

# QUALITY IN ACCOUNTING GRADUATES: EMPLOYER EXPECTATIONS OF THE GRADUATE SKILLS IN THE BACHELOR OF ACCOUNTING DEGREE

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## **Abstract**

This study investigated the accounting knowledge and skills desired by employers and their level of satisfaction with skills demonstrated by entry level accounting graduates. Results of survey research involving thirty-five accounting employers indicate that computing techniques, written communication, and reporting skills are required by employers. In contrast, employers perceive accounting graduates to be highly skilled in measurement skills, reporting skills, and research skills. Furthermore, as far as technological skills are concerned, employers indicated that the students are better trained in word-processing and knowledge of communications software skills, yet employers expect more knowledge of accounting packages and spreadsheet competencies for entry level graduates. The results provide useful information for academics and administrators that are making changes to their curricula.

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**Keywords:** Employer expectations, graduate skills, technological skills, accounting education

## **Introduction**

The dissatisfaction with the skills and knowledge demonstrated by accounting graduates entering the workforce has been of concern by employers for a number of years (Cory and Pruske, 2012). A question that often comes to mind is how academics can help accounting learners meet the set of skill demands both at recruitment and in their advanced accounting careers (De Villiers, 2010; Kavanagh & Drennan, 2008). An understanding of the broad and complex set of skill demands of employers is therefore essential. Accounting departments of most universities strive for continuous improvement in their accounting curriculum to provide a quality education

that will meet the needs of various stakeholders, mainly employers, and enable accounting graduates to succeed. The examination of skills and abilities that employers need in order to incorporate them in the current curriculum is essential to address where the curriculum might fall short (Hodges & Burchell, 2003). What is not clear is the list of skills generally agreed upon by key stakeholders in accounting or whether this skill set will differ depending on local or regional setting. The literature in accounting education has focused largely on the views of academia, and employers in the developed world, with few reports of research into employers' views in the developing world (e.g., Awayiga, Onumah & Tsamenyi, 2010; Abayadeera & Watty 2014).

Studies have shown that the contemporary business environment requires generalists with specialist knowledge or knowledge specialists (Howieson, 2003; Jackling & De Lange, 2009). Technological advances now mean that small businesses have become empowered with regards to their record-keeping requirements. Howieson (2003) suggests that the implications of technological changes are that future accountants would be transformed to knowledge employees. Even though a command of technology will be essential for accountants, the most important skills will be problem solving, analysis and communication.

On the other hand, there has been considerable debate on whether changes have actually been taking place in the accounting curricula. Albrecht and Sack (2000) reported that the teaching of accounting has not substantially changed to respond to the requirements of the employers. The employers have expressed concern that the accounting programs are not keeping pace with the accounting profession requirements (AECC 1990; Nelson 1991; Novin, Fetyko & Tucker, 1997; Albrecht & Sack, 2000). Kermis & Kermis (2010) contend that the accounting students need to acquire the technical skills and other necessary skills in order to be successful.

It is currently premature to conclude that employers' perceptions of accounting professional skills have been conclusively researched or that there is a skills set that is agreed upon by various stakeholders (Jackling & De Lange, 2009). On the contrary, more research needs to extensively identify the employers' expectations through a more nuanced, context-sensitive lens (Tempone et al., 2012). This paper will provide evidence from an African regional perspective, examining the requirements by recruiters of accounting students.

Specifically, the following research questions were addressed:

1(a): What specific skills do employers require from accounting graduates?

1(b): Which accounting graduate skills are more important?

2: Do employers position the professional accounting skills at the same level as technological skills?

3: Are there any differences between the requirements of employers and the skills demonstrated by accounting graduates?

## **Literature review**

### **Calls for changes in accounting education**

Throughout the last two decades the undergraduate students skills agenda has been widely debated (Holmes, 2000). Many studies have examined the need for academics to continuously enhance the academic performance and skills level of accountants entering the workforce (Albrecht & Sack, 2000; Borges, Santos, & Leal, 2014; Burnett 2003; Fogarty, 2005). The changing nature of the graduate labour markets requires a continuous assessment of the accounting graduates' knowledge and skills adequacy. Albrecht and Sack (2000) found that employers' perceptions of the way accounting is structured and taught is outdated and does not meet the current market requirements. Their research encourages accounting instructors to review curriculums. Burnett (2003) validated Albrecht and Sack's (2000) research when he administered a streamlined version of the Albrecht and Sack's (2000) study questionnaire. The overall results from Burnett's (2003) two surveys were similar to those reported by Albrecht and Sack (2000).

The calls for re-examining the key skills taught in an undergraduate accounting program are not confined to the 2000s. Earlier research by Stone, Arunachalam and Chandler (1996) argues that changes in accounting education should unambiguously outline the association between accounting knowledge, instruction and skill. Some of the concerns by employers during this period included the demand for information systems design topics (Siegel and Sorensen 1994). Cooper (1994) sought to encourage research in Canada that will provide a complete perspective involving examining the historical development of accounting in order to obtain an appreciation of the force for change in accounting instruction.

### **Can Universities provide the required skills?**

Others have expressed concern that universities cannot realistically guarantee the delivery of the skills required by employers (Cranmer 2006; Lucas, Cox, Croudace, & Milford, 2004). More specifically, Cranmer (2006) examines the university involvement in developing skills and has doubts as to the ability of tertiary institutions to successfully develop the required skills to the appropriate level. In spite of the high-quality intervention by instructors to improve graduates' skills, the limitations inherent in the whole process will constantly deliver mixed results. Clanchy and Ballard (1995) contend that the institutions of higher learning may only give an assurance

that learners will have the chance to acquire the skills during undergraduate education. Fogarty (2010) argues that the impact that can be made through current institutional structures is limited. Sikka, Haslam, Kyriacou, and Agrizzi (2007) examined accounting instructional material and found that besides technical instructional material, there is limited analysis of ethics, principles, theories or social responsibility issues.

### **Skills Needed in Accounting**

Various studies have suggested modifications to accounting instruction in universities. Albrecht (2002) states that skills in critical and analytical thinking, technology, teamwork and communication are crucial for transforming the accounting profession in the future. Hastings, Philip, and Lannie (2002) noted that in order for accountants to find relevance in the ever-changing environment, they have to demonstrate new skills. Changes to the curriculum that reflect the required skill set have to be clearly recognisable from an employer's perspective (AECC,1990).

Several studies identifying essential skills in the accounting profession have been carried out within the last decade. Lin, Xiaoyan, and Min (2005) investigated the required accounting skills and knowledge from both students and accounting instructor perspectives. Respondents agreed that the most important skills are professional demeanour, technical knowledge, communication and critical thinking. Their results revealed that the participants were not satisfied with the way skills and knowledge are delivered. An analysis of contemporary systems by Arnold and Sutton (2007), stresses the failure of current accounting instruction in delivering the skills and knowledge essential to be successful in the present situation. Lin (2008) examined, through a survey, the required accounting knowledge and skills in China using factor analysis (37 skill and knowledge variables). Six areas were identified as the most important: core accounting knowledge, business skills, personal characteristics, business knowledge, basic techniques and general knowledge. Business knowledge was ranked as the most important of these.

Chandra, Cheh, and Il-Woon (2006) notes that substantive evidence suggests a disparity relating to information technology (IT) skills supplied by universities and the IT skills demanded by employers. The extent of IT content in accounting was not at the employer-expected level. Boritz (1999) stated that most universities are adding IT subjects while sacrificing some important aspects of the accounting degree program. In the IT field, an accountant must demonstrate knowledge of a spreadsheet package, a word processing package, an accounting package and a database package (IEG 9, 1996; Mohamed & Lashine 2003).

Recently, Jones (2011) investigated communication skills required by accounting employers and found basic writing skills as the most important, the second being effective documentation. Jones (2011) revealed the following written communication skills as the most important (listed in priority order) (1) effectively organizing sentences and paragraphs; (2) writing clearly and precisely; (3) spelling correctly; (4) preparing concise, accurate, and supportive documents; (4) documenting work completely and accurately; (5) using correct grammar; (6) conscientiously editing and revising documents; and (7) effectively using email. This paper also seeks to clarify such contradictions. Do employers require technological skills such as spreadsheet package, a word processing package, an accounting package more than other skills such as communication skills?

In an Australia-wide study that interviewed employers and accounting professional bodies, employers stated that teamwork, communication, and self-management were the most essential skills for university accounting graduates (Tempone et al., 2012). Globally, employers face different environments across countries and their thinking regarding the importance of graduate skills will therefore vary depending on local circumstances.

## **Research method**

### **Purpose**

The aim of this research was to establish skills employers of accounting graduates expect and the skills the accounting graduates demonstrate. Skills list were obtained from a review of the literature (Albrecht and Sack 2000; Awayiga, Onumah, and Tsamenyi 2010; Jones 2011; Lin et al 2005).

### **Survey**

Data was collected using survey research. The study entailed conducting a survey with thirty-five accounting employers from a wide range of industry sectors: manufacturing, service, public sector and non-governmental organisations (NGOs), all in Swaziland. The organisations were mainly private corporations and professional service firms (see Table 1).

### **Sample selection**

Contact was made with employers in Swaziland who employ accounting students on internships during May to August. One major university in Swaziland, houses the department of accounting with more than 100 students majoring in accounting eligible for internship each year. Students would normally be required to be attached to an organisation for at

least a month and be assessed by the university on whether they have attained relevant skills and the acquisition of practical knowledge. Sixty representatives from organizations recruiting interns at the university constituted the population frame. Most of the firms are located in the two major urban centres of Swaziland.

A manager within the accounting department or a senior employee in the relevant department of the target organisation was sent a letter, inviting them to respond to questions investigating the skills sought and demonstrated by accounting graduates. They were also notified that personal contact would be made during student assessment visits in the near future.

The organisations provided their responses during the on-site visits at the time of student assessments. Previous accounting studies have used the same approach to improve the response rate (Awayiga et al. 2010). In all, questionnaires sent to 35 employers (representing a 83 percent of the sample) were fully completed and collected.

The survey presented the list of thirty skills (twenty professional accounting skills and ten technology-related skills) and requested respondents to state whether they agree with the necessity for each skill. They were also required to rate whether accounting graduates joining the accounting profession demonstrate the required skills. The rating of skills was on a five-point Likert scale. On the scale, 1 represented not important while 5 represented extremely important. The skills list was randomly organised and there was no categorisation.

The list of skills were first trialled with one organisation. This organisation was not included in the main study. The trial was aimed at refining the research instrument and a few changes were made to refine the wording on the list of skills. The survey instrument was completed face-to-face with a representative or a finance director for each of the 35 firms participating in the study. There was no attempt to link any organisation involved in the study with the responses. Table 1 provides a list of the activity in which the business organisation participating is involved.

### **Statistical Analysis**

For this study, the participants were required to report their responses on a Likert scale. The nature of the data permitted the mean and standard deviation of each skill to be calculated. A one-way analysis of variance (ANOVA) is used to determine whether there are any significant differences across the means of the two independent categories: skills needed and skills demonstrated. Results of the study are presented next.

## Results and Discussion

The participants were asked to rank the importance of graduates' skills using a five-point Likert scale with 1 representing not important and 5 extremely important. The rating was similar to the Albrecht and Sack (2000) instrument which required practitioners and faculty staff to rate the skills on a scale from one to five. The industry and work experience relevant to each organisation's representative is shown in Table 1.

Table 1. Background of Responding Employers (n=35)

Type of Industry	Number of Participants per industry	Work experience of respondents		
		Less than 5 years	5 -10 years	Greater than 10 years
Agriculture	4	0	0	4
Construction	5	0	1	4
Manufacturing	10	1	3	6
Retail	6	1	1	4
Service	7	2	0	5
Non-governmental organisations(NGOs)	3	0	2	1
<b>TOTAL</b>	<b>35</b>	<b>4</b>	<b>7</b>	<b>24</b>

### Importance of Each Professional Accounting Skill

The employers were requested to rate the importance of each professional accounting skill using a five-point Likert scale for entry level accounting graduates. Table 2 shows the results of the skills needed and demonstrated by accounting graduates.

Most of the respondent firms ranked computing techniques (mean, 4.571) as the highest (most important) accounting skill needed followed by written communication (mean, 4.429), reporting skills (mean, 4.286), measurement skills (mean, 4.057), professionalism (mean, 3.886), and functional competencies (mean, 3.857). The respondent firms said that the six skills demonstrated by entry level graduates in order of ranking are, reporting skills (mean, 4.143), measurement skills (mean, 3.971), research skills (mean, 3.829), functional competencies (mean, 3.800), finance (mean, 3.714), and professionalism (mean, 3.629).

These results indicate that the responding firms were not especially dissatisfied with accounting education today in developing reporting skills, measurement skills, professionalism, and functional competencies. However, the firms expect entry level graduates to improve on computing techniques and written communication, since they were not within the top six professional accounting skills demonstrated, even though they were the most important skills needed by the responding firms. We conclude that room for improvement exists because four of the skills were recorded as needed and

demonstrated in the top six skills, and two of the skills needed were not demonstrated.

Table 2. Ranking of Skills Needed and demonstrated by Entry Level Accountants

	Most important skill needed			Most important skill demonstrated			Mean difference of the skill needed over skill demonstrated	t	Df	P (sig. 2-tail)		
	<sup>a</sup> Mean (n = 35)	<sup>c</sup> Rank	S D	Mean (n = 35)	Rank	SD						
Professional accounting skill												
Computing techniques	4.571	1	0.731	3.200	11	0.868	1.371	6.550	68	0.000		*
Written Communication	4.429	2	0.502	2.914	13	0.562	1.514	10.101	68	0.000		*
Reporting Skills	4.286	3	0.426	4.143	1	1.094	0.143	1.966	68	0.057		
Measurement Skills	4.057	4	0.458	3.971	2	0.692	0.086	1.139	68	0.262		
Professionalism	3.886	5	0.857	3.629	6	0.547	0.257	2.714	68	0.010		*
Functional Competencies	3.857	6	0.845	3.800	4	0.833	0.057	0.627	68	0.534		
Oral Communication	3.829	7	0.482	2.714	14	0.562	1.114	7.072	68	0.000		*
Finance	3.771	8	0.906	3.714	5	0.985	0.057	0.236	68	0.815		
Legal and Regulatory	3.743	9	0.502	3.543	7	0.951	0.200	2.227	68	0.032		*
Problem Solving	3.657	10	0.502	3.486	8	1.158	0.171	1.974	68	0.056		*
Strategic and Critical Thinking	3.571	11	0.482	3.343	9	0.547	0.229	1.675	68	0.103		
Taxation	3.514	12	0.919	3.029	12	1.039	0.486	2.692	68	0.010		*
Ethics	2.714	13	1.095	2.686	15	1.339	0.029	3.787	68	0.711		
Risk Analysis	2.686	14	0.482	2.657	16	0.547	0.029	0.373	68	0.711		
Broad Business Perspective	2.657	15	1.220	2.600	17	1.474	0.057	0.813	68	0.422		
Leadership	2.571	16	0.471	2.486	18	0.598	0.086	1.139	68	0.262		
Research Skills	2.229	17	0.770	3.829	3	0.926	-1.600	-9.411	68	0.000		*



International Perspective	2.200	18	0.632	2.114	19	0.832	0.086	1.139	68	0.2628	
Industry Perspective	1.657	19	0.622	1.629	20	0.598	0.029	0.442	68	0.6613	
Marketing	1.229	20	0.471	3.257	10	0.598	-2.029	-9.271	68	0.0000	*
Overall values	3.256			3.137			0.118	0.659		0.5175	

<sup>a</sup>The mean scores are obtained based on a 5-point scale, '1' represents 'Not Important' and '5' represents 'Extremely Important'

<sup>b</sup>t-tests performed between scores for needed and demonstrated on each skill. t-values and P-values are determined based on two-way ANOVA tests.

\*The significance level is 0.05

<sup>c</sup>The ranking order is determined based on the mean scores

We performed t-tests between the ratings of each skill to examine whether there is a significant difference between what the employers need and what the graduates demonstrate. The results revealed that there is a significant gap between the accounting skills demonstrated and the accounting skills needed for 15 items (9 under professional accounting skill and 6 under technological skill). Respondents view the demands of the accounting profession as high and require much more talented accounting graduates particularly as may be measured across the fifteen skills. Our findings are consistent with past studies which have been critical of accounting education (Albrecht and Sack 2000; Burnett 2003; Tan, Fowler, and Lindsay 2004). An analysis of the gap between the skills needed and skills demonstrated for each classification (professional accounting skill and technological skill) showed that the skills-needed gap is greater than the skills-demonstrated gap although there is no significant statistical gap for both classifications. In addition, the differences affect all skills items and not one particular skill. These results suggest that the earlier changes in accounting instruction have been effective in addressing professional accounting skills and technological competency.

Secondly, an analysis of each individual skill shows that the highest rated skills that employers need from students entering the profession are computing techniques (mean score, 4.571), written communication (mean, 4.429), and reporting skills (mean, 4.286). The skills employers least require are marketing (mean, 1.229), industry perspective (mean, 1.657), international perspective (mean, 2.200) and research (mean, 2.229). These results contrast those of Awayiga et al. (2010) who report that employers perceive critical and analytical thinking, communication skills and professional demeanour as the most important skills. On the other hand, the most important skills demonstrated by students entering the profession are reporting skills, measurement skills, research skills, and functional

competencies. The students lack international perspective and industry perspective as well as risk analysis. Employers need ethics, problem solving and computer skills the most and do not expect much in the way of marketing and tax preparation skills from entry level accounting graduates.

### **Technology skills**

To give a robust description of the survey respondents' perceptions of technology skills needed and demonstrated by entry level accounting graduates, we asked what specific technological skills accountants should have and which they currently demonstrated. Again using a five-point Likert scale, the employers were requested to rate the importance they attach to technological skills for entry level accounting graduates. Table 3 shows the results of the technological skills needed and demonstrated by accounting graduates.

The respondent firms said that the five most important technological skills, in order of importance are; knowledge of accounting packages (mean, 4.829), spreadsheet packages (mean, 4.514), word processing packages (mean, 4.029), communications software (mean, 3.543), electronic commerce (mean, 3.429). Respondent firms also felt that the five most important technological skills demonstrated by entry level graduates were word processing packages (mean, 4.286) , communications software (mean, 3.657), World Wide Web (mean, 3.457), windows (mean, 3.400), and electronic commerce (mean, 3.371).

The ratings reveal that accounting packages (for example Pastel, QuickBooks), spreadsheet packages, word-processing packages and knowledge of communication software (for example Outlook) are the five highly-rated IT skills needed by employers. On the other hand, employers noted that accounting graduates demonstrate word-processing skills, communication software (for example Outlook) skills and World Wide Web skills. The analysis shows that word-processing and knowledge of communication software are both needed and demonstrated by accounting graduates. Clearly the respondents indicated that accounting graduates lacked sufficient knowledge of accounting packages. These results indicate that the faculty has managed to develop students' word processing, communications software, electronic commerce skills. However, the knowledge of accounting packages and spreadsheet packages need to be further developed.

Table 3. Technology Ranking of Skills Needed and Demonstrated by Entry Level Accountants

Technology skill	Most important skill needed			Most important skill possessed			Mean difference	t	Df	P (sig. 2-tail)	
	<sup>a</sup> Mean (n=35)	<sup>c</sup> Rank	SD	Mean (n=35)	Rank	SD					
Acc. package - Pastel, Quickbooks	4.829	1	0.742	1.800	10	0.891	3.029	12.580	68	0.000	*
Spreadsheet package	4.514	2	0.502	3.029	6	0.507	1.486	8.455	68	0.000	*
Word-processing package	4.029	3	0.622	4.286	1	0.502	-0.257	-1.086	68	0.285	
Comm. software – outlook	3.543	4	0.867	3.657	2	0.857	-0.114	-0.849	68	0.401	
Electronic commerce	3.429	5	0.857	3.371	5	0.710	0.057	1.435	68	0.160	
Presentation software	3.286	6	0.453	2.429	8	1.302	0.857	6.000	68	0.000	*
World wide web	3.229	7	1.039	3.457	3	0.725	-0.229	-2.472	68	0.018	*
Windows	3.086	8	0.502	3.400	4	0.490	-0.314	-2.234	68	0.032	*
Techno. Management	2.886	9	0.877	1.971	9	0.852	0.914	3.861	68	0.000	*
Database package	2.571	10	0.612	2.486	7	0.881	0.086	1.785	68	0.083	
Overall values	3.540			2.989			0.551	1.642		0.135	

<sup>a</sup>The mean scores are obtained based on a 5-point scale, '1' represents 'Not Important' and '5' represents 'Extremely Important'

<sup>b</sup>t-tests performed between scores for needed and demonstrated on each skill. t-values and P-values are determined based on two-way ANOVA tests.

\*The significance level is 0.05

<sup>c</sup>The ranking order is determined based on the mean scores. The t-tests results (investigating whether there were any differences between the most important skills needed and most important skill demonstrated) showed that there was no statistical difference with regard to the professional accounting skills ( $t = 0.659$  and  $p = 0.5175$ ) and technological skills ( $t = 1.642$  and  $p = 0.135$ ). The significance level was set at  $P < 0.05$  (Table 3).

The findings show that employers in general continue to perceive no major differences, and a greater appreciation of the qualities of graduates from the university with regard to professional accounting skills and technological skills. This finding is consistent with other prior studies (Jackling & De Lange, 2009; Tempone et al., 2012). There has not been a major change in the requirement for different skills from new accounting graduates. However, as shown earlier, gaps exist in the specific skills that need to be developed more. With regards to technology, the participants revealed that accounting graduates are equally prepared on both the most important skill-needed and most important skill-demonstrated dimensions. This finding signals the fact that students are well prepared technologically. The substantial changes that have been taking place in the accounting curricula with respect to technology has enhanced students' computer skills.

### **Limitations**

This survey concentrated on employers who hire accounting graduates from a major university in Swaziland. There are other employers who hire graduates but were not included in this survey. It seems unlikely that their views would be significantly different but this could be the subject of further research. Another limitation is the skills list presented. The skills were drawn from a wide range of sources (Albrecht and Sack 2000; Awayiga et al. 2010; Jones 2011; Lin et al. 2005). Again, this could be researched further.

### **Conclusion**

This research sought to investigate the skills employers need and to solicit their level of satisfaction with new accounting graduates using survey research. Results indicate that computing techniques, written communication, and reporting skills are required by employers. Employers perceive accounting graduates to be highly skilled in measurement skills, reporting skills, and research skills. Employers were satisfied with the students training in word-processing and knowledge of communications software skills, although they need more knowledge of accounting packages and spreadsheet competencies.

The conclusions from this survey provide empirical and relevant input for content review of the accounting programs in order to improve the essential skills and knowledge for accountants. Graduates entering the workforce are expected to be trained more in computing techniques, communication, reporting, measurement and professional skills. The way to address the skills deficiencies would require accounting instructors to look beyond the basic computer skills of Word, Excel, and Access. They need to incorporate advanced Excel skills and the teaching of widely-used

accounting packages skills such as Pastel and QuickBooks. Accounting students need to learn about telecommunications software, intranets and client/server management.

We also found no major difference between the skills needed and skills demonstrated by accounting graduates. The graduating accountants are not significantly different from what employers expect of an accounting graduate. There has been disapproval over the years of how accounting students are being taught. This finding suggests positive results from curriculum modifications over the years. The consistent skills gap across both professional skills and technological skills still needs to be addressed.

Other business subjects studied by accounting students have helped accounting graduates to become aware of the impact of a diverse work environment including global and environmental issues. Accounting academics need to continue in this direction in order to address the quality of accounting education. Academics need to continue providing a comprehensive understanding of accounting knowledge, revising their accounting curricula to meet the continuous changes in employer demands.

Future research could investigate accounting knowledge and skills needed by entry level accounting graduates to work in the ever changing marketplace since accounting graduates face unpredictable futures. In addition, future research may want to focus on why “advanced Excel skills” and accounting packages skills are important.

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