TAKING STOCK OF SOUTH AFRICAN ACCOUNTING STUDENTS' PERVASIVE SKILLS DEVELOPMENT: ARE WE MAKING PROGRESS?

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ABSTRACT

This study used a mixed-methods research design to take stock of the perceived level of awareness and perceived importance of pervasive skills development from three role-players in the South African accounting higher education environment, i.e. students, educators and employers. An investigation was launched into accounting students' level of exposure to SAICA's required pervasive skills set during their undergraduate studies. The results showed that students are aware of and perceive pervasive skills development as an important aspect of their higher education curricula. However, lacking emphasis was found in the development of *leadership* skills. Although educators are aware of their pervasive skills development responsibilities, its active incorporation into course modules is in need of improvement. Accounting employers want to be involved in pervasive skills development, especially in respect of *team work* and *communication* skills. Recommendations are made to enhance accounting education pedagogy in terms of pervasive skills development.

Keywords: accounting education, accounting students, Competency Framework, pervasive skills, South African Institute of Chartered Accountants (SAICA), skills development; South Africa

INTRODUCTION

To obtain Chartered Accountant South Africa (CA(SA)) status at the South African Institute of Chartered Accountants (SAICA), candidates need to graduate from a SAICA-accredited university and complete a training contract with a SAICA-approved training-officer employer company. Therefore, SAICA-accredited universities and employer companies are directly involved in and responsible for the education and training of accounting students within the South African accounting education environment. The higher education curricula of prospective CA(SA) candidates need to adhere to the requirements and outcomes set by both the National Qualification Framework (NQF) of the South African Qualifications Authority (SAQA) as well as the skills and competencies required in terms of the Competency Framework set by SAICA, the professional body responsible for regulating the CA(SA) profession in South

Africa.

In addition, employers seeking to appoint CA(SA) candidates also demand specific skills and competencies from these candidates on entering the formal workplace (Kavanagh and Drennan 2008; Robles 2012). Accounting education in South Africa, following the trend of other professional accounting bodies worldwide, is experiencing a change in nature due to the evolving aspects relating to accountability for graduate readiness (Boritz and Carnaghan 2003; Bui and Porter 2010; Steenkamp 2012, 482; Strauss-Keevy 2014, 419). Apart from technical knowledge, accounting graduates should be exposed to opportunities to develop pervasive skills (also referred to in the literature as 'generic' or 'soft' skills) to demonstrate graduate attributes such as communication, problem-solving, self-management, and technological skills, in the period prior to entering employment (Kavanagh et al. 2010).

SAICA's Competency Framework identifies pervasive skills in three categories, namely (i) Ethical Behaviour and Professionalism, (ii) Personal Attributes, and (iii) Professional Skills (SAICA 2014). Drawn from the descriptions indicated under each category, the pervasive skills set required by SAICA comprises 12 pervasive skills, namely: communication (verbal); communication (listening); communication (writing); problem-solving; team work; time management; leadership; professionalism; ethical awareness; strategic thinking; critical thinking and influencing others. These skills are also mentioned in the level descriptors of the SA National Qualifications Framework, for example: problem-solving; ethics and professional practice; producing and communicating information; and accountability (SAQA 2012, 10).

PERVASIVE SKILLS DEVELOPMENT WITHIN THE SOUTH AFRICAN ACCOUNTING EDUCATION ENVIRONMENT

Internationally, the need and importance of pervasive skills development in accounting graduates has been voiced by various stakeholders including professional accounting bodies (Chartered Accountants of Canada 2007; IFAC 2010; CIMA 2014), accounting and business-related employer companies (Kavanagh and Drennan 2008; Milner and Hill 2008; Confederation of British Industry (CBI) 2011; Jackson and Chapman 2012; Robles 2012), academics (Gammie, Gammie and Cargill 2002; Kermis and Kermis 2010; Paisey and Paisey 2010), as well as accounting students (Stivers and Onifade 2013; Ramlall and Ramlall 2014). Accounting bodies accordingly began qualifying candidates for the profession through a competency-based approach (Boritz and Carnaghan 2003). This was adopted by the International Federation of Accountants (IFAC) in its International Education Standard for Professional Skills (IES 3) and took effect on 1 January 2005 (IFAC 2003). In the South African context, SAICA also responded to this call for a change in approach, which introduced proposed

changes to its Competency Framework during 2010, indicated to be incorporated by 2013 (SAICA 2010). Since this, a review of relevant literature pertaining to the progress made in respect of pervasive skills development within the South African accounting education context includes the following:

Barac (2009) investigated and found that South African training officers highly value the generic skills requirements for entry-level trainee accountants. Steenkamp (2012) evaluated accounting students' perceptions when SAICA's training programme changed from a knowledge-based to a competency-based approach in 2010. Although students were positive about the renewed focus on pervasive skills, many felt that changes were communicated to them too late and were concerned of its impact on their assessment. De Villiers (2010) investigated methods of integrating pervasive skills with technical content taught to accounting students. These methods were found to be problematic due to different expectations on pervasive skills development from different stakeholders. Stainbank (2010) and Van der Merwe (2013) used a group project and business simulation case study to develop team work and professional skills in accounting students. Although students indicated that these methods successfully developed their '*personal*' and '*professional skills*', limitations in respect of time allowed for completion negatively impacted students' experience and impaired their level of learning. Fouché (2013) surveyed accounting students at a South African SAICA-accredited university and found that teaching methodologies applied were still too content-driven and did not sufficiently develop the professional skills required by the profession. Shuttleworth et al. (2013) determined an open distance learning (ODL) institution's ability to successfully develop pervasive skills in management accounting students to enter the workplace with confidence. The findings indicated that ODL education generally meets and even exceeds students' expectations regarding the enhancement of their employability skills, but that means of social interaction opportunities, face-to-face contact with peers and lecturers, and networking opportunities need to be found to better develop pervasive skills. Barac and Du Plessis (2014) investigated manners in which South African SAICA-accredited universities offer and teach pervasive skills, and whether these universities perceive it to be their responsibility. The study found that although pervasive skills development is largely indicated as a learning outcome at these accredited institutions, its presentation and integration into modules varies considerably and that greater integration of pervasive skills into course majors should be considered. Some pervasive skills were also indicated to be best achieved in practice rather than at the higher education level. Van Romburgh and Van der Merwe (2015) reported that South African universities do not sufficiently equip first-year trainees with the professional skills to be successful in practice. Strauss-Keevy (2014) reports that SAICA-accredited university academics are not aware of

their responsibility to ensure that aspirant CA(SA) candidates have achieved all the competencies as required by SAICA's Competency Framework. Strauss-Keevy (2015) also evaluated the collaborative learning exercises used by SAICA-accredited academics to transfer pervasive skills to accounting students and found that not all these methods are regarded to be effective.

It is evident that numerous challenges still need to be addressed in terms of pervasive skills development within the South African accounting education environment. Although the pervasive skills development expectations of employers, professional bodies and academic providers have been widely advocated, a gap is highlighted on limited research performed in respect of South African accounting students' view and perceived importance of their pervasive skills development at the higher education level. Taking stock of the progress made on pervasive skills development within accounting education up to date, based on the combined perceptions of three role-players in the accounting education environment, could inform action to be taken to address possible mismatches in the ongoing discussion of enhancing pervasive skills development at the higher education level in the South African context.

RESEARCH OBJECTIVE AND CONTRIBUTION

The primary objective of this research article was to take stock of and to evaluate, from three different perspectives (students, educators and employers), the current stance of pervasive skills development at the higher education level of accounting students at a South African SAICA-accredited university (hereafter referred to as 'University X'). The process of taking stock aimed to answer three main research questions:

- How aware are each of the three role-players operating within the accounting education environment of pervasive skills development at the higher education level, and do they perceive this to be of importance?
- Do South African accounting students perceive themselves competent, based on self-assessment and reflection upon the level of their exposure to the development of pervasive skills within undergraduate accounting degree modules, to possess the pervasive skills at the end of their third year of studies as required by SAICA's Competency Framework?
- What do employers perceive their role and responsibilities to be in terms of pervasive skills development of accounting students at the higher education level?

This study is unique in that it is the first of its kind in a South African context where perceptions

about the level of awareness, importance of, exposure to, and perceived role to play in respect of pervasive skills development are compared between three role-players in the accounting education environment. The article aims to take stock of recent pervasive skills development within the South African accounting education context to determine what progress has been made to date and to identify possible gaps that still need to be addressed. The findings on the progress made would not only benefit accounting education in general, but will also inform all relevant role-players within the South African accounting education environment in terms of where it is lacking and what actions are to be taken to enhance accounting pedagogy of pervasive skills development at the higher education level.

The remainder of this article is structured as follows: First, the research design and methods applied to take stock of pervasive skills development are described. This is followed by a report on and a discussion of the empirical research findings. Finally, a summary of the key findings and conclusions is provided, together with recommendations on action to be taken as well as suggestions for further research.

RESEARCH DESIGN AND METHOD

This research article reports on a part of a larger research project involving the evaluation of the usefulness of a tax-related intervention hosted at University X to expose accounting students to pervasive skills. All three role-players relevant to this study also formed part of the above-mentioned research project which was hosted close to the end of the accounting students' third year of study (the end of 2014).

Overall research design and method

In an attempt to answer the three mentioned research questions, a parallel convergent mixed-methods research design was applied. Creswell and Plano Clark (2011) suggest the combination of both quantitative and qualitative approaches in the collection and analysis of data as the results will reflect the synergy and strengths inherent to both these research methods.

Data collection and ethical considerations

Quantitative data were collected by means of a questionnaire distributed to each of the role-players (accounting students, employers and educators), while qualitative data were collected through focus group interviews held with accounting students and accounting educators. Participation in the research was voluntary and results are reported anonymously. Ethical clearance was obtained from University X where the research was conducted.

Collection of quantitative data

All three questionnaires comprised Likert-type rating scales as well as open-ended questions. Berk (2014) recommends an even-numbered scale to measure teaching effectiveness such as pervasive skills development. Questions pertaining to this research article covered the following areas: respondent profile information; perceived awareness and perceived level of importance of pervasive skills development at the higher education level; specific pervasive skills perceived to be developed by accounting students before entering the formal workplace; students' perceived level of exposure to pervasive skills development within undergraduate accounting modules; and employers' perceived role to play regarding pervasive skills development at the higher education level. Each of the three questionnaires was reviewed in advance by one independent statistical consultant and three independent accounting education researchers to ensure its validity, completeness and unbiased nature. The quantitative data from the questionnaire were captured and analysed by means of SPSS, while data derived from open-ended questions were captured and summarised in similar categories using Microsoft Excel for further analysis.

Collection of qualitative data

One focus group interview was held with accounting educators (comprising 10 interviewees), while ten interviews were scheduled with accounting students (comprising between six and ten interviewees per interview). According to Field (2000), qualitative data collected through focus group interviews has proven to be the richest source of information and is highly recognised as an effective method to research education and training. The author acted as focus group facilitator for interviews conducted with students as the author did not lecture these specific students, thus ensuring complete independence and anonymity. As the author was well known by the educators to be interviewed, an independent focus group facilitator was used to conduct interviews with the accounting educators to ensure that educators could freely and independently express their opinions. All interviews were conducted at University X and lasted between 50 and 60 minutes each. After eight of the ten interviews scheduled with students were completed, the researcher decided to cease further interviewing as data saturation had been achieved (Davies 2007). The interviews were voice-recorded (with permission of the interviewees) and transcribed for further analysis with Atlas.ti. A deductive coding approach (Saldaňa 2013) was applied where emerging themes enabled theory building (Friese 2012). Quotes extracted in Afrikaans were meticulously translated into English and independently reviewed to ensure the accuracy of the translations and that the intended meaning had been retained.

EMPIRICAL RESEARCH FINDINGS

Study population profile

The study population comprised the following: (i) third-year accounting students from University X, (ii) accounting educators on different academic levels involved in the CA training programme at University X, and (iii) staff of employer companies (training-officers) employed on different levels. The sample population consisted of 108 third-year accounting students, 10 accounting educators and 30 staff members representing seven different employer companies. As participation was voluntary, the study population is considered to be an availability sample, rather than a random sample. From the total study population, 98 completed questionnaires were received from students (response rate of 87.9%), 10 completed questionnaires were received from educators (response rate of 100%), and 23 completed questionnaires were received from employer company staff (response rate of 76.7%). The profile of the study population is summarised in Table 1.

Table 1: Study population profile

Variable	Overall number of respondents N = 128	Students (%) N = 95	Employers (%) N = 23	Educators (%) N = 10
Gender:				
Male	44	32.6	30.4	60.0
Female	84	67.4	69.6	40.0
Academic/Job level:				
End of third year	95	100.0	–	–
Trainee Accountant	8	–	34.8	–
Consultant	7	–	30.4	–
Recruitment Officer	3	–	13.0	–
Human Resource Manager	3	–	13.0	–
Manager	2	–	8.8	–
Associate Professor	2	–	–	20.0
Senior Lecturer	7	–	–	70.0
Senior Teaching Advisor	1	–	–	10.0

Perceived level of the importance and awareness of pervasive skills development at the higher education level

Students

Students were asked to firstly indicate the extent to which they thought pervasive skills

development should form part of the requirements of SAICA's Competency Framework, and secondly, whether this development should be incorporated as part of the undergraduate curriculum at university level. The mean score of the first question was 3.32 (see Table 2), being closer to 3 (representing '*quite a bit*') than 4 (representing '*a great deal*'). A mean score closer to 4 was expected from students studying towards obtaining the CA(SA) qualification at a SAICA-accredited university who are supposed to be fully informed about the skills and competencies required of them. The second question's mean score was 3.55, which was closer to 4 (representing '*strongly agree*') indicating that students, although not strongly aware of it being required in terms of SAICA's Competency Framework, do value the development of pervasive skills as an important aspect of their undergraduate curriculum.

Table 2: Students' perceived level of importance of pervasive skills development at the higher education level

Variable	Students (N = 95)	
	Mean (1–4)	Std. dev.
To what extent do you think that the development of pervasive skills should form part of the requirements of SAICA's Competency Framework?	3.32	0.71
The development of pervasive skills should form part of my CA(SA) undergraduate curriculum at university level.	3.55	0.56

In addition, students were also asked during the focus group interviews if they were aware of the fact that in terms of SAICA's Competency Framework, they were required to be exposed to the development of pervasive skills during their studies (from the first to the third year), and together with this, were asked how aware they were of pervasive skills development during this period. Noteworthy responses in respect of the aforementioned two issues included the following:

> Many lecturers will tell you about it a lot, but you do not really worry about it. You are just like, yes, it's okay, I shall worry about it tomorrow.
>
> One might have heard something small about it here and there, but we never really realised the weight that it carries and how important it actually is.
>
> I think subconsciously you are continuously aware of it because all the lecturers are mentioning it the whole time, but you do not know how everything will come together?

Furthermore, to determine the perceived level of importance of pervasive skills development, students were required to provide reasons (by means of an open-ended question in the questionnaire) for why they perceived the development of pervasive skills at the higher education level to be an important aspect of their undergraduate accounting curricula. Only

themes identified from three or more similar responses are reported and indicated in table 3.

Table 3: Students' perceptions of reasons why pervasive skills development should form part of accounting curricula at the higher education level

Reason themes	Students	
	Frequency (N = 95)	%#
It is required by practice and prepares us for the workplace	27	28.4
It provides me with an opportunity to develop and practice pervasive skills in a safe environment before I enter the workplace	17	17.9
Getting used to working in teams and with other people	11	11.6
I need to develop communication skills as it is crucial in the workplace	5	5.3
Combining pervasive skills with technical skills makes concepts more practical and easier to understand	5	5.3
It contributes in shaping me into a more holistically developed and well-rounded student, making me unique and setting me apart from other graduates	4	4.2
To prepare me for how to cope with different people in different situations	3	3.2
It builds self-esteem and self-confidence	3	3.2
Incorporation of pervasive skills in the curricula provides a fresh and new way of learning and makes me think about concepts differently	3	3.2

#Number of instances mentioned (frequency) divided by the number of completed questionnaires

Thus, developing pervasive skills at the higher education level is perceived to be beneficial in that it provides a safe environment in which students are allowed to freely develop their soft skills and have the opportunity to make and learn from their mistakes without it having negative consequences for employers and clients, as it could in practice. The following is a noteworthy comment obtained from a student during a focus group interview in support of the above-mentioned finding:

> The more exposure you can get to it before you enter practice, the better you will be equipped to handle situations. I mean, in practice itself it is your job that is on the line, it's not a safe environment like at the university where someone will necessarily have patience with you.

Therefore, although accounting students seem to be aware of pervasive skills development and perceive it to be important, they are not properly informed about the role it plays and how it is incorporated within their undergraduate accounting curriculum.

Educators

To establish accounting educators' awareness and perceived level of importance of the development of pervasive skills, the educators' questionnaire required them to indicate the extent to which they are familiar with the content of SAICA's Competency Framework. Based on the results, a mean score of 3.8 (being very close to 4, representing 'a great deal') and a

standard deviation of 0.42 were reported. Thus, it is evident that educators are very aware of the content of SAICA's Competency Framework. The SAICA Competency Framework (2014, 17) indicates that providers of the academic programme are expected to address all the qualities and skills (which includes pervasive skills) that, in their opinion, are suitable for inclusion in the academic programme. Considering the latter, educators were provided with a list of the 12 pervasive skills required in terms of SAICA's Competency Framework (as indicated in the introduction of this article) during their focus group interview after which the following question was posed to them:

- Which of the 12 pervasive skills, in your opinion, is the responsibility of educators to develop in accounting students at the higher education level?

Educators indicated that they perceived the development of the following skills to be their responsibility: *ethical awareness; time management*; *critical thinking; problem-solving*; *communication (writing) and strategic thinking*. In addition, educators stressed that in respect of '*ethical awareness*' they could only alert students on the importance of applying this skill, and could not teach students what is perceived to be ethical and what is not.

In addition, three Likert-type questions with a four-point rating scale (where: 1 = '*not at all*', 2 = '*very little*', 3 = '*quite a bit*', 4 = '*a great deal*') were included in the educators' questionnaire to determine their level of awareness of pervasive skills development while performing their academic duties. The results are summarised in Table 4. Despite the fact that educators indicated that they are very familiar with the content of SAICA's Competency Framework, which includes their responsibility to incorporate pervasive skills as part of the academic programme, the mean scores for their level of awareness and sensitivity to incorporating pervasive skills while preparing for lectures and setting tests and examinations were reported as 2.6 and 2.3 respectively (being close to '*very little*'). The level of awareness was much higher while setting assignments/group projects/interventions, with a mean score of 3.1 (representing '*quite a bit*').

Table 4: Educators' awareness of pervasive skills development while performing their academic duties

	Educators (N = 10)	
To what extent are you aware of/sensitive to incorporating pervasive skills when...	**Mean (1–4)**	**Std. Dev.**
... planning and preparing for your lectures?	2.60	0.70

... setting tests and examinations?	2.30	0.95
... setting assignments/group projects/interventions?	3.10	0.74

Furthermore, SAICA's Competency Framework (2014, 17) states that providers of the academic programme will be required to explain how the pervasive skills are addressed and must provide full motivation for excluding any from the academic programme, as part of the ongoing accreditation and monitoring of providers. From the literature multiple challenges are reported that accounting educators face in successfully incorporating pervasive skills development into course modules. These include: syllabus overloads with limited space in the curriculum to accommodate additional skills (Willcoxson, Wynder and Laing 2010); large class sizes (Wessels and Steenkamp 2009); limited contact time with students; considering that accounting educators also have other duties such as research (Milner and Hill 2008).

Therefore, although educators are well aware of their responsibility regarding students' pervasive skills development, its active incorporation into course modules seems to be lacking. Also, educators do not perceive the development of all the required skills to be their responsibility.

Employers

Two questions were posed relating to employers' perceptions of the level of importance of pervasive skills development at the higher education level. Both these questions were applied on a four-point Likert-type scale, where 1 = '*not at all*', 2 = '*very little*', 3 = '*quite a bit*' and 4 = '*a great deal*'. The mean scores of both the questions (see table 5) were close to 4 (representing '*A great deal*'), indicating that employers perceive the development of pervasive skills in accounting students at the higher education level to be very important.

Table 5: Employers' perceptions of pervasive skills development at the higher education level

	Employers (N = 23)	
	Mean (1–4)	**Std. Dev.**
The development of pervasive skills at University/Higher Education level is important	3.96	0.209
The need to appoint new employees (trainees) who have already been exposed to the necessary pervasive skills is becoming more important to our firm/company	3.61	0.583

Employers were also required to provide reasons (by means of an open-ended question) for why they perceived the development of pervasive skills to take place at the higher education level. Only themes identified from two or more similar responses are reported and are indicated in table 6.

Table 6: Employers' perceptions of reasons why pervasive skills development should form part of accounting curricula at the higher education level

	Employers	
	Frequency (N = 23)	**%[#]**
Students should learn how to work in teams and with different people before they enter the workplace	8	34.7
Students should learn the skill of how to communicate effectively	5	21.7
To prepare the student for the workplace, where pervasive skills play an important role	3	13.0
Employing staff with good pervasive skills is what makes business work	2	8.7

[#]Number of instances mentioned (frequency) divided by the number of completed questionnaires

Noteworthy individual responses received from employers on the open-ended questions in respect of reasons why students need to develop pervasive skills at the higher education level, include the following:

Team work:

> As a professional you work with people, not merely pen and paper.
>
> You will need to learn to work in a team as this is how it is mostly in a firm.
>
> You may be good technically, but if you cannot work together you won't be able to work in a corporate environment.

Communication (verbal, listening and writing):

> Majority of time gets spent on communicating, managing client expectations and team members.
>
> Communication is very important and will be attained through enquiries with clients.

Work readiness:

> To assist students to integrate smoothly into the work environment.
>
> It plays a crucial role in your workplace one day and how you handle situations.

Unique, employable candidates:

> Soft skills are what most companies are looking for in order to develop their companies.
>
> Time management, communication and team work makes business work, without proper development business loses out.

It is therefore clear that employers perceive pervasive skills development to be a crucial aspect of higher education accounting curricula in order to properly prepare students for the formal workplace. However, employers perceive the development of some skills at university level,

such as *team work* and *communication*, to be more important than others.

Perceived level of importance of exposure to the development of specific pervasive skills before entering the workplace

All three role-players were required to rate on a scale of 1 to 10 (where 1 represents '*not at all important*' and 10 represents '*extremely important*'), how important they perceive exposure to the development of each of the 12 required pervasive skills to be before the accounting student enters the formal workplace. From the fairly high mean scores indicated in Table 7, it is evident that all three role-players perceived all 12 the pervasive skills to be very important as the lowest mean score rating between all three role-players for all the skills was reported as 7.3 (see '*leadership*' ranked by educators).

All three the role-players rated '*ethical awareness*' and '*communication (listening)*' as part of the top four pervasive skills that should be developed before the formal workplace is entered. Other pervasive skills appearing on at least two of the role-players' list of top four ranked pervasive skills were '*time management*', '*problem-solving*' and '*communication (verbal)*'. Despite the fact that all 12 the required pervasive skills were ranked as fairly important to be developed before entering the formal workplace, it was the skills of '*leadership*' and *influencing others*' that appeared amongst the bottom three skills ranked by all three role-players, where mean scores of 8.32 (students), 7.30 (educators) and 7.74 (employers) were reported for '*leadership*', and mean scores of 8.11 (students), 8.1 (educators) and 7.57 (employers) were reported for '*influencing others*'. These findings correspond to those of research conducted by Jackson, Sibson and Riebe (2013, 14), as well as Lang (2009), who also reported consistently lower mean scores for the skill of '*influencing others*', while Ramlall and Ramlall (2014) also identified a lack of leadership skills in accounting students. As there is a prevailing need for future managers and leaders who can negotiate and influence in an effective yet sensitive manner (Fisher 2011), new and innovative ways to teach leadership skills (such social intelligence, influencing others and conflict resolution) should be developed, evaluated and applied.

From the analysis of variance (ANOVA) test performed (see Table 7), statistically significant differences were noted for pervasive skills with *p*-values smaller than 0.05 (Pallant 2007, 250), including: *problem-solving* (p=0.00); *leadership*, *professionalism* and *strategic thinking* (all with a p=0.03); and *time management* (p=0.04). Effect sizes (d-values) ranging from 0.5 to 0.7 indicate a medium to large practical effect (Ellis and Steyn 2003, 3) between skills that students perceive they should be exposed to before entering the workplace as opposed to this perception by educators. The significant d-values for the skills of *leadership*,

professionalism, *strategic thinking*, *communication (verbal)* and *team work* were all perceived more important by students than by educators to be developed before entering the workplace. The only skill with a significant *d*-value which was perceived more important by educators than by students was *communication (writing).*

The skills of: *problem-solving*, *time management* and *communication (listening)* resulted in significant *d*-values of 0.63, 0.40 and 0.41 respectively (all representing a medium to large effect in practice) when compared between students and employers. Based on the higher mean scores for each of the latter skills as ranked by students, it is evident that students perceive their exposure to these skills before entering the workplace as more important than employers do. A study conducted by Jackling and De Lange (2009) amongst accounting graduates and employers in Australia indicated that the greatest areas of skills divergence from the employers' perspective, were those of team skills, leadership, verbal communication and the interpersonal skills of graduates.

In comparing skills with significant *d*-values (all reflecting a medium to large effect in practice) between educators and employers, it was the educators who perceive students' exposure before entering the workplace to: *problem-solving*, *time-management*, *communication (writing)* and *critical thinking*, to be more important than employers do. However, employers perceive the skills of *strategic thinking*, *communication (verbal)* and *team work* to be developed before entering the workplace as more important than the educators do. These findings correspond to those of the study conducted by Wiseman (2013), where 93 per cent of American employers reported that a capacity to think critically, communicate clearly and solve complex problems was more important than an undergraduate major.

Table 7: *ANOVA* on perceived importance of exposure to specific pervasive skills before entering the workplace

Pervasive skills	Students (N = 95)		Educators (N = 10)		Employers (N = 23)			
	Mean (1–10)	Std. Dev.	Mean (1–10)	Std. Dev.	Mean (1–10)	Std. Dev.	F	*p*-value*
Problem-solving	9.18	1.01	9.20	1.23	8.22	1.54	6.78	0.00
Leadership	8.32	1.26	7.30	1.42	7.74	1.74	3.67	0.03
Professionalism	9.38	1.16	8.40	1.51	8.83	1.83	3.60	0.03
Strategic thinking	8.79	1.18	7.70	1.64	8.43	1.34	3.81	0.03
Time management	9.38	0.96	9.40	0.70	8.74	1.60	3.30	0.04
Communication (verbal)	9.38	0.90	8.70	0.95	9.22	0.90	2.65	0.07
Communication (listening)	9.32	1.02	9.10	0.74	8.87	1.10	1.85	0.16
Team work	9.01	1.19	8.30	1.34	9.00	1.00	1.69	0.19
Influencing others	8.11	1.41	8.10	1.29	7.57	2.04	1.17	0.31
Communication (writing)	8.39	1.81	9.20	1.03	8.48	1.28	1.06	0.35
Critical thinking	9.00	1.19	9.40	0.84	8.77	1.27	0.97	0.38

Pervasive skills	Students (N = 95)		Educators (N = 10)		Employers (N = 23)			
	Mean (1–10)	Std. Dev.	Mean (1–10)	Std. Dev.	Mean (1–10)	Std. Dev.	F	*p*-value*
Ethical awareness	9.26	1.11	9.50	0.97	9.18	1.33	0.27	0.77

Pervasive skills	Effect-sizes (d-values)^		
	Students and Educators	Students and Employers	Educators and Employers
Problem-solving	0.02	0.63	0.64
Leadership	0.72	0.33	0.25
Professionalism	0.65	0.30	0.23
Strategic thinking	0.67	0.26	0.45
Time management	0.02	0.40	0.41
Communication (verbal)	0.72	0.18	0.55
Communication (listening)	0.21	0.41	0.21
Team work	0.53	0.01	0.52
Influencing others	0.00	0.26	0.26
Communication (writing)	0.45	0.05	0.57
Critical thinking	0.34	0.18	0.49
Ethical awareness	0.21	0.06	0.24

**p-value: <0.05, indicates a significant result, assuming a random sample*
^d-value: Small effect: d=0.2; medium effect: d=0.5; large effect: d=0.8

Students' perceived level of exposure to pervasive skills development in undergraduate modules forming part of accounting degree programmes

To answer the second research question, students were asked to indicate, based on self-assessment and reflection on their undergraduates studies (from the first to the third year), their perceived level of exposure at the end of their third year to the various pervasive skills in their undergraduate models forming part of their accounting degree programme. From the mean scores reported for each of the pervasive skills (see table 8), it is clear that students perceived their level of exposure to the various pervasive skills required in terms of SAICA's Competency Framework to be moderate to high (where 3 = '*moderate level of exposure*'; and 4 = '*high level of exposure*'). Despite the latter, it is evident that students perceived their level of exposure to the development of *leadership* skills to be the lowest of all the pervasive skills, with a mean score of 2.99. The reason for this limited exposure to the development of *leadership* qualities and skills could possibly be ascribed to the fact that all three the role-players perceived the skill of *leadership* as one of the two least important pervasive skills to be developed at the higher education level before the formal workplace is entered (refer to the results reported in table 7). This finding also corresponds to what was reported by Ramlall and Ramlall (2014, 651), in their international study amongst accounting students of multiple universities in the United States, where the most significant disparity in what students perceived as important and how prepared they were for it was in respect of *leadership* skills.

Table 8: Students' perceived level of exposure to the development of the various pervasive skills in undergraduate accounting degree modules

Pervasive skills	Students (N = 95)	
	Mean (1 – 4)	Std. Dev.
Working in a team	3.38	0.70
Time management	3.59	0.57
Ethical awareness	3.22	0.87
Solving problems	3.46	0.60
Strategising techniques	3.18	0.73
Leadership	2.99	0.68
Communication (writing skills)	3.14	0.75
Thinking critically	3.53	0.56
Influencing fellow students	3.16	0.73
Communication (verbal & listening)	3.19	0.61
Acting professionally	3.33	0.72

Noteworthy comments obtained from the students during focus group interviews relating to the level of exposure to pervasive skills in undergraduate models are as follows:

> Our curriculum is mostly theoretical based. There is very little room for practical application and interaction. Yes, we had an audit assignment and a tax intervention this year (referring to the third year) and also a business project in our first year, but it was never sort of stipulated as to what the main purpose of it was.

> So, I knew about it, but I never felt like it was actually developed, until we had the tax court case evening assignment (during third year of studies).

> Yes, many times they told us theoretically that this is what is expected of you and that you need to be able to communicate, but never were these skills of ours actually developed.

> Lecturers often speak about how it will be when you start to work someday. But it is like if they are only speaking from their own experiences, rather than them trying to actually embed those skills within us. So they are really great lecturers, but if the goal really was to expose us to it, I feel it was more the case of them sharing their personal experiences rather than doing it as part of their duties.

Based on the findings relating to moderate to high levels of exposure to the various pervasive skills in undergraduate modules reported by students, it is clear that progress has definitely been made in terms of pervasive skills development. However, it seems as if this progress largely constitutes an awareness of the importance of pervasive skills raised rather than its active incorporation and application in course modules. Also, there seems to be a definite student need to better develop their *leadership* skills.

Employers' perceptions of their role to play in pervasive skills development at the higher education level

To answer the third research question, employers were asked to indicate whether employer companies should be involved in the development of pervasive skills at the university level. A mean score of 3.52 (between 3 representing '*quite a bit*' and 4 representing '*a great deal'*) with a standard deviation of 0.51 was obtained for this question. This gives a positive indication that employers want to engage with universities to develop the pervasive skills of accounting students.

In addition, staff from employer companies was requested to provide examples of how, in their opinion, pervasive skills could be developed at the higher education level. The results of specific responses received were categorised under eight main suggested method themes and were matched with specific pervasive skills. The results are summarised in table 9.

Table 9: Examples provided by employers for methods to develop pervasive skills at the higher education level

Suggested example themes	**Target pervasive skill(s)**	**Employers**	
		Frequency (N = 23)	**%[#]**
Group projects	Team work	7	30.4
Presentations and mock job interviews	Communication (verbal and listening); Influencing others	5	21.7
Active learning and game-based interventions outside the normal classroom environment	Combination of all 12 the required pervasive skills required by SAICA	4	17.4
Real life case studies and simulated client situations	Problem-solving; Critical thinking; Ethical awareness	3	13.0
Tasks requiring demonstration of leadership qualities	Leadership	2	8.7
Subject integrated projects	Problem-solving; Strategy; Critical thinking	1	4.3
Guest lectures and motivational speakers creating awareness about the importance of pervasive skills in practice	Influencing others	1	4.3
Incorporation in tests and examinations	Communication (writing); Ethical awareness	1	4.3

[#]Number of instances mentioned (frequency) divided by the number of completed questionnaires

SUMMARY OF FINDINGS AND CONCLUSIONS

The purpose of this study was to take stock of the pervasive skills development of South African accounting students from three different perspectives.

Firstly, the level of awareness and perceived level of importance of developing pervasive skills at the higher education level were determined. Accounting students indicated that although they were not so well aware of the fact that pervasive skills development at the undergraduate level was required in terms of SAICA's Competency Framework, they did

recognise its importance and valued it as a crucial aspect of their undergraduate accounting curricula. Students perceive the university as the ideal environment in which pervasive skills could be developed, as it is a safe environment in which they can make mistakes and learn from these. Although students felt that they were made aware of and were exposed to pervasive skills development during their undergraduate studies, this exposure was not sufficient and that more could have been done to enhance their awareness and overall development of pervasive skills. The latter findings were also echoed in the responses received from accounting educators. Educators indicated that they are very much aware of the fact that they should incorporate pervasive skills in their modules and curricula as required in terms of SAICA's Competency Framework, but admitted that while preparing for lectures and setting tests and examinations, they do not give enough consideration to the effective incorporation of the required pervasive skills and qualities. Also, educators perceived only six of the twelve pervasive skills of SAICA's Competency Framework to be their responsibility at the higher education level. Employers indicated that they regard the pervasive skills development of accounting students at the higher education level to be very important as the appointment of candidates who have already been exposed to it adds value to their business. Exposure to the skills of effective *team work*, *communication (verbal)* and *strategic thinking* was highlighted by employers as being most important before entering the workplace.

Secondly, the aim of the study was to determine whether students felt competent in possessing the pervasive skills required of them by practice at the end of their third year of studies. From the perceived level of exposure to each of the required pervasive skills provided by undergraduate modules, it is evident that students perceived an under-emphasis on their exposure to the development of *leadership* skills.

Thirdly, the study aimed to investigate the role that employers perceive they are to play in terms of pervasive skills development at the higher education level. Employers indicated that they felt they should also be involved in developing pervasive skills in accounting students at the higher education level and suggested methods such as simulated client situations, mock interviews, subject integrated group projects and guest lectures.

IMPLICATIONS FOR HIGHER EDUCATION AND TRAINING

Considering the implications of the findings for higher education (i.e. students and educators) and training (i.e. employers) it is clear that, although accounting students are to a certain extent aware of the fact that pervasive skills development are required in terms of SAICA's Competency Framework at the undergraduate level, students are still not adequately exposed to sufficient opportunities to develop pervasive skills at the higher education level. It is also

evident that higher education accounting curriculums are not adequately designed and planned to ensure the effective incorporation and development of pervasive skills. The fact that educators are either unaware that they should incorporate pervasive skills into their modules and curricula as required in terms of SAICA's Competency Framework, or are aware of the requirement, but not actively responsive to it, is extremely cumbersome. This results in students entering the profession not being adequately equipped with the pervasive skills which are imperative for functioning effectively within the professional environment after graduation. The latter contributes to already pressurised employers to find graduates who possess the required pervasive skills and competencies and forces employers to provide additional training to develop these skills in graduates.

The latter implications are alarming due to the fact that despite the vast majority of literature available on and research conducted in respect of the importance and development of pervasive skills at the higher education level, its underdevelopment remains problematic. This persistent problem seems to be very relevant in today's higher education, specifically in relation to accounting education and training.

RECOMMENDATIONS

It is submitted that universities are placing emphasis on and recognise the importance of pervasive skills development at the higher education level as students admitted to it being continuously communicated to them. However, it would seem as if this emphasis is not sufficient and that it is only communicated because accounting educators know that it is required of them in order to adhere to the SAICA Competency Framework.

It is therefore recommended that accounting educators and programmes need to clearly inform accounting students and raise awareness of the pervasive skills and competencies required of them in terms of SAICA's Competency Framework. The reasons for incorporating pervasive skills development into the curricula of various undergraduate accounting modules should be clearly communicated to students, as well as the methods for doing this. The latter should form a crucial aspect of each programme's overall teaching-learning strategy and learning outcomes. The role that pervasive skills play in the application of technical knowledge should be motivated and explained to students.

There is a clear indication that higher education institutions should re-curriculate in order to address the lack of opportunities for pervasive skills development in their graduates. Thus, overall it is concluded that although progress has been made, there is still a need for new and innovative teaching methodologies and interventions to be developed, of which the main aim is to expose accounting students to pervasive skills, especially '*leadership*' skills, which was

found to be lacking. A suggestion for future research is that the usefulness of such teaching methodologies and interventions needs to be explored and evaluated. Universities and employers need to partner together in addressing and overcoming the pervasive skills shortages prevailing in accounting education at the higher education level. It is submitted that synergies will arise within such partnerships that will contribute to the accounting education pedagogy of pervasive skills development of South African accounting students.

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