Are the knowledge areas covered by dedicated internal auditing programmes currently offered by South African public universities meeting expectations?

K Barac

Department of Auditing
University of Pretoria

KN Motubatse

Department of Auditing
Tshwane University of Technology

LJ Erasmus

Department of Public Sector Finance
Tshwane University of Technology

JM van Staden

Department of Auditing
University of South Africa

ABSTRACT

The role of internal auditors has changed especially dramatically over the last 20 years, with resultant challenges to their formally acquired competencies. In response, the internal auditing profession regularly updates its competency framework and its global internal audit curriculum to reflect these developments and the changing expectations of internal audit's stakeholders, including those relating to the required knowledge areas. Very little research has been done on internal audit education in South Africa, and no studies have focused on identifying and understanding the knowledge areas being covered in higher education institutions. This article explores the latter by identifying the knowledge areas currently being covered by dedicated internal auditing programmes at South African universities, determining whether the expectations of global internal audit stakeholders regarding internal audit knowledge requirements has similarities with the expectations of their South African counterparts, and establishing whether they are being met by formal internal audit education programmes offered by South Africa's publicly funded higher education institutions. A content analysis of knowledge areas covered by these South African universities' courses was performed. A similar analysis was performed on the secondary data contained in the 2010 CBOK survey, in order to determine stakeholders' knowledge requirement expectations. A comparative analysis was then carried out using the university programme content analysis and the secondary data's indications of stakeholders' expectations. The study found that the South African programmes cover nearly all the knowledge areas of the profession's competency framework and globally recognised internal audit curriculum, which generally correlates with the expectations of internal audit's stakeholders internationally and in South Africa. It was further revealed that South African internal audit stakeholders' expectations and rankings of the importance of the official knowledge areas do not differ significantly from those held by stakeholders from the rest of Africa, and that stakeholders in Australia and North America display similar tendencies, also without statistically significant differences.

CIA	Certified Internal Auditor	IIARF	Institute of Internal Auditors Research Foundation
DHET	Department of Higher Education and Training		
HEI	Higher Education Institutions	IPPF	International Professional Practices Framework
IAEP	Internal Audit Education Partnership		
IAF	Internal audit function	SA	South Africa

1 INTRODUCTION

Internal audit activities have evolved from being simple administrative functions intended merely to ensure compliance with rules and regulations, to check documents, to count assets and to issue reports, into an independent assurance and consultancy activity that now adds significantly more value and improves organisations' operational competencies (Arena & Azzone 2009:44; Morariu & Crecană 2009; Van Gansberghe 2005:69). This expansion of internal audit's activities has paralleled an acceleration in the changing demands being made on internal auditors, which in turn has resulted in revolutionary changes in the competencies (knowledge, skills and attitudes) required by internal auditors.

The internal audit profession has responded by developing a competency framework that is based on a body of knowledge which has been systematically built up over time (Institute of Internal Auditors Research Foundation (IIARF) 2007, 2010/2011; Institute of Internal Auditors Incorporated) (IIA(Inc)) 2012b). The adoption of the competency framework, based on the internal audit profession's required body of knowledge, has fuelled the debate concerning the future of internal audit education. Earlier research on internal audit education and training focused on skills development (Ernst & Young 2008:10) or on identifying core competencies looked for in internal auditors (Research Foundation 2007, 2010/2011; Burnaby, Hass & Abdolmohammadi 2006:857-959). Sadler, Marais and Fourie (2008:130-131) analysed internal auditors' educational levels and qualifications relative to their ability to comply with internal auditing standards.

The literature search did not reveal any studies that explored whether internal audit education was succeeding in equipping internal auditing graduates with the technical knowledge desired or expected by the internal audit profession in general, and employers in particular. In the related fields of accounting education and external audit education, a number of such studies have been carried out (Crawford, Helliar & Monk 2011:128; Barac 2009:23; Bui & Porter 2007:23-25; Humphrey 2005:346-349; Tan, Fowler & Hawkes 2004:64; Howieson 2003:100; Albrecht & Sack 2000:1-4; 13-17 and 43-58).

The limited research done on internal audit education in South Africa includes the discussion by Fourie (2008/9:37-40; 2008) on internal audit education and cooperative education, where the emphasis was placed on internal audit skills requirements and work-integrated learning. A study by Steyn and Plant (2009:990) compared the education and training considerations specific to South African internal auditors with the corresponding requirements

applicable to other South African professional and accounting bodies.

This study attempts to add to the body of knowledge of South African internal audit by relating the knowledge requirement expectations of various practising internal auditors, internal audit service providers and academics, both globally and in South Africa, to current internal audit higher education programmes in South Africa. This research supports, with hard data, the sentiment in the statement by Mr Nzimande, the Minister of Higher Education and Training (DHET) (DHET 2012b:ix) in the *Green paper for post-school education and training,* that requires higher education institutions (HEIs) to be responsible for ensuring that those entering the labour market are competent to be productive, flexible and innovative and are able to earn sustainable livelihoods in a rapidly changing economy.

The objectives of this article are:

- To determine the knowledge areas covered by dedicated internal auditing programmes offered by publicly funded higher education institutions (public universities) in South Africa.
- To determine whether the internal auditing knowledge requirement expectations of various internationally practising internal auditors and their staff, as well as internal audit service providers and their staff (internal audit stakeholders) match those of their South African counterparts.
- To determine whether internal audit education in South Africa's publicly funded higher education institutions (as identified in the first objective above) cover the required knowledge areas (as identified in the second objective above).

This research, which has broken relatively new ground, could provide a foundation for future research. This research benefits the South African internal audit profession by revealing the nature and extent of perceptions held by internal audit stakeholders of the knowledge requirements for today's internal auditors. The Institute of Internal Auditors (South Africa) (IIA SA) could use this information to develop parameters for education programmes that accurately complement its competency framework. In addition, the study could assist tertiary institutions to assess the relative importance of knowledge areas during internal audit curriculum development. The findings of the study could give internal auditing academics and scholars insight into market expectations (based on internal audit stakeholder perceptions). Finally, at a theoretical level the findings are important in that they expand the relatively unexplored area of internal audit education in the South African context.

2 LITERATURE REVIEW

Over the years the nature of internal auditing as a profession has changed dramatically (Arena & Azzone 2009:44; Morariu & Crecanã 2009; Van Gansberghe 2005:69). The focus of interest of an internal audit function (IAF) has shifted from a traditional compliance audit role to that of a value-adding role (Cooper, Leung & Wong 2006:828 and 829; Abdolmohammadi, Burnaby & Hass 2006:814; Carcello, Hermanson & Raghunandan 2005:69; Van Peursem 2004:379; Spira & Page 2003:657). Pressure for change has been generated by the need to strengthen regulatory frameworks in order to restore investor confidence and to bring about greater transparency and accountability in corporate affairs (Davies & Schlitzer 2008:532). Other pressing factors, such as advances in technology, globalisation, developments in corporate governance and increasing complexity and sophistication of business operations, have further contributed to the evolution of internal audit activities (IIARF 2010/2011:vii).

These changes have heightened general expectations of internal auditors' abilities and outputs, with corresponding challenges to upgrade their traditional competencies (technical knowledge, skills and attitudes) (Hass, Abdolmohammadi & Burnaby 2006:842). A broader range of competencies are now demanded (Specklé, Van Elten & Kruis 2007:103) to enable internal auditors to cope with the extensive changes and growing complexities that characterise today's business environment (Sumners & Soileau 2008:7-9; Oxner & Oxner 2006; Harrington 2008).

The internal audit profession has responded to this challenge by developing and adopting a competency framework for internal auditors (IIA(Inc) 2012b) based on a body of knowledge that has been systematically built up by carefully monitoring developments in internal audit practice in the dynamically changing business environment. By critically analysing these trends and expectations the IIA has been able to maintain the profession's relevance and ability to add value (IIARF 2010/2011). The six CBOK studies on the common body of knowledge of internal auditing, performed in 1972, 1985, 1991, 1999, 2006 and 2010 under the auspices of the IIARF, have contributed significantly towards achieving this objective (Abdolmohammadi *et al* 2006:811-821; IIA Research Foundation 2007, 2010/2011).

As education is regarded as the foundation of the internal auditing profession, the specific body of knowledge for internal auditors is pivotal to the profession's endeavour to enhance the professional status of the discipline (IIA(Inc) 2012b; Steyn & Plant 2009:991). In its competency framework the IIA(Inc) sets out the knowledge areas, skills, tools and techniques that trainees are expected to master on their way to becoming competent internal auditors (IIA(Inc) 2012b). They must be able to perform to an acceptable standard in the dynamic world they will encounter upon graduation, and to resolve the ethical dilemmas that they are likely to face during their professional careers (Gonzalo & Garvey 2005:431). Not only should internal audit educators cover core knowledge areas in curricula, as detailed by the competency framework, but such curricula should be updated regularly through a review of workplace requirements and the assessment of the impact of pertinent developments on them. This will help to ensure that the body of knowledge remains relevant (International Federation of Accountants (IFAC) 2003:9).

Current literature supports the notion that in developing new curricula (across the spectrum of professions), educators should seek input from practitioners, thereby ensuring that education of professionals remains relevant (Rebele 2002:18, Collier & Wilson 1994). Copeland (2002:11) observes that the relevance of curricula is paramount in such an endeavour, and cautions: "If we want practitioners to use the work output of academia, we must listen to what (they) need..." This study is an attempt to do just that; it identifies the expectations of practising internal auditors and their staff, as well as those of internal audit service providers and their staff, both globally and in South Africa, to internal auditing knowledge areas currently covered in dedicated internal auditing programmes offered by public universities in South Africa.

In the following section knowledge areas prescribed by the competency framework of the internal audit profession are discussed, with specific reference to knowledge areas covered by the global internal audit curriculum of the IIA(Inc). This is followed by an overview of the knowledge areas currently covered in the dedicated internal auditing programmes of South African public universities.

2.1 Global internal audit knowledge requirements

The IIA(Inc) was established in 1941 in the USA, and is the internal audit profession's global voice, its recognised authority, acknowledged leader, chief advocate and principal educator (IIA(Inc) 2012a). In its endeavour to enhance the standards of internal audit education in worldwide institutions of higher education, the IIA(Inc), with input from educators and practitioners, has developed a robust academic programme that prepares students for the profession of internal auditing (IIA(Inc) 2012b).

The competency framework

The IIA(Inc)'s competency framework forms the backbone of its academic programme. It outlines the minimum levels of knowledge and skills needed to maintain an effective IAF (IIA(Inc) 2012b). Four areas are covered (see Table 1). Each area comprises six levels of proficiency, from internal audit staff with less than one year's experience to chief audit executives (CAEs) at the highest level. The four areas are: internal audit standards, theory and methodology; tools and techniques; interpersonal (professional) skills and knowledge areas (IIA(Inc) 2012b).

Table 1: IIA(Inc) competency framework for internal auditors

Competency areas			
Area 1 **Internal audit standards, theory & methodology**	**Area 2** **Tools & Techniques**	**Area 3** **Interpersonal skills**	**Area 4** **Knowledge areas**
Attribute standards:			
Purpose, authority, responsibility & assurance *(area 2 in Table 3)*	Operational & management research *(area 3 in Table 3)*	Time management, achieving goals & tasks & organizational skills	Financial accounting & Finance *(area 1 in Table 3)*
Independence & Objectivity *(area 2 in Table 3)*	Forecasting *(area 3 in Table 3)*	Communication	Regulatory & legal *(areas 7 & 16 in Table 3)*
Proficiency & due professional care *(area 2 in Table 3)*	Project management *(area 3 in Table 3)*	General management	Economics *(area 8 in Table 3)*
Quality assurance *(could be included in area 2 or 22 in Table 3)*	Business process Analysis *(area 3 in Table 3)*	Leadership	Quality *(areas 2 & 22 in Table 3)*
Performance standards:			
Managing the IAF *(area 22 in Table 3)*	Balanced scorecard *(area 3 in Table 3)*	Change catalyst	Ethics & fraud *(areas 17 & 20 in Table 3)*
Nature of work *(area 2 in Table 3)*	Risk & control assessment techniques *(area 22 in Table 3)*	Conflict management	Information technology (IT) *(areas 4 & 19 in Table 3)*
Engagement planning *(area 2 in Table 3)*	Data collection & analysis *(areas 23 & 24 in Table 3)*	Building bonds	Governance, risk & control *(areas 6, 16, 18 & 22 in Table 3)*
Performing engagement *(area 2 in Table 3)*	Problem solving	Collaboration & Cooperation	Organisational theory & behavior *(area 5 in Table 3)*
Communicating results *(area 11 in Table 3)*	CAATS	Team capabilities	
Monitoring progress *(area 2 in Table 3)*			
Management acceptance of risk *(area 6 in Table 3)*			

(IIA(Inc) 2012b)

The global internal audit curriculum

A further development by the IIA(Inc) relating to internal auditing education is its global internal audit curriculum, which provides guidance to those who want to develop and teach internal auditing courses (IIA(Inc) 2012c). This curriculum was developed using the IIA(Inc)'s competency framework, the syllabus for the professional examination (Certified Internal Auditor (CIA)), and educator and practitioner input. Six core areas have been identified and are shown in Table 2 below. Advanced internal auditing topics – developing and managing an IAF; risk management; advanced organisational governance, and information technology – have all been identified as supplementary knowledge areas (IIA(Inc) 2012c).

Table 2: IIA(Inc) global internal audit curriculum

Knowledge area	Topics to be covered
Area 1 Principles of internal auditing *(areas 2, 16, 17, 20 & 21 in Table 3)*	Definitions, roles and responsibilities of internal auditors; types of audits/engagements; International Professional Practices Framework (IPPF); engagement process; organizational governance; risks and controls; reporting ethics, fraud.
Area 2 Ethics and organizational governance *(areas 16, 17 & 18 in Table 3)*	Ethics (personal, professional and business); internal audit responsibilities and role in ethical activities; IIA standards; business ethics; organizational behavior; internal auditing in organizations' governance.
Area 3 Fraud and Forensics *(area 20 in Table 3)*	Internal auditors' responsibilities and roles; fraud prevention, fraud investigation and techniques; fraud schemes; fraud reporting; ethics in fraud prevention.
Area 4 IT Auditing *(area 19 in Table 3)*	Definitions; IT strategies, plans and budgets; programme development and change; IT security processes; IT infrastructure, auditing and management skills.
Area 5 Business communication skills *(area 11 in Table 3)*	Communication processes in organizations; elements of effective communication; interpersonal communication skills; performing interviews; written, oral and graphic communication.
Area 6 Internship and/or case studies, or internal audit projects *(area 23 & 24 in Table 3)*	The application of knowledge.

(IIA(Inc) 2012c)

This global internal audit curriculum is directed at people who want to develop and teach internal auditing courses. The curriculum provides information on undergraduate and postgraduate degree programmes' content and structure that will result in endorsement in terms of the IIA's Internal Auditing Education Partnership (IAEP) programme (IIA(Inc) 2012d). This programme was developed to respond to the growing interest in internal audit education as well as to the expectations of internal auditing practitioners who would like to hire students who already possess a well-rounded set of skills for practising internal auditing (IIA(Inc) 2012d). An undergraduate or postgraduate degree with a focus on internal auditing is only endorsed by the IIA(Inc) as an IAEP programme after a rigorously interrogated application process, and is monitored by the IIA's Academic Relations Committee (ARC) through a partnership

between the HEI and the local IIA Chapter/Institute (IIA(Inc) 2012d).

The IAEP programme offers three levels of participation: centres for internal auditing excellence; comprehensive internal auditing programmes, and internal audit foundation programmes. Centres for internal auditing excellence teach a curriculum within an HEI degree programme (undergraduate and/or postgraduate) that consists of a minimum of four courses specific to the internal auditing profession, and meets requirements relating to quality, sustainability, volume of students completing the programme and longevity of the programme. The curricula of comprehensive internal auditing programmes offered by HEIs in degree programmes (undergraduate and/or postgraduate) consist of three courses related to the internal auditing profession, while those related to internal auditing foundation programmes include a minimum of two internal audit courses for at least one year (IIA(Inc) 2012d).

2.2 Internal audit education in South Africa

South Africa's higher education system consists of 23 public HEIs (DHET 2012a; CHE 2012), of which 11 are universities, six comprehensive universities (offering general and professionally orientated programmes from entrance level (certificate) through to research level (PHD), and six universities of technology (focusing on vocational and professional programmes). New developments in the South African higher education landscape are anticipated in the *Green paper for post-school education and training* issued by the DHET (DHET 2012b) on 13 January 2012.

Of the six universities of technology, five (Cape Peninsula University of Technology (CPUT), Central University of Technology (CUT), Durban University of Technology (DUT), Tshwane University of Technology (TUT) and Vaal University of Technology (VUT)) offer dedicated internal auditing programmes. The dedicated internal auditing programmes of DUT consist of a National Diploma in Internal Auditing (a three-year programme) and a Bachelor of Technology in Internal Auditing (on completion of a further one-year programme with the diploma as an entry prerequisite) (DUT 2012). The other universities of technology (CPUT, CUT, TUT, VUT) follow a similar structure in that their basic degree is a National Higher Certificate in Accounting or Accountancy, to which the National Diploma in Internal Auditing and the dedicated internal auditing Baccalaureus Technologiae degree (the BTech degree in Internal Auditing) can be added. Students may exit the system after completing each of the aforementioned qualifications (CPUT 2012; CUT 2012; TUT 2012; VUT 2012). At TUT these programmes are structured as a two-year National Higher Certificate in Accountancy, which could be followed by a one-year National Diploma in Internal Auditing, after which a student could enrol for a dedicated BTech degree in Internal Auditing, which requires one year of further study. Effectively this amounts to a four-year dedicated internal auditing programme (TUT 2012). As higher (postgraduate) degrees, CPUT and TUT both offer a Magister Technologiae in Internal Auditing for which a dissertation is required, and a Doctor Technologiae in Internal Auditing for which the

requirement is a thesis in the field of internal auditing (CPUT 2012; TUT 2012).

Three of South Africa's six comprehensive universities, the University of South Africa (Unisa), the Walter Sisulu University (WSU) and the Nelson Mandela Metropolitan University (NMMU), offer dedicated internal auditing undergraduate and postgraduate programmes, while the University of Johannesburg (UJ), also a comprehensive university, offers a similar programme only at postgraduate level (WSU 2012; NMMU 2012; UJ 2012; Unisa 2012). Dedicated internal auditing programmes at comprehensive universities vary. WSU follows an approach similar to that of universities of technology, with a two-year Higher Certificate in Accountancy as the basis, followed by a one-year National Diploma in Internal Auditing. After this a further year of study is required to obtain the Bachelor in Technology in Internal Auditing (WSU 2012). NMMU offers a three-year National Diploma in Internal Auditing programme, while its three-year BCom Accounting degree may be followed by a one-year Postgraduate Diploma in Internal Auditing (NMMU 2012). UJ offers a dedicated postgraduate qualification in internal auditing, the one-year honours degree BCom Hons in Accounting with specialisation in Internal Auditing (UJ 2012). Unisa's dedicated internal auditing programmes consist of a three-year degree, the BCompt Internal Auditing, which may be followed by a one-year Postgraduate Diploma in Internal Auditing (Unisa 2012). Higher degrees at master's and doctoral levels (requiring dissertations and theses in the field of internal auditing) are offered by Unisa and UJ (Unisa 2012; UJ 2012).

The University of Pretoria (UP) is the only university, other than universities of technology and comprehensive universities, which offers a dedicated internal auditing undergraduate and postgraduate programme, comprising a three-year degree, BCom Internal Auditing, followed by the one-year BCom(Hons) Internal Auditing (UP 2012). Thereafter UP offers an MCom Internal Auditing degree, requiring a dissertation, and a DCom Internal Auditing degree, requiring a thesis, both in the field of internal auditing (UP 2012).

3 RESEARCH METHOD

The article aims to reach three different objectives, each requiring a dedicated research method.

Objective 1 to determine the knowledge areas covered by dedicated internal auditing programmes offered by South African universities

Publicly available electronic information (universities' websites) on dedicated internal audit programmes at South African public universities was analysed. These universities present information about their qualification and programme offerings electronically as this is the most appropriate and accessible channel for prospective (and confused) current students. Such information explains broad knowledge areas covered by a programme leading to a specific qualification. These areas are distinguished by their discipline-related subjects, courses or modules. The electronic presentation does not include details of the topics which are covered by a specific subject, course

or module. For the purposes of this article the broad knowledge areas were considered sufficient, and the title of a subject, course or module was used as an indicator of the broad knowledge areas it was most likely to have covered. Where topics were included in a subject, course or module, but did not relate to its broad knowledge area and thus were not reflected in its title, these were not considered. This approach represents a limitation against which the results of this article should be considered.

Objective 2 to obtain the perceptions of internal audit stakeholders on the importance of internal audit-specific knowledge areas

In meeting the second objective of this article, the perceptions of internal audit stakeholders (practising internal auditors and their staff, as well as internal audit service providers and their staff) on the importance of internal audit-specific knowledge areas were obtained. The results of the 2010 Common Body of Knowledge (CBOK) study conducted by the IIA(Inc), were used as a secondary source (IIARF 2010/2011). The method used in this article to analyse this secondary data involved comparing data from the South African respondents who participated in the 2010 CBOK study with participants from the rest of Africa and from other northern hemisphere regions and Australia.

The 2010 CBOK study collected 13 577 responses from IIA members and non-members (referred to as internal audit stakeholders) in 107 countries. The main analysis being presented in this article is based on the 294 responses from South African participants, 337 from Rest of Africa (excluding South Africa); 657 from Ireland and the United Kingdom; 206 from Australia and 3 582 from North America.

Objective 3 comparative analysis of data from objectives 1 and 2

To achieve objective 3, a comparative analysis was performed on data obtained from achieving objectives 1 and 2 with the aim of identifying similarities.

4   RESULTS AND DISCUSSION

4.1   Knowledge areas covered by dedicated internal audit programmes (Objectives 1 and 3)

The knowledge areas covered by the dedicated internal audit programmes of South African public universities depends on the structuring of their programmes, whether an HEI offers internal audit programmes as certificates, diplomas, bachelor's degrees, BTech degrees, postgraduate diplomas and/or honours degrees. An overview of knowledge areas covered by dedicated internal auditing programmes over a four-year period as offered by these universities is presented in Table 3. Publicly available electronic information on dedicated internal audit programmes at South African public universities was used in Table 3 and, as explained above, under *Research method*, it may have been incomplete.

The following discussion and findings should be considered against this limitation.

It is clear from Table 3 that South African universities cover much common ground during the first three years of their dedicated internal auditing programmes (areas 1 to 17), but there is variation that is much more apparent in the fourth year of these programmes. It appears that the first three years are directed towards the establishment of a broad foundation incorporating knowledge areas in the following disciplines: financial accounting (area 1), internal auditing (area 2), cost and management accounting (area 3), information systems (areas 4 & 12), financial and organisational management (areas 5 & 6), law (areas 7 & 10), economics (area 8), entrepreneurial skills (area 9), communication (area 11), statistics and maths (areas 13 & 14), governance (areas 15 & 16) and ethics (area 17). The fourth-year programmes place more emphasis on specialised areas within internal audit, namely information system audits (area 19), forensic audit (area 20), risk-based audit (area 21) and internal audit practice (area 22). In certain instances students are also exposed to research (areas 23 & 24).

Of the 24 knowledge areas listed in Table 3 above, seven are not included in the IIA(Inc) (2012b) competency framework (refer to Table 1). These are entrepreneurial skills (area 9), taxation (area 10), accounting software (area 12), statistics (area 13), business calculus/financial mathematics (area 14), cooperative education (area 15) and risk-based auditing (area 21). It is clear from Table 3 that these are mostly included in the dedicated internal audit programmes of the universities of technology (with the exception of VUT) and in the dedicated internal audit programme of NMMU.

A comparison of the knowledge areas of the IIA(Inc) competency framework (refer to Table 1) and the knowledge areas covered by dedicated internal audit programmes of South African public universities (refer to Table 3) reveals that, apart from interpersonal skills, knowledge areas included in the IIA(Inc) (2012b) competency framework are relatively well covered by the dedicated internal auditing programmes of South African public universities, with the exception of the knowledge area of quality. No specific reference is made to quality assurance in the dedicated internal audit programmes, but the latter could be included in knowledge areas 2 and 22 in Table 3 below.

With the exception of internal audit practice/ management (area 22), knowledge areas 16 to 24, as listed in Table 3, are included in the global internal audit curriculum (IIA(inc) 2012d) (refer to Table 2). With reference to Table 2, two further knowledge areas are included in the global internal audit curriculum (IIA(Inc) 2012d), namely internal auditing (area 2) and communication/English (area 11). It is clear from Table 3 that, except for areas 2 and 11, the knowledge areas included in the global internal audit curriculum (IIA(Inc) 2012d) are mainly covered by the fourth-year dedicated internal audit programmes of South African public universities.

Table 3: Knowledge areas included in dedicated undergraduate and postgraduate internal audit programmes offered by South African universities.

| Knowledge area | Year one to year three – Offered as Higher Certificates and/or National Diplomas or as Bachelor's degrees | | | | | | | Fourth year – Offered as BTech degrees or Postgraduate Diplomas or Honours degrees | | | | | | | Unisa |
	VUT	CUT	CPUT; TUT; WSU	DUT	NMMU	UP	Unisa	VUT; TUT; DUT	CUT	CPUT	WSU	UJ	NMMU	UP	
1. Financial accounting¹	X	X	X	X	X	X	X	X		X	X	X		X	
2. Internal auditing³	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3. Cost & management accounting¹	X	X	X	X	X		X	X	X	X	X		X		X
4. Information systems¹	X	X	X	X	X	X	X								
5. Organisational/business management³	X					X	X						X	X	X
6. Financial (risk) management¹	X					X	X	X	X	X	X		X	X	X
7. Business/commercial/international law¹	X	X	X	X	X	X	X	X	X		X				
8. Economics¹	X	X	X	X	X	X	X								
9. Entrepreneurial skills	X	X	X		X										
10. Taxation	X	X	X	X	X	X	X								
11. Communication/English²	X	X	X		X			X	X	X	X			X	
12. Accounting software¹		X					X								
13. Statistics		X	X	X		X									
14. Business calculus/ Financial mathematics		X	X	X	X		X								
15. Cooperative education									X	X	X				
16. Corporate procedures/ governance³		X	X	X	X							X			X
17. Ethics and accountability³	X				X				X						
18. Public sector accountability¹													X		
19. Information system audits³	X							X	X	X	X		X	X	X
20. Forensic auditing³													X	X	
21. Risk-based auditing³													X	X	
22. Internal audit practice/management¹							X								X
23. Research project – internal auditing²												X			
24. Research methodology²								X	X	X	X	X			

(VUT 2012; CUT 2012; CPUT 2012; TUT 2012; WSU 2012; DUT 2012; NMMU 2012; UP 2012; UJ 2012 & Unisa 2012)
¹ = Included in the IIA(Inc) competency framework for internal auditors, refer to Table 1.
² = Included in the IIA(Inc) global internal audit curriculum, refer to Table 2.
³ = Included in both of the above documents

Translating competencies into curricula for training and education purposes is a significant challenge. Only two South African universities' dedicated internal auditing programmes are currently endorsed by the IIA(Inc) as IAEP programmes, namely that of UP, which is noted for its internal audit programmes, and that of Unisa, which presents a comprehensive internal audit programme (IIA(Inc) 2012d and 2012e). The internal auditing curricula followed in the postgraduate programmes of these two universities are compared, in Table 4, against the IIA(Inc)'s global internal auditing curriculum.

Table 4: Curricula followed in postgraduate qualifications by the IAEP-endorsed programmes of UP and Unisa

Knowledge areas included in curriculums of IAEP-endorsed postgraduate programmes	IIA¹	UP	Unisa
Core areas			
Principles of internal auditing	X	X	X
Ethics and organizational governance	X	X	X
Fraud and forensics	X	X	
IT Auditing	X	X	X
Business communication skills	X	X	X
Internship and/or case studies or internal audit projects	X		
Supplementary areas			
Advanced internal auditing	X	X	X
Managing an IAF	X	X	X
Risk management	X	X	X
Advanced organizational management	X	X	
Advanced information technology	X	X	X

¹IIA(Inc) global internal audit curriculum((IIA(Inc) 2012d))

It is clear from Table 4 that the knowledge areas covered by the global internal auditing curriculum of the IIA(Inc) (2012d) are comprehensively covered in the dedicated internal auditing postgraduate programme at UP, its BCom (Hons) Internal Auditing and, with the exception of Fraud and Forensics and Advanced

Organisational Management, by the Postgraduate Diploma in Internal Auditing offered by Unisa (Unisa 2012).

4.2 Comparison of internal audit stakeholder perceptions on knowledge areas (Objectives 2 & 3)

This section analyses and compares 20 core knowledge areas (listed in Table 5) perceived by internal audit stakeholder respondents to be essential prerequisites to internal auditors being able to perform their work. The data relate to the following question, (part of the 2010 CBOK study (IIARF 2010/2011)): *"How important are the following areas of knowledge for satisfactory performance of your job in your position in the organization?"* Table 5 lists the importance of knowledge areas as perceived by respondents from the following regions: South Africa, Global, Africa (excluding South Africa), UK and Ireland, Australia, and North America. The findings are reported as weighted averages, ranked in order of importance as perceived by South African respondents.

Table 5: Importance of knowledge areas as perceived by internal audit stakeholders by region rated

Region	Covered by HEIs (Table 3)	South Africa	Global	Africa (excl. SA)	UK & Ireland	Australia	North America
1. Internal auditing standards	Yes	91.19%	75.79%	89.42%	67.58%	70.27%	78.42%
2. Auditing	Yes	89.23%	83.46%	91.98%	88.72%	85.59%	89.35%
3. Enterprise risk management	Yes	82.38%	58.23%	77.30%	51.91%	63.64%	48.15%
4. Ethics	Yes	81.77%	64.21%	100.00%	40.68%	64.22%	72.55%
5. Changes to professional standards	Yes	81.05%	56.06%	75.14%	47.13%	50.91%	59.79%
6. Governance	Yes	77.20%	50.43%	74.86%	66.38%	67.89%	46.56%
7. Strategy and business policy	No	71.05%	42.68%	64.61%	47.97%	44.04%	39.00%
8. Technical knowledge for your industry	No	69.27%	51.34%	71.82%	44.09%	56.88%	56.04%
9. Fraud awareness	Yes	69.07%	60.86%	82.16%	45.76%	53.64%	66.30%
10. Organisational systems	Yes	68.75%	43.28%	69.95%	46.90%	52.29%	46.46%
11. Business management	No	59.79%	43.45%	70.00%	39.32%	40.37%	45.56%
12. Finance	Yes	53.40%	36.93%	73.60%	21.63%	18.52%	28.40%
13. Organisation culture	No	52.08%	41.88%	57.61%	41.70%	50.46%	48.56%
14. Business law and government regulation	Yes	51.30%	37.94%	63.54%	23.31%	34.86%	35.28%
15. Financial accounting	Yes	51.30%	44.74%	82.16%	16.53%	22.94%	43.55%
16. IT/ICT	Yes	45.55%	36.43%	64.13%	30.06%	30.28%	29.42%
17. Under-standing of quality frame-works	No	42.93%	25.57%	50.82%	14.89%	20.37%	25.59%
18. Managerial accounting	Yes	39.06%	34.67%	64.04%	15.30%	20.18%	26.20%
19. Marketing	No	22.92%	9.98%	24.29%	4.48%	5.45%	7.06%
20. Economics	Yes	18.62%	14.95%	36.72%	4.74%	6.54%	8.65%

Weighted mean interpretation: extremely important M = (mean ≥ 80%); very important M = (80% ≤ mean < 60%); important M = (60% ≤ mean <40%); limited importance M = (40% ≤ mean <20%); not important M = (mean < 20%).

Eighty-five percent (17/20) of the identified knowledge areas were perceived by South African respondents as important, with weighted means ranging from 42.93% to 91.19%. Nearly eighty percent (13/17) of these knowledge areas are covered by dedicated internal audit programmes offered by South African public universities (refer to Table 3): however six knowledge areas are not covered. These "gaps" are strategy and business policy; industry-specific technical knowledge; business management; organisational culture; understanding quality frameworks; and marketing. Nine of these knowledge areas are also included in the postgraduate programmes of the South African endorsed IAEP programmes (refer to Table 4), namely internal auditing standards, auditing, enterprise risk management, ethics, change of professional standards, governance, fraud awareness, organisational systems and ICT. Six of the nine knowledge areas were perceived by internal audit stakeholders to be extremely or very important, with weighted means ranging from 77.2% to 91.19%.

South African internal audit stakeholder respondents perceived knowledge areas within the discipline of auditing, namely internal audit standards, enterprise risk management and changes to professional standards as extremely important (weighted means ranging from 81.05% to 91.19%). Ethics, with a weighted mean of 81.77%, was also perceived by these respondents as extremely important. Managerial accounting and marketing were perceived by these respondents as being of limited importance, with weighted means of 39.06% and 29.02% respectively, while economics (weighted mean is 18.62%) was not perceived to be an important knowledge area.

Two knowledge areas that were perceived by South African respondents as being extremely important were knowledge of internal auditing standards and discipline knowledge in auditing (weighted means of 91.19% and 89.23% respectively). These were also rated by most of the respondents from the other regions as either the most important or the second most important (varying between extremely important and very important, weighted means ranging from 67.58% to 91.88%), with the exception of the rest of Africa, which ranked ethics in the first position of importance (weighted mean of 100%). Ethics as a knowledge area was perceived by the respondents from all the other regions, except for the UK and Ireland, as a very important knowledge area (weighted means ranging from 64.21% to 100%). South African respondents, as well as those from all the other regions except for the rest of Africa, ranked economics as a knowledge area of no importance (weighted means ranging from 4.74% to 18.62%). The same sentiment with regard to marketing was shared by respondents from the UK and Ireland, Australia and North America, who perceived it as a knowledge area of no importance (weighted means ranging from 4.48% to 9.98%). And respondents from the UK and Ireland also viewed the understanding of

quality frameworks and managerial accounting as unimportant knowledge areas (weighted means of 14.89% and 15.30%).

Generally, respondents from Africa and South Africa gave all knowledge areas higher ratings than did respondents from the other regions. The shortage of skills on the continent could have influenced the perceptions of respondents from South Africa and the rest of Africa (FASSET 2011). African respondents also indicated a significantly higher rating for financial accounting (perceived to be extremely important, with a weighted mean of 82.16%), than did respondents from the UK and Ireland, who, with a weighted mean of only 16.53%, perceived it as unimportant, and respondents from Australia who perceived it as of limited importance (weighted mean of 22.94%).

Table 6 provides information on the statistical significance of the weighted means in the responses from the various regions, using the Anova test. It is clear from Table 6 that significant differences (with a slight to medium effect) at 1% levels exist between the regions for all knowledge areas, except for knowledge of the

discipline of auditing (perceived to be extremely important across all regions) and organisational culture (perceived to be of importance).

Using the knowledge area of ethics as an example, the results presented in Table 6 should be interpreted as follows: A significant difference was found to exist between the importance of this knowledge area as perceived by South African respondents (indicated by the "a") when compared with the importance perceived by respondents from the other regions excluding the rest of Africa (indicated by the "b" or "c"). The rest of Africa respondents also perceived its importance as an "a". Some agreement was found between the perceived importance of this knowledge area expressed by South African respondents and those from the rest of Africa and North America (indicated by the "a" and "ab" values), while the perceptions of respondents from the UK and Ireland, and Australia are significantly different from each other (indicated as "c" and "b" respectively) and also from the perceptions of South Africa's and the rest of Africa's respondents (indicated by the "a" value).

Table 6: Knowledge areas by region – test for statistical significance

Knowledge Area	P Value	South Africa			Africa (excl. SA)			North America			UK and Ireland			Australia		
		M	N	S	*M*	N	S	*M*	N	S	*M*	N	S	*M*	N	S
[S] Internal auditing standards	<.0001*	[a]3.886	193	0.392	[a]3.855	186	0.471	[b]3.745	2451	0.526	[c]3.608	472	0.629	[c]3.640	111	0.629
Auditing	0.6932	3.862	195	0.438	3.897	184	0.425	3.880	2450	0.366	3.874	470	0.374	3.838	111	0.416
[S] Enterprise risk management	<.0001*	[a]3.767	193	0.561	[ab]3.698	182	0.658	[c]3.307	2432	0.787	[c]3.350	472	0.786	[b]3.581	110	0.612
[M] Ethics	<.0001*	[a]3.792	192	0.467	[a]3.767	180	0.486	[ab]3.682	2448	0.558	[c]3.229	472	0.753	[b]3.578	109	0.628
[S] Changes to professional standards	<.0001*	[a]3.763	190	0.536	[a]3.680	178	0.641	[b]3.506	2432	0.674	[c]3.348	471	0.710	[bc]3.382	110	0.729
[S] Governance	<.0001*	[a]3.725	193	0.552	[a]3.661	180	0.702	[b]3.324	2440	0.736	[a]3.617	470	0.579	[a]3.642	109	0.553
[S] Strategy and business policy	<.0001*	[a]3.637	190	0.625	[a]3.554	175	0.716	[c]3.204	2428	0.763	[b]3.373	469	0.679	[bc]3.330	109	0.681
[S] Technical know-ledge for your industry	<.0001*	[a]3.615	192	0.637	[a]3.674	178	0.588	[b]3.467	2427	0.673	[c]3.308	465	0.709	[b]3.486	109	0.647
[S] Fraud awareness	<.0001*	[b]3.655	194	0.557	[a]3.802	182	0.476	[b]3.602	2448	0.612	[c]3.356	472	0.668	[c]3.464	110	0.631
[S] Organisational systems	<.0001*	[a]3.609	192	0.654	[a]3.617	180	0.662	[b]3.328	2432	0.725	[b]3.338	467	0.716	[b]3.440	109	0.645
[S] Business management	<.0001*	[b]3.510	194	0.661	[a]3.644	177	0.606	[c]3.334	2441	0.699	[c]3.252	468	0.699	[c]3.321	109	0.637
[S] Finance	<.0001*	[b]3.460	191	0.638	[a]3.674	175	0.627	[c]3.041	2437	0.759	[cd]2.912	467	0.774	[d]2.889	108	0.715
Organisational culture	0.0211	3.422	192	0.690	3.453	181	0.741	3.354	2430	0.724	3.274	470	0.724	3.413	109	0.656
[S] Business law and government regulation	<.0001*	[b]3.399	193	0.693	[a]3.579	178	0.635	[c]3.125	2432	0.786	[d]2.892	472	0.789	[c]3.165	109	0.727
[M] Financial accounting	<.0001*	[b]3.430	193	0.643	[a]3.786	182	0.485	[c]3.270	2443	0.749	[e]2.786	472	0.773	[d]3.037	109	0.680
[S] IT/ICT	<.0001*	[b]3.319	191	0.731	[a]3.575	181	0.651	[c]2.975	2420	0.851	[c]3.062	469	0.770	[c]3.110	109	0.724
[S] Understanding of quality frameworks	<.0001*	[a]3.236	191	0.789	[a]3.361	180	0.768	[b]2.874	2438	0.863	[c]2.657	470	0.826	[b]2.889	108	0.777
[S] Managerial accounting	<.0001*	[b]3.208	192	0.765	[a]3.582	175	0.637	[c]2.920	2431	0.837	[d]2.720	464	0.799	[c]2.890	109	0.750
[S] Marketing	<.0001*	[a]2.786	192	0.893	[a]2.782	174	0.943	[b]2.249	2421	0.848	[b]2.237	469	0.804	[b]2.273	110	0.753
[S] Economics	<.0001*	[b]2.809	188	0.805	[a]3.149	174	0.798	[c]2.470	2417	0.795	[d]2.233	464	0.759	[cd]2.356	107	0.756

[a, b, c, d, e] identify the significant difference between the regions. Regions with the same letter are not statistically different from each other.
* - p value <0.01 significant on the 1% level
[S] - small effect semi partial eta square between 0.01-0.05
[M] - medium effect semi partial eta square between 0.06-0.14
M = weighted mean, **N** = population, **S** = standard deviation

Taking the frequencies of the indicator values into account ("a", "b", "c", "d" and combinations), it is clear from Table 6 that for 12 of the 20 (60%) listed knowledge areas, perceptions of the importance of these knowledge areas held by South African respondents did not differ significantly from perceptions held by the respondents from the rest of Africa. For

respondents from North America and Australia the result was 70% (14 of the 20 listed knowledge areas), while for respondents from the UK and Ireland and Australia it amounted to 65% (13 of the 20 listed knowledge areas) and for internal audit stakeholder respondents from North America and the UK and Ireland it was 40% (8 of the 20 listed knowledge

areas). It therefore appears that the majority of knowledge areas were perceived by South African and other African respondents to be at comparable levels of importance, and this is similar to perceptions held by internal audit stakeholder respondents from North America and Australia as well as those from the UK and Ireland and Australia.

Very little agreement was found between the perceptions of South African respondents and those from the rest of the world, excluding Africa. Significant differences were found in the importance of 85% (17/20) of the knowledge areas perceived as important by South African respondents when compared with those from North America. The same percentage was apparent for respondents from South Africa when compared with those from the United Kingdom and Ireland. The percentage increased to 90% (18/20) for those respondents from South Africa and Australia and therefore the perceptions of South African respondents appeared to be more in line with those from the rest of Africa than from the rest of the world.

5 CONCLUSIONS AND RECOMMENDATIONS

In pursuing the first objective of this article, namely to determine whether the knowledge areas covered by public HEIs in South Africa conform to those required by the IIA(Inc) competency framework and its global internal audit curriculum, the IIA(Inc)'s knowledge areas were identified and matched with the knowledge areas covered by dedicated internal auditing pro-grammes offered by South African public universities. An overview of currently offered internal audit education by South Africa's public higher education institutions indicated that the IIA(Inc)'s knowledge areas were mostly covered by these dedicated internal auditing programmes. The degree of coverage depended on the structure of the programmes – whether these programmes resulted in the awarding of certificates, diplomas, bachelor's degrees, postgraduate diplomas or honours degrees. The findings show that, especially in the case of South African public universities of technology, some knowledge areas that are covered by dedicated internal audit programmes are not included in the IIA(Inc) competency framework or its global internal audit curriculum. There remains a need to evaluate the curricula of dedicated internal audit programmes to ensure relevance to the IIA competency framework and its global internal audit curriculum. This is an area for future research. South African universities mainly covered the identified knowledge areas of the IIA(Inc) competency framework for internal auditors during the first three years of study (undergraduate programmes), while knowledge areas relating to the IIA(Inc) global internal audit curriculum were covered during the fourth year of study (including postgraduate programmes).

This study further set out to determine whether the internal auditing knowledge requirement expectations of global internal audit stakeholders agreed with the expectations of their South African counterparts (in accordance with objective 2). It was found that, with the exception of respondents from the rest of Africa, all other respondents ranked knowledge of internal auditing standards and discipline knowledge in auditing in either the first or the second position of

importance (varying between extremely important and very important). For respondents from the rest of Africa ethics was ranked most important. All the internal audit stakeholders, except for those from the rest of Africa, ranked economics as the least important knowledge area. Generally, respondents from Africa and South Africa placed a higher importance on each of the knowledge areas than did respondents from the other (non-African) regions. This may be an indication that Africa's skills shortage (and absence of widespread first-hand experience against which to evaluate the questions), has amplified the respondents' perceptions of the importance of the knowledge requirements (FASSET, 2011).

The findings further showed that South African and other African internal audit stakeholder respondents held similar views, ranking most of the knowledge areas at comparable levels of importance. This is equally true for internal audit stakeholder respondents from North America and Australia and the UK and Ireland and Australia – their perceptions of relative importance of knowledge areas were similar. Future research could explore/discover the specific topics that African internal audit stakeholders expect to be covered by the knowledge areas, the depth in which such topics should be presented, and the intended outcomes to be reached.

The above-mentioned knowledge areas were compared with knowledge areas perceived as important by internal audit stakeholders (thus reaching objective 3). The majority of knowledge areas perceived as important by South African internal audit stakeholders are covered by dedicated internal auditing programmes offered by South African public universities, except for the following five knowledge areas: business policy, industry-specific technical knowledge, business management, organisational culture and understanding quality frameworks. Future research could identify topics which internal audit stakeholders expect to be dealt with under these knowledge areas and determine the depth in which they should be covered. Such information could provide a basis for South African universities to translate competencies into curricula for internal auditing education purposes.

This article has certain limitations. It focuses on knowledge areas covered by South African public universities in dedicated internal auditing programmes, as published by the universities on their websites. Such information presents broad knowledge areas which are covered by a programme leading to a specific qualification. It does not include details of the topics which are covered by a specific subject, course or module. As the broad knowledge areas were identified by the title of a subject, course or module, topics not reflected in that title were not considered. Future research, in which detailed information on the curricula of dedicated internal audit programmes would be obtained and evaluated with the aid of content analysis tools, could address this limitation.

Academic content and teaching methods were also not considered; they also present opportunities for future research, this time into teaching methods and into discovering whether they do in fact relate to the

IIA(Inc)'s competency framework and knowledge areas. Furthermore, the article only referred to South African public universities and could be extended to include all private higher education institutions in South Africa. Despite these shortcomings, this article makes a valuable contribution to increasing the knowledge of the state of internal auditing education in the South African context, which is still a relatively unexplored area.

REFERENCES

Abdolmohammadi, M.J., Burnaby, P.A. & Hass, S. 2006. A review of prior common body of knowledge (CBOK) studies in internal auditing and an overview of the global CBOK 2006. *Managerial Auditing Journal*, 21(8):811-921.

Albrecht, W.S. & Sack, R.J. 2000. Accounting education: charting the course through a perilous future. *Accounting Education Series*, 16. Sarasota: American Accounting Association.

Arena, M. & Azzone, G. 2009. Identifying organizational drivers of internal audit effectiveness. *International Journal of Auditing*, 13:43-60.

Barac, K. 2009. South African training officers' perceptions of knowledge and skills requirements of entry-level trainee accountants. *Meditari Accountancy Research*, 17(2):19-46.

Bui, B. & Porter, B. 2007. Expectation performance gap in accounting education: an exploratory study. Paper presented at the 30th Congress of the European Accounting Association, Lisbon, Portugal. April.

Burnaby, P.A., Hass, S. & Abdolmohammadi, M.J. 2006. A survey of internal auditors to establish the scope of the common body of knowledge study in 2006. *Managerial Auditing Journal*, 21(8):854-868.

Carcello, J.V., Hermanson, D.R. & Raghunandan, K. 2005. Factors associated with U.S. public companies' investment in internal auditing. *Accounting Horizons*, 19(2):69-84.

Cape Peninsula University of Technology (CPUT). 2012. Faculty information. [Online]. http://www.cput.ac.za/faculties/index.php?option=com_jumi&fileid=8&q=161&f=1 (Accessed: 13 January 2012).

Central University of Technology (CUT). 2012. Faculty information. [Online]. http://www.cut.ac.za/web/academics/faculties/man/soebd/SACC (Accessed: 25 February 2012).

Collier, B. & Wilson, J. 1994. What does a graduate need? Evidence from the careers and opinions of CFOs. *Financial Practice & Education*, Fall/Winter:59-65.

Cooper, B.J., Leung, P. & Wong, G. 2006. The Asia Pacific literature review on internal auditing. *Managerial Auditing Journal*, 21(8):822-834.

Copeland, T.E. 2002. What do practitioners want? *Journal of Applied Finance,* Spring/Summer:5-12.

Council on Higher Education (CHE) RSA. 2012. Higher education in South Africa. [Online]. http://www.che.ac.za/heinsa/ (Accessed: 19 February 2012).

Crawford, L., Helliar, C. & Monk, E.A. 2011. Generic skills in audit education. *Accounting Education*: *An international Journal*, 20(2):115-131.

Davies, M. & Schlitzer, B. 2008. The impracticality of an international "one size fits all" corporate governance code of best practice. *Managerial Auditing Journal*, 23(6):532-544.

Department of Higher Education and Training (DHET) RSA. 2012a. Education institutions: universities. [Online]. http://www.dhet.gov.za/EducationInstitutions/Universities/tabid/172/Default.aspx (Accessed: 19 February 2012).

Department of Higher Education and Training (DHET) RSA. 2012b. Green paper for post-school education and training. Pretoria: DHET.

Durban University of Technology (DUT). 2012. Faculty information. [Online]. http://www.dut.ac.za/faculty/accounting_and_informatics/auditing_taxation (Accessed: 25 February 2012).

Ernst & Young. 2008. Escalating the role of internal audit: global internal audit survey. [Online]. http://www.ey.com/Global/assets.nsf/Australia/AABS_GIAS_2008/$file/GIAS-08.pdf (Accessed: 27 March 2009).

Finance, Accounting, Management Consulting and other Financial Services (FASSET) Sector Education & Training Authority (SETA). 2011. Fasset Scarce Skills Guideline: February 2011. [Online]. http://www.fasset.org.za/downloads/research/SS_Guide-_2011_V4.pdf (Accessed: 26 July 2011).

Fourie, H. 2008/2009. Internal audit education and co-operative education: a South African perspective. *Auditing SA,* 37-40.

Gonzalo, J.A. & Garvey, A.M. 2005. In the aftermath of crisis: The post-Enron implications for Spanish university accounting educators. *European Accounting Review*, 14(2):429-439.

Harrington, J. 2008. A barometer for stormy times. *Internal Auditor*, October. [Online]. http://www.theiia.org/intAuditor/feature-articles/2008/october/a-barometer-for-stormy-times/ (Accessed: 27 February 2012).

Hass, S., Abdolmohammadi, M.J. & Burnaby, P. 2006. The Americas literature review on internal auditing. *Managerial Auditing Journal*, 21(8):835-844.

Howieson, B. 2003. Accounting practice in the new millennium: Is accounting education ready to meet the challenge? *The British Accounting Review*, 35:69-103.

Humphrey, C. 2005. In the aftermath of crises: reflections on the principles, values and significance of academic inquiry in accounting – introduction. *European Accounting Review*, 14(2):341-351.

International Federation of Accountants (IFAC). 2003. Towards competent professional accountants. International Education Paper (IEP) 2. New York.

Institute of Internal Auditors (IIA)(Inc), The. 2012a. The Institute of Internal Auditors. [Online]. http://www.theiia.org/theiia/about-the-institute (Accessed: 16 February 2012).

Institute of Internal Auditors (IIA)(Inc), The. 2012b. The Internal Auditor Competency Framework. [Online]. http://www.theiia.org/guidance/additional-resources/competency-framework-for-internal-auditors/ (Accessed: 16 February 2012).

Institute of Internal Auditors (IIA)(Inc), The. 2012c. The IIA's global model internal audit curriculum. [Online]. http://www.theiia.org/guidance/academic-relations (Accessed: 23 February 2012).

Institute of Internal Auditors (IIA)(Inc), The. 2012d. The internal auditing education partnership programme (IAEPP). [Online]. http://www.theiia.org/guidance/academic-relations/internal-auditing-education-partnership-program (Accessed: 16 February 2012).

Institute of Internal Auditors (IIA)(Inc), The. 2012e. The IAEP schools. [Online]. http://www.theiia.org/guidance/academic-relations/iaep-schools/iaep-category (Accessed: 16 February 2012).

Institute of Internal Auditors (IIA) Research Foundation. 2007. CBOK (A global summary of the common body of knowledge 2006). Altamonte Springs, Florida: Institute of Internal Auditors.

Institute of Internal Auditors (IIA) Research Foundation. 2010/2011. CBOK (A global summary of the common body of knowledge 2010/2011). [Online]. http://www.theiia.org/research/common-body-of-knowledge/ (Accessed: 22 February 2012).

Morariu, A. & Crecană, C.D. 2009. The strategy of the internal audit in managerial councelling. *Theoretical and Applied Economics Scientific Symposium.* Bucharest. 29-31 May 2009.

Nelson Mandela Metropolitan University (NMMU). 2012. Internal Audit Brochure. [Online]. http://accounting.nmmu.ac.za/Brochures (Accessed: 27 February 2012).

Oxner, T. & Oxner, K. 2006. Boom time for internal audit professionals. *Internal Auditor*, August. [Online]. http://www.theiia.org/intAuditor/feature-articles/2006/june/boom-time-for-internal-audit-1/?staticReset&hardreset (Accessed: 27 February 2012).

Rebele, J.E. 2002. Accounting education's uncertain environments: Descriptions and implications for accounting programmes and accounting education research. *Accounting Education*, 11(1):3-25.

Sadler, E., Marais, M. & Fourie, H. 2008. Internal auditors' compliance with IIA Standards: a worldwide perspective. *Meditari Accounting Research*, 16(2):123-38.

Specklé, R.F., Van Elten, H.J. & Kruis, A.M. 2007. Sourcing of internal auditing: an empirical study. *Management Accounting Research*, 18:102-124.

Spira, L.F. & Page, M. 2003. Risk management: The reinvention of internal control and the changing role of internal audit. *Accounting, Auditing & Accountability Journal*, 16(4):640-661.

Steyn, B. & Plant, K. 2009. Education and training considerations applicable to internal auditors in South Africa. *African Journal of Business Management*, 3(13):989-997.

Sumners, G.E. & Soileau, J.S. 2008. Addressing internal audit staffing challenges. EDPACS. 37(3):1-11.

Tan, L.M., Fowler, M.B. & Hawkes, L. 2004. Management accounting curricula: striking a balance between the views of educators and practitioners. *Accounting Education*, 13(1):51-67.

Tshwane University of Technology (TUT). 2012. Faculty information. [Online]. http://www.tut.ac.za/Students/ facultiesdepartments/EconomicsFinance/departments/Documents/auditing.pdf (Accessed: 24 February 2012).

University of Johannesburg (UJ). 2012. Courses and Programmes 2012. [Online]. http://www.uj.ac.za/EN/ Faculties/ecofin/departments/accounting/coursesandprogrammes/Postgraduate/BComHonoursAccountingprogra mmes/Pages/BComHonoursAccountingNonCAStream.aspx (Accessed: 24 February 2012).

University of Pretoria (UP). 2012. Information Brochure. [Online]. http://web.up.ac.za/default.asp?ipk CategoryID=512&subid=512&ipklookid=3 (Accessed: 24 February 2012).

University of South Africa (Unisa). 2012. Study 2012. [Online]. http://www.unisa.ac.za/contents/study2012/ docs/CEMS.pdf (Accessed: 24 February 2012).

Vaal University of Technology (VUT). 2012. Faculty information. [Online]. http://www.vut.ac.za/new/index. php/faculties (Accessed: 24 February 2012).

Van Gansberghe, N.C. 2005. Internal audit finding its place in public finance management. The World Bank Institute, 62(4):69-73.

Van Peursem, K.A. 2004. Internal auditors' role and authority. *Managerial Auditing Journal*, 19(3):378-393.

Walter Sisulu University (WSU). 2012. Prospectus 2012. [Online]. http://www.wsu.ac.za/studywithus/images/ resources/FBMSL%20prospectus%202012.pdf (Accessed: 24 February 2012).

The Southern African Journal of Accountability and Auditing Research

Evolving Research