



الجمهورية الجزائرية الديمقراطية الشعبية

وزارة التعليم العالي والبحث العلمي

جامعة محمد بوضياف بالمسيلة

كلية العلوم الاقتصادية والتجارية وعلوم التسيير

مخبر الاستراتيجيات والسياسات الاقتصادية في الجزائر



المسيلة في: 2021/05/19

## شهادة مشاركة

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ورئيس الملتقى الوطني الافتراضي حول: "تقييم وتحسين النظام المحاسبي المالي الجزائري"، بأن:

الأستاذ (ة) / الدكتور(ة): Samya Kharkhache من: University of M'sila

A Participé par Une Communication Intitulée :

قد شارك(ت) بمدخلته بعنوان:

Requirements to Improve the Quality of Accounting Education at the Algerian University – A Survey Study.

في فعاليات الملتقى الوطني المنعقد عمه بعد يوم 19 ماي 2021 بجامعة محمد بوضياف بالمسيلة.

عميد الكلية

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رئيس الملتقى

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# Requirements to Improve the Quality of Accounting Education at the Algerian University – A Survey Study

(متطلبات تحسين جودة التعليم المحاسبي في الجامعة الجزائرية – دراسة استقصائية)

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## Abstract:

The objective of this study is to examine whether the current accounting education for Algerian universities, with its scientific, practical and technical aspects, leads to improving the outputs of accounting education and fits the skills and competencies that Algerian companies require from accounting graduates. To achieve this goal, the methods and quality of accounting education in general were addressed, and a questionnaire was prepared and sent to collect the views of a sample of accounting professors from different universities. The study found that there is a large gap between the courses covered by accounting education and the skills that students acquire at the Algerian University against the requirements and needs of the market. This is mainly due to the weakness of the practical side of accounting education and the absence of the use of technical means. In addition, the absence of cooperation between academics and professionals contributed to a large extent in widening the gap. The study recommended that the Ministry of Higher Education and Scientific Research and the Algerian University should start reviewing and updating accounting curricula, including focusing on developing practical and technical training for accounting students and cooperating with economic institutions and establishments to provide training opportunities in order to improve the quality of accounting education and to keep pace with the evolving market needs.

**Keywords:** Accounting education, Algerian university, International Accounting Education Standards, accounting profession.

## المخلص:

الهدف من هذه الدراسة هو فحص ما إذا كان التعليم المحاسبي الحالي للجامعات الجزائرية بجوانبه العلمية والعملية والتقنية يؤدي إلى تحسين مخرجات التعليم المحاسبي ويناسب المهارات والكفاءات التي تتطلبها الشركات الجزائرية من خريجي المحاسبة. ولتحقيق هذا الهدف، تم التطرق إلى أساليب وجودة التعليم المحاسبي بشكل عام، وأجري استبيان لتجميع وجهات النظر لعينة من أساتذة المحاسبة من جامعات مختلفة. ووجدت الدراسة فجوة كبيرة بين المقررات التي يغطيها التعليم المحاسبي والمهارات التي يكتسبها الطلاب في الجامعة الجزائرية مقابل متطلبات السوق واحتياجاته. ويرجع ذلك أساساً إلى ضعف الجانب العملي للتعليم المحاسبي وغياب استخدام الوسائل التقنية. بالإضافة إلى ذلك، غياب التعاون بين الأكاديميين والمهنيين ساهم إلى حد كبير في توسيع الفجوة. أوصت الدراسة بضرورة شروع وزارة التعليم العالي والبحث العلمي والجامعة الجزائرية في مراجعة وتحديث مناهج المحاسبة بما في ذلك التركيز على تطوير التكوين العملي والتقني لطلبة المحاسبة والتعاون مع المؤسسات الاقتصادية والمنشآت لمنح فرص للتكوين من أجل تحسين جودة التعليم المحاسبي ولمواكبة احتياجات السوق المتطورة.

**الكلمات الرئيسية:** التعليم المحاسبي، الجامعة الجزائرية، المعايير الدولية للتعليم المحاسبي، مهنة المحاسبة.

## **1. Introduction:**

The higher education policy is currently the subject of a profound study in most countries of the world, for several reasons vary according to the national circumstances of each society. However, the main concern is to support the dynamic of higher education and to persevere in strengthening and improving its outputs, so that it plays the fundamental role in cultural, scientific, technological and social development.

Accountancy is a profession that plays an important role in all societies. These societies are mainly characterized by rapid change. The pressures for change come from a number of sources including: globalization, largely cross-border investments and operations, digitization and expanding stakeholder groups. Therefore, professional accountants need a broad global view to understand the context in which companies and other organizations operate. In addition, they have to serve the information needs of many other users of financial and non-financial information. These trends are challenging professional accountants to make greater contributions to society than ever before.

To meet this challenge, the profession needs to ensure that individuals who become professional accountants achieve and maintain an agreed level of competence through education and practical experience, followed by continuing professional development. Therefore, accounting education needs to set high standards and meet them in these three areas. Accounting programs should enhance curricular flexibility to capture a new generation of students who are more technologically intelligent, less impatient with traditional teaching methods, and more cautious about career opportunities in accounting, so it has become imperative to develop a national strategy to develop a future structure and content suitable for higher education accounting in Algerian university.

### **Problematic:**

From the above, the following problematic can be posed:

**What is the extent of the contribution of the qualifications of accounting education of the Algerian University in improving the quality of accounting education outputs?**

### **Hypotheses:**

We suppose three sub-hypotheses from the previous problematic:

1. Scientific qualification of accounting education is significantly related to the quality of accounting education
2. Practical qualification of accounting education is significantly related to the quality of accounting education
3. Technical qualification of accounting education is significantly related to the quality of accounting education

### **Importance of the study:**

This study provides a view of accounting education reality from the perspective of academics. Furthermore, it suggests a bundle measures and strategies that contribute to improvement and modernization of curricula and teaching methods of accounting in Algerian universities. It adds to the growing discussions around the quality of higher education.

### **Purpose:**

To examine whether the current accounting education of Algerian universities contributes to improve the skills and competencies of graduates and meet market requirements.

### **Design and methodology:**

This research is divided into two main parts. In the first part, the theoretical framework of accounting education will be addressed, by getting acquainted with literature review on the subject, international accounting education standards, modern methods of accounting education and the quality of accounting education. Then, a questionnaire survey was taking place to collect the views of a sample of accounting professors.

### **2. Literature Review**

There have been many studies addressing the issue of improving and updating of accounting education in many countries around the world. The release of a major review of accounting education in the US, Russell et Al. (2000) provides one source of valuable evidence and insights into this issue. In their monograph, they suggested that there are several broad problems with the current state of accounting education:

1. Curricula: many experts view accounting curricula as ‘too narrow and often outdated or irrelevant. they are driven by the interests of faculty and not by the demands of the market.
2. Pedagogy: the teaching of accounting is dominated by a rule-based approach which promotes memorization rather than creativity.
3. Skill development: the focus of teaching is upon content rather than the development of ‘generic’ skills.
4. Technology: the emphasis remains on technology as a bookkeeping system rather than on how technology can be leveraged to make business decisions.
5. Faculty development and reward systems: accounting teachers are largely divorced from teachers of other business disciplines and business practitioners.

Lin (2008) in an empirical study focused on three categories of respondents: graduate students, teachers and professional accountants, and aimed at identifying the desired knowledge and skills elements in the accounting education programs to meet the challenges of change in the business environment of China. The study showed the existence of six areas of knowledge and skills that must be included in the accounting education program, namely: administrative skills, management skills, specialized accounting knowledge, personal characteristics, general knowledge, technical knowledge and basic skills.

Furthermore, Jackling & De Lange (2009) investigated technical and general skills included in the content of the university accounting education from the point of view of graduate students and employers in Australia. They found that employers assume that accounting graduates have technical skills related to accounting practices and procedures, but they demonstrate a clear lack of general skills, such as teamwork, which is purely an organizational skill, and personal communication skills. They also pointed out that there is a gap between the academic educational content and skills needed to develop the accounting profession.

Stivers et al. (2011) surveyed business faculty members at three colleges for the opinions about the essential accounting knowledge needed by business majors to provide

necessary information for developing curricula for principals of accounting education. According to the results there was an agreement on a common body of knowledge for the introductory accounting courses. “Introduction to Accounting and Business” had the highest score. Courses should be taught that student would be able to recall or have awareness and a general knowledge of the basics of the topic.

Pincus et al. (2016) examined the growth of offshoring and automation of accounting/finance jobs; and a growing skills/competency gap, both in the general job market and in the accounting profession. Technology advances have transformed academic research and publishing, and have been incorporated into familiar ways of teaching. However, as yet, they have not significantly changed either curriculum or pedagogy; changes in these areas may accompany future financial models. They reported the results of a survey of accounting program leaders, including examples of recent curricular and faculty (staffing) changes. they recommended strong faculty involvement in change efforts, but also discussed simpler ways that faculty can get involved in efforts to face the forces for change.

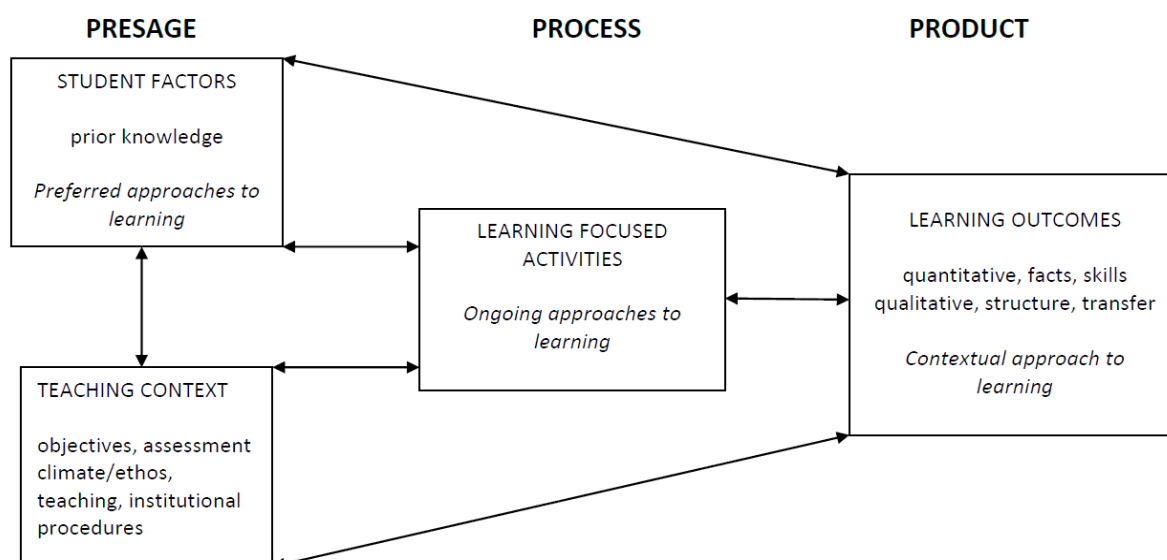
This study differs from other studies because it tries to identify all the factors that affect accounting education and witch group of qualifications have the greatest impact on improving the quality of accounting education, and the deficiencies in the current accounting education at the Algerian University, and this by the collection of views of academics in accounting.

### **3. Accounting Education:**

#### **3.1. Importance of Accounting Education**

For accounting to play a significant role in the economic development of any country, it should provide information that is relevant to the environment and needs of that particular country. Accountants must not only have strong professional competence but also possess the necessary learning and problem-solving skills so that they can adapt to the rapidly developing society. (Nassar, Al-Khadash, & Mah'd, 2013). In the face of the increasing changes, it is essential that accountants develop and maintain an attitude of learning to learn, to maintain professional competence. The education and practical experience of accountants should provide a foundation of professional knowledge, professional skills, and professional values, ethics and attitudes. These capabilities will enable professional accountants to identify problems, know what knowledge is required to solve problems, know where to find this knowledge and how to apply it in an ethical manner to achieve appropriate solutions. (IAESB, 2008)

#### **Fig. 1: The 3P model of teaching and learning**



**Source:** Arquero, J., González González, J., Hassall, T., Joyce, J., Germanou, E., & Asonitou, S. (2010). The approaches to learning of European accounting students. *EuroMed Journal of Business*, 5(3), P. 23.

Internationally, the International Federation of Accountants (IFAC) established the International Accounting Education Standards Board (IAESB) to function as an independent standard-setting body under the auspices of IFAC. The IAESB develops and issues pronouncements including, International Education Standards (IESs), International Education Practice Statements (IEPSs) and other information documents. IESs are intended to advance the profession of accountancy by establishing benchmarks for the minimum learning requirements of qualified accountants, including education, professional values, ethics and attitudes, practical experience and continuing professional development. (IAESB, 2008)

**Table 01: List of International Education Standards (IESs) since 2005:**

| Num   | Subject   |
|-------|---|
| IES 1 | Entry Requirements to a Program of Professional Accounting Education  |
| IES 2 | Content of Professional Accounting Education Programs   |
| IES 3 | Professional Skills   |
| IES 4 | Professional Values Ethics and Attitudes  |
| IES 5 | Practical Experience Requirements   |
| IES 6 | Assessment of Professional Capabilities and Competence  |
| IES 7 | Continuing Professional Development: A Program of Lifelong Learning and Continuing Development of Professional Competence |
| IES 8 | Competence Requirements for Audit Professionals   |

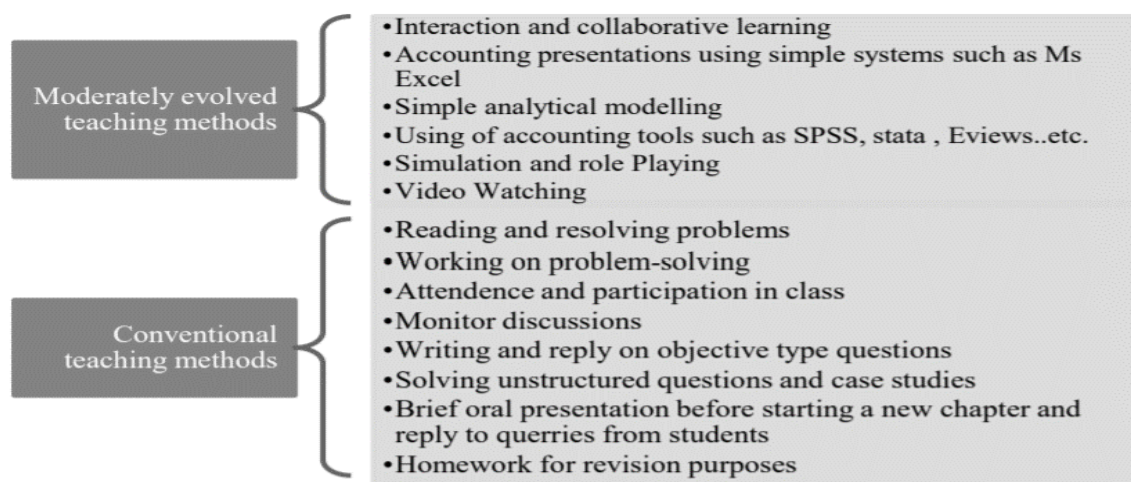
**Source:** IAESB. (2008). International Education Standards 1-8. New York: International Federation of Accountants, P. 24.

### 3.2. Methods of Accounting Education

At the present time, students are exposed to high impact of televisions and computers. So, it is nearly impossible to get student’s attention just with a whiteboard and marker. A program of accounting education and practical experience needs to go beyond the traditional approach. This approach emphasized “transfer of knowledge,” with learning defined and measured strictly in terms of knowledge of principles, standards, concepts, facts and procedures at a given point in time. (IAESB, 2008) To provide students permanent and practicable accounting knowledge, traditional methods need to be replaced with new different

methods. Because of the technological improvements, it has become a necessity to give technical competencies to the students in an effective education process. Especially in accounting education, digital applications and their uses need to be covered besides the basic principles of accounting. Therefore, accounting education have to be supported with practices and demonstrative equipment and have to provide interactive education media for students. By using these technologies, students will catch all changes in application and follow up latest developments in a continuous learning approach, without restricted by just theory. (Yücel, Saraçb, & Çabukc, 2012)

**Fig. 02: Traditional methods and modern methods of accounting learning**



**Source:** Ramen, M., Moazzam, & Jugurnath, B. (21-23 January, 2016). Accounting teaching techniques with the advent of technology: Empirical evidence from Mauritius. Fifth Asia-Pacific Conference on Global Business, Economics, Finance, (pp. 1-31). Ebene-Mauritius, P. 03.

Educators delivering professional accounting education programs will need to respond to the changing needs of the international accountancy profession as well as individual professional accountants. During pre-qualification education, teaching methods should focus on providing students with the tools for self-directed learning after qualification. There are teaching methods that include:

- a) using case studies, projects and other means to simulate work situations;
- b) working in groups;
- c) adapting instructional methods and materials to the ever-changing environment in which the professional accountant works;
- d) pursuing a curriculum that encourages self-learning so that students learn to learn on their own and carry this skill with them after qualification;

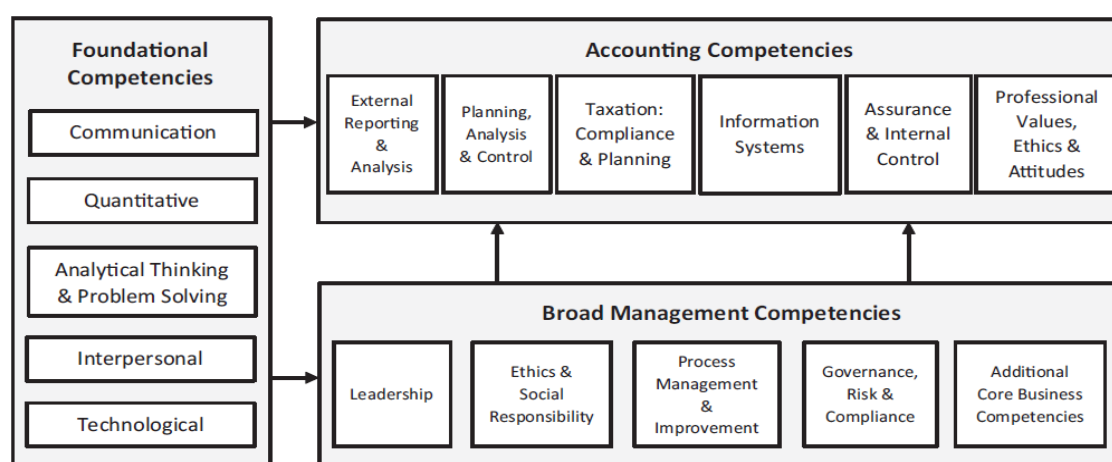
- e) using technology creatively and quality issues for e-learning;
  - f) encouraging students to be active participants in the learning process;
  - g) using measurement and evaluation methods that reflect the changing knowledge, skills, and professional values and ethics required of professional accountants;
  - h) integrating knowledge, skills, professional values and ethics across topics and disciplines to address many situations typical of professional demands;
  - i) emphasizing problem identification and problem-solving, which encourages identifying relevant information, making logical assessments;
  - j) exploring research findings; and
  - k) stimulating students to develop professional skepticism and professional judgment.
- (IAESB, 2008)

### 3.3. Quality of Accounting Education

Accounting education should aim to understand people behaviors also including qualitative instead of quantitative techniques. The quality of accounting education directly affects the application of accounting profession. Hence quality of accounting education is very important for the attractiveness of the accounting profession in the changing world. The quality of accounting education is due to the time of graduating new accountants who can meet variable demands of accounting professionals. (Yücel, Saraçb, & Çabukc, 2012) The IES (3) focusses on the professional skills that accountants are required to possess upon entering the professional work environment. IFAC has divided these skills into four groups, namely: Intellectual skills Interpersonal and communication, Personal skills, Organizational skills. (IFAC, 2014)

Fully overloaded students with theoretical knowledge are not an effective accounting education. The target of accounting education is to give basic accounting knowledge and provide students to create, measure and especially analyze the information in decision making process. Also accounting education consists of some special competencies like; problem solving, continuous learning, present, discuss, report and defend views, time management, communication, IT and team work. Therefore, accounting education program should train students also to gain these kinds of competencies. (Yücel, Saraçb, & Çabukc, 2012)

**Fig. 3: Competency integration - A general framework for accounting education.**



**Source:** Pincus, K. V., Stout, D. E., Sorensen, J. E., Stocks, K. D., & Lawson, R. R. (2017). Forces for change in higher education and implications for the accounting academy. *Journal of Accounting Education* 40, P. 12.

## 4. Research Methodology and Data Collection Methods



#### **4.1. Data Collection:**

The Algerian government has tried to raise the level of accounting education and training through the law 10-01 about scientific and practical qualification to practice the accounting profession in Algeria, Law 10-01 attaches great importance to accounting and education where accountants and auditors are trained to obtain a certificate of accounting experience and a certificate for the audit of accounts through a specialized knowledge structure through two stages, the first of which is the university stage to obtain a bachelor's degree, to be nominated for the entrance examination for specialized training. (the Democratic and Popular Algerian Republic, 11/07/2010)

In order to examine whether the current accounting education at the Algerian University develops and improves skills and competencies required by the market for accounting graduates, an electronic questionnaire was conducted and sent to professors from various universities to speed up and facilitate the task. 32 questionnaires were answered. The questionnaire was divided into three axes, one for personal information, another axis related to accounting education qualifications, and a final axis about the quality of accounting education.

1. **The first axis- Personnel Information:** it contains data related to general information about the study sample (name of the university, profession, academic qualification, academic rank, academic and professional experience).
2. **The second axis- Qualifications of Accounting Education:** It consists of three dimensions:
  - The first dimension: It contains seven (07) sentences through which we aim to clarify the reality of the scientific qualification of accounting education.
  - The second dimension: It contains seven (07) sentences, in which the reality of the practical qualification of accounting education is addressed.
  - The third dimension: It contains seven (07) sentences related to the aspects of the technical qualification of accounting education at the Algerian University;
3. **The third axis- Quality of Accounting Education:** It contains seven (07) sentences, from which we aim to find out the extent of the quality of accounting education outputs.

We also point out that the questions were prepared on the basis of the five (05) Likart scale, which can have five (05) answers (1- strongly disagree, 2-disagree, 3-neutral, 4-agree, 5- strongly agree), in order for us to determine the opinions of the sample members about the items for the second and third axes of the questionnaire.

A set of methods available in the SPSS 25 program were used to achieve the study objectives and analyze the collected data. The methods used are:

1. Extracting the occurrences and percentages of each item of the first axis, in order to identify the personal characteristics of the study members;
2. Measuring the mean and the standard deviation for statements in the second and third axes, based on the responses of the sample members to know the extent of the high and low and find out the extent of deviation in the study sample responses to each question;
3. Measuring the simple linear regression test between the independent variables and the dependent variable to test the validity or denial of the hypotheses

#### **4.2. Analysis of the questionnaire findings:**

In this section, we will present the general characteristics of the sample, in addition to the data contained in the valid questionnaire forms and analyze them.

- **General Characteristics of the Sample:**

The first part of the analysis provides a descriptive overview of the respondents under study. This information enables understanding of the background of respondents and to show that the respondents of the questionnaire are eligible to participate in the current study. Where the results were as follows:

**Table 02: General characteristics of the sample**

| Variable                       | Item                     | Frequency | Percent % |
|--------------------------------|--------------------------|-----------|-----------|
| <b>University</b>              | University of Setif -1-  | 21        | 65.6      |
|                                | Other universities       | 11        | 34.4      |
| <b>Profession</b>              | Professor                | 22        | 68.8      |
|                                | Professor and accountant | 10        | 31.3      |
| <b>Academic Qualification</b>  | Master Degree            | 8         | 25.0      |
|                                | PhD Degree               | 24        | 75.0      |
| <b>Academic rank</b>           | Assistant Professor      | 11        | 34.4      |
|                                | Lecturer Professor       | 21        | 65.6      |
| <b>Academic experience</b>     | Less than 05 years       | 7         | 21.9      |
|                                | 05 to 10 years           | 13        | 40.6      |
|                                | 11 to 15 years           | 8         | 25.0      |
|                                | Over 15 years            | 4         | 12.5      |
| <b>Professional experience</b> | No experience            | 22        | 68.8      |
|                                | less than 05 years       | 6         | 18.8      |
|                                | 05 to 10 years           | 2         | 6.3       |
|                                | 11 to 15 years           | 2         | 6.3       |

We notice through this table that 65.6% from respondents were from the university of Setif – 1- that because the big number of professors in this university and especially in the Faculty of Department of Economics, Commerce and Management. With respect to the variable of Profession, there are among the respondents a good number of individuals (31.3%) who combine the academic side as accounting professors and the professional side as accountants. This will increase the credibility of the results because the accountant professors have the professional experience to answer more reliably in the third axis about the quality of accounting education.

The majority of the sample members are of the advanced level, which is the doctoral level (75%), and most of them are also lecturers (65.6%). In addition to that, they have experience in the academic side ranging between five and fifteen years, which is medium experience. Lastly, professors and accountants have acceptable experience in the professional side.

According to previous statistics regarding the general characteristics of the sample, we believe that its results are generally acceptable and help to achieve the study objectives.

- **Analyzing the findings of the second axis- qualifications of accounting education**

**Table 03: Findings of the dimension of scientific qualification of accounting education**

| N° | Sentence  | Mean | Std. Deviation |
|----|---|------|----------------|
| 01 | The accounting programs are supervised by specialized and competent education members | 3.13 | 0.833          |

|    |  |      |       |
|----|--|------|-------|
| 02 | Accounting courses provide the necessary and sufficient knowledge in accounting education            | 2.81 | 0.998 |
| 03 | Accounting courses keep pace with global developments in the accounting profession and its practices | 2.69 | 1.120 |
| 04 | Education members are keen on continuous improvement of the accounting course                        | 2.75 | 1.016 |
| 05 | The university allocate the necessary schedule to complete the accounting course                     | 2.12 | 1.008 |
| 06 | The college library contains valuable and various references in accounting                           | 3.47 | 0.983 |
| 07 | Accounting education includes all fields of governmental and non-governmental accounting             | 2.75 | 0.984 |

We notice through the previous table related to the dimension of scientific qualification of accounting education, that the majority of the scales are medium. The highest mean was 3.47 in the sentence N° 06, which most of the sample members agreed upon it, and this is due to the fact that the majority of universities provide valuable, various and modern references in various fields, especially in the accounting field. On the other hand, the lowest mean was 2.12 in the sentence N° 05, that because the available time has become a major obstacle to the completion of educational programs, especially in the last years due to the exceptional and epidemiological circumstances.

**Table 04: Findings of the dimension of practical qualification of accounting education**

| N° | Sentence  | Mean | Std. Deviation |
|----|---|------|----------------|
| 08 | Accounting professionals are attracted and collaborated with them to enhance accounting education | 2.38 | 1.008          |
| 09 | The method of working in groups for students is relied upon in accounting tutorials               | 2.69 | 1.030          |
| 10 | Accounting tutorials contain real case studies  | 2.41 | 1.073          |
| 11 | Accounting documents are used for more clarification during the explanation                       | 2.44 | 0.948          |
| 12 | The student receives training on how to prepare financial and non-financial statements            | 2.63 | 1.040          |
| 13 | The university cooperates with institutions to provide students with practical experiences        | 2.47 | 1.107          |
| 14 | The university provides an appropriate opportunity to train accounting graduates                  | 2.00 | 0.950          |

We notice through the previous table related to the dimension of practical qualification of accounting education, that the majority of the scales are relatively low. The highest mean was 2.69 in the item N° 09 which most of the sample members agreed upon, and this is due to the fact that the method of working in groups can be adopted because the number of students in the tutorial sessions is small. On the other hand, the lowest mean was 2.00 for the sentence N° 14, that because the relation between student and university ends when the student leaves the university. Algerian universities do not follow up their students and cooperate with

institutions and offices for the training and formation of students, and this is due to the large rift that exists between academic institutions and economic institutions.

**Table 05: Findings of the dimension of technical of qualification of accounting education**

| N° | Sentence  | Mean | Std. Deviation |
|----|---|------|----------------|
| 15 | Electronic media is used in accounting education  | 2.31 | 0.998          |
| 16 | Accounting education courses contains chapters about accounting software  | 2.31 | 1.061          |
| 17 | Accounting education is supported by online learning platforms  | 2.78 | 0.975          |
| 18 | The university provides computer laboratories that assist in the practical qualification of accounting students         | 2.31 | 1.120          |
| 19 | Accounting education qualifies students to apply information technology systems in the treatment of accounting problems | 2.34 | 1.066          |
| 20 | University devices and computers contains the most used accounting software   | 2.38 | 1.129          |
| 21 | Students are trained to use accounting software   | 2.41 | 1.132          |

With regard to items of the third dimension related to technical qualification for accounting education, we note that most of the expressions have low degrees. The highest mean is for statement No. 12, and this is because Algerian universities in recent years have begun to develop distance education through electronic platforms, especially the last two years, due to the spread of the Covid 19 epidemic, which imposed the separation and made it necessary for universities not to rely on attendance education alone. But in general, there is almost total absence of technical and technological means in accounting education, and most of them are limited to the theoretical and practical side. The student receives lessons in computer science in general and does not receive special training about accounting software. It can be said that there is a great shortage of technical equipment that facilitates the university education process in general.

- **Analyzing the findings of the third axis- quality of accounting education**

**Table 06: Findings of the axis of quality of accounting education**

| N° | Sentence  | Mean | Std. Deviation |
|----|---|------|----------------|
| 01 | Graduate students have sufficient knowledge of the professional and ethical responsibilities of the accounting profession | 2.41 | 0.979          |
| 02 | The university provides a sufficient number of accounting graduates to meet the market needs.                             | 3.72 | 0.924          |
| 03 | An accounting graduate is able to prepare both financial and non-financial statements                                     | 2.41 | 1.012          |
| 04 | The accounting graduate is able to control the most used accounting software  | 2.22 | 1.008          |
| 05 | An accounting student graduates with good thinking skills and problem-solving ability                                     | 2.38 | 0.942          |
| 06 | An accounting graduate has the ability to adapt to a business environment   | 2.66 | 0.902          |

|    |   |      |       |
|----|---|------|-------|
| 07 | The university provides accountants who are able to work in all areas of governmental and non-governmental accounting | 2.41 | 0.911 |
|----|---|------|-------|

Regarding the second axis related to the quality of the outputs of accounting education, the statement N° 02 has the highest degree 3.72, and this is due to the large number of students who graduate from the university every year. The university focus on forming large numbers instead of improving the quality. The statement N° 04 has the lowest mean 2.22 because students did not receive any training in accounting software during university education, so he graduated without any control at all in any accounting software, and he will surely face difficulties at the beginning of his work as an accountant.

#### 4.3. Hypothesis testing

To analyze the hypotheses of this study, a simple linear regression test was performed between the independent variables -each separately- " Scientific qualification; Practical qualification and Technical qualification of accounting education" with all its paragraphs and the dependent variable "Quality of Accounting Education" in all its paragraphs according to the following equation:

$$Y = a_0 + a_1X_1 + \varepsilon$$

In which:

**Y:** Represent the dependent variable;

**a<sub>0</sub>:** Constant;

**X<sub>1</sub>:** Represent the independent variable;

**ε:** Random error.

This test is based on the formulation of two hypotheses, one is the null hypothesis H<sub>0</sub> and the other is the alternative hypothesis H<sub>1</sub>, as follows:

##### 1- Testing of the first hypothesis:

- **H<sub>0</sub>:** Scientific qualification of accounting education is not significantly related to the quality of accounting education;
- **H<sub>1</sub>:** Scientific qualification of accounting education is significantly related to the quality of accounting education;

**Table 07: The coefficients of correlation and regression model of the first independent variable and the dependent variable.**

| Model   | R                  | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|--------------------|----------|-------------------|----------------------------|
| 1   | 0.596 <sup>a</sup> | 0.355    | 0.333             | 0.57023                    |
| a. Predictors: (Constant), Scientific qualification |                    |          |                   |                            |

| Model  |                          | Unstandardized Coefficients |            | Standardized Coefficients | T     | Sig.  |
|--|--------------------------|-----------------------------|------------|---------------------------|-------|-------|
|  |                          | B                           | Std. Error | Beta                      |       |       |
| 1  | (Constant)               | 0.791                       | 0.456      |                           | 1.733 | 0.093 |
|  | Scientific qualification | 0.642                       | 0.158      | 0.596                     | 4.062 | 0.000 |
| a. Dependent Variable: Quality of accounting education |                          |                             |            |                           |       |       |

The coefficient of determination  $R^2$  formed a value of (0.355), meaning that the first independent variable represented by the scientific qualification alone explains (35.5%) of the dependent variable represented in quality accounting education, which means that there are other important variables that affect the quality of the outputs of accounting education, and the value of (Sig.) was equal to (0.000) that is, it is smaller than the degree of significance (0.05), and this leads us to accept the alternative hypothesis  $H_1$  and rejecting the null hypothesis  $H_0$ , which confirms that the scientific qualification represents an important factor that must be taken care of by university education to achieve the highest quality level of accounting education in Algeria.

## 2- Testing of the second hypothesis:

- **H<sub>0</sub>**: Practical qualification of accounting education is not significantly related to the quality of accounting education.
- **H<sub>1</sub>**: Practical qualification of accounting education is significantly related to the quality of accounting education.

**Table 08: The coefficients of correlation and regression model of the second independent variable and the dependent variable.**

| Model | R                  | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|--------------------|----------|-------------------|----------------------------|
| 1     | 0.664 <sup>a</sup> | 0.440    | 0.422             | 0.53112                    |

a. Predictors: (Constant), Practical qualification

| Model |                         | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig.  |
|-------|-------------------------|-----------------------------|------------|---------------------------|-------|-------|
|       |                         | B                           | Std. Error | Beta                      |       |       |
| 1     | (Constant)              | 1.123                       | 0.318      |                           | 3.533 | 0.001 |
|       | Practical qualification | 0.607                       | 0.125      | 0.664                     | 4.858 | 0.000 |

a. Dependent Variable: Quality of accounting education

The coefficient of determination  $R^2$  formed a value of (0.440), meaning that the first independent variable represented by the practical qualification alone explains (44%) of the dependent variable represented in quality accounting education, and the value of (Sig.) was equal to (0.000) that is, it is smaller than the degree of significance (0.05), and this leads us to accept the alternative hypothesis  $H_1$  and rejecting the null hypothesis  $H_0$ , which confirms that the practical qualification represents the most important input, this is because accounting education depends heavily on the applied aspect in improving and developing the student's skills, thus improving the quality of accounting education.

## 3- Testing of the third hypothesis

- **H<sub>0</sub>**: Technical qualification of accounting education is not significantly related the quality of accounting education.
- **H<sub>1</sub>**: Technical qualification of accounting education is significantly related the quality of accounting education.

**Table 09: The coefficients of correlation and regression model of the third independent variable and the dependent variable.**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|----------------------------|
|-------|---|----------|-------------------|----------------------------|

|  |                    |       |       |         |
|--|--------------------|-------|-------|---------|
| 1  | 0.520 <sup>a</sup> | 0.270 | 0.246 | 0.60645 |
| a. Predictors: (Constant), Technical qualification |                    |       |       |         |

| Model  |                         | Unstandardized Coefficients |            | Standardized Coefficients | T     | Sig.  |
|--|-------------------------|-----------------------------|------------|---------------------------|-------|-------|
|  |                         | B                           | Std. Error | Beta                      |       |       |
| 1  | (Constant)              | 1.631                       | 0.309      |                           | 5.269 | 0.000 |
|  | Technical qualification | 0.402                       | 0.121      | 0.520                     | 3.333 | 0.002 |
| a. Dependent Variable: Quality of accounting education |                         |                             |            |                           |       |       |

The coefficient of determination  $R^2$  formed a value of (0.270), meaning that the first independent variable represented by the technical qualification alone explains (27%) of the dependent variable represented in quality accounting education, which means that there are other important variables that affect the quality of the outputs of accounting education, and the value of (Sig.) was equal to (0.002) that is, it is smaller than the degree of significance (0.05), and this leads us to accept the alternative hypothesis  $H_1$  and rejecting the null hypothesis  $H_0$ , which confirms that the technical qualification represents the less important input from the view of accounting professors. This is because professors think that technical qualification is not very necessary in accounting education, and that the graduating student will receive training on the technical side in economic establishments.

## 5. Discussion and Conclusion

As a result of this research, we noticed through the results we obtained that the scientific qualification of accounting education is generally acceptable, but theoretical education alone is not sufficient, and the insufficiency of accounting education in its practical and technical aspects can lead to students' reluctance from accounting major. This also contributes to the graduation of students who are unable to develop the profession and who cannot adapt to the current business environment. It can be said that meeting current market demands with the current traditional accounting education is impossible.

Nowadays, the accounting profession has a wider scope; accounting education has not developed at the same speed to meet the demands of this profession. Accountants must be able to work in different fields that require the use of technology such as control, auditing, online accounting, system analysis, financial analysis, financial planning, or tax consulting. We conclude that to ensure the quality of the outputs of the accounting education process, attention must be paid to the requirements to achieve this quality in accordance with quality standards, especially those issued by the International Federation of Accountants. Professors should also be prepared appropriately so that specialized and competent ones are chosen to carry out this task, and students who are able and willing to learn accounting techniques and who are convinced that it is the future profession are chosen, so that these elements have the positive relationship and the effective role in improving the quality of education. This research includes other suggestions may help to fulfill the gap:

- The university should provide students with opportunities for training courses
- The accounting program should be improved to develop students' communication competencies, problem-solving and other skills.

- Integrating technology into accounting education to improve students' technical qualifications.
- Cooperating with professional accountants in universities to offer practical courses in accounting
- Increase recognition and support for high-quality teaching and linking audits of teaching staff, promotion and installation with teaching quality;
- Developing curriculum models by involving diverse learning resources, especially open source and interactive platforms for education;
- Training faculty members to improve their use of electronic and IT media to maintain an appropriate curriculum that addresses a new generation of students who are more attracted by technology and less impatient with traditional teaching methods.
- Establishing mechanisms for collecting, analyzing and disseminating information about the needs and requirements of the market.

Finally, it can be seen that the traditional accounting education system is insufficient to meet the growing and evolving needs and requirements of the market. Consequently, there is a need to correct all these problems and deficiencies in the accounting education system, and to develop a comprehensive and integrated strategy by the concerned ministry and even at the university level in order to improve accounting education and develop it to keep pace with market and technological development. So that, the accounting major becomes among the most attractive and effective disciplines to produce professional and competent accountants who possess all the required skills.

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