Skills, success, and society: Employer views about graduate accountants in the digital age

Abstract

This study examines the knowledge and skills required by graduates for contemporary accounting roles, as identified by employers, with a focus on changes driven by the COVID-19 pandemic and emerging technologies. Data collection comprises in-depth interviews with employers from a range of Australian organisations, with analysis being framed by Barnett's critique of the separateness of universities from the wider world, driven in part due to an emphasis on instrumentalism. While interviewees acknowledged the importance of addressing broader social contexts and values, the evidence suggests a reactive approach to sociopolitical agendas, rather than a more reflective consideration of the goals of university education. Our findings indicate that the skills sought by employers of accounting graduates have expanded to reflect recent developments, with a stronger emphasis on professional skills, business skills and proficiency in new technologies. This study contributes to accounting education literature by elucidating the skills required by gradates in the contemporary business environment. It also contributes to the broader accounting literature by applying the critical lens of Barnett (1990, 1994, 2018, 2023) to examine whether there is evidence of instrumentalism *and* whether it contradicts the tentative expectation that a focus on skills *ipso facto* 'shuts out' the broader purposes of university education. Through our critical analysis of employer views about specific forms of competence and skills, and their perceived economic and vocational relevance, we contribute to this body of work by searching for evidence of a broader and more nuanced approach to skills, including the recognition that 'skills' reflect particular social interests and values.

Key words: graduate skills; professional skills; emerging technologies; post-COVID-19; ethics skills

1. Introduction

The post-pandemic business environment for accountants is characterised by accelerated digitalisation and remote work, increased reliance on technology and professional skills, greater emphasis on flexibility and strategic advisory, new challenges in risk management and sustainability, and heightened attention to human factors such as stress and work-life balance (Leoni, Lai, Stacchezzini, Steccolini, Brammer, Linnenluecke, & Demirag, 2021; Tharapos, O'Connell, Beatson, & de Lange, 2023; Bujaki, Butt, Lento, Meredith, & Wick, 2025). These developments are not transient, creating challenges in the identification of staff with the technical, technological and professional skills required to drive success in the contemporary environment (Tsiligiris & Bowyer, 2021; IFAC, 2022; Suarta, Suwintana, Sudiadnyani, & Sintadevi, 2023). Consequently, universities are increasingly expected to enhance the technological and professional skills of accounting graduates (Daff, 2021) to ensure they are equipped to successfully operate within continuously evolving organisations of all types and sizes (Dyki, Singorahardjo, & Cotronei-Baird, 2021; Tharapos, 2022).

Although the development of 'skills' is just one dimension of the aims of a university education (Barnett, 1990, 1994), connection to the world of work is inherent within a professional field such as accounting, where 'job readiness' is at least part of the expectation of all stakeholders, including students themselves. While a significant body of research has examined graduate skills (e.g. Dolce, Emanuel, Cisi, & Ghislieri, 2020; Asonitou, 2022; de Lange, O'Connell, Tharapos, Beatson, & Oosthuizen, 2023), there is currently a lack of studies examining the influence of the post-pandemic landscape and emerging technologies on skills needs.

This study addresses this paucity in understanding by identifying the knowledge and skills required for contemporary accounting roles, as identified by employers, in the context of changes driven by both the COVID-19 pandemic and the rapidly evolving technological landscape. Focusing on the development of graduate skills as one important component of university accounting education, this study examines employer perceptions of the skills required in contemporary accounting business and professional workplaces. The following research question drove the investigation: *What graduate skills do employers perceive are needed for success in the contemporary accounting workplace*?

Data collection comprised 20 in-depth interviews with employers from a range of Australian organisations, including large and small accounting firms, corporations, government, small and medium-sized enterprises (SMEs), and not-for-profits (NFPs).

Our analysis acknowledges the potential danger of adopting an instrumentalist approach to 'skills development' as the central aim of university education, as this may limit the capacity of university education to address broader social and ecological imperatives (Barnett, 2018). Drawing on Barnett's (1990, 1994, 2018, 2023), our analysis of employer expectations of skills is framed by Barnett's critique of the separateness of universities from the wider world, in part due to an overriding concern with instrumentalism. We look for evidence both supporting this form of instrumentalism *and* challenging the (tentative) expectation that a focus on skills *ipso facto* 'shuts out' the broader purposes of university education.

This study builds on prior knowledge of graduate skills by providing empirical evidence relating to employer expectations of accounting graduates in the post-COVID-19 professional environment. While some prior studies have examined the needs of employers (Jackling & de Lange, 2009) and students (Sidaway, De Lange, Bouilheres, & Sangster, 2013; Dolce et al., 2020), they do not consider how these have evolved in the post-pandemic professional environment. This study also expands on prior work by considering future-focussed skills, such as data analytics and data visualisation, and emergent expectations in relation to high-order communication and interpersonal skills (Tharapos, 2022).

Another important contribution of our study is our examination of the employer perspectives through the critical lens provided by Barnett (1990, 1994, 2018, 2023). Faced with a decline in their social license, universities are compelled to adopt this mindset in reforms to curricula and research, which limits their capacity to address broader social and ecological needs (Barnett, 2018).

Barnett's work provides a point of departure and a critical theoretical framing for the analysis in this study. As a *point of departure*, the research starts by recognising the contemporary drive for 'skills' and 'competence' in university education. The paper extends our understanding of this domain by investigating employer views about specific forms of competence and skills, and their perceived economic and vocational relevance. Barnett

offered caution about focusing on skill development in higher education: “To say of someone that he or she is skilful is to damn with faint praise. It is to imply that he or she is merely skilful, no matter how complex the skills in question” (Barnett, 1994, p. 61). With this in mind, we also looked for evidence of a broader and more nuanced approach to skills, including a view of professional work as requiring a combination of skill, judgement, and reflection and recognition that ‘skills’ reflect particular social interests and values.

This study is of interest to accounting educators as it is critical for them to understand employers’ expectations regarding graduate skills and knowledge in the contemporary environment. Furthermore, it is important for educators to reflect on how well they are preparing university graduates, not only for the future world of work, but also for a wider contribution to society.

The remainder of the paper is organised as follows. The following section outlines the theoretical framing of the study. Section three reviews relevant prior literature on accounting graduate skills and the evolving needs of the accounting profession. Section four details the research approach and method employed in this study; and the findings of the study are reported in section five. Section six discusses the study findings with reference to the theoretical framing and prior literature. Section seven concludes by outlining implications for reform in university curricula and assessment.

2. Theoretical framing

To better understand the broader significance of employer views on graduate accounting skills, this study draws on the work of Ronald Barnett (1990, 1994, 2018, 2023), both as a point of departure and as a critical theoretical framing for the analysis. Barnett has deeply analysed the “malaise” (Barnett, 2023, p. 123) that increasingly characterises contemporary higher education and universities in the West. While the ‘skills’ agenda may, in part, represent a key institutional and societal response to this condition by seeking to make university education more ‘relevant’, Barnett’s work also offers an intellectual position from which this agenda can be critically examined.

Barnett (2023) contends that much of the thinking about the direction of universities is “totally inadequate for the *problématique* that the university faces” because it “retains an

instrumentalism" that is, in fact, at the heart of the problem universities must confront (pp. 122 & 123). He contends that universities have become "unduly wedded to instrumental reasons" (Barnett, 2018, p. 10), which limits their ability to address wider social and ecological needs.

One aspect of instrumentalisation that Barnett laments is the prominence of skills and employability agendas in the broader discourse surrounding university education. Barnett (2018) links this to the malaise described above, noting that "[i]n universities around the world, curricula have been increasingly constructed to yield economic value". While he acknowledges that there "*is* a rationality here", he argues that the instrumentalism reflected in these approaches represents "a limited form of reason" (p. 113). Barnett (2018) criticises the focus on transferable skills, graduate attributes, or general capabilities across university disciplines, arguing that, because the latter are context-free, they reflect a reactive "response to" the world rather than active engagement with it (p. 120). Furthermore, he contends that "this is an impoverished approach to curricula that ultimately spells over-simplicity, imposition and even domination" (Barnett, 2018, p. 121).

This perspective builds on Barnett's earlier (1994) exposition of "the limits of competence". While he acknowledges the value of competence as one of the aims of university education and does not dismiss the notion of skills per se, Barnett emphasises the problematic aspects of a competence-based approach and the "new vocabulary" that accompanies it – terms such as vocationalism, outcomes, capability, transferability, and enterprise. He suggests that these terms, and the actions associated with them, are often orientated towards economic efficiency and productivity, rather than being sensitive to the broader dimensions related to the natural, social, and human environments (Barnett, 1994).

Barnett's social philosophical critique extends to both the traditional approach to "academic competence", which is associated with academic "cognitive culture", and its displacement with "operational competence", a concept that reflects the increasingly close relationship between higher education and perceived labour market needs (Barnett, 1994). This shift has played out in contemporary times through the prominence of skills and employability on university agendas (Tsiligiris & Bowyer, 2021). Barnett's critique identifies longer-term trends

in Western universities that have intensified over the years, as the purpose of higher education has become increasingly tied to the perceived demands of the labour market, industry, and commerce more broadly. He argues that higher education focused on skills tends to reflect "the substitution of technique for insight; of strategic reason for communicative reason; and of behaviour for wisdom" (Barnett, 1994, p. 61).

The recent emphasis on skill development and vocational relevance in universities may reflect, more broadly, a response to a situation where "the university [has] lost a clear legitimacy as a valued institution in society" (Barnett, 2018, p. 3). The transition from the "university of reason" to the "university of utility" (Barnett, 2019, p. 70), however, magnifies a key concern for Barnett in that the "concern for technique above other kinds of criteria drives out a concern for values" (Barnett, 1994, p. 170). He argues that while education can usefully develop a range of skills in students, *higher* education must also foster the ability to "frame a situation in a range of possible ways and the capacity to identify the appropriate skills to bring to bear on the situation as defined", with skills constituting only part of the "repertoire of capacities to be developed" (Barnett, 1994, p. 58). Underpinning this aspect of Barnett's critique is the way in which approaches to competence – either academic or operational – are "reflective of narrow interests and limited worlds", in contradiction to what he posits as the idea of a "human being" being nurtured within a higher education system that is "relatively unconstrained by sectional interests" (Barnett, 1994, p. 7).

These ideas have evolved in recent years as Barnett has criticised the "separateness" (Barnett, 2023, p. 130) that characterises many approaches to university quality and impact. Barnett and Coate (2005) suggested that the reframing of curricula to focus on students acquiring discrete skills with "market value", and associated reorganisation of curricular around modularisation, risked a fragmentation of the student experience. They argue that this approach is not likely to be sufficient even to meet contemporary economic demands, let along be "adequate to the challenges of the twenty-first century" (p. 164). Barnett (2023) advocates for a broader "ecological" approach to address those challenges, emphasising an ethic of collective care for the world and offering "a canopy in which multiple values can be held and upheld simultaneously", while building on a "keen sense of the interconnectivity of the world and understand[s] itself to be in the world and not apart from it" (p. 125).

Here, Barnett's reflections on the realm of university education for the professions are useful: "The modern professional lives amid a set of infinities of expanding accountability demands, resource challenges, global horizons of standards and developing techniques, shifting knowledges, and changing client relationships" Barnett (2018, p. 128). The "professional self", Barnett noted, must interconnect with, and acknowledge a range of responsibilities to the wider community. Extending an associated sense of professional higher education to the ecological imperative, Barnett (2018, p. 130) stated that "The essence of the idea of the ecological lies in its dual features of interconnectedness and an ethical horizon. It is fact and value intertwined". That is, the emphasis must be on *interconnection with* and being explicitly *part of* the wider socio-ecological realm, rather than a separateness from it that is focused on responding-to or feeding-into the perceived demands of the (much narrower realm of the) economy.

3. Literature Review

We extensively reviewed accounting journals and related publications to identify relevant research regarding the skills needed by accountants in the contemporary social and business environment. Although a broad ambit was taken, in line with the study's aims, the focus of the review was on expectations *employers* have relating to the skills of new graduates or people who have completed a university accounting degree and are at the point of entering the accounting workforce – either professional accounting work, or accounting-related roles in businesses or other organisations. The focus was on articulating the skills required or expected at that point, rather than skills that could or should be developed (or further developed) on the job and in the context of specific work requirements. Given the nature of the study and the significant evolution in the role of an accountant in more recent times (Tharapos, 2022), the literature review concentrated on (but was not limited to) articles published since 2019.

A framework for the review was drawn from Tsiligiris and Bowyer (2021), who examined a range of research published by professional accounting bodies to assess the skills and personal qualities needed by future graduate accountants. They identified four skill

categories: (1) ethics; (2) digital; (3) business; and (4) professional (soft),[1] noting that there has been an "overemphasis in accounting education on technical skills and a relatively weak development of professional capabilities" (p. 625). While the former remain important, "there is a growing demand for critical soft skills which the industry expects accounting graduates to possess" (p. 626).

Based on the above, the framework adopted for the review of prior literature included *five* categorisations (ethics, digital, business, and professional, plus technical skills). The remainder of this section outlines the ambit of each area.

3.1 Ethics skills

Tsiligiris and Bowyer (2021) emphasised that ethics skills include both technical and interpersonal ethics skills. Technical ethics skills revolve around knowledge of ethical guidelines and professional accounting body codes of conduct, extending to an ability to scrutinise inputs, data, algorithms, and outputs of automated accounting entries and AI-assisted decision-making. The latter includes the capacity to identify unconscious biases and prejudices that have ethical implications.

Interpersonal ethics skills include an ability to act as a 'critical friend' by asking the right questions when it comes to the quality of inputs to and outputs from digital systems (Tsiligiris & Bowyer, 2021). This is vital in the contemporary accounting setting, as emphasised by the ACCA (2016): "Above all, professional accountants will be expected to make professional judgements and, in doing so, to exercise the highest standards of integrity, independence and scepticism" (p. 10). IFAC (2019) stressed the importance of trust and the "fundamental ethical principles of professional accountancy to ensure responsible business practices" (p. 14), which have become even more important in the post-COVID-19 context (IFAC, 2020) and

[1] These were said to interact with two essential personal qualities: 'adaptability' and taking a 'lifelong approach to CPD' (Tsiligiris & Bowyer, 2021).

recent high-profile cases that have negatively influenced society's perceptions of the accounting profession (e.g. Gow & Kells, 2023; Pigatto, Dumay, Cinquini, & Tenucci, 2023).

3.2 Digital skills

O'Connell, Carnegie, Carter, Helliar, Watty, Hancock, and DeLange (2015) emphasised that technology is likely to transform the future of accounting with advances into new areas, while broadly retaining existing fundamental core knowledge areas. A key driver in the context of rapid change in workplaces and society more generally is the use of technology to drive efficiencies by accomplishing tasks faster, more economically, and with a higher degree of reliability than humans working alone (Spring, Faulconbridge, & Sarwar, 2022).

IFAC (2019) characterised the accountant as a "digital and technology enabler" who uses data and information and communication technologies (ICT) to drive organisational decisions in collaboration with ICT experts. New skills are needed in data governance, modelling, and analysis, as well as advanced spreadsheeting and capacity to use accounting software, including cloud-based, enterprise resource planning (ERP), blockchain, AI and distributed ledger systems (ACCA, 2016; Suarta et al., 2023). At base, these areas all require a fundamental understanding of how transactions flow through an accounting system (Daff, 2021).

Bringing together much of the recent work in this area, Tsiligiris and Bowyer (2021) categorise the expected digital skills of future accountants into three groups: (i) basic digital skills, including spreadsheets, ERP, cloud-based applications, and online real-time reporting; (ii) advanced digital skills involving emerging technologies such as AI and blockchain, and basic programming within context-specific applications; and (iii) data management and analysis skills, including the ability to synthesise diverse data types and effectively present relevant data and information to audiences.

There is growing interest in Big Data analysis techniques, including predictive analytics (Gandomi & Haider, 2015; ACCA, 2016). Recent advances in AI, particularly generative AI (Wood, Achhpilia, Adams, Aghazadeh, Akinyele, Akpan, ..., & Kuruppu, 2023), are rapidly impacting on individuals, organisations, the economy, and society via increased automation of simple tasks through to the potential to solve complex problems (Al-Htaybat, von Alberti-

Alhtaybat, & Alhatabat, 2018; Moll & Yigitbasioglu, 2019; Cho, Vasarhelyi, Sun, & Zhang, 2020; Dwivedi, Hughes, Ismagilova, Aarts, Coombs, Crick, Duan, Dwivedi, Edwards, Eirug, Galanos, Ilavarasan, Janssen, Jones, Kar, Kizgin, Kronemann, Lal, Lucini, Medaglia, & Williams, 2021; Spring et al., 2022). Overall, the literature suggests that accounting graduates are expected to be able to understand and apply skills in relation to a broad suite of digital and ICT applications, with rapid change in this domain.

3.3 Business skills

Tsiligiris and Bowyer (2021) noted that automation of many manual accounting tasks, coupled with more direct involvement by accountants in internal decision-making, results in them being seem as "business partners and internal consultants" who must have "business vision and intelligence" (Tsiligiris & Bowyer, 2021, p. 635). They identified two broad sets of needed business skills: (1) consulting and business advisory; and (2) strategic thinking. Exploring post-COVID-19 accounting roles, Tharapos (2022) found accountants to be increasingly assuming trusted advisor and business partner roles for small, medium, and large organisations.

The range of issues arising from the COVID-19 pandemic are driving new thinking about accounting, accountability and governance (Mather, 2020; Salterio, 2020; Tharapos et al., 2023), including increased awareness of business responsibility for employee occupational health and safety (OHS) and a broad range of accountability-related disclosures (Parker & Narayanan, 2023). Sidaway, Juric, and Deegan (2023) emphasised the importance of understanding the actual uses of accounting information in specific contexts and by specific audiences.

These developments emphasise the importance of both good technical accounting skills and the capacity to apply multidisciplinary knowledge in different organisational contexts. An ability to cope with change and consider consequences for a range of possible actions is critically important (Covaleski & Hoque, 2020; Spraakman, 2020).

3.4 Professional skills

Professional skills – also known as generic or soft skills (Boyce, Williams, Kelly, & Yee, 2001), employability skills (Dyki et al., 2021), and transferable skills (Ballantine & McCourt Larres, 2009; Ng & Harrison, 2021) – are recognised as increasingly important for accountants

(Fogarty, 2020; Tharapos, 2022; Suarta et al., 2023). Tsiligiris and Bowyer (2021) articulated a common set of accounting professional skills and related personal competencies: (1) adaptability; (2) communication; (3) lifelong approach to continuing professional development (CPD); (4) critical thinking; (5) dynamic problem-solving; and (6) emotional intelligence.

Many of these skills have received attention in the accounting education literature over many years, with recent renewed emphasis on key skills such as critical thinking (Wolcott & Sargent, 2021; Dickins & Reid, 2023). There is also an emergent recognition of the importance of personal skills and values such as honesty, integrity, and responsibility (Suarta et al., 2023), compassion (Russell, Ariail, Smith, & Smith, 2020), and emotional intelligence (de Bruyn, 2023).[2]

These domains interact with social media and communication skills, and working with related organisational strategies (Landi, Costantini, Fasan, & Bonazzi, 2022). This combination of professional and digital skills is recognised to be an important aspect of employability (Dyki et al., 2021; Tharapos, 2022), connecting with a broader need for transferable skills in a constantly changing environment (Dyki et al., 2021; Ng & Harrison, 2021). Skills in flexibility, adaptability, and coping with and driving change (ACCA, 2016; IFAC, 2019) are also expected. Furthermore, there are emergent areas of expected skills such as high-order counselling and emotional intelligence, and providing assistance to clients and colleagues who are struggling to adjust to the ramifications of a changed operating environment (Tharapos, 2022).

The “marriage of hard and soft skills” (IFAC, 2020, p. 5) requires a capacity to look beyond ‘numbers’, with interdisciplinary approaches and abilities vital for relationship-building, communication, and “storytelling” around accounting information, particularly in relation to

[2] Emotional intelligence (EQ) consists of “an array of non-cognitive skills, capabilities and competencies that influence a person’s ability to cope with environmental demands and pressures” (Neely-Martinez, 1997, p. 72), including possessing a capacity to: manage emotions in others, handle relationships, social competencies, balance compassion and caring, build trust and rapport, and to repair emotional damage (Dulewicz & Higgs, 2000).

environmental, sustainability, and societal impacts (O'Connell, Tharapos, De Lange, & Beatson, 2023), as well as addressing “more humanistic concerns” (Twyford, 2023).

3.5 Technical skills

The development of broader skills must continue to be accompanied by a sound base of technical accounting skills (Tsiligiris & Bowyer, 2021). Indeed, even as many traditional accounting techniques are automated, there is an expanding range of new technical skills in relation to environmental, sustainability, and social justice issues (Schaltegger, 2020; Cho, Senn, & Sobkowiak, 2022; O'Connell et al., 2023; Powell & McGuigan, 2023), including the needs of developing countries and the UN Sustainable Development Goals (Hopper, 2020), and indigenous issues (Finau & Scobie, 2022), which are increasingly important.

O'Connell et al. (2023) argued that universities must be more ambitious about what they can instil in their student body in relation to contemporary social issues and higher-order professional skills such as critical thinking and problem-solving. They highlighted the need to develop more enlightened graduates with a broader grasp of the relationship of accounting to a range of wicked problems such as climate change and income inequality.

Thus, a range of emergent areas interact with, and build on, more traditional areas of technical skills that relate to knowledge of accounting principles, standards, and procedures. These include, but are not limited to, areas such as financial reporting and taxation, along with the need to understand professional values, ethics, and attitudes.

4. Research Method

4.1 Interviews

Data comprised 20 in-depth interviews with employers from various Australian organisations that employ accounting graduates. Interviewees were purposefully selected from a range of enterprises (large and small accounting firms, corporations, government, small and medium-sized enterprises (SMEs), and not-for-profits (NFPs). A stratified approach was applied whereby interviewees were sourced from each of these six areas to ensure a relatively even coverage of employer groupings (Robinson, 2014). Potential interviewees were identified using a combination of the researchers’ personal contacts and a snowballing approach.

The interviews were conducted during the period August to October 2023 and were between 35- and 60-minutes duration, with the vast majority conducted online using *Microsoft Teams*. All interviews were recorded with the permission of the interviewees.

4.2 Interview guide

The development of the interview guide was based on the framework elaborated by Tsiligiris and Bowyer (2021) together with our comprehensive analysis of prior research on the evolving set of skills and attributes expected of accounting graduates to navigate the post-pandemic world, including the emergence and development of advanced technologies (Al-Htaybat et al., 2018; Daff, 2021; Wood et al., 2023). Renewed expectations in relation to ethics and professional values (Boyce, 2008, 2014) following recent high-profile ethics scandals in the accounting profession (Gow & Kells, 2023; Pigatto et al., 2023), together with wider recognition of the social dimensions of accounting (Boyce, Greer, Narayanan, & Blair, 2015; Boyce, Narayanan, Greer, & Blair, 2019; Carnegie, Parker, & Tsahuridu, 2021) also informed its development.

The interview guide comprised of 17 semi-structured questions (see Appendix A). The first three questions were designed to elucidate employers' broad views about the changing nature of the accounting work environment and the skills needs by accountants. The next 11 questions focused on specific skill areas in the categories outlined in section three. The final three questions focused on perceived skills gaps in graduates and any potential reforms/changes to accounting curricula and assessments to address these needs.

Prior to commencing the interview phase of the study, a pilot interview was conducted to evaluate the interview instrument. While no issues of any consequence were identified during the pilot interview phase, it is acknowledged that conducting a pilot cannot guarantee success in the formal interview process (Van Teijlingen & Hundley, 2001). For this reason, the recordings from the first three interviews were assessed for any potential problems before proceeding with the remainder of the interviews; no issues were identified.

4.3 Study participants

A provisional list of around 40 interviewees drawn from a broad range of organisations employing accounting graduates was developed by the researchers using their professional

networks. Potential interviewees were individuals whose current roles and earlier professional experience had exposed them to an array of issues related to graduate employment in accounting and the ongoing professional development of accountants. Identified individuals were invited to participate in the study via email.

Table 1 provides details of the 20 employers interviewed for this study. Interviewees were drawn from a wide range of senior roles including chief financial officer (CFO), chief executive officer (CEO), partner and director. The table shows the de-identified code used for analysis and reporting of results in section 5. Importantly, interviewees were not viewed as representing their organisations' perspectives but rather their own as individuals with a wealth of relevant experience.

Table 1: Interviewees' background details and assigned codes

No.	***Role***	***Organisation Type***	***Assigned Code for analysis***
1	Director	Small Acc Firm	1SAF-DIR
2	Partner	Small Acc Firm	2SAF-PRT
3	ERP Leader	Large Acc Firm/Gov't	3LAF-ERP
4	Partner	Large Acc Firm	4LAF-PRT
5	Financial Planner	Consulting	5CON-FPL
6	Director	SME	6SMC-DIR
7	CEO	SME	7SME-CEO
8	Educator/Dean	Government	8GOV-EDU
9	Partner	Consulting	9TXC-PRT
10	CEO	Prof Acc Body/Education	10PAD-CEO
11	CFO	Prof Acc Body/SME	11PAS-CFO
12	CEO	Corporate	12CPR-CEO
13	CFO	Corporate	13CPR-CFO
14	Board member	Corporate	14CPR-BRD
15	Systems Analyst	Corporate	15CPR-SYS
16	GM Finance	Corporate	16FIN-FIN
17	Consultant	Consulting	17GNF-CON
18	CFO	NFP	18NFP-CFO
19	Transformation Manager	NFP	19NFP-TMG
20	Board Member	Government	20GNF-BRD

Interview transcripts were automatically produced using the recording function of Microsoft Teams and carefully checked for accuracy against the recordings.

All interviewee identities were protected through the anonymisation of the transcripts (Saunders, Kitzinger, & Kitzinger, 2015). All names related to an individual were removed before analysis and any words which may have represented a threat to anonymity and confidentiality were excluded during the analysis phase.

4.4 Data analysis

Transcripts were subjected to thematic analysis (Boyatzis, 1998). Thematic analysis is widely used across multiple disciplines for the analysis of interviews and other text-based data (Braun & Clarke, 2006) and offers a flexible and iterative approach to analysis. Whilst preliminary themes were established during the planning phase of the study, primarily based on the literature reviewed in section three, these themes were refined during analysis to allow for the emergence of sub-themes across all questions. We also specifically looked for evidence that related to Barnett's critique of the skills-based approach to education, as outlined in section two. There were two broad dimensions to this. First, evidence of a wider and more encompassing approach to skills, extending beyond 'skills for the job' and, second, how valued skills are directly or indirectly related to social and ecological concerns.

All members of the research team had responsibility for reading all interview transcripts in their entirety to ensure, amongst other things, the veracity of the findings identified as themes and for providing an overview of emerging interdependencies amongst themes and sub-themes. This analysis was conducted independently by the research team and the results compared during the final stages of the study.

5. Findings

5.1 Key skills for established accountants

Interviewees were first asked to nominate the key skills required by experienced accountants, considering the nature of the profession and contemporary world of work. The most prominent theme in answers related to the ability to provide wider advice, drawing on the capacity for broader thinking and a solid base of business understanding. This theme was touched on in some way by half of the interviewees (10) and related to a blending of professional skills and technical skills underpinned by a broader organisational perspective. As one interviewee put it, "it's really important to widen the field of interest" (6SMC-DIR).

This perspective also related to the capacity to understand the underlying basis for the outputs of an accounting system, with one interviewee noting that accountants need to be able "to do a reality check of what they're being told" (20GNF-BRD).

The capacity to attach meaning to accounting numbers or to demonstrate understanding of accounting information and use it to tell broader stories about what is happening in an organisation was mentioned by five interviewees. One summarised this in the following way:

> be analytical … go beyond the numbers … to actually say, what are these numbers telling me and how can I make a management story out of the numbers that are in front of me … beyond the numbers, telling a story, aligning that story to the company objectives. (17GNF-CON)

These responses provide some clear indications that employer views extend beyond a simple instrumentalist/technical view of skills. Although these views arguably remain centred on the perceived needs of the world of work and the economy, there are clear signs that employers support the combination of skill, judgement, and reflection that Barnett (1994) advocates.

Other important themes related to basic accounting skills and systems knowledge (4 interviewees), professional skills (generally) and communication, interpersonal and relationship skills (3 interviewees). A summary of all major themes is presented in Table 2.

Table 2: Skills needed by established accountants

Theme	***Number of Interviewees***
Broader thinking; business understanding; ability to provide wider advice	10
Attaching meaning to accounting numbers (understanding; storytelling)	5
Fundamental, technical accounting skills; accounting packages & systems	4
Professional skills (generically)	3
Communication; interpersonal; relationship skills	3

Interviewees were then asked if (and how) the post-COVID-19 environment, including both pandemic-induced and other contemporary pressures, had impacted on the skills needed by accountants. Two themes were prominent. First, the need for better skills in dealing with people and interpersonal interactions more generally, along with the need for a general attitude of care for others (9 interviewees). One interviewee described the importance of these skills as relating to the need for "functionally intelligent people" (3LAF-ERP). Another

said: “accountants need to know the business; they need to be across all of the people and all of the issues so they can actually make sense of the numbers and give good advice for how to change it” (20GNF-BRD).

Once again, these responses go beyond an expectation of mere routine and technicist approaches, instead reflecting a broader ethic of care and a connection to wider values and the social context. The capacity to look beyond the immediacy of the situation suggests something that goes beyond a narrow functional approach to skills (Barnett, 1994).

The second main theme related to the opportunities, presented by a range of COVID-19-induced changes in ways of working and using ICT, to provide wider advice within organisations (7 interviewees).

Other themes included in the interviewee responses are summarised in Table 3. While recognising the changes brought about by the COVID-19 pandemic, related changes in ICT and business generally were seen by many as a more prominent driver of change. As one interviewee put it:

> … the needs of the organisation … whether it's economic pressures, competitive pressures and depending on sectors and your ability to be your own, be responsive to environments. I think that's changing it more so than COVID … they may be triggering different levels of demand for finance and accounting professionals in different ways. (18NFP-CFO)

Table 3: Influence of the post-COVID-19 environment on skills of established accountants

Theme	***Number of Interviewees***
Need better people skills; interpersonal interactions; general care for others	9
Taking opportunities to provide wider advice (often ICT-induced)	7
Self-development and learning through working directly with others	4
Implications for career development	3
Professional skills (generally) needed more; may have been neglected	3

5.2 Key skills for graduate accountants

Moving to the specific focus of the present study, interviewees were asked about the key skills required by accounting graduates as new entrants to the profession and to the world of accounting work. In their responses, interviewees canvassed a similar range of skills regarded

as relevant for established accounting professionals and practitioners, although with some differences in emphasis (see Table 4). Notably, communication and interpersonal skills, and broader business and organisational understanding, were the most prominent themes. Emphasising the importance of communication at these early career stages, one interviewee suggested "I think it's 60 to 70% communication and interpersonal skills and 20 to 30% technical knowledge" (12CPR-CEO). Another interviewee summarised the required broader understanding as the need to "apply intelligence to the numbers that are coming out the other end" (3LAF-ERP).

An interesting perspective related to graduates' willingness to learn and be adaptable and flexible as they learn their job (5 interviewees). As one interviewee put it: "Willingness to learn about the "uninteresting and routine and boring … so that they can understand, understand how the accounting systems in organisations work and how organisations work" (20GNF-BRD).

ICT skills and a range of other professional skills were also regarded as particularly important, as summarised in Table 4.

Table 4: Key skills for graduate accountants

Theme	***Number of Interviewees***
Communication and interpersonal skills	6
Broader understanding of what accounting numbers mean; organisational understanding	6
Willingness to learn; adaptability/flexibility	5
Real-world / practical understanding / industry understanding	4
ICT skills – *Excel*; accounting software; advanced IT (/AI)	4
Analytical and problem-solving skills	3

This set of responses suggested a more functionalist interpretation of the skills needed by graduates. However, the emphasis on learning and interacting with others provides a clear indication that employers see personal and professional development as requiring a deeper approach to skill application and development than the mere uncontextualised application of technique, again reflecting venturing beyond a narrow functional approach to skills (Barnett, 1994).

5.3 Ethics skills

Recognising wider concerns with ethics that reflect prominent issues in contemporary social and business/professional contexts, interviewees were asked whether the post-COVID-19 environment had any perceptible impact on professional ethics (including both technical and interpersonal ethics skills), and to identify the key ethics skills needed for accounting graduates to succeed in this environment. Results are summarised in Table 5.

Table 5: Ethics skills required by graduate accountants

Theme	***Number of Interviewees***
Need a renewal of professionalism and integrity; attentiveness to social expectations; trustworthiness; beyond self-interest	9
General sense of right & wrong; ability to identify & discuss ethics issues	9
Not COVID-19 per se, but general change in attitudes and decline in ethics	8
Working-from-home – communication & interpersonal skills; more use of ICT	5
Respect; Empathy, care, and support for people	4

Many interviewees specifically mentioned that they sensed a decline in ethics in the profession in recent times, and a strong theme in interviewee responses related to the perceived need for a renewal of professionalism and integrity within accounting, and a related need to fulfill societal expectations of the profession. This related to the need to re-establish the trustworthiness of the profession, including the characteristic of looking beyond self-interest. For example: “we've had a lot of societal events that have increased the focus on ethics” (8GOV-EDU); and “society's expectations of organisations and positions of trust has massively moved, and I don't know whether it's a result of COVID or whether it's just the … journey that we're on in the West” (4LAF-PRT).

Another strong theme related to the need to be able to apply a general sense of right and wrong, and a willingness and capacity to identify and discuss ethics issues (9 interviewees). For example: “the art of that is being able to identify when you're perhaps asking or being asked to … defer from the actual ethical … the key is being … able to identify that” (2SAF-PRT).

Interestingly, five interviewees referred to potential ethical challenges arising from the increasing prevalence of accountants working from home. There was some scepticism as to

whether some employees would deliver the same level of productivity and effort when not being directly supervised in an office environment. Allied to this was a concern that junior accountants may not be exposed to the same level of learning opportunities that naturally occur when located in the office. An example provided of this is when a junior accountant overhears a senior colleague dealing with a difficult client over the phone. This learning opportunity would not occur if the employee were primarily working from home. This was viewed to some extent as an ethical issue in that junior employees were being denied important development opportunities (1SAF-DIR).

Although these latter views align more with the instrumentalist approach to skills that Barnett (1994) critiques, this approach is arguably in tension with the strong call for a revival of professionalism and integrity, which both addresses broader social concerns *and* acknowledges the need for change in organisational practices.

When specifically asked whether it was important for accounting graduates to possess an understanding of the impacts of accounting on people's behaviours and actions within organisations and society, eight interviewees reiterated the need to understand impacts on people, society, and the environment; four interviewees further emphasised the need to understand issues beyond cost and numbers; and another four interviewees stressed the need to be able to identify ethics and related issues and ask questions about these matters. One interviewee suggested that accountants must understand how "accounting information can be … a problem rather than a solution" (11PAS-CFO), while another stated "it's more than just the numbers, it's about also having an empathy about what that may mean for other people's lives" (19NFP-TMG). Here, the evidence suggests that employers do recognise the need to address the broader context and to look beyond the immediacy of accounting numbers and profit.

5.4 Digital and ICT skills

Focusing on the key digital and ICT skills needed for accounting graduates to succeed in the post-COVID-19 world of work, interviewees were asked about this domain, and about the proficiency that they felt was needed for specific applications such as spreadsheeting. Summary results are presented in Table 6.

Table 6: Digital and ICT skills required by graduate accountants

Theme	***Number of Interviewees***
Accounting packages/software, incl. *Excel. PowerPoint,* Word processing	10
ICT relationship to organisation processes understanding; systems understanding	6
Embracing technology; adaptability; learning; innovation	5
ERP; AI	3
Analytics and visualisation	3

The strongest themes in interviewees' answers related to accounting packages and software such as *Excel*, *PowerPoint*, and basic word processing – mentioned by more than half of the interviewees. Thus, basic ICT skills are still regarded by employers as being very important. There was a clear need for accounting graduates to possess an ability to apply ICT to meet the specific requirements of an organisation: "they need to understand how these applications work and how they can be configured to meet the business need" (3LAF-ERP). At the same time, the ability to use ICT to enhance the way accounting messages are communicated was also recognised as being important: "if you're good at *Excel*, you can do a lot of stuff … I've seen people who are very good at *Excel* who have helped me a lot to make my decision because they've produced the stuff" (11PAS-CFO).

There was also a recognition of the need to build on these basic skills, and skills such as advanced spreadsheeting, to capture the benefits that ICT offers in areas such as ERP, analytics, and data visualisation. The importance of understanding connections between systems and a wider perspective of technology usage was also mentioned: "the whole context of data governance … robust data … warehouses and data analytics … analytical perspective" (18NFP-CFO).

Given the prominence of discourse around advanced ICT such as AI, Big Data and data analytics, and other advanced systems, interviewees were separately asked about these key emerging technologies. Most interviewees agreed that AI knowledge and skills are likely to become more critical in accounting. There was recognition that, although this was an emerging area, it will become especially important for career development. Although a few interviewees (5) suggested that the main use of AI was for basic functions such as the

production of emails, letters, and reports, others recognised opportunities to harness AI more significantly, but emphasised the need to understand and use AI wisely (9 interviewees). There was a sense that AI is still an emergent area, but, as one interviewee stated, it will not replace accounting work and accountants but will change (and is changing) the type of work done and the way things are undertaken (19NFP-TMG). There was also recognition that AI would remove many repetitive tasks from accountants, leaving them to focus on more high value and complex tasks.

Similarly, in relation to Big Data and data analytics, there was a general recognition of their growing and improving use within organisations (6 interviewees), tempered by the need to understand them to harness them confidently (5 interviewees). This was also related to the question of analysing and understanding data and accounting reports in general: "being able to read financial statements … being able to actually read and understand the story that financial statements are telling you … they tell a massive story" (2SAF-PRT). One interviewee insightfully and optimistically expressed the role of analytics in these terms: "analytics is just so, so, so important … it cuts away all the noise, all the data and then … helps you to focus on … the things that you need to … change to make significant transformation" (19NFP-TMG).

Some interviewees (3) explicitly predicted a big role for accounting in this realm (primarily because of accountants' comfort with numbers): "accountants can play a big role because the … aversion for other people with the numbers, that's where the accountants can sort of do a big favour there …" (12CPR-CEO). Others (2 interviewees) suggested that this is not necessarily a part of accounting although accountants do have a natural advantage in the area, but further development and advancement will necessarily involve interdisciplinary work.

These views reflect a narrower and more immediately instrumentalist approach to skills in what may be regarded as more complex areas. This could reflect some level of uncertainty in the context of rapid developments in contemporary ICT and the 'hype' over the imminent transformation that AI and related advanced technologies may induce. At the same time, there was an emergent sense of the opportunities to apply advanced ICT applications to

broaden thinking and transform practices in ways that reflect the human dimensions of accounting (Ballantine, Boyce, & Stoner, 2024).

5.5 Business skills

Moving to the more general business domain, interviewees were asked to nominate needed business skills and the proficiency expected of accounting graduates in areas such as governance, consulting and business advisory skills, and strategic thinking. Two areas stood out in the answers given.

First, the need for broad understanding of business operations – both in the organisation they work for and in the wider business world. This broader sense of industry knowledge was canvassed by almost half of the interviewees (9), and expressed in a range of ways, such as "having good commercial acumen is important … understanding the commercial implications … good operational understanding" (19NFP-TMG).

The second main theme (7 interviewees) related to communication, interpersonal and people skills, and a general willingness to get involved with others in the organisation. Communication and the kinds of broader understanding referred to above were intertwined. As one interviewee put it: "you may have the numbers, but how do you use the numbers to convince or to put a case or to provide a solution, that's more important" (12CPR-CEO).

Other answers canvassed several interrelated themes, which are summarised in Table 7. There was a recognition that not all these skills would be evident in graduates: 'the expectation is that they don't have those skills and that's something that's acquired over time" (2SAF-PRT).

Table 7: Business skills required by graduate accountants

Theme	***Number of Interviewees***
Broad understanding of business operations and wider business world / industry	9
Communication; Interpersonal and people skills; Willingness to get involved	6
Governance and ethics (incl compliance)	4
Strategic thinking; critical evaluation	4
Understanding in this area is acquired over time, with experience	4
Professional skills (generically)	3

Interviewees were specifically asked if capacity for flexibility, adaptability, and coping with and driving change were important for accounting graduates. In general, this proposition was supported directly by half of the interviewees (10), often as part of an all-round sense of the need for business understanding. Others were more direct in suggesting that an approach that embraced change was needed (5 interviewees), while care and confidence were needed to navigate change (4). A need for resilience, along with openness to learning and self-development (3 interviewees) were also mentioned, however these skills and characteristics were more important for career progression and development: "Employees … need to be technically competent, but they also have to be flexible so they can actually change with … the organisation" (19NFP-TMG).

Similarly to digital and ICT skills (section 5.4), these views are suggestive of a more instrumentalist approach that relates to perceived business and organisational imperatives. However, again we find evidence that suggests employers value the capacity to combine the direct application of skills with judgement and reflection, and that they expect this capacity to be developed over time. This is suggestive of a more rounded view of skill development that extends to a more expansive view of enlightened professional action (Barnett, 1994).

5.6 Professional skills

Key professional skills needed for accounting graduates to succeed could encompass many areas such as problem-solving, critical thinking, communication, leadership, teamwork, listening, and emotional intelligence – all of which have been canvassed in prior literature (see section 3). This suite of skills pushes more into "sensitivity to the wider dimensions" of environment and society as advocated by Barnett (1994, p. 57). These areas may carry at least some potential to look beyond immediate "market" imperatives and values (Barnett & Coate, 2005; Barnett, 2023).

Interviewees were asked about the areas of professional skills that they felt were most important, along with the proficiency expected of accounting graduates in these areas. The most prominent area mentioned by interviewees was general people skills, including teamwork and relationship-building – mentioned by nine interviewees – while another seven focused on communication and interpersonal skills. It was recognised that these skills build over time:

> How you develop relationships, how you conduct yourself in the workplace … You learn from being out and playing in teams, team sport as well as being in teams in the workplace … It may be difficult to teach some of these skills, but you can make people aware of them. (7SME-CEO)

A range of other professional skills was also canvassed, such as critical thinking, emotional intelligence, persistence, and trustworthiness. These are summarised in Table 8. Some of the areas mentioned delved into the realm of personal characteristics, but the effect of recent issues confronted by the profession was evident: "as a profession, we need … people who are trusted and valued members of society" (4LAF-PRT). At the same time, there was a real optimism that an appropriate suite of professional skills can be vital in enabling accountants to contribute to change within organisations and beyond:

> Emotional intelligence means knowing when to say what you've got to say, it is critical from a communication perspective that you say what you've got to say … you need to be critically aware of how you influence change … to have the confidence to have a difficult conversation and support it with the logic of numbers and the critical thinking behind it is important. (17GNF-CON)

Interestingly, the rising need for possession of emotional intelligence was highlighted by one interviewee who made the following observation about the need for counselling and related skills in accountants:

> Interacting with clients, a lot of them have become de facto counsellors to their clients … when you've got someone whose business is basically being stopped because of COVID and all of a sudden they have got no money coming in and they're under mortgage pressure and they're under other financial pressures and then they start breaking down over the phone to you. You gotta try and comfort them. And that was happening a lot. (9TXC-PRT)

Table 8: Professional skills required by graduate accountants

Theme	***Number of Interviewees***
Teamwork and relationship-building; people skills	9
Communication and interpersonal skills; listening	7
Critical thinking / understanding	5
Enthusiasm and motivation; confidence to contribute	4
Empathy and care; emotional intelligence	4
Willingness to learn; adaptability / persistence; self-awareness	3

Interviewees were also specifically asked to consider whether the post-COVID-19 environment had amplified the need for accounting graduates to possess clear communication and related skills, and whether specific aspects of communication skills were particularly important. Unsurprisingly, most agreed with the general proposition, with the working-from-home context and the changed nature of ICT-mediated communication figuring most prominently in answers (8 interviewees). Several interviewees specifically addressed the need for attention to finding ways to get people together in face-to-face settings, to facilitate interactions and connections and to activate possibilities for people to learn from each other in more subtle ways (7 interviewees). Others highlighted how the post-COVID-19 setting made many key dimensions of communication even more important for accounting graduates (7 interviewees).

While these findings do suggest some openness to a more expansive view of skills, Barnett's (1994) caution that such skills may be tightly corralled within business and organisational imperatives must be borne in mind:

> There is a significant tension … between the ideas of critical thought and of skills. Critical thought - and particularly so in its radical form of critique - implies the possibility of breaking through any cognitive boundaries that may be present … The corporate world welcomes the boundary-breaking that critical thinking offers, but only up to a point. It shrinks from fundamental boat-overturning critique. In the end, critical thinking in the corporate world must be confined within manageable and predictable limits. But to do this is to bar real critical thinking. (Barnett, 1994, p.114)

5.7 Technical skills

Interviewees were asked about the key technical skills needed by accounting graduates, considering both traditional technical accounting competencies such as knowledge of accounting standards and procedures, and areas such as professional values, ethics, and attitudes. Several important areas were captured in interviewee answers, as summarised in Table 9.

Table 9: Technical skills required by graduate accountants

Theme	***Number of Interviewees***
Accounting standards and regulation	7
Fundamental/basic accounting skills	6

ICT/IS and accounting software	5
Understanding / conceptual skills; Ability to provide (informed) advice	3
Communication, incl. via ICT	3

Although there was a clear recognition of the importance of fundamental (traditional) accounting skills, it was also evident that these skills now interact with a wider suite of more generic skills:

> Less emphasis on the production of … reports prepared as a preparer, but rather … using technology to produce the reports … and then important skills move on to include much more work about interpretation and the provision of advice on the basis of accounting information" (8GOV-EDU).

Reflecting on the prominence of current issues relating to the environment, climate change, and associated issues, interviewees were asked about the extent to which they felt it was important for accounting graduates to possess an appreciation of sustainability issues and reporting, such as carbon accounting, energy accounting, and climate-related issues. More than half of the interviewees (10) stated that an understanding of sustainability and related areas was now particularly important – such that it should be regarded as a core requirement for accounting graduates. Another seven interviewees recognised that this area was becoming more important, while a further three suggested that this trend will continue as this reflects generational change within accounting, and the interests of emergent accountants within the profession.

Interviewee responses clearly conveyed that sustainability-related knowledge should be regarded as a central accounting skill to be developed in educational programs: "students have to be taught the impact of many, many of the decisions that you're making into the long-term sustainability area … that's perhaps the number one thing that they have to be taught" (10PAD-CEO). There was a recognition that formal reporting and related requirements in this domain will become more significant in the future: "there will be increased requirements around sustainability… you can see it more and more" (18NFP-CFO). One interviewee recognised the importance of sustainability but maintained that it remained a second-order issue in relation to the priority for business profitability (20GNF-BRD).

These findings suggest that a more extensive view of required technical skills is evident, but that employers tend to view these as, at least initially, emanating from compliance and regulatory requirements, which drive the agenda and set boundaries around organisational responsibility. This stands somewhat in contrast to the kind of openness to boundary-breaking deeper understanding envisaged by Barnett (1994), but the clear understanding that traditional technical skills are not sufficient does perhaps indicate some openness to broader thinking on the part of employers.

5.8 Skills gaps and accounting education

Interviewees were asked if they had experience with (or around) graduate-entry accounting professionals, and, if they had observed any graduate skills gaps. A range of varied answers were given, ranging from the suggestion that there was not enough emphasis on professional skills to there being too much emphasis on professional skills (2 and 1 interviewees, respectively).

Although no obvious themes emerged from the analysis, areas that were mentioned by multiple (>2) interviewees were: (i) communication skills and the related willingness to speak up when issues arise; and (ii) practical business or real-world experience and understanding, and a broader ability to apply leant knowledge in organisational contexts (4 interviewees each). One interviewee brought some of the key issues together: "… the lack of skills that I've seen is accountants just wanting to be scorekeepers and not in getting involved in the business … being, you know, commentators more than players" (19NFP-TMG).

When asked about how university curricula and assessments could be improved to develop the skill gaps identified, or to address other skills gaps that interviewees were aware of, the most prominent suggestion was for various forms of industry exposure and practical experience, such as through placements or internships (7 interviewees). As one interviewee summarised this: "There's just a lot more practical stuff that could be ideally addressed to ... prepare graduates for their life in the professions" (8GOV-EDU).

Others suggested a specific capstone or interdisciplinary subject be included in degrees to help bring knowledge areas together, including knowledge of other disciplines (4 interviewees).

The areas suggested by all interviewees are summarised in Table 10.

Table 10: Skills gaps in university curricula and assessment

Theme	***Number of Interviewees***
Placements/internships; Practical experience; Industry exposure	7
Communication, incl. business communication; relationship-building	5
Capstone / interdisciplinary; knowledge of other disciplines	4
Group work; group dynamics	3
Case studies	3

5.9 Sectoral comparison of employer views

The various skills requirements of the different employer groupings were largely consistent across all 20 interviewees. However, some differences were observed within skills groupings, particularly in relation to digital and ICT skills, ethics, professional and business skills. The smaller entities, including small accounting firms, SMEs and NFPs, identified basic digital skills, such as spreadsheeting, and an ability to apply commercial software packages, such as *Xero*, as being critical skills needs. For example, one interview from a small accounting firm made the following comments:

> Getting back to what I said before about the accounting packages, being able to move around and understand what you're looking for, you know what sort of reports you might want to get out of an accounting package. How do you get those reports? How do you manipulate them? … Those skills around presenting, you know, *PowerPoint*, *Excel*, *Word*, all those sorts of things. (1SAF-DIR)

In contrast, large entities, such as corporates and Big 4 accounting firms, were more likely to identify expertise in enterprise-wide systems, Big Data and AI as being vital. For example, a partner in a Big 4 firm made the following comment:

> Digital skills are critical. OK, even I at my ripe old age, I'm going back to study information systems. … because the digital journey that society is on means you are going to need to understand the blockchain, Artificial intelligence …How do you audit these technologies? (4LAF-PRT)

A senior finance person from a large corporate emphasised the importance of systems knowledge:

> I want him to understand how the numbers come into the management reporting system properly … I think firstly, he needs to be system savvy. Recently I interviewed a person and then sort of grilled him on his system knowledge. Now,

> do you know *Power BI* and you know, experience, have you done that? (12CPR-CEO)

Larger entities were also more likely to highlight the need for ethics training and a focus on ethical conduct. For example, a partner in the Big 4 remarked that "Organisations that fail to meet the high standards expected of them by society, are severely punished in their social licence. You only need to look at [name of organisation] as examples" (4LAF-PRT).

Turning to business skills, larger entities were also more likely to mention the importance of strategic thinking and understanding of the evolving landscape: "It's having the understanding of the business and then being able to advise on the financial aspects of that business, so advisory skills, communication skills, story writing [are critical]" (3LAF-ERP).

While professional skills were viewed by all groups as critical, high-level communication skills were seen as being especially important by larger entities: "If you can't communicate, if you can't influence, if you can't present your work to your stakeholders, your career will be limited on how far you progress" (4LAF-PRT). These entities were also more likely to concede that they as employers, could assist in the development of these communication skills through their in-house training programs. One interviewee remarked: "[We have] a heavy emphasis on soft skills and analysis skills … writing skills, communication skills, teamwork skills" (4LAF-PRT).

Overall, these findings suggest that larger entities regarded development of a range of professional skills as extremely important whereas smaller entities focussed more heavily on technical skills development. The former is more likely to lead to producing accounting and finance graduates with the attributes favoured by Barnett (2023) than a narrow focus on technical skills.

6. Discussion

6.1 Skills and beyond

The findings presented in section five indicate that employer expectations of graduate accounting skills and their development over time were identifiably broader than simple instrumentalism. However, while interviewees provided some recognition of the need for capacities to address the broader context and social needs and values, the evidence also

suggests a certain reactiveness to a wider sociopolitical agenda rather than a deeper, more reflective approach to the aims of university education. While there was some sense of "interconnectivity" with the wider social and ecological context (Barnett, 2023, p. 125), this largely remained "reflective of narrow interests and limited worlds" (Barnett, 1994, p. 7) of industry and commerce. This is not unexpected, as employers necessarily reflect a particular perspective which may represent a form of enlightened self-interest as opposed to a genuine concern for wider societal goals.

The results show *some* appreciation among employers that 'skills' do not stand apart from the social, economic, and ecological contexts within which skills are applied. To be meaningful, skills must be contextualised with capacities for reasoning and judgement in a way that sees these latter characteristics as more than just another set of skills (Barnett, 1994). This requires sensitivity to the natural, social, and human environments within which skills are applied, and an overriding concern for values rather than technique.

Accounting education should move beyond a focus on vocational relevance if it is to transcend narrow instrumentalism in a way that is capable of addressing the challenges and demands of the twenty-first century (Barnett & Coate, 2005). However, the contemporary sociopolitical reality is such that the 'skills agenda' will likely continue. Despite the reality of this skills agenda, our findings demonstrate that there was an evident openness to broader perspectives. This suggests that employers' perceptions of required graduates' skills do not necessarily represent a 'roadblock' to developing a broader, more holistic approach to accounting education that produces well-rounded graduates (Boyce et al., 2015; Boyce, 2018; Boyce et al., 2019).

We now discuss our findings in relation to each of the skills categories considered.

6.1.1 Ethics

Employers identified ethics skills as an area of rising emphasis in the post-COVID-19 work environment. Accounting and the accounting profession have not been immune from the effects of corporate scandals (Carnegie & O'Connell, 2012, 2014; Clarke, Dean, & Egan, 2014; Clarke, Dean, & Oliver, 2014) and it is disappointing that, once again, the profession finds itself defending recent poor behaviour from certain individuals and firms within the sector. It

is, therefore, not surprising that employers call for a greater emphasis on ethics and associated considerations in accounting degrees.

Prior research examining ethics education in accounting has identified a persistent lack of ethics topics (Larrán Jorge, Andrades Peña, & Muriel de los Reyes, 2015). While most accounting programs claim to embed ethical considerations throughout, this integration tends to be executed in an inconsistent and *ad hoc* manner (Blanthorne, Kovar, & Fisher, 2007; Boyce, 2014). Furthermore, little consensus exists on whether ethics should be taught as a standalone subject or integrated throughout program curriculum (Blanthorne et al., 2007; Poje & Zaman Groff, 2022), with some arguing that accounting educators should prioritise developing students' values and ethical attitudes over teaching theory and standards (Caglio & Cameran, 2017).

6.1.2 Digital

Our findings reflect a heightened awareness of the importance of technologies such as AI and blockchain, and of the increasing rate of technological change that requires constant adaption. These findings largely accord with various academic studies and reports from the accounting profession that recognise the increasing significance of these developments (e.g. IFAC, 2019, 2020), as well as barriers to their adoption, such as a lack of clarity regarding their application in accounting, a shortage of employee skills in the area, and concerns about ethics and security (Kar, Kar, & Gupta, 2021). Our findings reflect many of these concerns, particularly from interviewees in small accounting firms and SMEs, who expressed uncertainty about how these technologies might be employed within their organisations while acknowledging their likely significant future influence.

Interviewees from these smaller entities primarily believed graduate accountants should understand these developments, but felt the immediate focus should be on developing expertise in spreadsheeting and commercial accounting packages like *Xero*. Interviewees from larger organisations conveyed a preference for developing students' expertise in enterprise-wide information systems and data analytics. Prior studies examining digital skills (e.g. Daff, 2021) have not discussed the varying digital needs of entities based on their size, scale and client expectations. However, there is a rising appreciation within the accounting education literature (e.g. Stewart & Khan, 2021; Suarta et al., 2023) as well as with our

interviewees, of the need to expose accounting students to a wider range of technological applications beyond *Excel*, including blockchain, AI, cloud computing, digitalisation of data, eXtensible business reporting language (XBRL), data analytics, and *Power BI*.

Our findings, and much of the broader discussion surrounding advanced AI and other technologies, remains primarily instrumentalist in nature, with the prevailing view that it is the technology itself that will shape our responses to it. On the other hand, there are many opportunities to harness advanced ICTs in both accounting education and accounting work to make both more meaningful (Ballantine et al., 2024). This most certainly requires both the integration of skill, judgment, and reflection, and sensitivity to the wider world, in the way Barnett (1994, 2023) envisages.

6.1.3 Business

A prominent theme was that graduates need the ability to provide broader advice, supported by a strong business understanding and a wider organisational and societal perspective. While reports from professional accounting bodies have highlighted this need (e.g. ACCA, 2016; IFAC, 2019), it has received less attention in the academic literature, which has tended to focus on the development of professional (e.g. Douglas & Gammie, 2019; Asonitou, 2022) and digital skills (e.g. Daff, 2021; Jackson, Michelson, & Munir, 2023).

Employers identified a lack of practical business or real-world experience in accounting graduates, as well as an inability to apply acquired knowledge in organisational contexts. Related to this concern was the perception that some graduates did not fully understand the impact of accounting on people's behaviours and actions within organisations and society, due to an inability to understand issues beyond cost and numbers. In the business context, concerns were also raised about some graduates' ability to identify ethical issues, ask questions about them, and a willingness to speak up when such issues arise. These concerns all reflect the integration of facts and values, as well as skills and judgement, which Barnett (1994) characterises as central to making skills effective.

6.1.4 Professional

Interviewees indicated that possession of key professional skills was essential for success in the contemporary work environment. This included problem-solving, critical thinking,

communication, leadership, teamwork, listening and general people skills such as the capacity to work effectively in teams and to build relationships. These types of skills have been identified in previous studies (see section 3.4). That they are still seen as requiring development within accounting education suggests a lack of success in reform efforts to date (Boyce et al., 2019).

What was novel from our findings and of great interest to us as researchers, was the rising need for, and expectation by employers that accounting graduates possess emotional intelligence. This may directly reflect the post-COVID-19 environment, where organisations have faced significant financial and emotional distress, stemming from both a challenging business environment and emotions related to isolation and remote working (Tharapos et al., 2023). To effectively deal with clients facing these feelings, accountants must have well-developed capacities for empathy and care, together with knowledge of support services offered by government and health agencies. Recent accounting studies have considered the rising importance of emotional (e.g. Tharapos, 2022; de Bruyn, 2023) and cultural intelligence (Tharapos, O'Connell, Dellaportas, & Basioudis, 2019; Tharapos & O'Connell, 2023), yet these areas remain a neglected component of accounting curricula.

Another important finding that extends prior research in this area was the rising importance of communication skills. All interviewees felt that the post-COVID-19 environment had amplified the need for accounting graduates to possess clear communication and related skills. There was also a perception that many graduates struggled to explain accounting concepts and outputs to non-accounting audiences, and to work effectively in cross-disciplinary teams. In itself, this is not new (e.g. Zaid, Abraham, & Abraham, 1994; Morgan, 1997; Siriwardane & Durden, 2014), however the new working-from-home context and the changed nature of ICT-mediated communication has accentuated the need for strong communication skills (Herskowitz, 2022). A capacity to communicate effectively with people away from face-to-face settings and to enable interactions, connections, and relationships to develop in virtual environments is now critical, as is a capacity to learn from others in more subtle ways.

Our findings highlight the critical need to develop high-order communication skills for graduate accountants to become effective leaders in the increasingly prevalent hybrid working environments; 'communication' as a discrete skill cannot be effectively separated from the contexts in which it is applied. Furthermore, effective communication must include *listening* to others *and* a willingness to change based on what is both *said* and *felt*.

6.1.5 Technical

Our findings, which show that employers fundamentally expect graduates to possess technical accounting skills – such as knowledge of accounting standards, regulation, and ICT/IS and accounting software - are also echoed by the profession (ACCA, 2016; IFAC, 2019). In an evolving business landscape, professional accountants are increasingly required to respond to internal and external requests for forward-looking business information and more frequent ad hoc reporting ACCA (2016).

Furthermore, many of our employer interviewees stated that an understanding of sustainability and related areas was now critical given the changed reporting requirements in this area; a technical skill hitherto not referred to in prior studies examining graduate skills. Mburayi and Wall (2018) found that accounting and finance lag other management disciplines in embedding sustainability in their curricula. Our findings on the strong demand for these skills suggest a gap between what universities offer and the needs of employers. The need to integrate technical skills with a sensitivity to the broader world is also evident.

6.2 Skills development in university accounting programs

Our findings show that the work undertaken by accountants has evolved from primarily record-keeping and transactional work to an increased focus on data analytics and high-order decision-making. Accounting graduates need to possess a diverse set of skills to succeed in this changed professional environment.

There is a clear and urgent need for curricular and pedagogical reform to address the longstanding challenge of balancing technical requirements with the development of professional and business skills within the context of a broader liberal/humanistic education (Boyce et al., 2001; Boyce et al., 2015; Boyce, 2018; Boyce et al., 2019; Ballantine et al., 2024).

Space within the curricula needs to be made for a greater focus on ethics, sustainability, and emerging technologies.

It is acknowledged that many skills in accounting are contextually related and therefore will be more fully developed on-the-job. Employers and the professional bodies bear a significant responsibility to provide and support CPD in these areas. Nevertheless, universities must provide a strong foundation to enable the further development of these skills in graduates.

Finally, personal skills such as flexibility and adaptability are key skills that are rarely addressed in accounting education. Several employers highlighted that a willingness to ask questions and seek advice was imperative as it provides unique opportunities for learning and development. The post COVID-19 move to increased online and blended education delivery modes, and the dramatic increase in working from home, has directly impacted the availability of formal and informal opportunities for university and on-the-job learning in this regard.

7. Conclusion

The research question in this study was: *What graduate skills do employers perceive are needed for success in the contemporary accounting workplace?* Our findings indicate that employers value a blend of technical and professional skills in accounting graduates, with an increasing emphasis on broader thinking, business understanding, and interpersonal abilities. Graduates are also expected to be capable of providing strategic advice by interpreting accounting data beyond its numerical value and aligning financial insights with organisational objectives. Our findings also showed that the post-COVID-19 environment has heightened employers' needs for accounting graduates who possess interpersonal skills and adaptability, with a focus on emotional intelligence and ethical skills. Digital and ICT competencies, including proficiency in accounting software, enterprise systems, and emerging technologies such as AI and analytics, are also highly regarded. Business acumen, strategic thinking, and the ability to navigate organisational change were particularly valued, although these expectations varied by sector, with larger firms prioritising advisory and communication skills while smaller entities emphasised technical proficiency. Employers identified gaps in

graduates' practical experience and advocated for enhanced industry exposure in university curricula.

Our study makes four major contributions to accounting education literature around graduate skills. First, this study investigates the post-COVID-19 professional environment. The impact of the pandemic on the world of work, including the significant increase in accountants (and their clients) working remotely, the increasingly complex operating environment for clients, and the prominence of emerging technologies was not as prevalent in earlier studies examining the needs of employers (Jackling & de Lange, 2009) and students (Sidaway et al., 2013; Dolce et al., 2020). These studies also did not considered future-focussed skills now required of accountants, such as data analytics and data visualisation, which have become increasingly prominent due to developments in ICTs, nor the new expectations regarding high-order communication skills required for remote work (Tharapos, 2022).

Second, this study identified new skills that have not featured in prior studies examining accounting graduate skills and attributes. Specifically, the need for accounting graduates to possess high-order empathy, counselling, and emotional intelligence to manage clients facing stressful and emotional circumstances flowing from the COVID-19 pandemic and the subsequent difficult economic environment. Practitioners also highlighted the importance of accounting graduates possessing ethics skills and an appreciation of sustainability issues.

Third, our study documents employers' perspectives on the rise of new technologies and their capacity to reshape the profession. While industry reports have pointed to these developments (e.g. IFAC, 2019, 2020), few academic studies to date have highlighted these areas or explored them in any detail.

Finally, drawing on the critical work of Ronald Barnett (1990, 1994, 2018, 2023) to frame the analysis, this study examined the views of accounting graduate employers to 'hold a mirror up' to accounting education. Barnett's work provided a foundation to consider the relevance of skills for all involved (students, educators, and employers), and provided a critical lens through which we could better understand how the 'skills' agenda fits within broader discourses. In this regard, the findings are important for both the university as a vital social

institution, and the role of education in longer-term social development in a context where holistic approaches are necessary and ecological needs demand urgent attention.

Our study also has important implications for accounting programs, universities, and professional bodies. Our findings highlight the need for ongoing reform of accounting curriculum. There is an urgent need to inculcate emerging technologies, and their impact on accounting work and high-order decision-making, into accounting education (Ballantine et al., 2024). Our findings suggest that practitioners are a valuable resource that should be better leveraged in the ongoing development of accounting education.

Universities must allocate sufficient time and resources to enable educators to develop and expand learning strategies and assessments that cultivate students' professional skills to ensure these skills are meaningfully embraced and assessed. Academic workloads in accounting must adequately recognise the time and effort required to develop and assess professional skills, which is often a demanding and time-consuming task (Ozdil, Khosa, Tharapos, & Burch, 2023).

The study findings also suggest that there is an urgent need for reform of the accreditation processes of professional accounting bodies. Universities require greater flexibility to innovate and enhanced scope to develop students' professional skills, values, and ethics. Accrediting accounting professional bodies collaborate with accounting program directors to identify opportunities for reducing required content and fostering innovation in curricula and assessments, particularly in areas such as sustainability, ethics, and technology.

Our findings should be interpreted with consideration of the usual limitations associated with interview data, including social desirability and interviewer bias (Geiger & O'Connell, 2000). Data analysis is also a subjective process (Kvale & Brinkmann, 2009; Rubin & Rubin, 2012). We sought to address these inherent weaknesses through actions such as assuring the interviewees that all responses would be treated anonymously and involving multiple researchers in the analysis process. Furthermore, while the small sample of Australian employer interviewees produced rich data, the study findings may not be generalisable to other jurisdictions or contexts.

Turning to avenues for future research, the evolving landscape for accountants presents several opportunities for further investigation. First, while we have presented evidence of employer perceptions, we know little about how universities are developing new skills in accounting students and how successful they are at doing so. Second, we do not know the extent to which there is diversity in the skills needs of employers across countries and differing cultures. More research in different countries and regions would elucidate understanding of this issue.

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Appendix A: Interview Schedule

Open-ended questions relating to the overall investigation

1. Thinking about the nature of the profession and contemporary accounting work, what do you see as being the key skills required by *accountants* in the world of work today?
2. Do you think the post-COVID environment is impacting on the skills needed by *accountants*, and, if, so, how?
3. Thinking about new entrants to the profession, and to the world of accounting work, what do you see as being the key skills required by *accounting graduates* to succeed in the world of work today?

Guided questions on specific areas of interest for the study

4. (a) Has the post-COVID environment had any perceptible impact on professional ethics? *If answered yes, then:* (b) What do you see as being the key *ethics* skills needed for accounting graduates to succeed in the post-COVID-19 world of work?

5. To what extent do you feel it is important for accounting graduates to possess an understanding of the impacts of accounting on people's behaviours and actions within organisations and society?
6. What do you see as being the key digital and ICT skills needed for accounting graduates to succeed in the post-COVID-19 world of work?
7. Focusing on emerging technologies such as artificial intelligence, do accounting graduates require skills in this area, and if so, what are they?
8. Focusing on Big Data and data analytics, do accounting graduates require skills in this area, and if so, what are they?
9. What do you see as being the key business skills needed for accounting graduates to succeed in the post-COVID-19 world of work?
10. Is capacity for flexibility, adaptability, and coping with and driving change important for accounting graduates, and, if so, how?
11. What do you see as being the key professional (soft) skills needed for accounting graduates to succeed in the post-COVID-19 world of work?
12. To what extent has the post-COVID-19 environment has amplified the need for accounting graduates to possess clear communication and related skills?
13. What do you see as being the key technical skills needed for accounting graduates to succeed in the post-COVID-19 world of work?
14. To what extent do you feel it is important that accounting graduates possess an appreciation of sustainability issues and reporting?

Questions about what is needed in accounting education

15. Have you had any experience with, or around, new graduate-entry accounting professionals, and, if so, have you observed any skills gaps in accounting graduates?
16. What areas do you believe universities should include in their curricula and assessments to develop the skills you have identified, or to address the skills gaps you are aware of?
17. Are there any other comments that you would like to make about accounting graduate skills needs and current skills levels?