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Expectation-Performance Gap in Knowledge and Competencies in Accounting Graduates: Evidence from Tunisia

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ABSTRACT

The aim of this paper is to investigate the gap between the competencies which employers expect and those acquired by accounting graduates. We adopted the framework of (Bui &Porter, 2010) to examine the causal factors that contributed to this gap. A questionnaire survey was distributed to accounting professionals and educators. Furthermore, we analyzed data collected by non-parametric tests: the Wilcoxon signed-rank test and the Mann-Whitney test. Findings indicate the constraints within universities as contributing to the failure of accounting education to provide accounting graduates with the competencies expected by accounting professionals. This study contributes to the literature as one of few studies that examine expectation-performance gap in Tunisia.

1. Introduction

In recent decades, the business environment in which professional accountants are being operated, has been undergone major changes. These changes are mainly due to the emergence of information and communications technology, globalization and the concentration of institutional structure. (Albrecht & Sack,2000). In this new business environment, employers generally expect a wide variety of skills from new accounting graduates (Kavanagh &Drenan, 2008, Webb & Chaffer, 2016). In this context, (klibi & Oussi, 2013) find that accounting professionals expect accounting graduates to be equipped with organizational and business skills, personal skills, and interpersonal skills (IFAC, 1996). Moreover, the results of the study (Tan & Fawzi, 2017) showed that the most sought skills included the ability to collaborate with colleagues, presenting, discussing and defending views, and having a positive attitude.

However, several researchers indicated that there is a gap between the knowledge and skills acquired by accounting graduates and those expected by accounting professionals. (Jackling & De Lange, 2009, Kavanagh & Drennan, 2008, Altrawneh, 2016). As a result, several studies indicate that accounting graduates are ill-equipped to begin professional practice (Albrecht & Sack, 2000; Mohamed & Lashine, 2003).

Like many countries, Tunisia faced such challenges in higher educational system.In 2005, Tunisia adopted the BMD system (Bachelor - Master – Doctorate)which aims to respond to the needs of the labor market. It should be noted that our study will focus on “Bachelor degree”, which continues for a period of three years after the high school diploma.

Despite the reform of the higher educational system in Tunisia, the labor market still suffers from several constraints aggravated by the social and political events following the revolution of January14, 2011.The objective of this paper is to examinethe knowledge and skills

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acquired by accounting graduates and those expected by chartered accountants "expectation-performance gap" in Tunisia. In particular, we will identify the causal factors contributing to this gap. Therefore, a questionnaire survey was distributed to chartered accountants who are registered on the board of the chartered accountants and accounting university educators.
This article is organized as follows: The second section presents an overview of the previous research work, the third section exposes the research hypothesis, the fourth section describes the methodology adopted and the fifth section presents the results obtained. The last section concludes this research.

2. The review of literature

Several studies, such as those conducted in Australia, have shown that there is a gap between the knowledge and skills acquired by accounting graduates and those expected by professional accountants (Courtis & Zaid, 2002, Evans et al., 2010, Hancock et al 2009, Jackling & De Lange, 2009, Kavanagh & Drennan, 2008).
According to (Mohamed&Lashine,2003) the gap between the skills acquired by graduates and those required by the labor market is mainly due to changes in the business environment and the reluctance to change the higher education system in accounting sciences (Albrecht &Sack,2000). Most accounting education programs at universities in many countries lack skills training that are needed by accounting professionals (AAA, 1986; AECC, 1990; Albrecht & Sack, 2000).
Searchers conducted by (Bui & Porter, 2010) found that there is a gap between the skills required by professional accountants and those acquired by accounting graduates "expectation-performance gap" (Low et al, 2016; El-Dalahmeh, 2017). The authors identify the causal factors contributing to this gap such as: accounting students' ability and aptitude; institutional factors, pedagogical methods and content of university program.
The framework expectation-performance gap is adopted by (Abayadeera & Watty, 2014), in the context of Sri Lanka. They found that accountants professionals are dissatisfied with the skills of accounting graduates such as: professional ethics, intellectual skills; decision making skills; problem solving skills; the ability to think critically; written and oral communication in English skills; and listening ability. Their study has also shown that university educators have admitted that they lack high confidence in teaching many generic skills.

3. Formulation of hypotheses

We have adopted (Bui & Porter's, 2010) expectation-performance gap" framework to examine the gap between the knowledge and skills acquired by accounting graduates and those expected by chartered accountants. The authors discuss three causal factors contributing to this gap: Expectation gap, Constraints gap, Performance gap.

H_1: There is a gap between skills and knowledge acquired by accounting graduates and those expected by chartered accounting (expectation-performance gap).

H_2: There is a gap between the perception of accounting educators and chartered accountants in terms of knowledge and skills that should be acquired by accounting graduates. (Expectation gap).

H_3: There is a gap between the perception of accounting educators about the knowledge and skills that should be acquired by accounting graduates and those perceived as reasonably acquired. (Constraints gap).

H_4: There is a gap between the knowledge and skills that accounting educators perceived to be reasonably acquired by accounting graduates and those perceived as actually possess by chartered accountants.

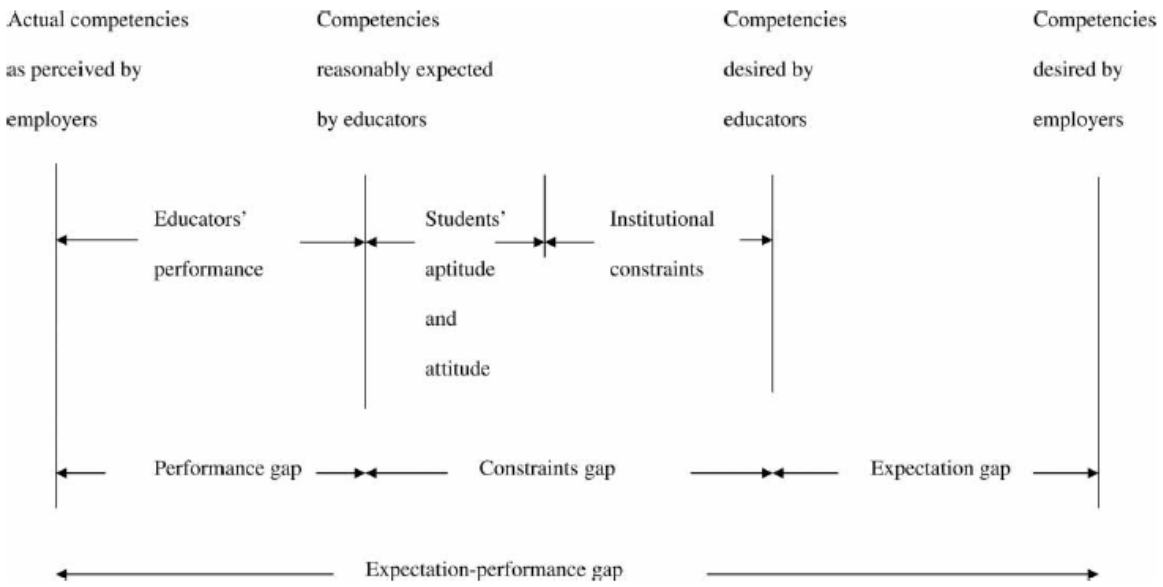

Figure 1. hypothesized structure of accounting education's expectation-performance gap (Source: Bui and Porter (2010) framework)

4. Research Methodology

4.1 Data collection

Data was collected by addressing questionnaire surveys to two groups: university educators and chartered accountants registered on the board of chartered accountants of Tunisia. Items for skills and knowledge were based on International Education Standards, (IES 2 and IES 3). This choice can be justified by the fact that these standards are recognized internationally, and they present the learning outcomes that accountants must achieve.

It should also be noted that this scale of measurement has been adopted in other research works. Several authors have attempted to determine the extent of compliance of the accounting program with international education standards such as (Watty et al, 2013). Other studies such as (Pratama,2015; Majzoub & Aga, 2015), used this measure to identify perception differences between university educators and professional accountants about competencies of graduates. It should also be noted that we did not use the IES variable scale of the information technology knowledge because it fails to explain cultural differences. Adapted to our context, we made the choice to use the measurement scale of (Barac,2009).

In our research work, we focus more specifically on interpersonal and communication skills, and intellectual skills. This choice is justified by the fact that these skills are considered the most important for success in accounting profession. Several organizations emphasize the importance of interpersonal skills and communication; and intellectual skills in the workplace: for example (AECC, 1990, AAA, 1986, IFAC, 1996).

The first questionnaire was addressed to university educators. The questions are formulated on the following main topics: General information, "Expectation gap", "Constraints gap" and "Performance gap". The second questionnaire was addressed to chartered accountants which replicates questions addressed to university educators and excludes the question of the "constraints gap". It should be noted that we have adopted the Likert scale which is the most frequently used in surveys and usually comes in five choices (1=not agree at all; to 5=strongly agree).

The questionnaire was administered on the one hand to 464 chartered accountant's governorate of Tunis and Ben Arous who represent the majority (we excluded chartered accountants who had less than ten years of experience. Indeed, their experience is recommended in order to better evaluate the knowledge and skills acquired by accounting

graduates). On the other hand, the second questionnaire was distributed to 70 accounting university educators; Finally, our sample is composed of 98 chartered accountants and 66 university educators. This represents a response rate of 94.28% of university educators and 32.66% of chartered accountants.

4.2 Statistical Analysis Method

In order to measure the gap between the knowledge and skills acquired by accounting graduates and those expected by chartered accountants, we proceeded, first to the verification of the conditions of normality which is not achieved in our case. In fact, we used non-parametric tests to answer our research problem: the Mann Whitney test which aims to compare two independent samples and the Wilcoxon test which aims to compare two paired samples. Data from the questionnaires were analyzed using SPSS version 21 for Windows.

5. Results

5.1 Expectation-performance gap

The Wilicoxon test indicates that the sum of the positive ranks is nearly equals the sum of the negative ranks in management accounting, taxation, Spreadsheet software (Excel) and Standard internet software (e-mail, web browser) (see table 1). This test also indicates that the sum of the negative ranks is different from the sum of the positive ranks in financial accounting, audit, Finance and financial management , Professional values and ethics, economics, business environment, financial market, quantitative methods, accounting management, Management and strategic decision making., Database software (Access), Specific Search Tool, Business presentation software (PowerPoint), Word processing software (Word), Accounting packages (Pastel), Audit working paper-related software, Utility software (CAATS), Intellectual Skills and Interpersonal Skills and Communication.

Results have revealed that many of the skills are not achieved by accounting graduates at the level expected by chartered accounting. The gap between the knowledge and skills acquired by accounting graduates and those expected by accountants which really exists. Our results are in line with research conducted by (Abayadeera & Watty, 2014). These authors noted that there is a gap between the skills and knowledge acquired by accounting graduates and those required by professional accountants. Besides, our results are consistent with the study conducted by (Bui &Porter, 2010; Wells et al, 2009) in New Zealand and others (Tempone & Martin, 2003, Kavanagh & Drennan, 2008, Jackling & De Lange, 2009) in Australia.

5.2 Expectation gap

The MannWhitney U test indicates that there are significant differences between chartered accounting and university educators (see Table 2), which means that the respondent groups do not share similar views over such skills and knowledge. Indeed, the average rank of university educators is higher than the average rank of chartered accountants in financial accounting, taxation and audit. Nevertheless, the average rank of chartered accountants is higher than the average rank of university educators in economics, management accounting, business environment, quantitative methods, economics, Spreadsheet software (Excel), specific search tool, Word processing software (Word), and utility software (CAATS).

Results has shown that educators focus on accounting knowledge, while chartered accountants put the emphasis on organizational and business knowledge, as well as on information technology knowledge. The results of Mann-Whitney U-test indicate that the respondent groups have similar views on the importance of intellectual and interpersonal and communication skills.

Despite these findings, there is a difference in perception between university educators and chartered accountants about knowledge and skills needed for accounting graduates, that is

consistent with the research work done by (Mohdali et al. 2016, Armitage,1991, Novin et al. 1997, Theuri & Gunn,1999, Francis &Minchington,1999).

5.3 Constraints gap

The Wilicoxon test indicates that the sum of the negative ranks is different from the sum of the positive ranks about financial accounting, Taxation, Business and commercial law, Audit and assurance, Finance and financial management, Professional values and ethics, economics, business environment, quantitative methods, Management and strategic decision making, technology knowledge, interpersonal and communication skills, and intellectual skills (see Table 3). Thus, results have revealed that there is a gap between the perception of accounting educators about the knowledge and skills should be acquired by accounting graduates and those perceived as reasonably acquired. This conclusion is corroborated by the research conducted by (Abayadeera &Watty, 2014; Bui & Porter, 2010). Indeed, this gap is due to a number of constraints.

Table 4.
Obstacles to develop skills and knowledge at university

Crowded classes	3.72
The lack of financial, human and material resources	3.37
Students have an inappropriate attitude to learn	2.36
Students have an inappropriate intellectual ability	2.87

According to table 4 this gap is due to crowded classes, tenure and promotion policies of universities, the lack of financial, human and material resources, the aptitude and the attitude of the students. In the Tunisian context, accounting educators believe that crowded classes inhibit them to develop skills and knowledge needed by the labor market.

5.4 Performance gap

The Mann Whitney U test indicates that there are significant differences between the two groups in financial accounting, Professional values and ethics, management accounting, specific research tool, audit working paper-related software, negotiate acceptable solutions and agreements in professional situations, Spreadsheet software (Excel) , Standard internet software (e-mail, web browser), Business presentation software (PowerPoint), utility software (CAATS, interpersonal and communication skills (see Table 5) . Results have revealed that there is a gap between the knowledge and skills that accounting educators perceived to be reasonably acquired by accounting graduates and those perceived as actual possess by chartered accountants.

This conclusion is corroborated by the research conducted (Abayadeera & Watty,2014) and (Bui & Porter,2010). Indeed, this gap reveals the failings of pedagogy methods and the content of the program. It proves that universities in the Tunisian context are devoided of innovations and suffer from a lack of interest in adopting new teaching methods. It also appears that accounting higher education programs don't meet the expectations of the labor market.

6. Conclusion

This article aims to examine the gap between knowledge and skills acquired by accounting graduates and those required by chartered accountants. To achieve this goal, we adapt the framework of (Bui &Porter, 2010) expectation-performance gap, and it was amended to suit the Tunisian context. A questionnaire was administered to chartered accountants and

university educators. Data collected by the questionnaire was analysed by non-parametric test, namely the Mann whitney test and the Wilicoxon test.

Our results has shown that there is a gap between knowledge and skills acquired by accounting graduates and those expected by chartered accounting.The results have also revealed that chartered accounting put emphasis on the importance of organizational and business knowledge as well as information technology knowledge. However, the university educators focus on accounting knowledge. In addition, our study proves that crowded classes is the main factor to empede accounting educators to develop skills required by the labor market.Accounting higher education programs seems unable to provide "job ready" for accounting graduates.

Like all researches, our study has a limit when it comes to providing samples: We were restricted to the perception of chartered accountants and university educators. It will be more interesting to share the study with the responsible parts for developing the content of the program of the Ministry of Higher Education, accountants enrolled in the company of Tunisian accountants and internal auditors registered in the Internal Audit Tunisian Association.

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Table 1.

Chartered accountant responses on the knowledge and skills acquired by accounting graduates and those expected. (expectation-performance gap)

Items	Rank	Mean rank	Rank sum	z
Financial accounting	Negative ranks	20	300,5	3,694 **
	Positive ranks	29	1.077,5	
Management accounting	Negative ranks	22	438	0,737
	Positive ranks	18	342	
Taxation	Negative ranks	26	675	0,412
	Positive ranks	25	600	
Business and commercial law	Negative ranks	28	1.359	5,937 **
	Positive ranks	18	72	
Audit and assurance	Negative ranks	29	1.565	6,433 **
	Positive ranks	15,5	31	
Finance and financial management	Negative ranks	30	1.689	6,804 **
	Positive ranks	22	22	
Professional values and ethics	Negative ranks	38	2.446	6,239 **
	Positive ranks	32	255	
Economics	Negative ranks	39	2.863	7,425 **
	Positive ranks	21	63	
Business environment	Negative ranks	41	3.321	7,957 **
	Positive ranks	0	0	
Financial markets	Negative ranks	31	1.124	3,121 *
	Positive ranks	22	416	
Quantitative methods	Negative ranks	34	2.193,5	7,093**
	Positive ranks	17,5	17,5	
Management	Negative ranks	34,5	2.346	7,390**
	Positive ranks	0	0	
Management and strategic decision making	Negative ranks	38,5	2.926	7,858**
	Positive ranks	0	0	
Spreadsheet software (Excel)	Negative ranks	23	411	0,569
	Positive ranks	20,5	492	
Database software (Access)	Negative ranks	33,5	2.108	6,951**
	Positive ranks	18,5	37	
Standard internet software (e-mail, web browser)	Negative ranks	26,5	636	0,555
	Positive ranks	26,5	742	
Specific research tool (Research toolbox)	Negative ranks	34,5	2.346	7,461**
	Positive ranks	0	0	
Business presentation software (PowerPoint)	Negative ranks	33	2.145	7,438**
	Positive ranks	0	0	
Audit working paper-related software	Negative ranks	43	3.655	8,258**
	Positive ranks	0	0	
Word processing software (Word)	Negative ranks	41	3.208	8,124**
	Positive ranks	32	32	
Accounting packages (Pastel)	Negative ranks	43	3.655	8,206**
	Positive ranks	0	0	
Utility software (CAATS)	Negative ranks	43	3.655	8,223**
	Positive ranks	0	0	
The ability to locate, obtain, organize and understand information from human, print and electronic sources.	Negative ranks	41	3321	7,969 **
	Positive ranks	0	0	
The capacity for inquiry, research, logical and analyticalthinking, powers of reasoning, and critical analysis.	Negative ranks	46,06	3961,5	8,156**
	Positive ranks	14,5	43,5	
The ability to identify and solve	Negative ranks	45,56	3872,5	8,075 **

unstructured problemswhich may be in unfamiliar settings.	Positive ranks	14,5	43,5	
Work with others in a consultative process, to withstandand resolve conflict.	Negative ranks	49,58	4611	8,484**
	Positive ranks	15	45	
Work in teams.	Negative ranks	49,58	4462,5	8,264**
	Positive ranks	19,5	97,5	
Interact with culturally and intellectually diverse people.	Negative ranks	49,91	4691,5	8,454**
	Positive ranks	20,5	61,5	
Negotiate acceptable solutions and agreements in professional situations.	Negative ranks	47,5	4465	8,621**
	Positive ranks	0	0	
Work effectively in a cross-cultural setting.	Negative ranks	42,5	3570	7,421**
	Positive ranks	85,5	171	
Present, discuss, report and defend views effectivelythrough formal, informal, written and spoken communication.	Negative ranks	45,5	4095	8,345**
	Positive ranks	0	0	
	Positive ranks	0	0	

Table 2.

Group responses on expected knowledge and skills for accounting graduates (expectation gap)

Items	Statuts	Mean rank	Rank sum	Z
Financial accounting	Chartered accountants	65,35	6.404	6,437**
	Educators	107,97	7.126	
Management accounting	Chartered accountants	81,86	8.022	0 ,247
	Educators	83,45	5.508	
Taxation	Chartered accountants	74,86	7.336	3 ,071 *
	Educators	93,85	6.194	
Business and commercial law	Chartered accountants	79,56	7.797	1,176
	Educators	86,86	5.733	
Audit and assurance	Chartered accountants	75,68	7.417	3,009 *
	Educators	92,62	6.113	
Finance and financial management	Chartered accountants	84,51	8.282	0,756
	Educators	79,52	5.248	
Professional values and ethics	Chartered accountants	79,81	7.821,5	1,024
	Educators	86,49	5.708,5	
Economics	Chartered accountants	89,29	8.750	2 ,451 *
	Educators	72,42	4.780	
Business environment	Chartered accountants	93,97	9.209,5	4 ,270 **
	Educators	65,46	4.320,5	
Financial markets	Chartered accountants	90,55	8.873,5	2 ,99*
	Educators	70,55	4.656,5	
Quantitative methods	Chartered accountants	88,79	8.701,5	2 ,207 *
	Educators	73,16	4.828,5	
Management	Chartered accountants	90,94	8.912,5	3,114 *
	Educators	69,96	4.617,5	
Management and strategic decision making	Chartered accountants	85,76	8.404	1 ,246
	Educators	77,67	5.126	
Spreadsheet software (Excel)	Chartered accountants	91,76	8.992	3 ,452*
	Educators	68,76	4.538	
Database software (Access)	Chartered accountants	86,41	8.468	1 ,429
	Educators	76,7	5.062	
Standard internet software (e-mail, web browser)	Chartered accountants	85,64	8.393	1,193
	Educators	77,83	5.137	
Specific research tool (Research toolbox)	Chartered accountants	92,91	9.105	3,828 **
	Educators	67,05	4.425	
Business presentation software (PowerPoint)	Chartered accountants	86,29	8.456	1,386
	Educators	76,88	5.074	
Audit working paper-related software	Chartered accountants	79,56	7.797	1,241
	Educators	86,86	5.733	
Word processing software (Word)	Chartered accountants	88,9	8.712	2,452 *
	Educators	73	4.818	
Accounting packages (Pastel)	Chartered accountants	84,72	8.303	0,88 3
	Educators	79,2	5.227	
Utility software (CAATS)	Chartered accountants	89,25	8.746,5	2 ,568 *
	Educators	72,48	4.783,5	
The ability to locate, obtain, organize and understandinformation from human, print and electronic sources.	Chartered accountants	83,56	7946,50	1,010
	Educators	77,19	5094,50	
The capacity for inquiry, research, logical and analytical thinking, powers of reasoning, and critical analysis.	Chartered accountants	82,18	8054,00	0,121
	Educators	82,97	5476,00	

The ability to identify and solve unstructured problems which may be in unfamiliar settings.	Chartered accountants	82,36	8071,00	0,054
	Educators	82,71	5459,00	
Work with others in a consultative process, to withstand and resolve conflict.	Chartered accountants	84,79	8309,00	0,877
	Educators	79,11	5221,00	
Work in teams.	Chartered accountants	79,20	7762,00	1,313
	Educators	87,39	5768,00	
Interact with culturally and intellectually diverse people.	Chartered accountants	79,55	7796,00	1,209
	Educators	86,88	5734,00	
Negotiate acceptable solutions and agreements in professional situations.	Chartered accountants	85,29	8358,00	1,079
	Educators	78,36	5172,00	
Work effectively in a cross-cultural setting.	Chartered accountants	81,79	8015,00	0,279
	Educators	83,56	5515,00	
Present, discuss, report and defend views effectively through formal, informal, written and spoken communication.	Chartered accountants	77,90	7634,00	1,520
	Educators	87,02	5569,00	

Table 3.

Educators responses perception of the knowledge and skills should be acquired by accounting graduates and those perceived as reasonably acquired. (Constraints gap)

Items	Rank	Mean rank	Rank sum	z
Financial accounting	Negative ranks	12,5	250	3,266 *
	Positive ranks	12,5	50	
Management accounting	Negative ranks	15	240	0,577
	Positive ranks	15	195	
Taxation	Negative ranks	12,9	245	2,957*
	Positive ranks	11	55	
Business and commercial law	Negative ranks	21,5	903	6,016**
	Positive ranks	0	0	
Audit and assurance	Negative ranks	25,5	1.275	6,459 **
	Positive ranks	0	0	
Finance and financial management	Negative ranks	27	1.303	6,264 **
	Positive ranks	25	75	
Professional values and ethics	Negative ranks	25,5	1,275	6,273 **
	Positive ranks	0	0	
Economics	Negative ranks	16,5	528	5,027 **
	Positive ranks	0	0	
Business environment	Negative ranks	20,5	820	5,655 **
	Positive ranks	0	0	
Financial markets	Negative ranks	22	462	1,066
	Positive ranks	18	318	
Quantitative methods	Negative ranks	26	1,234	6,043**
	Positive ranks	16	32	
Management	Negative ranks	27	671	0,331
	Positive ranks	24	605	
Management and strategic decision making	Negative ranks	25	1,225	6,255**
	Positive ranks	0	0	
Spreadsheet software (Excel)	Negative ranks	19	591	4,335**
	Positive ranks	15	75	
Database software (Access)	Negative ranks	25	958	5,055**
	Positive ranks	11	77	
Standard internet software (e-mail, web browser)	Negative ranks	15	370	4,081**
	Positive ranks	12	36	
Specific research tool (Research toolbox)	Negative ranks	23	913	5,414**
	Positive ranks	11	33	
Business presentation software (PowerPoint)	Negative ranks	24,5	1,029	5,457**
	Positive ranks	13	52	
Audit working paper-related software	Negative ranks	25	1,225	6,278**
	Positive ranks	0	0	
Word processing software (Word)	Negative ranks	21,5	622	3,112**
	Positive ranks	18	198	
Accounting packages (Pastel)	Negative ranks	33,5	2,211	7,173**
	Positive ranks	0	0	
Utility software (CAATS)	Negative ranks	31	1,891	6,900**
	Positive ranks	0	0	
The ability to locate, obtain, organize and understand information from human, print and electronic sources.	Negative ranks	29	1653	6,706 **
	Positive ranks	0	0	
The capacity for inquiry, research, logical and analyticalthinking, powers of reasoning, and critical analysis.	Negative ranks	30,5	1830	6,832**
	Positive ranks	0	0	
The ability to identify and solve unstructured problemswhich may be in	Negative ranks	32,5	2080	7,083 **
	Positive ranks	0	0	

unfamiliar settings.				
Work with others in a consultative process, to withstandand resolve conflict.	Negative ranks	30,5	1830	6,839**
	Positive ranks	0	0	
Work in teams.	Negative ranks	33,5	2211	7,257**
	Positive ranks	0	0	
Interact with culturally and intellectually diverse people.	Negative ranks	31,5	1953	6,990**
	Positive ranks	0	0	
Negotiate acceptable solutions and agreements in professional situations.	Negative ranks	27	1431	6,448**
	Positive ranks	0	0	
Work effectively in a cross-cultural setting.	Negative ranks	29,5	1711	6,739**
	Positive ranks	0	0	
Present, discuss, report and defend views effectively through formal, informal, written and spoken communication.	Negative ranks	32,5	2080	7,033**
	Positive ranks	0	0	
	Positive ranks	0	0	

Table 5.

Group responses on the knowledge and skills that accounting educators perceived to be reasonably acquired by accounting graduates and those perceived as actual possess by chartered accountants (performance gap).

Items	statuts	Mean rank	Rank sum	Z
Financial accounting	Chartered accountants	77,38	7583,50	1,95
	Educators	90,1	5946,50	
Management accounting	Chartered accountants	82,12	7966,00	0,05
	Educators	81,82	5400,00	
Taxation	Chartered accountants	81,71	8007,50	0,3
	Educators	83,67	5522,50	
Business and commercial law	Chartered accountants	84,62	8293,00	0,77
	Educators	79,35	5237,00	
Audit and assurance	Chartered accountants	82,39	8074,00	0,04
	Educators	82,67	5456,00	
Finance and financial management	Chartered accountants	83,25	7992,00	0,65
	Educators	78,95	5211,00	
Professional values and ethics	Chartered accountants	88,16	8640,00	1,97**
	Educators	74,09	4890,00	
Economics	Chartered accountants	81,19	7956,50	0,45
	Educators	84,45	5573,50	
Business environment	Chartered accountants	83,77	8209,50	0,45
	Educators	80,61	5320,50	
Financial markets	Chartered accountants	83,71	8204,00	0,44
	Educators	80,7	5326,00	
Quantitative methods	Chartered accountants	85,91	8419,00	1,17
	Educators	77,44	5111,00	
Management	Chartered accountants	71,35	6992,00	3,83**
	Educators	99,06	6538 ,00	
Management and strategic decision making	Chartered accountants	86,3	8457,50	1,33
	Educators	76,86	5072,50	
Spreadsheet software (Excel)	Chartered accountants	112,24	11000,00	10,3**
	Educators	38,33	2530,00	
Database software (Access)	Chartered accountants	77,96	7.640,50	1,62
	Educators	89,23	5889,50	
Standard internet software (e-mail, web browser)	Chartered accountants	108,72	10655,00	9,72**
	Educators	39,81	2548 ,00	
Specific research tool (Research toolbox)	Chartered accountants	74,57	7307,50	2,85*
	Educators	94,28	6222,50	
Business presentation software (PowerPoint)	Chartered accountants	93,55	9168 ,00	3,91**
	Educators	66,09	4362 ,00	
Audit working paper-related software	Chartered accountants	85,31	8360,50	0,99
	Educators	78,33	5169,50	
Word processing software (Word)	Chartered accountants	83,23	8156,50	0,27
	Educators	81,42	5373,50	
Accounting packages (Pastel)	Chartered accountants	66,76	6542,00	5,45**
	Educators	105,88	6988 ,00	
Utility software (CAATS)	Chartered accountants	98 ,34	9637,50	5,45**
	Educators	58,98	3892,50	
The ability to locate, obtain, organize and understand information from human, print and electronic sources.	Chartered accountants	86,83	8509,50	1,513
	Educators	76,07	5020,50	
The capacity for inquiry, research, logical and analytical thinking, powers of reasoning, and critical analysis.	Chartered accountants	85,03	8332,50	0,881
	Educators	78,75	5197,50	
The ability to identify and solve	Chartered accountants	82,31	8066,50	0,066

unstructured problems which may be in unfamiliar settings.	Educators	82,78	5463,50	
Work with others in a consultative process, to withstand and resolve conflict.	Chartered accountants	91,22	8939,50	3,158*
	Educators	69,55	4590,50	
Work in teams.	Chartered accountants	89,36	8757,50	2,379*
	Educators	72,31	4772,50	
Interact with culturally and intellectually diverse people.	Chartered accountants	75,95	7443,00	2,257*
	Educators	92,23	6087,00	
Negotiate acceptable solutions and agreements inprofessional situations.	Chartered accountants	71,66	7023,00	3,825**
	Educators	98,59	6507,00	
Work effectively in a cross-cultural setting.	Chartered accountants	78,99	7267,50	0,176
	Educators	80,20	5293,50	
Present, discuss, report and defend views effectively through formal, informal, written and spoken communication.	Chartered accountants	78,80	7722,00	1,280
	Educators	88,00	5808,00	