Teaching pervasive skills to South African accounting students

K. Barac & L. du Plessis

ABSTRACT

Professional accountants need to retain and maintain a broad skills set. In response to this need, the South African Institute of Chartered Accountants (SAICA) emphasises the mastering of pervasive skills in its competency framework and expects South African universities offering its accredited programmes to produce graduates able to demonstrate such skills at acceptable levels of competence upon entry into the workplace. This study investigates the manner in which SAICA-accredited South African universities offer and teach pervasive skills, and attempts to determine whether heads of departments have identified the teaching of these skills as being the responsibility of the university, or not. These views were solicited through an e-mailed questionnaire. The study found that although the development of pervasive skills is an outcome largely included in these accredited undergraduate programmes, their presentation and integration into the courses vary considerably, and more integration of pervasive skills into course majors should be considered. Teaching methods and practices followed by the universities show significant diversity, and this result corresponds with those reported elsewhere in the literature. It is a concern that there is only limited use of research-based projects in these undergraduate programmes. An interesting finding of the study was that heads of departments perceive the acquisition of some pervasive skills to be best achieved in the real-world, practical workplace, rather than in the theoretical confines of the universities' lectures and tutorials.

Key words: pervasive skills, generic skills, South African chartered accountants, competency framework, teaching methods, teaching practices, learning, assessment, research projects, employability

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Introduction

The business environment continues to experience significant changes such as globalisation, increased competition from local and international sources, and rapid developments in information technology and communication systems. Such changes challenge the competencies of today's professional accountants and demand a continually expanding skills set (IAESB 2008: IES 3) to meet the expectations of employers and of society as a whole. Universities have responded by developing policies redefining graduate skills and by designing and delivering various teaching and learning initiatives that directly address professional skills development (Coetzee & Schmulian 2012: 85; Barrie 2004: 263).

Pervasive skills, also referred to as generic skills, are developed regardless of the field of study or domain of knowledge (Barrie 2004: 262), and their development for professional accountants forms part of the broader discussion of whether accounting graduates produced by universities are (or even should be) 'work ready', and are able to meet employers' expectations (Kavanagh, Hancock, Segal, Howieson & Kent 2010). The literature supports the view that universities and workplace training have complementary roles to play in the development of the pervasive skills expected of entry-level professional accountants (Bui & Porter 2010: 33, 37; Ballantine & McCourt Larres 2009: 388), but what is unclear is the identification of the point at which educational institutions' responsibilities finish and those of professional bodies and employers begin. Equally vaguely defined is the manner in which universities should develop such skills, if agreement can be reached on whether, or how much, of the task they should be taking on in the first place.

Although internationally a wide body of knowledge exists on the need for and teaching of generic skills amongst and to accounting students, much less research has been published on the South African perspective. Stainbank (2003 & 2009), for example, investigated how teams function in an accounting project, and found that the presence of skills such as management and good interpersonal skills have a positive effect on the South African students' satisfaction with the team, suggesting that this approach may contribute positively to students' career preparedness. Wessels (2006 & 2008) identified the information technology (IT) tools that educators can use to ensure that graduating professional accountants have acquired those IT skills during their university education. He also identified strategies that South African universities can employ to ensure that they produce graduates who are competent in the critical IT skills. Barac (2009) investigated South African training officers' perceptions of the skills requirements for entry-level trainee accountants, and found that they place much emphasis on the generic skills set of entry-level trainee accountants. Building on this research, this article attempts to add to this body of knowledge by reflecting on generic skills development for South African undergraduate accounting students.

Objective and significance

The important role that chartered accountants play in the South African business environment is well illustrated by survey results that showed that within the top 200 JSE-listed companies, more than 90% of their chief financial officers (CFOs), 25% of their directors and 22% of their chief executive officers (CEOs) were chartered accountants (Finweek April 2010). The South African Institute of Chartered Accountants (SAICA) acknowledges the value of the CA(SA) designation and intends to strengthen its brand by producing chartered accountants – (CA(SA)s – capable of becoming the leaders of business (SAICA 2010: 4). To achieve this objective, SAICA has introduced a competency framework which CA(SA)s should have demonstrable mastery of by the time they enter the professional workforce (SAICA 2008b). The SAICA competency framework defines the competencies (a broad range of knowledge, skills and attributes) a CA(SA) needs in order to be seen as a business leader with a professional accounting background. The framework includes pervasive skills that are required to be fully integrated with specific accountancy competencies, namely accounting and external reporting, strategy, risk management and governance, financial management, management decision-making and control, taxation as well as auditing and assurance (SAICA 2010: 6, 7).

In terms of the SAICA competency framework, entry-level CA(SA)s are expected to demonstrate the highest level of proficiency for all the pervasive skills (SAICA 2010: 19). This expectation triggered the research reported in this article. Although some research has been done in South Africa on the skills that accounting students are expected to master, and the challenges of teaching them (Hesketh 2011; Barac 2009; Wessels 2006 & 2008; Stainbank 2003 & 2009), these studies, with the exception of the very recent study by Coetzee and Schmulian (2012), did not specifically refer to the pervasive skills contained in the SAICA competency framework (SAICA 2010). The research on which this article is based attempts to fill this gap and was done with two objectives in mind:

- Firstly, to determine the manner in which SAICA's competency framework-defined pervasive skills are being offered and taught by South African universities in their SAICA-accredited undergraduate programmes; and
- Secondly, to determine the perceptions held by heads of departments (HoDs) as to the extent to which their universities are (or should be) responsible for the development of specific pervasive skills through their SAICA-accredited undergraduate programmes.

These research findings are of importance, firstly in helping SAICA to understand the manner in which pervasive skills are presented in their accredited undergraduate

programmes, and secondly, affording SAICA an insight into HoDs' perceptions of the extent to which these programmes should be responsible for developing such skills. The results should also benefit HoDs and lecturers involved in the education of accounting students aspiring to become CA(SA)s, because they can now compare their course content and their methods of teaching specific pervasive skills with the research findings. This could then prompt the identification and development of alternative practices that might better equip or enrich some of the accounting programmes currently intended to develop pervasive skills. They could further consider whether their perceptions have similarities with those reported in the findings about where the responsibility for the development of these skills lies – with university programmes, or as part of workplace training. Finally, workplace training officers responsible for trainee accountants aspiring to become CA(SA)s could use these findings to benchmark the development of the individual pervasive skills addressed in their training programmes.

Literature review

Defining pervasive skills

Various factors, including globalisation, increased competition and the rapid developments in information technology and communication facilitated by the internet, have changed the business environment in which today's accounting professionals operate (Pan & Perera 2012: 92; Chang & Hwang 2003: 441; Howieson 2003). These changes have culminated in heightened expectations of the workplace performance delivered by professional accountants, significantly challenging their current competencies (technical knowledge, skills, values, ethics and attitudes) (IAESB 2012: IES 3 revised, par. A2). In addition to sound technical knowledge, they are expected to have an ever-broadening range of skills to maintain their preparedness for the increasingly unpredictable demands of the changing business environment (Sin, Reid & Jones 2012: 2; Kavanagh et al. 2010; Paisey & Paisey 2010: 89; Hancock, Howieson, Kavanagh, Kent, Tempone & Segal 2009: 14; Webb, De Lange & O'Connell 2009: 183).

There is wide support in the literature for the notion that employers are looking for much more than specific academic subject knowledge in their new employees, and while the 'perfect home' for imparting these skills has not yet been finally agreed on, there is merit in the expectation that tertiary accounting education should provide graduates with these generic skills (Bui & Porter 2010: 33, 37; Ballantine & McCourt Larres 2009: 388). Generic skills are neither domain- nor discipline-specific

(Ballantine & McCourt Larres 2009: 388; Boyce, Williams, Kelly & Yee 2001: 37) and comprise those transferable skills essential for employability (Tempone, Kavanagh, Segal, Hancock, Howieson & Kent 2012; Sin et al. 2012: 2; De Lange, Jackling & Gut 2006: 366). They include the cognitive and soft skills required of graduates in order to apply their discipline-specific knowledge in the workplace (Jackson & Chapman 2012: 95), which are deemed necessary to enhance accounting graduates' employability. Other terms used in the literature that are essentially interchangeable with the concept of pervasive skills include professional, non-technical, transferable, soft, core, underpinning, critical, enabling, fundamental or employability skills (IAESB 2012: IES 3 revised, explanatory memorandum; Tempone et al. 2012; Kavanagh et al. 2010; Hancock et al. 2009: 28). For the purposes of this article, the terms 'generic' and 'pervasive' skills are used interchangeably.

The term 'generic skills' is widely used in the literature (Hancock et al. 2009: 14) and generally refers to communication (verbal and written), interpersonal interactions, critical thinking, problem-solving and analytical skills (Hartie, Kavanagh & Zraa 2011; Paisey & Paisey 2010: 89; Hassal, Joyce, Arquero Montaño & Anes 2005: 391, 392). Shuttleworth (2012: 246) distinguishes between basic academic skills (such as reading, writing, listening, financial literacy, IT skills) and higher-order cognitive skills (such as contextualisation, creative thinking, problem-solving, decision-making), ethics and professional skills, and personal qualities. Skills such as self-management, conflict resolution, lifelong learning, ethics, organisational awareness (business knowledge), business management and creative thinking are also regarded as generic skills (Jackson & Chapman 2012: 104, 105; Awayiga, Onumah & Tsamenyi 2010: 142, 143; Paisey & Paisey 2010: 89). In their comprehensive Australian study intended to establish the generic attributes required of accounting graduates to meet the profession's challenges over the next decade, Tempone et al. (2012) regard self-management, for example, as a generic skill, with a wide range of elements (or components) such as ambition; community engagement and social responsibility; hard work and dedication; a holistic and flexible approach to tasks; the ability to deal with complexity, uncertainty and pressure; intellectual capacity; displaying a well-rounded maturity; ability to work independently; and effective time management.

From the above, it is clear that there is no standard definition of generic skills, and that the term includes many elements or sub-categories (IAESB 2012: IES 3 revised, par. A3). Other factors such as the prevailing commercial or market needs, local business and social culture, the needs of a particular work environment (Tempone et al. 2012), and the ruling professional accounting bodies' interpretations of the domestic and globally accepted accounting policies and protocols all appear to have an impact on the definition of the concept of generic skills. In addition, the

International Accounting Education Standards Board (IAESB) has changed to a principles-based approach: the prescribed list of professional (or generic) skills areas as set out in its 2008 standard, *Professional Skills and General Education* (IAESB 2008: IES 3, par. 13–18) has been changed, and the revised IES 3 publication (*Initial Professional Development – Professional Skills)* now identifies learning outcomes for professional (or generic) skills (IAESB 2012: IES 3 revised, par. 7).

In its competency framework, SAICA (2008b) refers to pervasive skills as the professional qualities and skills that all chartered accountants (CAs) are expected to bring to all tasks – the 'how' of a CA's work. It recognises pervasive skills as falling into three categories, namely: ethical behaviour and professionalism, personal attributes and professional skills (SAICA 2008b: 12). As the CA profession is committed to retaining the confidence of clients, employers and the public, through an overriding commitment to integrity in all professional tasks, members of the profession should demonstrate ethical values and should have developed the personal qualities and professional skills necessary to conduct themselves as professionals (SAICA 2008b: 10–14). The latter interpretation of pervasive skills was used for the purposes of this study.

Teaching and learning methods to develop pervasive skills

According to the general concept, generic skills, and in particular generic skills statements, are not precise constructs (Hancock et al. 2009: 14) and form part of the debate on the nature and level of skills that new accounting graduates should already possess, and how and where these skills can best be acquired and developed (Hartie et al. 2011; Parris & Saville 2011: 16; Paisey & Paisey 2010: 91; De Lange et al. 2006: 382). A prominent theme in this debate relates to the discourse of this article: assuming that universities have a responsibility to teach pervasive/generic skills, how should they most effectively develop these generic skills in their students?

In answering this question, universities should consider the alignment of their teaching and assessment processes that are intended to develop generic skills (Webb et al. 2009: 185). Over the past years the requirement to develop generic skills among undergraduate accounting students, in order to prepare them for the workplace, has gained prominence in accounting curricula, but educators do not share a common understanding of either the nature of the outcomes from the teaching of generic skills, or of the teaching and learning processes that are best suited to facilitate the development of these outcomes (Barrie 2004: 263, 264). Based on their own individual understandings, educators have developed and implemented a number of pedagogies aimed to develop students' generic skills during their university education. These

include problem-based learning, case studies (Arquero Montaño, Cardoso & Joyce 2004: 208; Boyce et al. 2001: 55), work shadowing, business simulation (Gammie, Gammie & Cargill 2002: 73; Fortin & Legault 2010: 102), cooperative learning (Shuttleworth 2012: 253), project work, group work (Jackson, Watty, Lu & Lowe 2006: 79), and a variety of other activities (where the learner is directly in touch with the realities being studied (Webb et al. 2009: 185), which are collectively defined as experiential learning (Ballantine & McCourt Larres 2009: 389, 390; Hellier, Monk & Stevenson 2006).

There is wide support for the use of case studies or additional writing components among teachers in higher education as a means to develop the written communication skills of accounting graduates (Friedlan 1995: 60; Ashbaugh, Johnstone & Warfield 2002: 126; English, Bonanno, Ihnatko, Webb & Jones 1999: 238). In some instances, a dedicated module for the development of communication skills is used (Morgan 1997: 103). Recently in accounting education there has been an emphasis on the acquisition of written communication skills as a collaborative effort between English language teachers/specialists and accounting academics (Evans & Cable 2011: 315), while for the development of oral communication skills, accounting students are requested to participate in class discussions or presentations (Grace & Gilsdorf 2004: 166–171).

The acquisition of the principles of ethical conduct, professionalism and professional skills is achieved through the use of case studies, group discussions, in-class student presentations, individual and group research projects, simulations and role plays (Fortin & Legault 2010: 102, 103). Various permutations of the group work concept are used to develop the teamwork skills of accounting students (Gabbin & Wood 2008: 393, 394). In their study of final year undergraduate students taking an advanced accounting course at a UK university, Ballantine & McCourt Larres (2009: 398) found that cooperative learning (group learning with a more deliberate and robust structure with respect to group formation, instruction and management) enhances students' interpersonal and communication skills, specifically their verbal, listening and tolerance skills (Kennedy & Dull 2008). Dyball, Reid, Ross and Schoch (2007: 145) found that cooperative learning positively impacts on the development of generic skills relating to self-management, planning and organising. Blended learning, where face-to-face interactions with students are combined with online methods, enables accounting students to assume more responsibility for their learning (Abraham 2007: 7) and thereby increase self-management abilities (Hancock et al. 2009: 20).

Intellectually challenging assignments, interactive assignments and case studies are used to develop the critical thinking and problem-solving skills of accounting

students (Rich & Dereshiwsky 2011: 22; Hancock et al. 2009: 18; Tonge & Willett 2009: 213; Reinstein & Bayou 1997: 341). Problem-based learning assists students to think critically, to analyse and to solve complex problems (Hurt 2007: 297, Milne & McConnell 2001: 67), and this enables students to develop information literacy, communication skills, lifelong learning skills and technical knowledge (Hancock et al. 2009: 19). Work-integrated learning is used to facilitate integration of training/learning efforts between industry and the university (Subramaniam & Freudenberg 2007: 77). In their work-integrated learning experiences, students are exposed to the workplace during their tertiary education to obtain applied or problem-based knowledge of "real world situations" (Hancock et al. 2009: 21). Work placement appears to be an effective vehicle for the development of some generic skills, such as group working, meeting deadlines and coping with stress (Paisey & Paisey 2010: 104). Such learning programmes have been used to develop students' competencies and they are positively contributing towards life-long learning (Star & Hammer 2008: 238, 243).

Flowing from the above discussion, it is clear that the development of generic skills at universities requires that universities move away from passive or non-experiential teaching methods (where a subject expert tells it as it is), to a student-centred, more active or experiential learning approach, where the student is "roused from the role of passive listener to that of active respondent" (O'Leary & Stewart 2012).

Even though universities have responded by designing and delivering various teaching and learning initiatives that address skills development, they should not be regarded as surrogate employment and training agencies, and higher education can therefore not carry the onus of skills development alone (Jackson et al. 2006: 76; Gammie et al. 2002: 65). Much uncertainty is expressed in the literature as to the extent to which universities are responsible for skills development (Star & Hammer 2008: 238), and this is reflected in the continued dissatisfaction expressed by employers with the level of skills possessed by recent graduates from university accounting courses (Hesketh 2011: 6; De Villiers 2010: 2; Kavanagh et al. 2010). In their comprehensive study of perceptions of the roles of Australian universities and of accounting practices in the education of professional accountants, Kavanagh et al. (2010) found that the overwhelming majority of participants perceived universities to be responsible for the development of various generic skills, particularly communication, initiative and enterprise, problem-solving, self-management, and technological skills, in the period prior to entering employment. The responsibility for the development of other generic skills, including planning and organising, as well as teamwork, were perceived by the participants in this study to be equally shared by universities and employers (Kavanagh et al. 2010).

Methodology

This article is based on the 12 responses received from the heads of the departments (HoDs) offering SAICA-accredited undergraduate programmes at South African universities. Although these CA(SA)-focused programmes are currently offered by 15 of South Africa's 23 public universities (SAICA 2012; CHE 2010), only 14 universities were accredited at the time this research was conducted. Twelve of the 14 HoDs (86%) responded and participated in the research. Although the limited number of responses could cause one to question the value of the research, the response rate compares very favourably with the 20 responses from 38 public universities (53%) received by Hancock et al. (2009) in their investigation of the development and assessment of generic skills provided by accounting programmes accredited by Australian professional accounting bodies. Questionnaires were completed by the HoDs who were responsible for the strategic, academic and operational management of a department, as well as for its scholarly academic and professional education, and were therefore regarded as being the voice of a department. The data were captured on a spreadsheet and checked and reconciled by the authors. The content of open-ended questions was analysed by one author and reviewed by the other author.

Even though some generic skills, such as IT skills and ethics, have formed part of the SAICA-accredited undergraduate programmes for many years, the SAICA competency framework (SAICA 2010) represented a significant shift in focus in terms of teaching and learning pervasive skills (Hesketh 2011: 4), and this shift triggered this research project. Particulars of SAICA's competency framework were first released in 2008 (SAICA 2008a), and it was anticipated that by the time this research was initiated, the South African universities offering SAICA-accredited undergraduate programmes would have had time to re-align or change their programmes to make them compliant with the SAICA competency framework. Thus, during June 2011, the HoDs of accounting departments at all 14 South African universities offering SAICA-accredited undergraduate programmes were approached by email and invited to participate in the research. A questionnaire dated 14 June 2011 (the research instrument), was attached to these emails. HoDs were requested to respond by 24 June 2011.

The questionnaire was specifically developed to meet the objectives of the research: firstly, to determine the manner in which pervasive skills, in terms of the SAICA competency framework (SAICA 2010), were being offered and taught by South African universities with SAICA-accredited undergraduate programmes, and secondly to determine the perceptions of HoDs as to the extent to which their university's SAICA-accredited undergraduate programmes and workplace training should be held responsible for the development of specific pervasive skills.

The questionnaire was compiled by one of the authors and reviewed by the other author to ensure that no unreasonable demands were made; requests were made for information that HoDs could reasonably be expected to have; the questions were straightforward and could be readily answered; and the questionnaire format met the expectations of the survey (Salkind 2009: 142–145). A former HoD of a SAICA-accredited university examined and did a pilot run in completing the questionnaire before it was emailed to targeted participants.

Questions one, two and three of the questionnaire were intended to obtain information on how pervasive skills were being offered by universities in their SAICA-accredited undergraduate programmes. Question four requested HoDs to indicate, on a five-point Likert scale (ranging from 'not at all' to 'extensively'), their perceptions of where the responsibilities for the development of pervasive skills lay with the universities or with the employer. Question five requested information on how specific pervasive skills were being taught in these programmes. Questions six and seven were directed at determining whether ethics, as a pervasive skill in SAICA-accredited undergraduate programmes, was being offered, and if so, how it was being taught and assessed by the universities. Due to the length of this article, these findings will not be reported on here. The final question, question eight, was open-ended, which allowed HoDs the opportunity to offer any additional, relevant information on the teaching of pervasive skills in their university's SAICA-accredited programmes.

Only five of the HoDs responded by the initial deadline. A follow-up email was sent on 10 August, requesting responses to be returned by 24 August 2011. Three HoDs responded to this follow-up email, bringing the total responses received to eight. The remaining HoDs were personally approached during SAICA's meeting with HoDs held on 27 September 2011. By 15 November 2011, 12 of the 14 HoDs had responded, providing an acceptable response rate of 86%.

Discussion of findings

The research findings are discussed next, as they address the article's two objectives.

Objective 1: Offering and teaching of pervasive skills

Dedicated modules/courses for pervasive skills

The SAICA competency framework identifies three categories of pervasive skills, namely, ethical behaviour and professionalism, personal attributes and professional

skills (SAICA 2010: 19–30). Understanding how IT impacts on a CA's daily functions and routines, the ability to locate information, critical thinking, problem-solving, communication, as well as management and supervisory skills, all form part of professional skills (SAICA 2010: 25). All the responding HoDs indicated that their universities offered IT skills as a separate dedicated module/course in their SAICA-accredited undergraduate programmes, and ten of them (83%) also followed this practice for the teaching skills in ethical behaviour and professionalism. Five (50%) of the ten responding HoDs indicated that their dedicated modules/courses in ethical behaviour and professionalism were offered by their university's Department of Auditing, while three (30%) of the responding HoDs indicated that these modules/courses were presented by the Department of Philosophy, and the remaining two HoDs (20%), indicated that the modules/courses were presented by the Department of Business Management, and by the university's Business School. It is interesting to note that for half of the responding universities, the module/course in ethical behaviour and professionalism was presented by university departments or centres (Philosophy, Business Management or Business School) outside the sphere of accounting sciences (thus not in the Department of Auditing). While the reason for this decision was not researched, it was possibly an attempt to expose students to the broader social, cultural, economic and political dimensions of the discipline, more effectively accessed from outside the accounting domain. Practical considerations could also play a role, for example, where the Department of Philosophy was already presenting an ethics course/module for which students enrolled in SAICA-accredited accounting programmes also registered.

Only one of the responding HoDs indicated that their university had a separate module/course for each of the three categories of pervasive skills being taught in their SAICA-accredited undergraduate programme. Seven HoDs responded that they only offered IT skills, and ethical behaviour and professionalism, as separate modules/courses, and that the other pervasive skills were integrated into other modules/courses in their SAICA-accredited undergraduate programmes. It therefore appears that the practice of using a 'stand-alone' module/course for pervasive skills was favoured for dedicated IT skills and for ethical behaviour and professionalism modules/courses only, while in most cases the pervasive skills of personal attributes and other professional skills were offered and taught as part of other modules/courses in the SAICA-accredited undergraduate programmes.

Of the ten (83%) universities offering a dedicated ethical behaviour and professionalism module/course, nine (90%) responding HoDs reported that their module/course was presented on a semester basis (50% of an academic year) at the second-year level (i.e. for second-year students). The tenth HoD reported that this

module/course was offered at third-year level (level three) in its SAICA-accredited undergraduate programme.

For the dedicated IT skills module/course, there was much more variance on the level at which this module was offered. Three responding HoDs (25%) reported that their module/course was offered during the first and second years of their SAICA-accredited undergraduate programmes, while another responding HoD (8%) reported that this module/course was offered in all three years of its SAICA-accredited undergraduate programme. For the remaining eight universities, three responding HoDs (38%) reported that this module/course was presented only at first-year level, while three other responding HoDs indicated that it was presented only at second-year level. The remaining two HoDs (25%) indicated that it was presented as a third-year module/course in their university's SAICA-accredited undergraduate programmes.

From the above, it is clear that although the responding HoDs generally agreed that IT skills and ethical behaviour and professionalism should be offered as dedicated modules/courses, and while the majority supported the idea that the ethical behaviour and professionalism module/course should be presented at second-year level, the level at which the IT skills module/course should be offered in their SAICA-accredited undergraduate programmes varied significantly.

Integration of pervasive skills

While the majority of universities have dedicated teaching modules/courses for IT and for ethical behaviour and professionalism, as explained above, the exposure of students to the other categories of pervasive skills contained in the SAICA competency framework can be achieved by integrating them into other modules/courses in the SAICA-accredited undergraduate programmes. Although the structures of these 14 university undergraduate programmes vary, they all offer five core disciplines (financial accounting, taxation, management accounting, financial management and auditing) as majors at second-year and third-year levels. HoDs were then requested to indicate the extent (based on a five-point Likert scale varying from 'very little integration' to 'extensive integration', as used during the Barac study of 2009) to which of the different categories of pervasive skills in the SAICA competency framework were integrated in these five core disciplines in their SAICA-accredited undergraduate programmes. Table 1 presents this information.

It is clear from Table 1 that IT skills were integrated into the core disciplines (excluding auditing) to only a limited extent. This low inclusion rate could be attributed to the existence of dedicated IT skills module(s)/course(s) on universities'

Table 1: Integration of pervasive skills in core disciplines

Categories of pervasive skills	N	Fin Acc	Taxation	Man Acc	Fin Man	Auditing
Ethical behaviour and professionalism	12	2.7	2.7	2.7	2.8	4.0
Personal attributes	12	3.1	2.9	3.1	3.1	3.3
Professional skills	12	3.6	3.3	3.6	3.6	3.6
IT skills	12	2.1	1.9	2.1	2.3	3.3

Fin Acc = Financial Accounting, Man Acc = Management Accounting, Fin Man = Financial Management

Key: mean > 4.5 = extensive integration; 4.5 ≥ mean > 3.5 = much integration; 3.5 ≥ mean > 2.5 = some integration; 2.5 ≥ mean > 1.5 = limited integration; mean ≤ 1.5 = very little integration

SAICA-accredited undergraduate programmes, which required students to perform computer-based tasks and routines. The integration into auditing is understandable because students were exposed to computer-assisted auditing techniques (CAATS) or were presented with computerised audit working papers, which demanded a computer-based practical response. Given the rapid development and widespread integration of IT in today's accounting environment, the reinforcing of the learning of IT skills in the universities' core SAICA-accredited modules/courses should be considered, as this would ensure a wider appreciation and application of IT skills throughout these programmes.

The same tendency was identified with the ethical behaviour and professionalism skills set, with its limited integration into core disciplines other than auditing. The responding HoDs reported much integration of this pervasive skill with auditing. The key elements of this skill include protecting the public interest; acting competently with honesty and integrity; the ability to perform work with due care; maintaining objectivity and independence; the ability to avoid conflict of interest; the ability to protect confidentiality of information; maintaining and enhancing the profession's reputation; and adhering to the rules of professional conduct (SAICA 2010: 19), and these clearly show a very close relationship with the SAICA professional code of conduct and its disciplinary rules, South African legislation and regulations, and the International Auditing Standards. The high degree of integration into the auditing discipline is therefore understandable.

Ethical behaviour is a cornerstone of the accounting profession, especially in the light of South Africa's being placed in 69th position out of 176 countries surveyed in the *Corruption Perceptions Index 2012* (Transparency International 2012). The need to integrate ethical behaviour and professionalism into all the other core disciplines thus becomes much more compelling. This could be done by requiring students to critically consider the ethical implications of actions required in response

to problem-based scenarios and questions discussed in the modules/courses in the aforementioned disciplines. The levels of such critical consideration should relate to the level at which the core discipline is offered.

With respect to the personal attributes set of skills, the research findings show some integration into the core modules/courses. As indicated in the literature review, the teaching elements of this skills set include self-management; maintaining and demonstrating competence and leadership; adding value through innovation; managing change; treating others professionally; teamwork; time management; and developing the mindset to be a life-long learner. These could be addressed through a more student-centred teaching approach, coupled with active or experiential learning (O'Leary & Stewart 2012; Jackson et al. 2006: 55; Kern 2002: 251), and the relatively limited integration of this skill into other core disciplines indicates some opportunities for improvement.

Responding HoDs reported that they had achieved considerable integration of professional skills into the core modules/courses, while mean scores for the discipline of taxation were lower. As the elements of professional skills include analytical, problem-solving and communication skills (SAICA 2010: 25), a high level of integration into core disciplines was expected. The high level of integration could further be related to the aim of SAICA-accredited programmes, namely, to prepare students for the initial test of competence (ITC) (this is Part 1 of the SAICA qualifying examination, and consists of mini case-studies and problem-based questions that require well-developed problem-solving, analytical and communication skills). It is interesting to note that the integration of professional skills obtained the same mean score of 3.6 for all the core disciplines except taxation, suggesting a comparable level of integration into four of the five core disciplines.

Teaching and student learning of some elements of personal attributes and professional skills

HoDs were requested to explain their departmental teaching methods, and the learning methods and practices students used (or were required to use) in their SAICA-accredited undergraduate programmes, as they applied to the development among students of three elements of personal attributes (developing as a life-long learner, working effectively as a team member and mastering time management) and four elements of professional skills (gathering information and ideas, critical thinking, problem solving and communication). These elements were specifically selected by the authors because of their high prominence in the literature (refer to the second part of the literature review discussion on teaching and learning methods to develop pervasive skills). To provide clearer explanations of the concepts of critical

thinking, problem-solving and communication in the questionnaire, the definitions published by the International Education Standard (IES 3) (IAESB 2008) were provided. Table 2 provides an overview of the number of universities reporting the use of specific teaching methods and student learning practices. HoDs were requested to identify as many as possible of the teaching and/or learning methods or practices that they used, resulting in some row totals exceeding 12.

Table 2: Teaching and student learning methods and practices for some elements of specific pervasive skills

Teaching and learning methods and practices	Personal attributes			Professional skills			
	Life-long learner	Team member	Time management	Information and ideas	Critical thinking	Problem-solving	Communication
Simulated/practical projects	1		1	4	4	4	4
Team/group projects/work		10		1			
Research projects	1			2			
Study groups	1						
Group discussions							
Self-study	3						
Principles-based learning	2						
Case studies				4	4	4	1
Problem-based questions					1	1	
Essays/discussion type questions							3
Assignments	2	2	12	5	3	3	4
Tutorials		2		1	1	1	
Tests and examinations	2		12	3	6	6	7
Presentations							2
Study sources*	6			1			
Deadlines			12				
Lecture times			2				
Communication/ English modules							4

* including standards, regulations, laws and legislation

Although various teaching methods and practices were identified by responding HoDs as being in use by their universities specifically to develop their accounting

students as life-long learners, much reliance was also placed on the students' personal engagement with their study sources to achieve the same goal. Six of the 12 responding HoDs (50%) relied on the requirement to continually update study sources in core disciplines (to remain current) in order to develop their accounting students' acceptance of the need to be life-long learners. The argument presented was that the continual changes in accounting and auditing standards, in national laws and regulations, and in IT and other related fields, require all members of the profession, including students, to remain abreast of new developments. By keeping lectures and study material completely up to date, the intention was to make students aware that such changes will continue throughout their professional accounting careers, thus demonstrating the essential nature of the concept of life-long learning. Simulations, practicals, research projects, assignments, tests and examinations were also used to test students' understanding of new developments.

Responding HoDs from residential universities (11 in total, 92%) indicated that group work and projects were used to develop the skill of working effectively as a team member, and such teaching methods and practices have been reported on in the literature as being appropriate and effective (Gabbin & Wood 2008: 393, 394). The response from the only distance-learning university completing the survey indicated that although group work had not yet been formally introduced into its SAICA-accredited undergraduate programme, online groups would be established; meanwhile, the university's online student platform already makes provision for discussion forums, chat rooms and posts of 'frequently asked questions and answers'.

The findings of the study indicate that all the responding HoDs rely on strict deadlines set for projects and assignments, as well as the imposition of tight time limits for tests and examinations, to develop time management skills. Two of the responding HoDs indicated that the starting times of lectures were strictly applied and that late-comers were not given entrance to lecture venues at their universities, a policy that further contributes to the development of students' time management skills. The mere fact that the majority of the students enrolled for the SAICA-accredited undergraduate programme at the distance-learning university were also employed attests to their abilities to properly manage their time to meet both workplace and study requirements. The responding HoD from the distance-learning university also referred to their blended learning approach which, as discussed in the literature (Abraham 2007: 7; Hancock et al. 2009: 20), enables accounting students to assume more responsibility for their learning and therefore increases their self-management abilities.

Various teaching methods or practices were reportedly used to develop the professional skill element of gathering and developing information and ideas. It

is encouraging that the application of other types of projects and case studies was widely used, according to the responding HoDs, to develop this skill. However, only two responding HoDs (17%) indicated that research-based projects had been introduced in their SAICA-accredited undergraduate programmes. The limited exposure of accounting students to research in their SAICA-accredited programmes is reflected in the minimal involvement of South African chartered accountants in published research contributions (Steenkamp 2009: 93), and represents an area for the profession to improve and to nurture the creation of new knowledge and best practices. A small research component or task could be integrated in core academic disciplines, which could stimulate accounting students to develop new ideas and information by building arguments, solving problems, applying knowledge, and drawing abstractions and making generalisations to address other situations, as reflected in Kolb's learning cycle (1984). The latter recognises that when learning starts with experience, students are intrinsically motivated, and when tasks require active reflection on new knowledge in relation to experience (Kolb 1984: 132–161), the learning is real (Hesketh 2011: 11).

An interesting finding is that responding HoDs indicated that the teaching and learning methods and practices used to develop critical thinking skills were the same as those used to develop problem-solving skills. This finding agrees with previous research (Rich & Dereshiwsky 2011: 22; Hancock et al. 2009: 18; Tonge & Willet 2009: 213; Hurt 2007: 297, Milne & McConnell 2001: 67). Eight of the 12 respondents to this question (66%) employed case studies and/or special or practical projects to develop critical thinking skills and problem-solving skills. Reliance on tutorials, assignment questions, tests and examinations for such development was widely supported by nine (75%) of the responding HoDs.

Two of the otherwise responsive HoDs did not complete the section on the teaching of communication skills. According to the HoD from the distance-learning university, a separate communication module was to be introduced the following year as part of the university's revised undergraduate SAICA-accredited programme. The remaining nine responding HoDs all indicated that participation in some form of an additional writing component was required of students enrolled in their SAICA-accredited undergraduate programmes in order to develop their communication skills. They further indicated that in assessing all assignments, tests and examinations, the teaching staff were also looking for proper language usage and the employment of some form of logic. This requirement extended to the submission of reports on discussion-type questions, projects and case studies, as well as to the essays students submitted. These practices correspond with teaching methods and practices reported on in the literature (Friedlan 1995: 60; Ashbaugh et al. 2002: 126, English et al.

1999: 238; Hancock et al. 2009: 11–12). Four of the nine (44%) responding HoDs regarded the participation in a specific module/course on communication or English language in their SAICA-accredited undergraduate programmes as further contributing to the development of the students' communication skills. This is also in line with the practice reported by Evans and Cable (2011: 315) of using specialist English language teachers in collaboration with accounting academics. One of the responding HoDs reported that his/her university required students in the SAICA-accredited undergraduate programme to participate in a Toastmasters course (a course presented by an non-profit educational organisation that operates worldwide for the purpose of helping attendees improve their communication, public speaking and leadership skills), and two other responding HoDs indicated that their students in this programme had to make oral presentations – also an approach supported by the literature, for example Grace & Gilsdorf (2004: 166–171) – as part of their efforts to develop communication skills.

Objective 2: Perceptions of ownership of the responsibility for the development of specific pervasive skills

The literature supports the view that the responsibility for the development of pervasive skills does not rest solely with higher education, because so much ongoing development occurs in the workplace (Jackson et al. 2006: 76; Gammie et al. 2002: 65). With this notion in mind, HoDs were requested to give their views on the extent to which the elements of the three categories of pervasive skills (ethical behaviour and professionalism, personal attributes and professional skills) were being developed in their SAICA-accredited undergraduate programmes (both in dedicated pervasive skills modules and courses, and through integration into core disciplines), and their responses were compared with their views on the extent to which they believed that development should take place in the workplace. HoDs were requested to use a five-point Likert scale varying from 'very little reliance' to 'extensive reliance' to be placed on either universities or the workplace for the development of pervasive skills, similar to the scale used during the Barac study (2009). These results, presented as mean scores, are shown in Table 3.

Table 3: Responsibility for development of pervasive skills: higher education versus workplace

Categories and elements of pervasive skills	N	SAICA-accredited undergraduate programme	Workplace	Z	Sig. (2-tailed) at .05 level
Ethical behaviour and professionalism					
Protects public interest	12	3.2	3.8		
Acts competently with honesty and integrity	12	4.2	4.4		
Carries out work with due care	12	3.5	4.2		
Maintains objectivity and independence	12	3.6	4.2		
Avoids conflict of interest	12	3.4	4.4		
Protects the confidentiality of information	12	3.5	4.4		
Maintains and enhances the profession's reputation	12	3.4	4.5	-2.176	.030
Adheres to the rules of professional conduct	12	3.8	4.5		
Personal attributes					
Effective self-management	12	3.8	4.6	-2.271	.023
Demonstrates leadership and initiative	12	2.9	3.8	-2.310	.021
Maintains and demonstrates competence	12	2.7	4.2	-2.549	.011
Strives to add value in an innovative manner	12	2.7	4.0	-2.724	.006
Effective change management	12	2.8	3.2		
Treats others in a professional manner	12	3.5	4.3	-2.460	.014
Understands the national and international environment	12	3.1	4.0	-2.332	.020
Life-long learner	12	3.4	4.4	-2.428	.015
Works effectively as a team member	12	3.1	4.3	-2.090	.037
Effective time management	12	4.1	4.8	-2.070	.038
Professional skills					
Obtain information	12	3.8	4.2		
Critical thinking	12	3.9	4.4	-2.121	.034
Problem-solving	12	3.8	4.4	-2.333	.020
Effective and efficient communication	12	3.8	4.4	-2.271	.023
Management and supervision	12	2.6	3.8	-2.392	.017
Understands how IT impacts a CA's daily functions and routines	12	3.4	4.2	-2.271	.023
Consideration of basic legal concepts	12	3.9	3.9		

Fin Acc = Financial Accounting, Man Acc = Management Accounting, Fin Man = Financial Management

Key: mean > 4.5 = extensive reliance; 4.5 ≥ mean > 3.5 = much reliance; 3.5 ≥ mean > 2.5 = some reliance; 2.5 ≥ mean > 1.5 = limited reliance; mean ≤ 1.5 = very little reliance

With the exception of only one pervasive skill (the professional skill consideration of basic legal concepts), the mean score for the other 24 listed skill statements was higher for development in the workplace than in the SAICA-accredited undergraduate

programmes (Table 3). This could be an indication that responding HoDs regarded the development of pervasive skills for prospective chartered accountants to be a shared responsibility between universities and their training environment, with a higher degree of reliance being placed on the training environment for the development of such skills.

The Wilcoxon signed-ranked test, a nonparametric test, was used to test for statistically significant differences between the SAICA-accredited undergraduate programme and the workplace as the primary responsibility vehicle for pervasive skills development, as reflected in each of the 25 statements. The Wilcoxon signed-rank test considers information about both the sign of the differences and the magnitude of the differences between pairs. The results, as reflected in the dark shaded rows in Table 3, indicate that for almost all the personal attributes (nine of the ten listed in Table 3) and professional skills (five of the seven listed in Table 3), and the ethical behaviour and professionalism skills to maintain and enhance the profession's reputation, statistically significant differences were found at the 1% or 5% levels. In all instances, the HoDs perceived workplace training as being primarily responsible for the development of these pervasive skills. The same test (Wilcoxon signed-rank) was performed for the combined scores of the three categories of pervasive skills. Once again the results indicated statistically significant differences, with z-values amounting to -2.091 ($p < 0.05$), -2.703 ($p < 0.01$) and -2.673 ($p < 0.01$) for ethical behaviour and professionalism, personal attributes and professional skills respectively, demonstrating that HoDs perceived that the training environment is primarily responsible for the development of the pervasive skills of prospective chartered accountants.

Various studies in the literature reflect a contrasting view from the one above. For example, in their comprehensive study of perceptions of the role of Australian universities and accounting practices in the education of professional accountants, Kavanagh et al. (2010) found that the overwhelming majority of participants, namely employers, perceived universities to be responsible for the development of various generic skills. Various examples are also found in the literature where employers expressed their dissatisfaction with the generic skills development of accounting students (Hesketh 2011: 6; De Villiers 2010: 2; Kavanagh et al. 2010), which could serve as an indication that employers have high expectations that generic skills development should be undertaken by universities. Hancock et al. (2009: 47) also found that the overwhelming views of employers were that it is the university's responsibility to develop non-technical or pervasive skills among graduates. The results of this study (refer to Table 3) cast doubt on whether South African universities will position their accounting departments to meet this expectation. These results

provide a strong endorsement of the need for most of the development of pervasive skills to take place in the workplace. These conflicting views on the responsibility for the development of pervasive skills pose a significant challenge to the profession and educators in assuring the competence of future South African accountants. Future research should add to the debate.

Responding HoDs perceived that much reliance could be placed on their SAICA-accredited undergraduate programmes to develop the skill to adhere to the rules of professional conduct. This could be ascribed to their first-hand awareness of the extensive coverage of the SAICA Code of Professional Conduct, disciplinary rules, and laws and regulations in the auditing modules/courses of their SAICA-accredited undergraduate programmes, an awareness not readily apparent to employers.

The findings of the research show that responding HoDs perceived that more reliance should be placed on the training environment/workplace than on the universities' SAICA-accredited undergraduate programmes for the development of personal attributes. To develop effective time management skills, the HoDs perceived that extensive reliance could be placed on the workplace training environment, possibly because the fee structures of practising accountants and auditors are generally directly related to time spent on the task. It is interesting to note that responding HoDs perceived that much reliance could also be placed on the university environment and their SAICA-accredited undergraduate programmes to develop time management skills. The same perception was held by responding HoDs in relation to the element of self-management. This is perhaps an acknowledgement that students need to manage their time and themselves properly to complete their studies. There was also a lower perceived degree of reliance on the training environment for developing the personal attribute of 'effective change management', which could possibly be ascribed to the notion that a trainee accountant, due to the nature of his/her duties and responsibilities, would not be placed in a position to manage change.

The responding HoDs perceived that much reliance could be placed on the training environment, as well as on the university environment and their SAICA-accredited undergraduate programmes, for the development of almost all the elements of professional skills. The responding HoDs perceived only some reliance on the university environment and their SAICA-accredited undergraduate programmes for the development of the elements to manage and supervise as well as to understand the impacts of IT on a CA's daily functions and routines. The views relating to the management and supervision element could possibly be ascribed to an awareness of the limited opportunities students have to fulfil a management or supervisory role.

Conclusions, limitations, recommendations and areas for future research

Accounting graduates are expected to have a broad skills set to meet the demands of ongoing changes in the business environment. SAICA has responded to this need by emphasising the mastery of pervasive skills in its competency framework, and in its expectation that South African universities offering its accredited programmes should produce graduates able to demonstrate such skills at levels acceptable in the workplace. This study is based on the views of HoDs offering SAICA-accredited programmes. Although HoDs are regarded as the strategic, academic and operational managers of a department, only their perceptions were considered, which could be regarded as a limitation of the study. The study found that although the development of pervasive skills is an outcome included in SAICA-accredited undergraduate programmes, offerings within such programmes vary. IT skills and ethical behaviour and professionalism (mostly at second-year level) are generally included as dedicated modules/courses in SAICA-accredited undergraduate programmes.

The study found that, with the exception of auditing, IT skills were integrated into the core disciplines of SAICA-accredited undergraduate programmes to only a limited extent. Given the continual development and wide application of IT in today's accounting environment, the learning of IT skills (currently taught in foundation years, and sometimes beyond), by means of a dedicated module/course, in core disciplines at third-year level of the SAICA-accredited programmes, should be considered.

Limited integration of the ethical behaviour and professionalism skill into core disciplines other than auditing was also found. As ethical behaviour is a cornerstone of the accounting profession, and especially in light of the high levels of corruption prevalent in South Africa, the lack of integration of this skill into the other core disciplines at advanced levels of the SAICA-accredited undergraduate programmes could be regarded as a weakness. More purposeful and effective integration into final-year taxation, management accounting, financial management and financial accounting modules is suggested. This could be done by requesting students to critically consider ethical implications in scenarios of problem-based questions. Future research could identify teaching methods that effectively achieve this objective.

The study investigated teaching and learning methods and practices for some elements of personal attributes and professional skills. The application of these varied in effectiveness and extent, and although many agree with conclusions reported in the literature, the responses of HoDs reveal that much reliance is still placed on traditional teaching practices such as assignments, examinations and tests for the development of these skills. To develop accounting students into life-long learners, much reliance continues to be placed on the students' engagement with

new developments in their core disciplines. The active engagement of students was identified through HoDs who reported on the incorporation of group work, group projects and simulations into their SAICA-accredited undergraduate programmes.

A concern is the limited introduction of research-focused projects in SAICA-accredited undergraduate programmes. Accounting students' development of higher-order cognitive skills (such as reasoning, contextualisation, creative thinking, decision-making and problem-solving) could be hampered by such limited exposure. The level seven descriptors of the South African National Qualifications Framework (SAQA 2012: 10) allow for such development through research-focused projects by requiring graduates to demonstrate the ability to develop and communicate their ideas and opinions in well-formulated arguments, using appropriate academic, professional or occupational discourse. It is therefore recommended that a small research component or task be integrated into core disciplines in the final year of the SAICA-accredited undergraduate programme.

An interesting finding of the study is that responding HoDs perceive the workplace to be more responsible than universities for the development of some pervasive skills, especially personal attributes and professional skills. Statistical analysis showed the significance of these perceptions. This finding is in contrast with the views of employers reported in the literature, namely that employers expect universities to produce market-ready accounting graduates, who require the minimum of additional investment before fulfilling their work commitments. Future studies, possibly qualitative in nature, could investigate pervasive skills development paths followed or offered by professional accounting firms, particularly the challenges they face, the interventions employed, and the outcomes ultimately achieved. Such information would enable accounting educators to more accurately assess the gap between the pervasive skills students are exposed to during university education, and the limitations employers have to address during on-the-first-job training. This would contribute to the debate on employability as a desirable and deliverable outcome of a university education. Although this is no easy task, especially given the high demands of employers for skilled graduates and the challenges faced by universities to develop such skills, focused research has the potential to identify the complementary roles of educators and practitioners in developing the pervasive skills set of future accounting professionals.

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