaching methods, and included three questions; and Section (ii)was dedicated for the dependent variable – i.e. accounting education quality – and included four questions. Before distribution, the

questionnaire was arbitrated by professors specialized in both accounting and education: their comments were taken into consideration in the development of the final form of the questions. The results of Cronbach's alpha showed a reliability rate of 0.75,which is statistically acceptable. Out of the 320 questionnaire distributed, 288 were retrieved, i.e. by 90.46%, which is largely a satisfactory rate. However, 6 questionnaires were excluded due to invalidity for statistical analysis (i.e. by 2.04%, which is a very small and in significant rate).

Study Variables:
The study variables are divided into:

Independent variables: These include PSBL, Cooperative Learning, and Brainstorming. Table (1) shows these variables and their components – as agreed upon by most educational and accounting studies. The independent variables were broken down into sub-elements (components) to ensure adequacy of application of these teaching methods:

Table 1: independent variables and elements partial

Variable	Sub-elements
Problem-Solving-Based Learning	• Good definition of the problem. • Determination of all possible solutions to problem, and expected results. • Selection of the right option as solution. • Post-implementation evaluation of the selected option.
Cooperative Learning	• Choice of appropriate content that achieves lesson objectives • Division of students into appropriate groups (3to5) • Good choice of students in groups • Determination of individual and integrated roles within groups (individual and collective responsibility) • Allocation of sufficient time • Preparation of appropriate educational materials
Brainstorming	• Ensuring freedom of expression and welcoming all ideas • Avoidance of negative criticism • Increase of ideas presented to participants • Building on and developing others' ideas

Dependent variable: AEQ is the dependent variable, and can be interpreted in light of the four dimensions expressed in terms of the standards identified by NCAAA Benchmark4:
Knowledge: Knowledge in this context is represented by courses directly related to accounting. IES2 identified profession-oriented accounting courses as a sign of knowledge-based learning outcomes, including Financial Accounting, Cost Accounting, Management Accounting, Auditing, and Taxation Accounting (as well as zakat in Saudi Arabia and other Islamic countries). It is to be noted that some studies (Papageorgiou & Halabi, 2014; Halabi et al. 2010; and Liu, 2012) focused on educational curricula while measuring accounting performance.
Cognitive Skills: The study adopts the intellectual skills indicated by IES3, in addition to the five basic work skills determined by Lusher (2006) and the definition of 'generic skills' by Opdema & Everaet (2012).Therefore, the variables of cognitive skills include the ability to evaluate information collected from miscellaneous resources through research, analysis and integration; the ability to make professional judgement ; the ability to solve problems ; the ability to apply logic, critical analysis and creative thinking; in addition to the skills of preparing financial statements, cost statements, and analysis of accounting information systems.
Interpersonal Skills and Responsibility: IES3 regarded as one of the most important interpersonal skills – as did Lusher (2006) also – the ability to engage in collective work and in teamwork; verbal and written communication skills; ability to maintain openness to different cultures and languages; and effective listening and interviewing skills. Besides, IES4 presented

concepts related to the sense of responsibility, most notably work ethics and professional code of conduct, commitment to public interest, and social responsibility.

Telecommunications and Information Technology: The ability to use modern means of communication and information technology can no doubt be manifested by the ability to efficiently use general software applications, such as MS office; the ability to use internet practically; and the ability to handle ready-made accounting software.

Measuring:

Using1-5 Likert Scale, variables are measured, and the descriptive perceptions obtained from the sample respondents are converted into quantitative data.

Statistical Tests:

In addition to descriptive analysis of data, which includes the arithmetic mean and standard deviation, the study also uses Spearman Correlation Coefficient to determine the correlation between teaching methods and AEQ, and multiple regression analysis to determine the effect of independent variables on the dependent variable quantitatively.

RESULTS AND DISCUSSION:

Descriptive Results:

Table (2) displays the results of the descriptive analysis of the study variables. The first panel includes the measures of Cooperative Learning adequacy for students.

Table 2: Descriptive Analysis of Data

Variable	Sub-Variable	Minimum	Maximum	Mean	Standard Deviation
Cooperative Learning	Selection of appropriate content that achieves lesson objectives	1.00	5.00	2.2536	1.14155
	Division of students into appropriate groups (3 to 5)	2.00	5.00	4.0972	1.05803
	Appropriate selection of students in groups	1.00	5.00	4.0417	1.03510
	Determination of individual and collective roles within groups (individual and collective responsibility)	1.00	5.00	1.9464	1.06760
	Allocation of sufficient time	2.00	5.00	4.3611	0.80600
	Development of appropriate educational materials	1.00	5.00	2.0556	1.09339
	Overall Mean	2.00	5.00	3.1250	0.54011
Brainstorming	Ensuring freedom of expression and welcoming all ideas	1.00	5.00	4.0417	1.12541
	Avoiding negative	1.00	5.00	3.6944	1.35265

Variable	Sub-Variable	Minimum	Maximum	Mean	Standard Deviation
	criticism				
	Increasing amount of ideas presented to participants	1.00	5.00	2.0556	0.97192
	Building on and developing others' ideas	1.00	5.00	2.1528	0.93942
	Overall Mean	1.50	4.25	2.9861	0.62454
PSBL	Good definition of the problem	2.00	5.00	4.0972	0.96141
	Identification of all possible solutions to the problem and expected results	1.00	5.00	3.7361	1.19223
	Selection of the right alternative as a solution	2.00	5.00	3.8743	1.01470
	Post-implementation evaluation of the selected option	1.00	5.00	2.7361	1.09472
	Overall Mean	2.00	5.00	3.6147	0.65050
Knowledge	Financial Accounting	1.00	5.00	3.3194	1.24745
	Cost Accounting	1.00	5.00	2.5278	0.94404
	Management Accounting	1.00	5.00	2.4028	0.96863
	Auditing & Assurance Services	1.00	5.00	3.6806	0.92697
	Taxation & Zakat Accounting	2.00	5.00	2.8472	0.70161
	Overall Mean	1.80	4.80	2.9556	0.58432
Cognitive Skills	Research, analysis and integration	1.00	5.00	2.2639	1.05584
	Making professional judgments	1.00	5.00	2.9167	1.23537
	Problem solving	1.00	5.00	3.5278	0.92916
	Application of logic, critical analysis and creative thinking	1.00	5.00	2.5694	1.01317
	Preparation of financial statements, cost statements, and planning budgets	1.00	5.00	2.3889	0.93787
	Design and analysis of accounting information systems	1.00	4.00	1.9444	0.89737
	Overall Mean	2.00	3.33	2.6019	0.36446
Interpersonal Skills & Responsibility	Work collectively and in work-teams	1.00	5.00	2.9722	1.01518
	Verbal and written communication skills	1.00	5.00	2.8194	1.03360

Variable	Sub-Variable	Minimum	Maximum	Mean	Standard Deviation
	Openness to different cultures and languages	1.00	5.00	2.3472	1.17060
	Effective listening and interviewing skills	1.00	5.00	1.9861	0.98055
	Work ethics and professional code of conduct	1.00	5.00	2.4167	0.94075
	Commitment to public interest and social responsibility	1.00	5.00	2.8611	1.16039
	Overall Mean	1.67	3.83	2.5671	0.51584
Communication Skills& Information Technology	Handling ready-made accounting software (e.g., Beachtree, Alpha and Smack)	1.00	5.00	2.1806	0.96382
	Ability to use various applied programs (e.g., MS Office)	1.00	5.00	2.4583	1.01470
	Ability to use internet practically	1.00	5.00	2.4861	0.95899
	Overall Mean	1.33	4.00	2.3750	0.50376

It is clear that there is tendency among students' responses to reflect the adequacy of student grouping technique in terms of the dividing of students into appropriate numbers in each group as well as allocation of sufficient time – with mean averages of 4.09, 4.04, 4.36, respectively, and standard deviation ranging between 1.05 and 0.80. However, respondent students believed that there was inadequacy in "selection of appropriate content that achieves lesson objectives", "determination of individual and collective responsibility", and "preparation of appropriate educational materials", with mean averages of 2.25, 1.94, 2.05, respectively, and standard deviation ranging between 1.14 and 1.06. This result reflects more focus on the formal dimensions of applying Cooperative Learning than on the thematic dimensions, which is clearly indicated by the low mean averages of thematic dimensions compared to those of formal dimensions. Despite the disparity of such focus, the mean of the adequacy of Cooperative Learning has surpassed the estimated standard mean by 3; it reached 3.12. This, in turn, reflects the adequacy of Cooperative Learning from the point of view of students; this adequacy is basically focused on formal dimensions, though.

The second panel showed the mean averages and standard deviation values of the measurements of the adequacy of Brainstorming from students' point of view. Obviously, students confirmed the adequacy of "ensuring freedom of expression and welcoming all ideas" and "avoidance of negative criticism", with averages of 4.04 and 3.69, respectively, and standard deviation values of 1.12 and 1.35, respectively. On the other hand, the results confirmed inadequacy of "increasing the amount of ideas put forward for participants" and "building on and developing others' ideas", with mean averages of 2.05 and 2.15, respectively, and a standard deviation nearing 0.9. This result puts the adequacy of Brainstorming in question, since despite the fact

that the overall mean of Brainstorming approached the standard average (by i.e. 2.98), the tendency of students' views indicates negative neutrality of teachers in classrooms. While there was focus on "ensuring freedom of expression and welcoming all ideas" and "avoidance of negative criticism" on one hand, there was neglect of "increasing the amount of ideas put forward for participants" and "building on and developing others' ideas" on the other hand – and the responsibility for that is directly placed on the shoulders of the course teacher.

The third panel shows the adequacy level of PSBL, with an average of 4.09 for "good definition of problem", 3.73 for "identification of all possible solutions to problem, and expected results", and 3.87 for "selection of right option as solution"; with standard deviation values ranging between 0.96 for "good definition of problem" and 1.19 for "identification of all possible solutions to problem, and expected results" .However, PSBL application appears lacking in "post-implementation evaluation of the selected option", which came up with a mean of 2.73 and a standard deviation of 1.09.Therefore, it can be generally assumed that PSBL application is adequate, given that the overall mean exceeded 3.61.

The fourth panel shows the mean averages of students' grades as an indicator of 'knowledge', which is considered an important AEQ dimension. The results showed "very good" rates for students in both courses of 'Financial Accounting' and 'Auditing and Assurance Services', with mean averages of 3.31 and 3.68, respectively, and a standard deviation of less than 1 for both. By contrast, averages of other courses came to be 2.84 for 'Taxation and Zakat Accounting' and 2.40 for 'Management Accounting', with standard deviation below 0.96 for 'Management Accounting' and less for the rest of the courses. This is perhaps attributed to the nature of the curricula of Management Accounting and Cost Accounting, which are more often seen by accounting students as a heavy burden due to complexity of their theoretical concepts, overlapping and abundance of their practices and applications, and their constant influence by changes in production environment and management thought. This is also consistent with the conclusions of a study by Lui (2012) which revealed that the marks of Auditing and Financial Accounting courses were higher than those of Management Accounting, which came to be below the estimated standard average. Clearly, the decline that marked the mean average of these courses has greatly affected the average of the entire 'knowledge' dimension, which came below the estimated standard mean (i.e. its overall mean did not exceed 2.98).

The results of the descriptive analysis of the cognitive skills are shown in the fifth panel. With the exception of problem-solving skills, which averaged 3.52 with a standard deviation of 0.92, the averages of the rest of the skills came at 2.91 for "making professional judgments"(with a standard deviation of 1.23) and 1.94 for "design and analysis of accounting information systems" (with a standard deviation of no less than 0.93). Such results reflect decline in cognitive skills necessary for students in the post-university stage, with an overall average not exceeding 2.60. It is expected that the cause for that may be students' lack of interest in and irresponsiveness to these skills for two reasons. The first reason is students' attitude that the knowledge obtained from accounting courses would be sufficient for professional practice – this view is quite consistent with the findings of Tacket et al. (2001). The second reason is that these skills are not included in the evaluation of student's final marks on one hand, in addition to teachers' traditional perspective that knowledge itself is the essence of accounting education, on the other hand.

The sixth panel reveals a decline in the role of university in the development of "interpersonal skills and responsibility", as the result did not exceed of the estimated standard mean. Other results came to be 2.97 for "work collectively and in teams" and 1.98 for "effective listening and interviewing skills", with a standard deviation revolving around 1 for all items, and an overall average of 2.56. One of the direct causes of this decline is that students do not take into account the importance of successful communication with others in the business world, in addition to the lack of inculcating the concept of social responsibility both in universities and even at schools. This differs with the result obtained by Lui (2012), which stressed that students were aware of the importance of communication skills with others during the conduct of accounting training programs. This difference between both studies is due largely to differences

between societies and educational systems, which are both important in encouraging effective interpersonal skills of individual.

The last panel shows that despite the interest of Saudi universities in the infrastructure of telecommunications and information technology, there is decline in these skills among university students. The averages ranged between 2.48 for "ability to use internet practically" and 2.18 for "handling ready-made accounting software", with a standard deviation spinning around1, and an overall average not exceeding 2.37. This result agrees with that of Beck and Halim (2007), which emphasized that students' interest in technological skills was always less than their interest in other skills representing education outputs. This can be attributed to the point that information technology infrastructure at universities is directed toward pure technological knowledge, such as the curricula of Computer Principles course, which offers dry and futile exposition of hardware and software without paying attention to the effects of this technology on the accounting profession, or even on the general applied uses of this technology.

To sum up, the results of the descriptive analysis revealed that from students' perspective there was, to a certain extent, adequacy with respect to Cooperative Learning and PSBL, and a little less than the average with respect to Brainstorming. It also revealed that accounting education focused more on the dimension of 'knowledge' compared to the other AEQ dimensions.

ANALYSIS:

Spearman Correlation Analysis:

Table (3) illustrates the results of Spearman Correlation analysis between the overall averages of the three teaching methods and the AEQ dimensions based on AEQ components to determine the correlation between these teaching methods and AEQ elements. The first panel reveals that there is significant correlation at a significant level (P. Value 0.01) between the average of Cooperative Learning and 'Financial Accounting' and 'Taxation and Zakat Accounting', with correlation coefficients of 0.40 and 0.47, respectively. There is also a weak correlation at the same signification level with 'Cost Accounting' and 'Management Accounting', by correlation coefficients of 0.24 and 0.32, respectively. Additionally, there is a very weak correlation at the same signification level with 'Auditing and Assurance Services', i.e. 0.05. Although these correlation coefficients have ranged between medium and weak, they reveal that Cooperative Learning has an impact on knowledge, and that it is possible to enhance the effectiveness of accounting knowledge by improving Cooperative Learning adequacy. Lui (2012) confirmed that there was low satisfaction among students regarding the effect of Cooperative Learning programs on students' knowledge achievement, but this decline was a result of the comparison with Cooperative Learning programs in practical training.

PSBL, too, had a medium significant correlation with accounting knowledge at a signification level of 0.01, with correlation coefficients amounting to 0.65 for 'Financial Accounting' and 0.42 for both' Cost Accounting' and 'Management Accounting'. Moreover, the results also show that, with the exception of 'Management Accounting', Brainstorming does not correlate with accounting knowledge: despite signification, the correlation was weak, with a coefficient of 0.17 at a signification level of 0.05. Therefore, this is an acceptable evidence of the role of Cooperative Learning, followed by PSBL, in accounting knowledge. This role differs depending on the nature of accounting courses: i.e., it becomes more visible in the accounting courses which have multiple practical applications, considering that the abundance of practical cases included in such courses provides good subjects for student groups taught by Cooperative Learning and includes many topics that can raise questions and be suitable to construct practical problems. Brainstorming does not plays a major role in accounting knowledge, and from our point of view (as referred to above in the descriptive analysis) this is largely due to the negative neutrality of teachers while application of this teaching method.

Table 3: Results of Analysis of Correlation between Teaching Methods and AEQ Dimensions

AEQ Variables		Cooperative Learning		Brainstorming		PSBL	
		Correlation Coefficient	P. Value	Correlation Coefficient	P. Value	Correlation Coefficient	P. Value
Knowledge	Financial Accounting	0.409**	0.000	0.0500	0.394	0.652**	0.000
	Cost Accounting	0.244**	0.000	0.089	0.131	0.420**	0.000
	Management Accounting	0.320**	0.000	0.146*	0.013	0.419**	0.000
	Auditing & Assurance Services	0.119*	0.043	0.059	0.322	0.048	0 .422
	Tax & Zakat Accounting	0.476**	0.000	0.027	0.654	-0.016	0.787
Cognitive Skills	Research, analysis and integration	0.001	0.986	0.174**	0.003	0.028 0	0.634
	Making professional judgments	0.023	0.702	-0.006	0.919	0.124*	0.035
	Problem Solving	0.127*	0.031	-0.005	0.928	0.053	0.374
	Application of logic, critical analysis and creative thinking	0.133*	0.024	0.079	0.183	0.136*	0.021
	Preparation of financial statements and cost statements and planning budgets	0.426**	0.000	-0.074	0.210	0.037	0.527
	Design and analysis of accounting information systems	0.005	0.935	0.372**	0.000	-0.079	0.182
Interpersonal Skills & Responsibility	Work collectively and in teams	0.481**	0.000	0.247**	0.000	0.501**	0.000
	Verbal and written communicatio n skills	0.328**	0.000	0.169**	0.004	0.336**	0.000
	Openness to different cultures and languages	-0.028	0.630	0.054	0.359	0.009	0.884
	Effective listening and interviewing skills	-0.014	0.810	0.279**	0.000	0.063	0.290
	Work ethics and professional code of conduct	-0.057	0.334	0.057	0.332	0.139*	0.019
	Commitment	0.032	0.594	-0.084	0.153	0.150*	0.011

AEQ Variables		Cooperative Learning		Brainstorming		PSBL	
		Correlation Coefficient	P. Value	Correlation Coefficient	P. Value	Correlation Coefficient	P. Value
	to public interest and social responsibility						
Communication, Information Technology	Ability to handle ready-made accounting software (e.g., Beach Tree, Alpha and Smack)	-0.057	0.336	0.079	0.179	-0.177**	0.003
	Ability to use applied programs (e.g., MS Office)	0.060	0.307	-0.045	0.448	0.002	0.976
	Ability to use internet practically	-0.154**	0.009	0.064	0.282	-0.037	0.536

** Significance at 0.01
* Significance at 0.05

The second panel shows the correlation of the three teaching methods with cognitive skills. It has been found that there was medium significant correlation at the signification level of 0.01 between Cooperative Learning and 'preparation of financial statements, cost statements and planning budgets', with a coefficient of 0.42. This is a normal result, given that there is a lot of overlap between this skill and the knowledge contained in the courses of Financial Accounting, Cost Accounting, and Management Accounting; hence, this skill constitutes an important professional reflection of these courses. Besides, Cooperative Learning showed a weak correlation at the signification level of 0.05 with both 'problem solving' and 'application of logic, critical analysis and creative thinking', with a correlation coefficient of 0.13 for both of them. By contrast, there was no correlation between Cooperative Learning and other cognitive skills. This result seems close to the conclusion of Opdecam & Everaet (2012) that there is correlation between Cooperative Learning and cognitive skills. Brainstorming reflected weak signification correlation at 0.01 with skills involving research and investigation – i.e. the skills of'design and analysis of accounting information systems' and 'research, analysis and integration', with correlation coefficients of 0.37 and 0.17, respectively. These are weak coefficients; however, the high signification level confirms the possibility of improvement of these skills by improving the adequacy of Brainstorming. On their part, problem-solving skills revealed weak signification correlation at the level of 0.05 with 'application of logic, critical analysis and creative thinking' and 'making professional judgments', with coefficients 0.13 and 0.12, respectively. Therefore, it can be said that from the perspective of cognitive skills, Cooperative Learning has emerged as the teaching method most associated with AEQ, followed by Brainstorming and PSBL.

Regarding 'interpersonal skills and responsibility', the third panel reveals that there was a medium correlation of Cooperative Learning as well as PSBL with 'work collectively and in teams' at the signification level of 0.01,with correlation coefficients of 0.48 and 0.50 for both teaching methods, respectively. In addition, there was a weak significant correlation at the level of 0.05 between both teaching methods and 'verbal and written communication skills', and a correlation coefficient of 0.13 for both teaching methods. The impact of Cooperative Learning on communication skills gained wide acceptance (Beck and Halim, 2007; Kavanagh and Drennan, 2008), although that acceptance was subject to university accounting training

programs. Baird &Munir (2015) also emphasized on the importance of Cooperative Learning in improving accounting professional skills. Besides, 'problem-solving skills' showed weak correlation with 'commitment to public interest and social responsibility' and 'work ethics and professional code of conduct' at the signification level of 0.05, with coefficients of 0.15 and 0.13 for both skills, respectively. Moreover, Brainstorming had a weak correlation with the skills of 'working collectively and in teams','verbal skills and written'and 'effective listening and interviewing skills' at the signification level of 0.01,with coefficients of 0.24, 0.16 and 0.27, respectively. This result confirms that teaching methods play a role in the development of the skills of 'working collectively and in teams' and 'verbal and written communication skills'. Essentially, this result may be due to the way these teaching methods were applied. In other words, the descriptive analysis contains a reference to students' confirmation that there was emphasis on 'dividing students into appropriate groups', 'appropriate selection of students in groups' and 'ensuring freedom of expression and welcoming all ideas': these steps might have prompted students' tendencies to improve their interpersonal and communication skills.

With respect to 'telecommunications and information technology' skills, it can generally be said that there is no significant correlation between these skills and the teaching methods under study. It was also observed that the signification correlation was weak and produced a negative value at the signification level of 0.01 between the skill of 'using internet practically' and Cooperative Learning (with a coefficient of -0.15) on the one hand, and between the skill of 'handling ready-made accounting software' and PSBL (with a correlation coefficient of -0.17), on the other hand. The results may be interpreted to indicate that the development of the skills of this dimension needs teaching methods other than these ones.

Despite the importance of correlation analysis to demonstrate the strength and direction of the correlation, it remains unable to provide indicators of the quantitative impact of the teaching methods combined on the four AEQ dimensions. Such indicators can be obtained by the multiple regression analysis, the results of which are described below.

Multiple Regressions:

Table (4) shows the results of the multiple regression analysis of measuring the impact of the overall mean of the teaching methods on the overall mean of AEQ dimensions. The table demonstrates the validity of the regression models of 'knowledge', 'cognitive skills' and 'interpersonal skills and responsibility' and their F. value – i.e. at value of 46.87, 4.81 and 7.15, respectively, at a signification level of 0.01. Contrastively, the regression model of 'telecommunications and information technology' was rejected. With respect to 'knowledge', the results show that 33.1% of accounting knowledge acquired by undergraduate students can be interpreted in terms of a linear relationship with the above-mentioned teaching methods, and that there is a correlation of 0.575 between 'knowledge' and both Cooperative Learning , Brainstorming and PSBL at the signification level of 0.01.Therefore,thefollowing regression equation can quantitatively show the effect of both Cooperative Learning , Brainstorming and PSBL on 'knowledge'(as one of AEQ dimensions).

Table 4: Results of Multiple Regression Analysis of Study Variables

Accounting Education Quality Dimensions				Educations Techniques	Statistical Data
Communication, Information Technology	Interpersonal Skills & Responsibility	Cognitive Skills	Knowledge		
-0.036	0.181	0.111	0.253	Cooperative Learning	Regression Coefficient
0.049	0.038	0.034	0.102	Brainstorming	
-0.087	0.083	0.039	0.366	PSBL	
0.064	0.064	0.046	0.062	Cooperative Learning	S. Error

Accounting Education Quality Dimensions				Educations Techniques	Statistical Data
Communication, Information Technology	**Interpersonal Skills & Responsibility**	**Cognitive Skills**	**Knowledge**		
0.048	0.047	0.034	0.046	Brainstorming	
0.053	0.053	0.038	0.051	PSBL	
0.573	0.005**	0.016*	0.000**	Cooperative Learning	P.Value
0.308	0.423	0.312	0.025*	Brainstorming	
0.101	0.120	0.305	0.000**	PSBL	
2.659	1.589	2.011	0.539	Contrast	
0.150	0.265	0.220	0.575	R	
0.022	0.070	0.048	0.331	R^2	
0.012	0.060	0.038	0.324	R^2 Adj.	
2.179	7.149	4.809	46.87	F	
0.091	0.000**	0.003**	0.000**	P. Value	

** Significance at 0.01
* Significance at 0.05

$$y = 0.539 + 0.253x + 0.102z + 0.366u$$

Where:
Y = Knowledge
X = Cooperative Learning
Z = Brainstorming
U = PSBL

The results also reveal that the amount of the impact of teaching methods on cognitive skills did not exceed 4.8%, and that this impact depended mainly on Cooperative Learning due to lack of signification of regression coefficients between other teaching methods and cognitive skills. In addition, there is a linear correlation of 0.22 between these teaching methods and skills cognitive. This weak quantitative impact may be due largely to lack of adequacy of application of these teaching methods – not inadequacy of these methods *per se*. The following formula can reflect the results of the multiple regression analysis with respect of cognitive skills:

$$y = 2.011 + 0.111x$$

Where:
Y = Cognitive Skills
X = Cooperative Learning

As for 'interpersonal skills and responsibility', the above-mentioned teaching methods had an effect of no more than 7%, with a (rather weak) linear correlation of 0.26 between these teaching methods. However, the impact can be reliably traced to Cooperative Learning only, due to lack of signification of the regression coefficients for Brainstorming and PSBL. Hence, the regression equation will take the following form:

$$y = 1.589 + 0.181x$$

Where:
Y = Interpersonal Skills & Responsibility
X = Cooperative Learning

The multiple regression analysis provides further evidence of the important role of Cooperative Learning in improving AEQ. This result may agree with the results of several other studies that emphasized the impact of Cooperative Learning in accounting education (Woodley & Tam, 2011; Akman-Hosal & Simga-Mugan, 2010; Baird & Munir, 2015). However, this study excels

others because it investigates and identifies this impact, firstly, from a quantitative perspective and, secondly, according to AEQ dimensions based on IESs. Brainstorming and PSBL also have an effect on AEQ in terms of 'knowledge' and 'interpersonal skills and responsibility'.

RESULTS OF HYPOTHESES TESTING:

H_1 proposes that there is a significant correlation between PSBL, Cooperative Learning and Brainstorming and accounting knowledge. Based on the results of Spearman test and multiple regression analysis, there is a significant correlation between Cooperative Learning and all course curricula. Besides, there is correlation between PSBL and the courses of 'Financial Accounting', 'Cost Accounting' and 'Management Accounting'. Brainstorming also has significant correlation with the 'Management Accounting' course. The multiple regression analysis not only revealed that there was significant correlation of the impact of the three teaching methods and 'knowledge', but also defined it quantitatively. Therefore, it can be said that the first hypothesis of the study is accepted.

H_2 proposes that there is a significant correlation between PSBL, Cooperative Learning and Brainstorming and accounting cognitive skills. This correlation does exist, according to the correlation analysis between Cooperative Learning and three of the six cognitive skills. Besides, there is correlation between Brainstorming and two other skills, as well as between PSBL and two different skills. This means that the above-mentioned teaching methods cover all cognitive skills. The correlation was significant in seven out of the eighteen correlation coefficients, which means that – with the exception of Cooperative Learning – it could be argued that there is no significant correlation between these teaching methods and cognitive skills. This result has been confirmed by multiple regression analysis. Therefore, the second hypothesis is rejected.

H_3 proposes that there is a significant correlation between PSBL, Cooperative Learning, Brainstorming and interpersonal skills and responsibility necessary for the accounting profession. The results of correlation analysis confirmed the existence of significant correlation between Cooperative Learning and two interpersonal skills. PSBL was the most significantly correlated with 'interpersonal skills and responsibility', realizing significant correlation with four skills. Finally, Brainstorming had significant correlation with three other skills. The existence of significant correlation in 9 out of 18 coefficients requires additional confirmation to such relationship. The multiple regression analysis proved that – with the exception of Cooperative Learning – it could be said that the third hypothesis is rejected.

H_4 proposes that there is a significant correlation between PSBL, Cooperative Learning and Brainstorming and telecommunications and information technology necessary for the accounting profession. The results of the correlation analysis and the multiple regression analysis reject this hypothesis, and confirm the lack of substantial reliable relationship.

CONCLUSIONS AND RECOMMENDATIONS:

The adequacy of teaching techniques in Saudi universities shows variation. While there was acceptable adequacy of Cooperative Learning and PSBL, it was below the average for Brainstorming. The result is essentially due to poor application of some aspects and dimensions of these teaching methods. In Cooperative Learning, for example, it was clear that the lack of attention to the thematic components of Cooperative Learning, such as selection of appropriate content, identification of individual and collective responsibility, and preparation of educational materials which suit the theme of lesson. These points can be activated through on-going training courses for teaching staff members along with periodic evaluation of Cooperative Learning sessions at end of each course. As for Brainstorming, teaching staff members showed negative neutrality toward 'increasing the number of ideas put forward for discussion' and 'building on and developing others' ideas'. The emphasis on the course teacher as a key player in Brainstorming sessions can contribute greatly to improving the implementation of this

teaching method. As regards PSBL, it is necessary to pay attention to revision of the alternative solution chosen by students, and evaluate the extent of their success in solving problem.

Generally, AEQ dimensions were below average, with a relative precedence in favor of 'knowledge' compared to the other dimensions. AEQ improvement rests on several various procedures, based on the type of the dimension. With respect to cognitive skills, focus should be placed on the measurement and evaluation procedures of the courses, which should take into account these skills, as they are the most important skills from the perspective of professional accounting. 'Interpersonal skills and responsibility' realized the second highest average (after 'knowledge'); however, such skills can be activated through the allocation of courses specialized in work ethics and professional code of conduct on the one hand and the activation of university's societal role on the other hand.

The dimension of 'telecommunications and information technology' came to be the least adequate of all AEQ dimensions. In this regard, the good infrastructure of Saudi universities should be taken advantage of in the development of the accounting courses by integrating information technology dimensions in accounting applications, particularly those related to Financial Accounting, Cost Accounting and Management Accounting.

The results showed that Cooperative Learning had a good impact on AEQ. Therefore, the adoption of this teaching method in classes will contribute to AEQ enhancement, taking into account the thematic aspects referred to above. The impact was less on Brainstorming and PSBL; however, improvement of the adequacy of these two teaching methods will no doubt reflect positively on AEQ.

According to results, the dimension of 'telecommunications and information technology' was not influenced by the teaching methods used. Therefore, it is necessary to search for teaching methods that can create an impact on this dimension, taking into account to determine the IT needs of the accounting profession and such needs framed in the form of accounting knowledge.

From a quality perspective, the results of the effect differed depending on AEQ dimensions. The results were much clearer on the dimension of 'knowledge', less clearer on the dimensions of 'cognitive skills' and 'interpersonal skills and responsibility', and almost nil on 'telecommunications and information technology'. Generally, the results open up broad prospects for further accounting research on other teaching methods, or improving the AEQ procedures, in addition to the mechanisms of efficient and effective IESs application in the Arabic educational environment.

REFERENCES:

Abayadeera, N & Watty, K. (2016). The generic skills in accounting education in a developing country: exploratory evidence from Sri Lanka, *Asian Review of Accounting*, (24) 2: 149-170.

Albrecht, W. & Sack, R.(2000). Accounting education: charting the course thru a perilous repute, *American Accounting Association, Sarasota*, FL.

American Accounting Association (AAA), (1986). Committee on the Future Structure, Content, and Scope of Accounting Education (The Bedford Committee), "Future Accounting Education: Preparing for the Expanding Profession", *Issues in Accounting Education*,(1) 1: 168-195.

Andis, K. &Heather,H. (2011). Impact of problem-based versions learning in a large classroom setting: student perception and problem-solving skills, *Advances in Physiology Education*,(35) 4: 408-416.

Araujo, A. & Júnior, V. (2012). AVALIAÇÃO DA APRENDIZAGEM: the UMA EXPERIÊNCIA DO USO DO PORTFÓLIO the UMA EM DISCIPLINA DO CURSO DE CIÊNCIAS CONTÁBEIS, *Revista Ambiente Contabi* l, (4) 1: 36-50.

Arunachalam, V. et al. (1997). The relationship between problem solving, cognitive problem-solving style and affecting task structure in student performance, *Accounting Educators' Journal***,** (9) 1: 1-13.

Awayiga, J. et al. (2010). Knowledge and skills development of accounting graduates: The perceptions of graduates and Employers in Ghana, *Accounting Education: an international journal*,(19) 1: 139-158.

Baldwin, BA&Reckers, PM. (1984). Exploring the role of learning style research in accounting education policy, *Journal of Accounting Education***,** (2) 2: 63-76.

Baird, K. & R. Munir (2015). The Effectiveness of workshop (cooperative media learning) based versions seminars, *Asian Review of Accounting* (23) 3: 293-312.

Beck, J. & Halim, H. (2007). Undergraduate internships in accounting: what and how do Singapore interns learn from experience? *Accounting Education***,**(17)2: 151-72.

Bui, B. & Porter, B.(2010). The expectation-performance gap in accounting education: An exploratory study, *Accounting Education: an international journal*, (19) 2: 23-50

Burnett, S. (2003). The repute of accounting education: A regional perspective, *Journal of Education for Business*, (78) 3: 129-134.

Calk, R. &Carr, S. (2011). A Course Format for Problem-Based Learning in Accounting, *Journal of Accounting and Finance*, (11) 2: 139-154.

Carland, J. W. et al. (1994). Accounting education: A cooperative media learning strategy, *Accounting Education: An International Journal*, (3) 3: 223-236.

Carter, V. et al. (2016). The Integrating Design and Social Studies: Engineering a PALAY, *Children's Technology and Engineering*, (20) 3: 10-13.

Cockrell, C. et al. (2013). Making the Most of the Knowledge Sharing, *Management Accounting Quarter*, (15) 1: 44-52**.**

Coetsee, D. (2010). The role of accounting theory in the development of accounting principles, *Meditari: Accountancy Research*, (18) 1.

Collins, J. & V. Milliron (1987). A Measure of Professional Accountants' Learning Style, *Issues in Accounting Education***,** (2) 2: 193.

Core, D. et al. (2014). Teaching Problem Solving Skills to the Age Elementary Students with Autism, *Education and Training in Autism and Developmental Disabilities*, (49) 2: 189-199.

Cottell, P. & Millis, B. (1992). Cooperative learning in accounting, *Journal of Accounting Education*, (10) 1: 95-111.

Dandago, K. & Shaari, N. (2013). Effects of focus of accounting research on the accounting to quality of education in Malaysian universities, *Asian Economic and Financial Review*, (10) 3: 1371-1385

Souza, D. K & Maheshwari, S. (2010). Factors influencing student: The performance in the introductory science course management, *Academy of Educational Leadership Journal*, (14) 3: 99-119

Duff, A. (2004). Understanding academic performance and progression of first-year accounting and business economics undergraduates: the role of approaches to learning and prior academic Achievement, *Accounting Education*, (13) 4: 409-430.

Elliott, R. & Jacobson, P. (2002). The evolution of the professional knowledge, *Accounting Horizons*, (16) 1: 69-80.

Fatima, A. et al. (2007). Accounting students' perception of effective teaching methods and instructor characteristics: Some Malaysian evidence, *Malaysia Accounting Review*, 6: 101-128.

Ferreira, M. &Trudel, A. (2012). The Impact of Problem-Based Learning (PBL) on Student Attitudes toward Science, Problem-Solving Skills, and Sense of Community in the Classroom, *Journal of Classroom Interaction*, (47) 1: 23. 30.

Gabbin, A. &Wood, L. (2008). An experimental study of accounting majors' academic achievement using cooperative media learning groups, *Issues in Accounting Education*, (23) 3: 391-404.

Grifoni, A. &Messy, F. (2012). The Current Status of National Strategies for Financial Education: A Comparative Analysis and Relevant Practices, *OECD Working Papers on Finance*, Insurance and Private Pensions. Apr 2012: 33

Guney, Y. (2009). Exogenous and endogenous factors influencing students' performance in undergraduate accounting modules, *Accounting Education: An International Journal*, (18) 1: 51-73.

Halabi, A. et al. (2010). A South African study comparing the Effectiveness of computer-based versions learning materials and face-to-face teaching, *Meditari: Accountancy Research*, (18) 2: 23-37.

Halabi, A. et al. (2005). Empirical Evidence on the Relative Efficiency of Worked Examples versus Problem Solving Exercises in Accounting Principle Instruction, *Issues in Accounting Education*, (20) 1: 21-32

Akman-Hosal, N. &Simga-Mugan, C. (2010). An assessment of the effects of teaching methods on academic performance of students in accounting courses. *Innovations in Education & Teaching International*, Vol. 47, No. 3, 251-260.

Hwang, N. et al. (2005). An empirical test of cooperative media learning in a passive learning environment, *Issues in Accounting Education*, (20) 2: 151-165.

Hwang, N. et al. (2008). Cooperative learning in a passive learning environment: A replication and extension, *Issues in Accounting Education*, (23) 1: 67-75.

IFAC. (2015). Handbook of International Education Pronouncements.

Kavanagh, M. & Drennan, L. (2008). What skills and attributes does an accounting graduate need? Evidence from student perceptions and employer expectations, *Accounting and Finance*, (48) 2: 279-300.

Kovar, S.E. et al. (2003). Personality preferences of accounting students: a longitudinal case study, *Journal of Accounting Education, (21)* 2: 75-94.

Lancaster, K., and Strand, C. (2001). Using the team-learning model in a managerial accounting class: An experiment in cooperative media learning, *Issues in Accounting Education*, (16) 4: 549-567.

Lightner, S., et al. (2007). Team-based versions Activities to Promote engaged learning, *College Teaching*, (55) 1: 5-18.

Lindsay, R. (2012). We're must Overcome the relationship Controversial Between management accounting research and practice, *Pacific Accounting Review*, (24) 3

Lin, C. et al. (2012). Improvement Strategies for Logistics on Management - the TOC Approach, *Journal of Accounting, Finance & Strategy on Management*, (7) 2: 25-52.

Liu, G. (2012). A survey on satisfaction with cooperative media student: The accounting education based versions on CPA firm internships, *Asian Review of Accounting*, (20) 3: 259-277.

Lubbe, l. (2014). Accounting education A new way forward? *Accountancy SA*, April

Lusher, A. (2006). Identifying Assessment Practices in Undergraduate Accounting Programs Associate, *Thesis: PhD*, of University West Virginia.

Martin, A.et al. (2012). Problem Solving and Immigrant Student Mathematics and Science Achievement: Multination Findings from the Program for International Student Assessment (PISA), *Journal of Educational Psychology*, (104) 4: 1054 - 1073.

McCombs, GB &Van Syckle, LD (1994). Accounting internships: a win-win arrangement, *The National Public Remember Accountant*, (39) 5: 21-3.

Mentzer, N et al (2015). Brainstorming strategies for teaching in Design Education, *Technology and Engineering Teacher*, (74) 08: 8-13.

Messmer, M. (2006). Seven is Mistakes to Avoid colour: as a Manager, *Strategic Finance*, (87) 9: 8

Mortlock, L. (2015). Innovation is needed now more than ever, *Bottom Line*, (31) 12: 13-17.

Nassar, M.et al. (2013). Accounting Education and Profession to: Accountancy in Jordan: The Current Status and Improvement of the Processes, *Research Journal of Finance and Accounting*, (11) 4, ISSN: 1696 to 1697.

Nelson, I. et al. (2002). No, the sky is not falling: evidence of accounting student characteristics at FSA schools, 1995-2000, *Issues in Accounting Education*, (17) 3: 269-287.

Opdecam, E. & Everaert, P. (2012). Improving Student Satisfaction in a First-Year Undergraduate Accounting Course by vBulletin® Team Learning, *Issues in Accounting Education*,(27) 1: 53-82.

Oliver, G. & Coyte, R. (2011). Engendering learning engagement in a diverse Other cohort: a : reflection, *Accounting Research Journal*, (24) 2 : 195-204

K. Papageorgiou & A. Halabi. (2014). Factors contributing toward student performance in a distance accounting education degree, *Meditari: Accountancy Research*, (22) 2: 211-223.

Pitulice, I. & Manea, L. (2015). Accounting education and its place in the Romanian Economic education literature, *Accounting Information on Management and the Systems, (*14) 1: 36-59

Sim, M. &Anamaria-Mirabela, P. (2012). Mind Mapping and Brainstorming as Methods of Teaching Business Conceptsin Englishas A foreign Language, *Academic Science Journal, Psychological Series,* (1) : 75-83.

Smith, S. N. Kohn & (2011). Collaborative fixation: Effects of others' ideas on brainstorming, *Applied Cognitive: Psychology*, (25) 3: 359-371.

Stanley, T. & Marsden,S. (2012). Problem-based versions learning: Does accounting education need it? *Journal of Accounting Education*, (30) 3-4: 276.

Subramaniam, N. et al. (2011). The effects of perceived business uncertainty, external consultants and risk management on Organisational outcomes, *Journal of Accounting & Organizational Change*, (7) 2: 132-157.

Summers, SL et al. (2000). Problem-Solving in Style and Fit Consulting and Auditing, *Journal of the Systems Information***,** (14)1: 1.

Tackett, J.et al. (2001). Accounting interns and their employers: Conflicting perceptions, *Ohio CPA Journal*, (60) 2: 54-6.

Tucker, P & S. Schaltegger (2016). Comparing the research-practice gap in management accounting: A view from professional accounting bodies in Australia and Germany, *Accounting, Auditing & Accountability Journal*, (29) 3.

Van der Laan Smith, J., &Spindle, R. (2007). The impact of group formation in a cooperative media learning environment, *Journal of Accounting Education***,** (25) 4: 153 - 167.

Watty, K. (2005). Quality in accounting education: What say the academics? *Quality Assurance in Education*, (13) 2: 120-131.

Wheeler, P. (2001). The Myers-Briggs type indicator and applications to accounting education and research, *Issues within Accounting Education*, (16) 1: 125-150.

Wright, S. & Chalmers, K. (2010). The future for accounting academics in Australia, accounting education at crossroad in 2010. The Institute of Chartered Accountants of Australia.

Woodley, C. et al. (2011). Encouraging and maintaining learning in the workplace and community (LiWC): engaging, supporting and rewarding academics, *Proceedings of 2011 WACE World Conference*, June 14-17, Philadelphia, PA, available at: www.waceinc.org/philly2011/conference_proceedings/Refereed%20Papers/Australia/Woodley%20Russell%20Faux%20Encouraging%20and%20Maintaining%20LiWC.PDF (accessed April 20, 2012).

Woodley, C. & Tam,V. (2011). Industry of Engaging in the business curriculum in Hong Kong**,** *Proceedings of 2011 WACE World Conference*, June 14-17, Philadelphia, PA, available at www.waceinc.org/philly2011/conference_proceedings/Refereed%20Papers/Australia/Woodley%20Tam%20Engaging%20IndustryHK_paper_2010.pdf (accessed April 20, 2012).

Yunis, A. et al. (2006). Problem Solving Abilities of Malaysian University Students, *International Journal of Teaching and Learning in Higher Education*,(17)2: 86-96.

Zarif,T. & Abdul Mateen. (2013). Role of Using Brainstorming on Student Learning Outcomes during Teaching of S. Studiesat Middle Level, *Interdisciplinary Journal of Contemporary Research in Business*,(4)9:1089

*****