

GENERIC SKILL PROFILES OF FUTURE ACCOUNTANTS AND AUDITORS – MOVING BEYOND ATTRIBUTES

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Abstract

Purpose - This study investigates perceptions regarding generic skills future entry-level accountants and auditors will require. Such soft or pervasive skills are necessary to operate effectively in the future world of work. Prior research mainly explores generic skills from an attribute-based perspective, while this paper combines it with an activity-based perspective in generic skill profiles of accountants and auditors.

Design/methodology/approach - Following a mixed method research approach through focus group discussions and a survey involving more than 3 000 professional accountants and/or auditors, the study uses data from the southern African region (South Africa, Zimbabwe and Namibia) to determine views on the competency needs of future accountants and auditors. An exploratory factor analysis was conducted to determine whether categories of generic skills for future entry-level accountants and auditors differ.

Findings – Four generic skills factors emerged as essential for future entry-level chartered accountants (CAs): digital, decision-making, organisational and business acumens. Three generic skill factors emerged for future registered auditors (RAs): digital, practice, and commercial acumens. The results show that generic skill profiles of CAs and RAs who are members of an accounting body differ and that both the context, related to an activity-based perspective, and individual or internal abilities, related to an attribute-based perspective, matter.

Originality/value – The study identifies broad categories (digital, decision-making, organisational, business, practice and commercial acumens) within generic skill profiles of CAs and RAs, and shows that generic skills do not operate independently and should be viewed as an interdependent set or constellation of competencies.

Practical implications – Insights from this paper facilitate a comprehensive understanding of the generic skill profile approach, combining attribute-based and activity-based perspectives, and this could assist accounting educators, practitioners and professional bodies to better prepare entry-level accounting and audit professionals for the workplace.

Keywords: accounting education, audit practice, business acumen, digital skills, generic skills

Introduction

The concept of “generic skills”, those cognitive and soft skills needed to apply discipline-specific knowledge in the workplace (Jackson and Chapman, 2012), has been central in the discourse relating to employability and lifelong learning (Mayne *et al.*, 2015). Its prominence in accounting literature (and auditing as a sub-discipline of accounting) forms part of the “work-ready” or “fit-for-purpose” narrative focusing on the nature of generic skills for accountants and auditors (Chaplin, 2017; Helliard *et al.*, 2009; Howieson *et al.*, 2014) and ways in which these should be developed (Chaffer and Webb, 2017; Howcroft, 2017; Jackson and Chapman, 2012; Webb and Chaffer, 2016). This paper aims to investigate generic skill profiles of accountants (referred to as chartered accountants (CAs)) and auditors (referred to as registered auditors (RAs)) at entry point into their respective professions.

Generic skills demonstrate commonalities across fields and are transferable within a wide range of contexts (Bunney *et al.*, 2015; Crawford *et al.*, 2011). These skills are also referred to as non-technical skills (Jackson and Chapman, 2012), soft skills, graduate attributes, employability skills (Bunney *et al.*, 2015), vocational skills (Howcroft, 2017), fundamental skills, key skills (Bowman, 2010) and 21st century skills (Voogt and Roblin, 2012). Prior studies have shown ambiguities arising from inconsistent definitions and categorisations (Bunney *et al.*, 2015; Cinque, 2016), as well as failure to recognise the interconnectedness (Jones, 2010) and contextual nature (Bunney *et al.*, 2015) of generic skills. Page and Knight (2007) pithily describe these generic skills as “wicked competencies”, as they are difficult to define, transform in different contexts, and are continuously developing. Literature on 21st century skills suggests augmenting the attention being given to transversal generic skills associated with higher order skills in order to cope in an increasingly disruptive, unpredictable and complex environment (Voogt and Roblin, 2012). Recent professional literature (ACCA, 2016; Lawson *et al.*, 2014; CGMA, 2020) also confirms the need for accountants’ and auditors’ skills to evolve to address 21st century reality.

While the roots of generic skills development lie in vocational education, they are now explicitly included in higher education curricula, assessment and graduate outcomes (Bowman, 2010). Notwithstanding this prominence, the demonstration of generic skills in the workplace remains fragmentary and sub-optimal (Bunney *et al.*, 2015) and widens the gap between employers’ needs and their perceptions of graduates’ employability (Arquero, Fernández-Polvillo, Hassall and Joyce 2017; Howcroft 2017; Howieson *et al.*, 2014; Webb and Chaffer, 2016). This paper attempts to narrow the aforementioned gap by viewing generic skill profiles as comprising highly context-dependent, intertwined and not-easily-

disentangled generic skills (Jones, 2010). This view is in contrast with extant literature which mainly considers each generic skill as a distinct attribute (such as problem-solving or critical thinking) (Jones, 2010) or groupings of these attributes (such as relational, cognitive (Adriaensen *et al.*, 2019), personal or self-management skills (Webb and Chaffer, 2016)). These views mainly use an attribute-based perspective and do not emphasise generic skill interdependency from an activity-based perspective, a matter which could assist educators to tailor their offerings and consequently narrow the generic skills expectation gap.

This paper adopted a mixed method research approach and used data from members of professional accounting bodies from South Africa (SA), Zimbabwe (ZI) and Namibia (NAM) to investigate the industry's understanding of the generic skill profiles of entry-level CAs and RAs. The findings of the paper extend generic skill theory in two ways. First, it shows that generic skill profiles of CAs and RAs who are members of an accounting body differ (Lawson *et al.*, 2014); thus for generic skills the context (related to an activity-based perspective), as well as individual or internal abilities (related to an attribute-based perspective), matter (Lester, 2014). Second, the paper identifies broad categories (referred to in this paper as digital, decision-making, organisational, business, practice and commercial acumens) within generic skill profiles of CAs and RAs, which shows generic skills do not operate independently and should be viewed as an interdependent set or constellation of competencies (Rychen and Salganik, 2000). On a practical level the abovementioned insights from the paper facilitate a comprehensive understanding of the generic skill profiles of CAs and RAs.

We structure the remainder of the paper as follows. The next section presents an overview of the literature on generic skills, including those identified for accountants and auditors. Thereafter, we describe the data collection and analysis methods used, and present and discuss the results. The paper concludes by identifying areas for future research.

Literature review

Human capital theory (Becker, 1964), promoting education and training as an investment which yields returns in the labour market (Gillies, 2017), posits that specific skillsets of individuals may be rewarded by employers (Suleman, 2017). Generic skills, as critical considerations for employability, have become a 'new institutionalized mission' (Suleman, 2017:265) of higher educational institutions to facilitate the smooth transition of graduates into the labour market (Adriaensen *et al.*, 2019).

There is no definitive understanding of the generic skills concept, and the conceptualisation and identification of these skills is 'far from straightforward' (Suleman, 2017:264). Even though the literature lacks a recognised definition for generic skills, features of these skills have been identified as follows: 1) students need to develop generic skills to equip them for various roles in the world of work and society at large; (2) individuals need various combinations and various levels of generic skills to perform tasks and realise their potential in aspects of life; (3) generic skills are somewhat transferable from one context to another; (4) they develop over a lifetime; and (5) such development is the collective responsibility of educators, employers, policymakers, regulators and the broader community (Bowman, 2010; Voodgt and Roblin, 2012).

With the roots of generic skills development embedded in vocational education (Bowman, 2010), it becomes necessary to position these skills in the Vocational Education Training (VET) competence discourse. Two approaches have been used in the literature to arrive at the elements of competence; the first is a functional analysis of the profession (and its tasks and duties), while the second focuses on identifying the characteristics (or attributes) of good performers in the professional role (Tuxworth, 1989). Based on this broad perspective, VET competence models can then be categorised as either based on inputs or based on outcomes (Mansfield 1989). The input-based approach assumes "competence is an individual attribute" (Mansfield 1989:24) and is closely aligned with characteristics or attributes of a good performer. The output-based approach does not confine competence to individual attributes but rather describes competence in relation to aspects of work roles (Mansfield 1989) and is thus functional in orientation. Building on the notion of a functional approach versus an individual attribute approach, we distinguish between generic skills from an activity-based perspective (being function - and thus context-specific, and relating to tasks and duties) and an attribute-based perspective (relating to individual attributes and individuals' demonstration of them).

Two key international studies followed an activity-based perspective (functional approach) to conceptualise generic skills. The Organisation for Economic Co-operation and Development (OECD) Program, *Definition and Selection of Competencies: Theoretical and Conceptual Foundations (DeSeCo)*, aimed to develop a framework for key competencies and classified them in three categories, namely the abilities to (1) act autonomously, (2) act socially in heterogeneous groups and (3) use tools interactively (Rychen and Salganik, 2000). More recently, acknowledging that the world has become a borderless, multi-cultural and interconnected environment driven by information- and knowledge-based economies (Suto, 2013), 21st century skills have been categorised as: (1) ways of thinking (e.g. creativity and

innovation, critical thinking, problem solving and decision-making, as well as metacognition (lifelong learning)); (2) ways of working (communication and collaboration); (3) tools for working (information literacy and information and communication technology (ICT) literacy); and (4) living in the world (citizenship, life and career, and personal and social responsibility) (Scott, 2015; Suto, 2013; Voogt and Roblin, 2012). Extant literature mostly reports on generic skills following an attribute-based perspective by providing lists for individual groupings; for example, scholars have identified specific general skills required for accountants (or auditors). These skills include self-management skills (Jackling and De Lange, 2009; Tempone *et al.*, 2012), critical thinking and problem solving skills, (Awayiga *et al.*, 2010; Low *et al.*, 2013; Tempone *et al.*, 2012) and communication skills (Bui and Potter, 2010; Jackling and De Lange, 2009; Low *et al.*, 2013; Tempone *et al.*, 2012).

Generic skills have been gaining prominence in professional literature, especially with regard to competency framework developments. For example, Lawson *et al.*,¹ (2014) suggest a competency framework consisting of foundational competencies (communication; quantitative, analytical thinking and problem solving; and interpersonal and technological skills) as well as accounting and broad management competencies (including leadership, ethics, and social responsibility). The Association of International Certified Professional Accountants (AICPA), for example, sees accountants' role as extending across an organisation, driving transformation and creating shareholder value. This requires business skills (knowledge of data sources, analytical skills and judgement), people skills (empathy and interacting with stakeholders) and leadership skills (team building, mentoring, driving performance and change management skills) (CGMA, 2020). The Association of Chartered Certified Accountants (ACCA, 2016) has identified professional quotients to enable the profession to continue to evolve. These quotients reflect accountants' and auditors' competencies across seven constituent areas: technical skills; ethics; intelligence (thinking, reasoning and problem-solving skills); creativity (generating new ideas); digital (including emerging digital technologies); emotional intelligence; and vision and experience (skills to understand customer expectations, meet desired outcomes and create value) (ACCA, 2016). None of the aforementioned studies have used both attribute-based and activity-based perspectives in their consideration of generic skills.

While prior research has extensively studied the development of generic skills at university (Barac, 2009; Montañó *et al.*, 2004; Helliár *et al.*, 2009; Watty, 2014), generic skills as

¹ Lawson *et al.*, (2014) present findings of a Task Force representing the Institute of Management Accountants (IMA) and the Management Accounting Section (MAS) of the American Accounting Association (AAA).

manifest in the workplace have still only been intermittently studied (e.g. Albrecht and Sack, 2000; Bunney *et al.*, 2015; Kavanagh and Drennan, 2008). Some critics have questioned whether generic skills ought to be taught at university, whether accounting educators can in fact teach them (Howieson *et al.*, 2014; St Pierre and Rebele, 2014), and whether students entering university possess the necessary foundational exposure to master skills such as critical thinking in a university setting (St Pierre and Rebele, 2014). As a result, no real progress is being made to narrow the gap between industry needs and their perceptions of accounting graduates' employability (Ferrández-Berruenco *et al.*, 2016; Arquero *et al.*, 2017).

This paper, investigating generic skill profiles of CAs and RAs, can thus offer new insights to educators and practitioners on how to narrow the above-mentioned gap. Instead of regarding generic skills as 'discrete entities that are portable items of learning' (Mayne *et al.*, 2015) or separate attributes (such as problem-solving or critical thinking) (Jones, 2010), this paper, with its focus on generic skill profiles, acknowledges that both activity-based and attribute-based perspectives for generic skills should be considered, as they are highly context-dependent, intertwined and not easily disentangled (Jones, 2010). By structuring their courses or offerings in accordance with specific professional profiles, educators and practitioners can address the additional learning requirements necessitated by the application of a skill in a different setting (Eraut, 2009). Such profiling can assist them to refine the contextual nature and interconnectedness of their generic skills development offerings and to dismantle barriers inherent in present day disciplinary silos (Bunney *et al.*, 2015; Jones, 2010).

Research methodology

Context

This paper distinguishes between the profiles of CAs and RAs. In SA, CAs are professional accountants and members of the South African Institute of Chartered Accountants (SAICA) whereas RAs, also SAICA members, are also registered with the Independent Regulatory Board of Auditors (IRBA) which provides these members with a mandate to perform the attest function (IRBA, 2020; SAICA, 2020).

This paper forms part of a comprehensive research project which aimed to revise the competency frameworks of the SAICA and IRBA. Because of the SAICA's close collaboration with the Institute of Chartered Accountants Zimbabwe (ICAZ) and the Institute of Chartered Accountants of Namibia (ICAN) (SAICA, 2018), the revised SAICA competency framework will also be used by the ICAZ and the ICAN. The SAICA has reciprocity agreements with the

ICAZ and the ICAN (SAICA, 2020), and their education programs are fully aligned (IFAC, 2018a and 2018b). The ICAZ and the ICAN professional examinations are the same as the SAICA's, except that regulatory aspects such as taxation are specific to their local regulations (IFAC, 2019). The ICAZ and the ICAN use the SAICA model for initial professional and continuing professional development (CPD).

Research method

This paper adopted a mixed method research approach, based on a pragmatic worldview. It reports on two phases of the above-mentioned comprehensive research project, namely focus group discussions and the results of a survey which was conducted thereafter. Ethics approval for the comprehensive research project (of which this paper forms part) was obtained from the researchers' university, and throughout the process participants were asked to give their consent, and their anonymity was assured, as was their right to withdraw at any time.

Focus group discussions

Five focus group discussions (Table 1) were held in SA between November 2016 and May 2017. Assisted by the SAICA secretariat, preferred individuals were identified to participate in these focus group discussions and were emailed invitations by the researchers. These focus groups were conducted using the interactive qualitative analysis (IQA) method, using focus groups comprising participants who were knowledgeable about a phenomenon (i.e. competencies, including generic skills for future accountants and auditors). This was achieved through implementing a detailed, application-orientated, systematic process where data, analysis and the interpretation of a focus group's interactions were merged (Northcutt and McCoy 2004). This research method allows the voice of each participant in the group discussion to be heard, and obviates the possibility that the researcher, facilitator or any particularly dominant member influences the group's collective views (Northcutt and McCoy 2004). With the IQA method, participants actively generate their own themes and continue the process by coding the data themselves (Northcutt and McCoy 2004; Plant *et al.*, 2019). The researcher is involved in neither the data generation process, nor data coding, and therefore cannot influence the direction of the discussions. The original voice of the focus group is thereby ensured.

Table 1. Information on focus group participants and discussions

Participants	Number of participants	Affiliation	Method used	Number of themes/skills emerging
Academic heads (FG1)	12	SAICA – chartered accountants	IQA method	17
SAICA representatives (FG2)	9	SAICA – chartered accountants	IQA method	14
Young professionals (under 35) in commerce and industry (FG3)	7	SAICA – chartered accountants	IQA method	13
Young professionals (under 35) in public practice (FG4)	12	IRBA – registered auditors	IQA method	19
IRBA representatives (FG5)	12	IRBA – registered auditors	IQA method	14
<i>Total</i>	<i>52</i>			<i>77</i>

Survey

The survey of SAICA, ICAZ and ICAN members was conducted late in 2017. The survey questionnaire was developed from the findings of the focus group discussions, together with ideas emerging from post pilot study discussions and the consideration of recent literature on generic skills. For the purposes of this paper two parts of the questionnaire were considered: personal profile information (part 1) and respondents' perceptions on the importance of 22 generic skills for future CAs and RAs (part 3). A five-point Likert scale (from (1) not important to (5) extremely important) was used to rate levels of importance.

The initial draft of the questionnaire was reviewed by an expert statistician and three specialist academics and their recommendations (in some profile and technical competency questions) were implemented. Thereafter the questionnaire was presented to a steering committee comprising CA and RA members of the SAICA and the IRBA. Further changes were then made to ensure clarity of definitions of generic skills. Thirteen SA CAs (five males and eight females) participated in the pilot study on 3 November 2017. They were satisfied with the accuracy and clarity of the questions, but some were concerned about its length.

Table 2. Comparison of themes generated by focus groups

Generic skills Abbreviation	Academic heads FG1	SAICA representatives FG2	Young professionals in commerce and industry FG3	Young professionals in public practice FG4	IRBA representatives FG5
1 Adaptability	✓			✓	
2 Analytical ability				✓	
3 Business acumen		✓		✓	
4 Citizenship	✓	✓	✓	✓	
5 Collaboration	✓	✓	✓	✓	
6 Communication	✓	✓	✓	✓	✓
7 Continuous professional development				✓	
8 Critical thinking	✓				
9 Data analytics – big data			✓	✓	✓
10 Diversity awareness			✓	✓	
11 Entrepreneurial skills	✓	✓			✓
12 Ethics (business and personal)	✓	✓	✓	✓	✓
13 Flexibility	✓		✓	✓	
14 General business knowledge					✓
15 Holistic approach	✓	✓		✓	✓
16 Integrated thinking	✓	✓			
17 Innovation skills	✓	✓			
18 Leadership	✓	✓	✓	✓	
19 Life-long learning	✓	✓			✓
20 People skills	✓	✓		✓	✓
21 Personal attributes					✓
22 Personal wellness		✓			
23 Professional judgement and scepticism	✓				
24 Relevance					✓
25 Self- management	✓	✓			✓
26 Technological skills/innovation	✓	✓	✓	✓	✓
27 Technology privacy			✓		
28 Time management				✓	

29	Township economy development	✓	
30	Understanding client's IT environment		✓
31	Value proposition		✓

Results

Focus group results

Each focus group discussion (each lasting approximately two hours) ended with a collection of clearly described themes developed/identified by group participants (refer to Table 1 for the number of themes per focus group, amounting to 77 themes or skills in total). After regrouping the themes (duplicated skills were removed, while similar skills were grouped together), the researchers reworked the skills' descriptions and requested participants to confirm via e-mail that these were reasonable representations of the focus groups' collective meanings. The outcome of this process clearly identified 31 skills (Table 2).

Based on feedback from participants, the researchers consolidated the descriptions of the individual focus groups and presented a collective description or definition for each skill to the steering committee of the research project. Table 3 provides examples of definitions of the 31 skills (presented in Table 2) which are based on views expressed by focus group participants.

The abovementioned definitions informed the descriptions of the generic skills used in the draft survey questionnaire. Post pilot study consultations with participating CAs and RAs and specialist academics led to refinements of skills' definitions and additional skills relating to data analytics and ICT were included. In total 22 generic skills were included in part 2 of the questionnaire; respondents' perceptions of these skills' importance for CAs and RAs were used in the statistical analysis explained in the next section.

Table 3. Examples of skills: using focus group views to define the skills

No	Focus group views and definition of skills
1	<i>Adaptability</i> : This skill was identified by FG1 and FG4. FG1 participants viewed adaptability as “the ability to be agile and able to accept and adapt to continuous change”, while FG4 participants’ view was: “the ability to adapt to the fast pace of changes, to be creative rather than conservative and to have the discipline to stay relevant through continuous education”. Adaptability can thus be seen as the ability to be agile and to adapt to continuous change in a creative rather than a conservative manner
3	<i>Business acumen</i> : This skill was identified by FG2 and FG4. FG2 participants identified elements of business acumen as “to be an all-rounder global player with a broader world view and a big concepts” and “macro environment awareness with an understanding of geo-political factors and their business impact”, “financial markets including international markets and how business and business processes works”, “how to re-engineer these processes” and “an informal and practical understanding of township economy”. FG4 participants believed business acumen can be demonstrated when auditors act as “quality advisors” by displaying “better networking, economists, core business and entrepreneurial skills” to “understand the client’s needs and business with increased value driven focus on client’s bottom line earnings” whilst having “a political awareness of the political alignment in South Africa”. Business acumen can thus be seen as the ability to be a quality advisor: it requires demonstration of deep insight into general and specialised businesses within their environments; being responsive to aspects of size (from informal to macro/global), as well as the influences of global, economic and political changes, thereby being able to re-engineer business processes to maximise added value
4	<i>Citizenship</i> : Four focus groups (FG1, FG2, FG3 and FG4) commented on citizenship. FG1 participants highlighted aspects such as the ability “to act with a social conscience” and to contribute at the local level (“towards the country’s economic growth and the uplifting of less-developed areas”) and at global level (“to function without boundaries by embracing cultural differences across borders”). FG2 participants mentioned tolerance “to diversity with a sense of community, social awareness and social capital”. FG3 participants highlighted “being socially conscious, be aware of climate changes and have an environmental awareness”. The views of FG4 participants included “public sector knowledge and experience by conducting public sector service” and the management of “cross cultural and cross border diversity”. Thus, citizenship can be seen as the ability to display social conscience across cultures and borders by being responsive and attuned to and tolerant of diversity in social, environmental and political contexts; at a local level this manifests as public sector service that contributes to the country’s economic growth and transformation, and the uplifting of less-developed areas
9	<i>Data analytics (big data)</i> : Young participants (FG3 and FG4) and FG5 participants elaborated on data analytics. FG3 participants expected data analytical skills “through the programming and coding of data to enable programmatic data extraction” and they mentioned that these skills need to assist CAs “in automated fraud detection and audits”. FG4 participants had high expectations to be “a data analytic expert” that understands, manages and analyses information and big data by using modelling and artificial intelligence. FG5 participants emphasised the understanding of data versus information, mentioned aspects such as big data filtering, analysis of data, programming skills, system implementation, advanced excel skills as well as cyber security and intellectual property. Data analytics can thus be seen as the ability to understand, manage and analyse big data (including filtering and analysis of big data, and advanced Excel skills); to use artificial intelligence (AI), apply model building techniques, and apply programming and coding to enable the programmatic extraction of data and self-created reporting that predicts likely future outcomes and identifies problem areas
11	<i>Entrepreneurship</i> : Three focus groups (FG1, FG2 and FG5) highlighted entrepreneurship as a required skill. FG1 participants viewed the skill as the ability “to be competitive, to change risks into the creation of opportunities” and to be “the employer instead of being employed”. FG2 participants mentioned the ability to be “positive in evaluating risks and opportunities”, while FG5 participants emphasised skills such as “entrepreneurial skills and business acumen, effective practice management, marketing, client retention, project management and negotiation”. Entrepreneurship can thus be seen as the ability to recognize commercial opportunities, and having insight, self-esteem, knowledge and skills to act on them
13	<i>Flexibility</i> : FG1, FG3 and FG4 expressed views on flexibility. FG1 participants focused on remote working “to operate and work easily in a non-office-bound space at any time”, while FG3 participants were more specific by referring to “work in a virtual office” with “global finance teams” and to be “available on demand”. FG4 participants also referred to “being flexible in the time and place of work”, but they added meeting “deadlines through work-life balance”. Flexibility can thus be seen as the ability to work alone or in multinational teams, and to demonstrate flexibility in times and places of work

- 16 *Integrated thinking:* Two focus groups (FG1 and FG2) discussed integrated thinking. FG1 participants mentioned a “*big picture view*”, the integration of “*technical and non-technical principles*” (rather than rules) and “*multiple disciplines within a broad-based business environment*”. FG2 participants referred to the ability to connect “*the dots through agile integrated critical business thinking*”, dealing with complexity and root cause problem solving. Integrated thinking can thus be seen as the ability to generate and understand scenarios that integrate technical and non-technical principles by identifying the interconnected logics of multiple complex contexts
- 26 *Technological skills/innovation:* All focus group participants discussed this skill. For example FG3 participants mentioned “*advanced computer literacy skills that move beyond computer literacy*” and FG4 participants expected “*information technology specialist*” that can function in a “*paperless environment*”, which requires a broader understanding of cyber security, a working knowledge of Enterprise Resource Planning (ERP) systems, crypto currencies and platforms and IT programming. FG5 participants again referred to cyber security and intellectual property considerations. Technological skills/innovation can thus be seen as the ability to demonstrate information technology (IT) competence (*inter alia* an understanding of ERP systems, crypto currencies and platforms) in a paperless IT environment which is influenced by cyber security and intellectual property considerations
- 25 *Self-management:* Three focus groups (FG1, FG2 and FG5) elaborated on self-management. All three focus group participants mentioned the ability to manage oneself (as FG2 participants stated, “*without a boss looking over your shoulder*”). FG1 participants mentioned that this should happen “*through a process of personal development*” and they mentioned “*stress management and time management in an attempt to reach demanding outcomes*”. FG2 and FG5 participants discussed various wellness issues (e.g. mental health). Thus, self-management can be seen as the ability to work independently and manage oneself through a process of personal development and wellness programmes, demonstrating mastery of stress- and time- management skills in the pursuit of demanding outcomes
- 28 *Time-management:* Although time management was referred to as side-comment by all FG participants, it was only discussed and identified as a separate skill by FG4 participants. They viewed it as: “*the ability to manage time to meet deadlines through effective work/life balance*”

Survey results

A census approach was followed, targeting the full membership databases of the SAICA, the ICAZ and the ICAN. On 28 November 2017, the final questionnaire was sent to SAICA, ICAZ and ICAN members using an emailed link to an electronic survey platform; this was to facilitate response and data collection. The email included a covering letter that provided details about the research project. On 13 December 2017, the request was repeated for SAICA members as part of their 2018 membership fee reminder email. A further follow-up email was sent to all SAICA, ICAZ and ICAN members on 16 January 2018.

Questionnaire response rates (Table 4) were as follows: SAICA 6.95%, ICAZ 5.3% and ICAN 16.2%. This modest response can be ascribed to two factors: (1) being an online survey - past studies show online surveys result in lower response rates than paper-based surveys (Nulty, 2008); and (2) the questionnaire’s length. The latter is apparent in that not all parts of the questionnaire were completed by all respondents. As a southern African perspective (the analysis considers the three countries as a single collective) the population totals 44 867 and the responders’ sample totals 3 129 (a response rate of 6.97%). Not all responders answered all the questions; 2 471 respondents (response rate = 5.51%) completed part 3. The sample size $\left[\frac{z^2(p)(1-p)}{e^2} \right]$ required to achieve a confidence level of 99% ($z=2.58$) and margin of error +/- 3% ($e=0.03$), and adopting standard practice of maximum variability ($p=0.5$) (Israel, 1992) requires 1 849 responses, fewer than the 2 471 responses actually received. The sample

sizes for the southern African perspective are thus acceptable. Table 4 shows the realised sample, stratified between SAICA, ICAZ and ICAN, as reflected in the population. The SA sample (representing 93% of the study sample) appears representative of the population in terms of demographics and economic sector.

Table 4. Population and sample

Category	Population 42,227 + 2,123 + 517 = 44,867						Sample 2,933 + 112 + 84 = 3 129					
	SAICA	%	ICAZ	%	ICAN	%	SAICA	%	ICAZ	%	ICAN	%
Total	42,227	100	2,123	100	517	100	2,933	6.95	112	5.3	84	16.2
<i>Gender</i>												
Male	27,009	64	1,557	73	319	62	1,834	63	92	82	44	52
Female	15,218	36	566	27	198	38	1,099	37	20	18	40	48
<i>Culture group</i>												
African	4,935	12	NA	na ¹	137	26	332	11	97	87	16	19
Coloured	1,538	4	NA	na ¹	54	10	105	4	–	–	7	8
Indian	4,763	11	NA	na ¹	1	–	337	12	–	–	–	–
White	30,699	72	NA	na ¹	323	63	2,094	71	13	12	59	70
Other	292	1	NA	na ¹	2	1	65	2	2	1	2	3
<i>Sector representation</i>												
Commerce and industry	28,630	68	1,987	93	241	46	1,654	57	59	53	42	50
Public practice	10,355	24	101	5	164	32	565	19	28	25	29	34
Public sector	637	2	15	1	25	5	156	5	7	6	3	4
Academia	1,220	3	20	1	8	2	87	3	5	4	–	–
Self-employed	1,385	3	–	–	79	15	471	16	13	12	10	12
<i>Firm representation (% of those in public practice)</i>												
Big	2,731	26	27	27	74	45	247	43	16	57	14	48
Medium	3,079	30	23	23	49	30	96	18	7	25	8	28
Small	4,545	44	51	51	41	25	191	34	5	18	7	24
Not indicated	–	–	–	–	–	–	31	5	–	–	–	–

Note(s): ¹ = na: not available

Exploratory factor analysis was conducted to determine the underlying factor structure of the data. Principal axis factoring was used as the extraction method and Promax with Kaiser Normalization as the rotation method. On conclusion of the exploratory factor analysis, the reliability of the identified factors related to generic skills was established and presented as acumens in Table 5.

The Kaiser-Meyer-Olkin (KMO) measure of sampling accuracy was 0.940 for CA skills and 0.962 for RA skills, both above the recommended minimum of 0.6 (Kaiser, 1974); similarly, Bartlett's tests of sphericity (Bartlett, 1954) reached statistical significance, $p < 0.001$, confirming the data's factorability. The total variance explained by these factors was 57.54% for CA skills and 61.47% for RA skills. Only skills with a factor loading of 0.3 and above were considered (Table 5). Cronbach alpha values for future CA skills exceeded 0.7 (regarded as demonstrating acceptable reliability), while for future RA skills the alpha values were above 0.8, demonstrating good reliability (Hair *et al.*, 2010).

Table 6. Descriptive statistics for generic skill factors

	Generic skill factors for CAs				Generic skill factors for RAs		
	Digital acumen	Decision-making acumen	Organisational acumen	Business acumen	Digital acumen	Practice acumen	Commercial acumen
N	2,471	2,471	2,471	2,471	2,471	2,471	2,471
Mean	3.87	4.59	4.48	4.39	3.97	4.61	4.25
Median	3.86	4.60	4.60	4.50	4.00	4.83	4.33
Std. deviation	0.70	0.44	0.50	0.54	0.73	0.52	0.61
Skewness	-0.24	-1.47	-0.92	-0.89	-0.60	-2.696	-1.194
Kurtosis	-0.28	4.33	0.72	0.82	0.563	11.74	2.92

Discussion of the findings

This paper aims to investigate the generic skill profiles of entry-level CAs and RAs. The results show that generic skill profiles of CAs and RAs who are the members of an accounting body differ (Lawson *et al.*, 2014) and that both the context, related to an activity-based perspective, and individual or internal abilities, related to an attribute-based perspective, matter (Lester, 2014). Although prior studies have referred to the aforementioned two perspectives in relation to competence, these have been used to distinguish between extremes of competency models (functional vs capability (Gammie and Joyce, 2009) or activity-based vs attribute-based (Lester, 2014)) and have not previously been applied at the micro-level of generic skills.

Most of the skills defined through focus group discussions in our study were from an attribute-based perspective. Participants' views point towards interdependence of generic skills. For example, all focus group participants referred to individual attributes when they discussed communication skills, but in their discussions mention was made of other skills (e.g. negotiation and influencing others) which points towards the interdependence of these skills. FG1 participants viewed communication skills as "the ability to effectively, suavely and

professionally communicate on all levels by demonstrating proper articulation and presentation skills”, which clearly refers to the individual’s ability to articulate and do presentations. While FG2 participants’ definition of communication skills as “the ability to articulate thoughts, communicate, including by means of excellent presentations” agreed with the definition arrived at by FG1 participants, they added the further requirement - the ability to “negotiate properly with various stakeholders”, and this shows interdependence between communication skills and negotiation skills. The view of FG4 participants was that communication skills comprised “the ability to communicate well, verbally, in writing reports and reporting, and to connect with people through different types of communication such as social media etc”, and this highlights collaboration which is an interpersonal dimension. Similarly, FG5 participants viewed communication skills as “the ability to demonstrate effective and impactful communication skills which include verbal and written (business and report writing) skills to not only having conversations with clients focusing on business measures, but also positively influence others”, and this highlights the ability to influence others. Such interdependence was also apparent when FG4 participants highlighted creativity and lifelong learning when they defined adaptability as “the ability to adapt to the fast pace of changes, to be creative rather than conservative and to have the discipline to stay relevant through continuous education”. Another example where a variety of other skills were mentioned was found when FG5 participants identified entrepreneurial skills as “the ability to demonstrate entrepreneurial skills and business acumen by having a business mind-set and strategy through applying the following skills: effective practice management, marketing, client retention, project management and negotiation”. Also, when FG2 participants defined ethics as “the ability to demonstrate professional behaviour which includes acting ethically, being independent, using sound judgement skills and having the necessary scepticism and suspicion as well as being a corner observer who are not always directly involved”, they were also referring to judgement skills and professional scepticism.

It was however apparent from the focus group discussions that some skills could only be defined with reference to the context of the professional work and the related tasks and duties, thus requiring an activity-based perspective. The manner in which FG4 participants defined business acumen serves as an example. They viewed business acumen as “the ability to demonstrate business acumen through better networking, core business and entrepreneurial skills to be able to understand businesses through identifying economy drivers and having a political awareness of the political alignment in South Africa. The ability to understand the client’s needs and business with increased value-driven focus on client’s bottom-line earnings as quality advisors with stakeholder knowledge”. This definition sets the context and identifies tasks and duties (to understand the client’s needs and act as quality advisors). Another

example is FG3 participants' view of leadership as "the ability to demonstrate extraordinary leadership and entrepreneurship skills to enable value creation, be an advisor in sales and marketing, human behaviour sciences and people management and assist in cash management through a process of mentorship through which knowledge is transferred"; this refers to the advisory role CAs play in a variety of contexts.

The survey results revealed broad categories (referred to as acumens) within generic skill profiles of CAs and RAs, which also shows that generic skills do not operate independently and should therefore be viewed as an interdependent set or constellation of competencies (Rychen and Salganik, 2000). Four generic skill factors emerged as essential for future CAs: digital, decision-making, organisational, and business acumens. Future CAs will need these acumens in business to demonstrate integrated thinking on strategy and traditional accounting within a broad management context, whilst collaborating with others (Lawson *et al.*, 2014), and using technology and business analytics to reach solutions (CGMA, 2020).

Three generic skill factors emerged for future RAs: digital, practice, and commercial acumens. These acumens will facilitate future RAs' integrated thinking to (re)shape their practices and to remain abreast of change emanating from globalisation and associated business complexities, increased regulation, expectations of continuous audit, and assurance on non-financial information and/or forward-looking information (ACCA, 2016; AICPA, 2015).

Using an attribute-based perspective, digital acumen was identified in both CA (mean = 3.87) and RA (mean = 3.97) profiles. It includes the following individual abilities: understanding and interpreting big data; demonstrating information technology knowledge and skills (influenced by cyber security and intellectual property considerations); using data analysis tools and technologies; understanding the characteristics and parameters of structured and unstructured data; and extracting data and choosing the most appropriate analytics solutions. Indications are that technology (new data sources, analysis methods and tools, and cognitive computing) will enable accountants to interpret information and influence others more effectively, thus moving outside their traditional functions, as these become increasingly automated, or migrate to shared service centres (CGMA, 2020). The demand for CAs with digital skills is growing (Birt *et al.*, 2017). CAs need digital acumen for enhanced analytical skills, to handle both structured and unstructured data (Cao *et al.*, 2015; Vasarhelyi *et al.*, 2015), select appropriate analytical tools, and interpret the results (Huerta and Jensen, 2017). Previous research shows that accountants are already using advanced technology and data analytic skills (e.g. Pan and Seow, 2016; Sledgianowski *et al.*, 2017), which include a

deep understanding of the data, insight and creativity when interrogating the data, and the ability to use data science applications (Griffin and Wright, 2015; Huerta and Jensen, 2017; Richins et al., 2017).

There is also a need for RAs to develop their digital acumen, as their current skillsets leave them ill-equipped to mine non-financial data and perform more advanced statistical techniques (Moll and Yigitbasioglu, 2019). Digital acumen will enable RAs to perform continuous auditing (AICPA, 2015), be more predictive, and apply data analytic techniques (thus using data extraction tools and statistics) (Appelbaum *et al.*, 2018; Earley, 2015; Huerta and Jensen, 2017; Richins *et al.*, 2017). This acumen emphasises the need for data science, programming, and basic machine learning skills, applicable to both structured and unstructured data (Sutton *et al.*, 2016).

Following an attribute-based perspective, respondents perceived decision-making acumen for future CAs (the highest mean score (4.59)) to comprise higher order thinking skills (e.g. problem solving, critical thinking, decision-making), plus aptitudes for personal and business ethics, judgement and professional scepticism, and pursuit of lifelong learning. Accounting education scholars have identified critical thinking and problem-solving skills as important skills (e.g. Awayiga *et al.*, 2010; Low *et al.*, 2013). Respondents perceived ethics (personal and business), and professional scepticism and judgement as well as lifelong learning to be elements of decision-making acumen. These have been identified as personal professional skills and values which relate to personal professional skills and behaviour (IFAC, 2019). Lifelong learning is integral to being a professional in an ever-evolving work environment (Arquero *et al.*, 2017).

Two factors from the activity-based perspective formed part of the CA generic skill profile: organisational acumen and business acumen. Organisational acumen relates to future finance functions, supporting the mandate that accountants should look “beyond the numbers” (ACCA, 2016:10) and collaborate with others (CGMA, 2020). Our respondents supported this notion: the organisational acumen (mean = 4.48) comprises communication, teamwork and time management skills. These skills are all well represented in the literature (e.g. Chaffer and Webb, 2017). Emotional intelligence, also a component of organisational acumen, assists accountants in their decision-making, leadership, team building and client relations efforts (Tharapos *et al.*, 2018).

The other factor from the activity-based perspective in the CA profile was the business acumen factor (mean = 4.39), which comprises higher order thinking, business acumen (deep insight into clients' business dynamics and environments), entrepreneurial and leadership skills. Business acumen relates to future CAs' roles that will extend beyond the finance function. As leaders, CAs will be required to be proactive in collaborating and networking to establish partnerships, and to establish and manage relationships with various stakeholders (ACCA, 2016) and therefore require leadership skills. CAs' roles in the organisational value creation process will require a more entrepreneurial approach with respect to calculating and accepting risk (ACCA 2016). Higher order thinking skills load highly on both decision-making and business acumens. These two acumens are thus interrelated (Field, 2009), generating expectations of a strong relationship between accountants' ability to influence others through their decision-making skills, and creating value in business (Lawson *et al.*, 2014). Interestingly, social citizenship (refer to Table 3, skill number 4 for the definition by the focus groups) did not load as a factor, suggesting that respondents perceive future CAs' role in an organisation's value creation process predominantly from a "business" rather than "sustainability" perspective. Capitals are then managed "in order to increase the wealth of individual investors, not society's prosperity" (Thompson, 2015:19), as these are not linked to the social, environmental and/or economic contexts of organisations (Flower, 2014; Thompson, 2015). This finding is surprising because all participants are from developing countries, known for their poor growth rates and high levels of unemployment, where social citizenship needs to reside on businesses' agendas to "help bring the socially excluded back into the paid labour market and thereby restore true citizenship" (Handler, 2003:230). According to the World Bank, ZI is a low-income country (World Bank, 2017a), and while SA and NAM are categorised by the World Bank as upper-middle-income countries (2017a); SA and NAM are also rated on the Gini index as two of the world's most unequal countries in terms of income distribution (World Bank, 2017b). These circumstances, the researchers believe, should have elicited more emphasis on social citizenship.

In addition to digital acumen (as discussed above) two factors from an activity-based perspective formed part of the RA generic skill profile. First, practice acumen (mean score = 4.61) relates to their professional services, while the second, commercial acumen (mean = 4.25) relates to their commercial services. The latter has long been associated with audit firms operating from an increasingly multinational commercial business model (Greenwood and Suddaby, 2006; Lander *et al.*, 2013; Sikka, 2009). The literature reveals that there are two orientations or logics in audit firms: a professional and a commercial orientation (Andon *et al.*, 2015; Malsch and Gendron 2013; Suddaby *et al.*, 2009) and these are mirrored in their skillsets (Noordegraaf, 2011). Popa and Span (2016) linked most of the elements included in

the practice acumen to the role of professional judgment and decision-making of external auditors. In contrast, the elements of commercial acumen correspond with those identified in organisational and business acumens, thus demonstrating the commercial orientation of auditors. It is worth noting that entrepreneurship loaded negatively on practice acumen and positively on commercial acumen, indicating that respondents view entrepreneurship skills (refer to Table 3, skill number 11 for the definition by the focus groups) as appropriate in a business environment where audit partners present themselves as entrepreneurs (Edgley *et al.*, 2015), but not in audit practice. In addition, various skills (communication, time management, agility and adaptability, higher order thinking) loaded highly on both practice and commercial acumens, indicating that these two acumens are thus interrelated (Field 2009). In contrast to the situation with the CA profile, social citizenship (described above) loaded as an item in the practice acumen.

Implications for educators, industry and the profession

This paper's results contain a number of implications for stakeholders in accounting and auditing education and training. It is apparent that generic skill profiles of entry-level CAs and RAs differ and both activity-based and attribute-based perspectives are needed to understand the differences. Accounting educators can use these insights to incorporate generic skills in their programmes and/or to refine their curricula for the development of these skills. In addition, it can be used by accounting educators to ensure that generic skills from both accountants' and auditors' viewpoints are included in their programmes. Furthermore, the results show that some skills are included in multiple acumens, pointing to their interconnectedness. Extant accounting education literature mainly uses an attribute-based perspective for generic skill development and does not emphasise generic skill interdependency from an activity-based perspective. Including both perspectives could assist educators to tailor their offerings and consequently narrow the generic skills expectation gap. Accounting educators, industry and professional bodies can also embed a set or constellation of generic skills in their education and development programmes and direct their efforts towards applying a skill in a specific setting. These insights could inform discussions between accounting educators and industry as they delimit responsibilities for the development of generic skills (St Pierre and Rebele, 2014).

CONCLUSION

This paper investigated generic skill profiles of entry-level CAs and RAs. Focus group participants used both attribute-based and activity-based approaches to define generic skills,

and in doing so showed that generic skills do not operate independently. The interdependencies of generic skills were apparent from the survey results and generic skills were categorised as acumens (digital, decision-making, organisational, business, practice and commercial). The study uses both the activity-based and attribute-based perspectives to understand the differences between the generic skill profiles of CAs and RAs. Such understanding can assist in narrowing the generic skill expectation gap.

The paper is not without limitations. Whilst it provides a southern African perspective, most of the data was obtained from SA participants, due to the SAICA's numerical dominance relative to memberships of the ICAZ and the ICAN. The paper's statistical analysis was also conducted on the individual data for SA and ZI, but NAM's small sample size made meaningful analysis impossible. Unsurprisingly, the results for SA are almost identical with those of this study's full data set; the same factors for both CA and RA profiles were evident. More work needs to be done on the specific development needs of CAs and RAs in ZI and NAM (and other developing countries). Dependency of ZI and NAM on SAICA's professional development model (which is currently under review) opens up various avenues for comparative studies.

In addition, the concept of social citizenship/responsibility with respect to accountants and auditors needs closer inspection. Evidence in the literature indicates that social responsibility forms part of accountants' competence requirements, not only to develop themselves as human beings but also to contribute to society's sustainability (Dyball, Thompson and Wilson, 2014), and elsewhere some accounting education programmes are presented from a "sustainability" perspective (e.g. Dyball *et al.*, 2014, Gray, 2013; Hazelton and Haigh, 2010; Kamp-Roelands, 2013). Social citizenship in our paper (as identified by our focus groups) embraces diversity in a social, environmental and political context, and includes contribution at local level. Being responsive, attuned to and tolerant of diversity is a skill both CAs and RAs need to demonstrate as future "global villagers" (ACCA, 2016:20), whilst 'making a contribution' is a valid expectation for their current roles. In the context of our paper, this contribution relates to addressing challenges faced by developing countries: economic growth, transformation, and the social and economic uplifting of less-developed areas. Future research could determine the nature of social citizenship as a competency for accountants and auditors (is it a value, an attitude or a skill, and can it be transversal?) and how it should then be developed. Study respondents were not supportive of a social development programme which includes community service (despite our framing it as similar to the hospital year graduate medical professionals perform). Community service for CAs and RAs is a topic which requires further exploration.

Although data analytics and contemporary technologies have captured researchers' attention, more work needs to be done to assist accounting educators' efforts to embed data analytics and contemporary technologies in discipline content. Some scholars (e.g. Pan and Seow, 2016; Richins *et al.*, 2017; Sledgianowski *et al.*, 2017) have made inroads, but it remains an essentially fallow field awaiting researchers.

Whilst prior studies have used the attribute-based and activity-based perspectives in studies relating to competency models (Mansfield 1989; Lester, 2014) these perspectives are absent in research at the micro-level of generic skills. The two perspectives assisted us to understand the groupings of generic skills in our study. Future studies could determine whether the differentiation can address the disconnect between educators and practitioners on the development of generic skills. These studies could cast light on educators' role in development of generic skills; whether they are focusing on generic skills related to the attribute-based approach or whether different pedagogies are needed to develop attribute-based or activity-based generic skills. In similar vein, workplace training officers could redefine the focus of their training programmes. These may be limited to generic skills presented in an activity-based approach, which are more context-specific and task- or duty-orientated, and in future can be acquired through experience (learning in the workplace).

Our study is further limited as it is based on a self-developed questionnaire with a moderate response rate that only allows for an exploratory factor analysis. While it provides a starting point, future studies need to confirm the eligibility and validity of the constructs. Future studies could build on this platform.

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