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## The Skill Set Required in the Accounting Workplace: Perspectives of Accounting Graduates and Warrant Holders

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Monique Micallef<sup>1</sup>, Cheryl Mifsud<sup>2</sup>, Lauren Ellul<sup>3</sup>, Peter J. Baldacchino<sup>4</sup>,  
Simon Grima<sup>5</sup>

### **Abstract:**

**Purpose:** There is consensus in the accountancy profession that graduates of accounting programmes must possess a broad skill set that goes beyond technical skills. Inherent in non-technical skills, there is the recognition of emotional intelligence (EI) skills, which are deemed to be crucial for the success of the accounting profession. In light of this, the study (i) examines the gap or otherwise between graduates' and employers' perceptions of the value placed on EI and non-EI skills for a career in accounting with the Big-four or mid-tier accounting firms; (ii) examines the extent of development of such skills during the accounting programme at the University of Malta; and (iii) examines the extent to which graduates' perceptions converge with those of the employers in relation to the specific EI and non-EI skills that should be developed during the university's accounting programme.

**Design/Methodology/Approach:** A mainly quantitative approach was adopted, where online questionnaires were distributed to big-four and mid-tier accounting firm warrant holders (WH) (n=222), together with recent University of Malta accountancy graduates (n=96), to gain insight into their perceptions on EI and graduates' skills.

**Findings:** The findings show that both WH and graduates agree that a broad skill set, encompassing both EI and non-EI skills, is important for a career in accounting with accounting firms. Written and oral communication skills, integrative thinking skills and analytical skills are the most valued non-EI skills. It is also revealed that WH and graduates share similar views on which skills are relatively well developed in university. These include the non-EI skills of financial accounting, audit and assurance and the EI skills of teamwork and collaboration. WH and graduates also agree on which skills require further development at university, these being analytical skills, integrative thinking skills, oral communication and the EI skill of self-confidence.

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<sup>1</sup>University of Malta, Senior Associate Academic – Department of Accountancy, Faculty of Economics, Management and Accountancy, [monique.micallef@um.edu.mt](mailto:monique.micallef@um.edu.mt)

<sup>2</sup>University of Malta, Graduate Accountant – Department of Accountancy, Faculty of Economics, Management and Accountancy, [cheryl.mifsud.17@um.edu.mt](mailto:cheryl.mifsud.17@um.edu.mt)

<sup>3</sup>University of Malta, Senior Lecturer – Head, Department of Accountancy, Faculty of Economics, Management and Accountancy, [lauren.ellul@um.edu.mt](mailto:lauren.ellul@um.edu.mt)

<sup>4</sup>University of Malta, Professor, Department of Accountancy, Faculty of Economics, Management and Accountancy, [peter.j.baldacchino@um.edu.mt](mailto:peter.j.baldacchino@um.edu.mt)

<sup>5</sup>University of Malta, Associate Professor, Department of Insurance and Risk, Faculty of Economics, Management and Accountancy, [simon.grima@um.edu.mt](mailto:simon.grima@um.edu.mt)

**Practical implications:** *The results will assist the university in the alignment of its accountancy programme with the expectations of employers. Given the difficulty of developing certain non-technical skills within the classroom, other solutions could also be considered including structured work experience.*

**Originality/Value:** *The study contributes to the literature on skill gaps between market expectations and actual development in university by looking at the perceptions of both graduates and WH on a broad list of EI and non-EI skills.*

**Keywords:** *Emotional Intelligence, Accountancy graduates' skills, Accountancy education, Malta.*

**JEL codes:**

**Paper type:** *Research article.*

## **1. Introduction**

The skill set essential in the accountancy profession is continuously evolving and in today's dynamic environment, the professional accountant is required to possess a broad skill set that goes beyond technical skills. There is a general consensus that graduates of accounting programmes must possess a variety of skills, both technical and professional skills, with non-technical skills gaining in importance (De Lange *et al.*, 2006; Dolce *et al.*, 2020; Tsiligiris and Bowyer, 2021; Cook *et al.*, 2011).

Research found that employers value professional skills in the hiring process of accounting graduates and that such skills are essential for career success in the long term (Lawson *et al.*, 2014; De Lange *et al.*, 2006; Jones and Abraham, 2009). Technical skills refer to knowledge or skills specific to a particular job, discipline, or profession (Robles, 2012) such as expertise in taxation, audit and assurance and financial accounting. Professional or generic skills are transferable skills that are neither subject- nor industry-specific but are considered to be important for employability (Crawford *et al.*, 2011; Robles, 2012), such as analytical skills, oral and written communication skills, and integrative thinking skills.

Inherent in non-technical skills, there is also now recognition of emotional intelligence (EI) skills, defined as “the capacity for recognising our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships” (Goleman, 1998, p. 317) including teamwork and collaboration, empathy, and adaptability.

EI skills were developed by Salovey and Mayer (1990) and were first extended to the accounting profession by Goleman *et al.* (2002) who contended that great leaders are not only technically competent but are distinguished by a high degree of EI. In line with this, Cook *et al.* (2011) found that accounting professionals, who have

developed their EI skills, perform better in leadership positions, decision-making and clientele relationships.

EI skills are becoming increasingly important (Jones and Abraham 2009; Coady *et al.*, 2018) and are deemed to be crucial for the success of the accounting profession (Akers and Porter, 2003; Hunter *et al.*, 2023). Accounting professionals are recognising this and are calling for changes in accounting education programmes to cater for EI training as a way to improve interpersonal skills (Abraham, 2006; Akers and Porter, 2003; Bay and McKeage, 2006; Cook *et al.*, 2011; Foley, 2007; Esmond-Kiger *et al.*, 2002; 2006; Jones and Abraham, 2009).

In the workplace, audit firms such as Deloitte, PricewaterhouseCoopers (PwC) and KPMG are already providing training and promoting EI (Deloitte, 2023; PwC, 2010; KPMG, 2023a). In line with the increasing importance of training in EI, Kastberg *et al.* (2020) contend that universities play a fundamental role in developing students' EI skills.

However, in education, Dolev and Leshem (2016) claim that emotional aspects have been neglected. In view of the increasing importance given to EI, and drawing from Coady *et al.* (2018), this study classifies skills into EI skills and non-EI skills. We look at the perspectives of graduates who have completed the Master in Accountancy programme at the University of Malta; and those of warrant holders (WH<sup>6</sup>) working in big-four and mid-tier accounting firms.

Prior studies (Jackling and De Lange, 2009; Kavanagh and Drennan, 2008) have reported perceived gaps between the skills sought by employers in accounting graduates and the graduates' actual skills; what is referred to as the expectation-performance gap (Bui and Porter, 2010). This has resulted in universities being frequently criticised (Howieson, 2003; Siegel *et al.*, 2010) and, over the past 20 years, calls for modifications to the accounting curriculum have been raised (Bostwick *et al.*, 2023).

As the accounting profession evolves at a rapid pace, it is paramount for the university education system to narrow this gap and adapt the accounting curriculum to ensure that graduates are well-equipped in terms of the skill set required in the workplace. This is even more exacerbated by the talent shortage, partly resulting from a reduction in the availability of new graduates interested in pursuing a career in accounting, which is being felt in several countries including the US, Australia, New Zealand, Malta and other parts of Europe (Birrell, 2006; The Washington Post, 2022; Financial Review, 2022; ICAEW Insights, 2023; Accountancy Ireland, 2002; The Wall Street Journal, 2023; Falzon, 2022).

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<sup>6</sup>In this study, the term warrant holders refers to those individuals who have satisfied the requirements of the Accountancy Profession Act to be considered a Certified Public Accountant.

Such a common issue shared by the accounting profession and academic institutions across the globe implies that the results of this study may provide useful insights to such stakeholders in various countries. This study responds to the need to periodically evaluate whether the skill set developed at an academic institution, the University of Malta, satisfies the demands of employers.

The two-year programme, leading to the Master in Accountancy degree, provided by the University of Malta was introduced in 2012 after a comprehensive three-year exercise was carried out by the Department of Accountancy with input from numerous parties including departmental staff, the Malta Institute of Accountants and major employers, for alignment of employer expectations and the accounting programme. Several new electives that go above and beyond the warrant requirements were introduced during this time, including international financial reporting, public sector financial reporting, international taxation and small entity financial reporting.

Other study units were introduced to address the changing economy including study modules in financial services legislation, corporate governance, internal audit and information technology auditing. A longer dissertation with additional time allotted aimed to give students more opportunity to develop their ‘analytical, soft and other important skills beyond those required for examination assessment’ (Baldacchino, 2016, p. 54).

This study is part of a larger project looking at periodically revising the department’s accounting programme to address changes in the economy and the market, and to further reduce the expectations gap in relation to employers’ expectations. In light of this, the present study:

1. examines the gap or otherwise between graduates’ and employers’ perceptions of the value placed on EI and non-EI skills for a career in accounting with accounting firms;
2. examines the extent of development of such skills during the accounting programme at university;
3. examines the extent to which graduates’ perceptions converge with those of the employers in relation to the specific EI and non-EI skills that should be developed during the university’s accounting programme.

The study contributes to the literature on skill gaps between market expectations and actual development in university by looking at the perceptions of both graduates and WH on a broad list of EI and non-EI skills. Graduates’ perceptions are taken into account when similar research looking at the views of graduates is limited (Douglas and Gammie, 2019).

The Maltese context of the study differs from previous research contexts in that in Malta, the university Master in Accountancy degree is one of the main academic

routes to becoming an accountant and no additional professional examinations, such as those required for the ACCA Qualification, or by any professional body, are required following attainment of the degree.

## **2. Theoretical Framework**

Graduates may find difficulty finding employment in the profession if educational programmes do not succeed in developing the skills required by employers for the profession (Bayerlein and Timpson, 2017). In view of this, the neo-correspondence theory, developed by Saunders and Machell (2000) contends that higher education institutions should correspond with and consider employers' expectations in the development of accounting programmes.

In the accounting education literature, neo-correspondence theory has been used to examine employer requirements and business graduate students' expectations (Nicolescu and Cristian, 2009) in Romania, to examine employers' expectations of an undergraduate accounting programme in Australia (Pan and Perera, 2012), and to examine the perceptions of recent university accounting graduates and accounting employers on the importance of skills, their extent of development in the graduates, and their expected development in university in Canada (Coady *et al.*, 2018).

According to research based on this theory, employers carefully consider social skills, attitudes, motivation, depth of knowledge, and flexibility when employing graduates (Nicolescu and Cristian, 2009). Furthermore, studies (Bui and Porter, 2010; Elo *et al.*, 2023; Kavanagh and Drennan, 2008) point to skill gaps between the skills expected to be important at the workplace and those developed in accounting programmes. Such skill gaps are international issues and it is important that they are understood by educational institutions (Elo *et al.*, 2023). The research seeks to advance the discussion on EI skills and non-EI skills development of accounting graduates, through the use of this theory.

## **3. The Importance of a Wide Skill Set**

The need to develop both technical and non-technical skills in preparation for a career in accounting has been put forward by several studies (Borzi and Mills, 2001; Feldmann and Usoff, 2001; De Lange *et al.*, 2006; Kavanagh and Drennan, 2008; Dolce *et al.*, 2020; Elo *et al.*, 2023; Jackling and De Lange, 2009). The importance of technical skills in education is typically not contested in literature (Coady *et al.*, 2018), nonetheless, technical skills alone are insufficient and it is imperative that accounting graduates develop a broad skill set (Conway, 2018; De Lange *et al.*, 2006; Jackling and De Lange, 2009).

Looking at the future labour-market transformations and the effects of technology progress in the coming years, as well as the effects of a variety of other trends such as sustainability reporting (Hutaibat, 2019) and supply-chain changes, the World

Economic Forum (2023) found that the importance of both technical and non-technical skills will remain in the coming years. Particularly with the ever-evolving digital technologies such as artificial intelligence, the accounting profession is seeing a revolution (Polimeni and Burke, 2021).

The ability of accountants to apply non-technical skills and adopt new technology will affect their employability and have a significant impact on the transition of the accounting profession from transaction-based to value-adding (Tsiligiris and Bowyer, 2021).

As the role of a professional accountant evolves in a globalised environment, several studies contend that developing EI skills is fundamental in fulfilling uppermost organisational challenges (Freedman, 2007), in enhancing employee productivity (Riaz *et al.*, 2018), for team effectiveness (Druskat *et al.*, 2017; Jordan and Troth, 2002), for a more positive work environment leading to better service provision (Makkar and Basu, 2019), for better leadership (Rosete and Ciarrochi, 2005), for greater job satisfaction (Ceballos *et al.*, 2017; Sy *et al.*, 2006; Teles *et al.*, 2020), and for lowering negative implications relating to workload, stress and job dissatisfaction (Membrive-Jiménez *et al.*, 2020) which leads to better teamwork, relationships and performance (Molero Jurado *et al.*, 2018).

While prior research related to skills has looked into diverse professional skill sets, these tend to consider only a few EI skills. For example, teamwork, a relationship management EI skill was studied by Al Mallak *et al.* (2020), Crawford *et al.* (2011), Dolce *et al.* (2020), Douglas and Gammie (2019), Jackling and De Lange (2009), and Paguio and Jackling (2016).

Teamwork, customer service, a social competence EI skill and adaptability, a self-management EI skill, were considered by Kavanagh and Drennan (2008). Teamwork, adaptability (flexibility), and empathy – the latter being an EI skill related to social awareness – were looked at by Robles (2012). This present study extends the literature on skill gaps and provides insights on a comprehensive list of technical, non-technical, as well as EI skills.

#### **4. Educational Development of the Required Skill Set**

While accounting literature contends that professional accountants need to be trained in both technical and non-technical skills (Carvalho and Almeida, 2022; De Lange *et al.*, 2006; Dolce *et al.*, 2020; Jackling and De Lange, 2009; Kavanagh and Drennan, 2008; de Villiers, 2010), Rebele and St. Pierre (2019) believe that the development of professional skills in education should not take precedence over the development of technical skills.

When examining the varied stakeholders' perceptions on the extent of the development of a number of skills in accounting education, past studies (Towers-

Clark, 2015; Dolce *et al.*, 2020; Douglas and Gammie, 2019; De Lange *et al.*, 2006; Jackling and De Lange, 2009; Smith *et al.*, 2018; Coady *et al.*, 2018) show that the extent to which the different skills are developed in education varies. Jackling and De Lange (2009) and Berry and Routon (2020) found that some accounting graduates contended that their education was primarily focused on developing technical skills rather than non-technical skills.

Non-technical skills are being increasingly sought by employers, yet several studies found that accounting graduates do not adequately develop these skills to help them in their accounting career (Barac and Du Plessis, 2014; Dolce *et al.*, 2020, Lim *et al.*, 2016; Oosthuizen *et al.*, 2021). De Lange *et al.* (2006) found that graduates felt that skill deficiencies were mostly perceived to relate to interpersonal, oral expression and computing skills.

However, they also found skill gaps in technical accounting skills. Findings by Elo *et al.* (2023) show that students perceived some technical skills, such as knowledge of different fields and understanding of the big picture, to be less developed in their studies, this together with some professional skills such as customer service and general leadership.

Furthermore, Daff *et al.* (2012) contends that the current focus on the development of professional skills in accounting programs is not addressing some important aspects of EI skills which are important in the accounting. At the same time, Coady *et al.* (2018) found that accounting employers consider non-EI skills to be more important in the accounting workplace, than accounting graduates.

When considering that literature (Cook *et al.*, 2011; Esmond-Kiger *et al.*, 2006; Bay and McKeage, 2006; Rozell *et al.*, 2002) contends that accounting students have less-developed EI skills when compared to students in other disciplines and that to enhance interpersonal skills in the workplace, accounting academics and practitioners are supporting the development of EI skills (Abraham, 2006; Akers and Porter, 2003; Bay and McKeage, 2006; Cook *et al.*, 2011; Foley, 2007; Esmond-Kiger *et al.*, 2002; 2006; Jones and Abraham, 2009; Tsiligiris and Bowyer, 2021), the development or lack of development of EI skills warrants further research.

## **5. Research Methodology**

### **5.1 Sample**

Graduates from the country's main university, the University of Malta, are primarily employed by the Big-4 firms and mid-tier accounting firms. We conducted a study involving data collection from a survey questionnaire of WH working in these accounting firms. The target population of WH stood at 1,050. Data were also collected from a survey questionnaire of graduates. Under Maltese law, to obtain the Certified Public Accountant warrant, three years professional experience is required.

Therefore, students who graduated over the three years, 2019-2020-2021 were considered to be the target population for this study. The Faculty of Economics, Management and Accountancy confirmed that the total target population of the University of Malta accountancy graduates between 2019 and 2021 is 277.

The questionnaire was emailed to the Big-4 and mid-tier accounting firms' Human Resources Department and the survey link was in turn distributed to the respective WH and graduates employed within the respective firm. In cases where a firm was unable to distribute the questionnaire due to in-house technology policies on distributing external links, such firms were provided with hard copies of the questionnaire.

In addition, in instances where certain firms did not reply to the request to distribute the questionnaires to their respective WH and graduates, such WH and graduates were contacted through the platform LinkedIn. Similarly, graduates employed with other accounting firms were contacted via LinkedIn.

## **5.2 Survey Instrument**

In order to address the objectives, data was collected both from graduates and from WH using a survey instrument with questionnaire. The Coady *et al.* (2018) survey instrument was adopted because it had been validated previously. To facilitate the distribution of the survey instrument by the firms, the questions were subdivided and tailored to allow graduates to articulate their personal experiences, while enabling WH to share their own perspectives. Minor adjustments were made to reflect areas noted in the pilot study.

The questionnaire consisted of three main sections. In the introduction part, a description of each of the 19 EI skills and 12 non-EI skill set was provided. The first section of the questionnaire looked at the respondents' demographics. The subsequent section asked the respondents to indicate the level of importance given to the various skills during their university accounting programme.

The third section looked at the degree to which the skills have been developed during the programme and the final section dealt with the extent to which students should develop certain skills during the university programme. Both open-ended and closed-ended questions were included in the survey.

A five-point Likert scale was mostly used in close-ended inquiries to gauge respondents' perceptions. Although open-ended questions are challenging to code (Scholz et al. 2022), close-ended questions restrict responses (Creswell, 2014). To address this and therefore to gather further insight (Baburajan *et al.*, 2021), open-ended questions were also included in the questionnaire.

### 5.3 Measures

Based on the data collected, means were derived and independent sample t-tests were performed to determine whether there were significant differences in perceptions between WH and graduates. Drawing from Coady *et al.* (2018), computation of the Extent and Where Indices was carried out. These were originally based on Hassall *et al.* (2005), who calculated a weighted importance indicator to determine skills development priorities.

The Extent Index represents skills least developed in graduates depending on their level of importance. The greater the Extent Index score, the less developed is the skill in graduates, given its level of importance within big-four or mid-tier accounting firms. The formula used is:

$$\text{Extent Index}_i = I_i \times \frac{\bar{E}}{E_i}$$

where

- Extent Index<sub>i</sub> is the Extent Index for skill i
- $I_i$  is the mean importance score for skill i
- $E_i$  is the mean extent developed score for skill i
- $\bar{E}$  is the average of the mean extent developed score for all skills
- i is the skill, from 1 to 31.

The Where Index highlights the most important skills to be developed during the accountancy programme, depending on their level of importance. The greater the Where Index score, the more appropriate is the skill to be developed during the programme, given its level of importance within the workplace. The formula used is:

$$\text{Where Index}_i = I_i \times \frac{W_i}{\bar{W}}$$

where

- Where Index<sub>i</sub> is the Where Index for skill i
- $I_i$  is the mean importance score for skill i
- $W_i$  is the mean expected development score for skill i
- $\bar{W}$  is the average of the mean expected development score for all the skills
- i is the skill, from 1 to 31

These two indices are then integrated and depicted on a strategic map (Montano *et al.*, 2001) to identify four distinct skill quadrants.

## 6. Respondents' Profile

The data collection resulted in a total of 222 and 96 valid observations from WH and graduates respectively. Table 1 shows that 19 of the responses from the graduates

included graduates employed with firms other than those classified as big-four or mid-tier. Graduates are not required to seek employment in big-four or mid-tier firms and all graduates, irrespective of their place of employment, were considered in this study.

Overall, Table 1 shows that these responses returned 21.14% and 34.66% respectively for WH and graduates, as detailed in Table 1.

**Table 1.** *Respondents' profiles*

Respondents' profiles		WH		Graduates	
		Frequency	%	Frequency	%
<b>Type of firm</b>	Big-four firm	127	57.21	43	44.79
	Mid-tier firm	95	42.79	34	35.42
	Other firm	-	-	19	19.79
		<b>222</b>	<b>100.00</b>	<b>96</b>	<b>100.00</b>
<b>Gender</b>	Male	98	44.14	40	41.67
	Female	124	55.86	56	58.33
		<b>222</b>	<b>100.00</b>	<b>96</b>	<b>100.00</b>
<b>Years since graduation</b>	2021 graduate	-	-	42	43.75
	2020 graduate	-	-	35	36.46
	2019 graduate	-	-	19	19.79
		-	-	<b>96</b>	<b>100.00</b>
<b>Area of specialisation</b>	Financial accounting	49	22.07	31	32.29
	Management accounting	11	4.96	2	2.08
	Audit and assurance	95	42.79	42	43.75
	Taxation	47	21.17	11	11.46
	Advisory	20	9.01	10	10.42
		<b>222</b>	<b>100.00</b>	<b>96</b>	<b>100.00</b>
<b>Response rate</b>		<b>21.14%</b>		<b>34.66%</b>	

*Source: Own study.*

Owing to the possibility of non-response bias as well as comparisons with other presented studies where questionnaires were sent to employers (Pan and Perera, 2012 [41.9%]), the former response rate is disappointing. The graduates' response rate is higher than those of some similar studies using online questionnaires to accounting students or graduates (Dolce *et al.*, 2020 [15%]; Towers-Clark, 2015 [16%]; Elo *et al.*, 2023 [15.5%]; Jackling and De Lange, 2009 [27%]).

Assuming a 95% degree of confidence, a maximum margin of error of 5.84% was guaranteed from a population size of 1,050 WH and a sample size of 222. In the case of UoM graduates, based on a population of 277 and a sample size of 96, a maximum margin of error of 8.1% was guaranteed assuming a 95% degree of confidence.

## 7. The Importance of EI and Non-EI Skills

The first objective of this study sought to examine the gap or otherwise between graduates' and employers' perceptions of the value placed on EI and non-EI skills for a career in accounting with the Big-four or mid-tier accounting firms. The importance of EI across various professions has been noted in prior studies such as Raghubir (2018) in the case of nursing, Parrish (2015) regarding higher education, Douglas (2015) with respect to the legal profession, and Kosti *et al.* (2014) in relation to software engineering.

Similarly, research also contends that EI skills are deemed to be essential in the field of accounting as well (Akers and Porter, 2003; Tsiligiris and Bowyer, 2021; ACCA, 2021). The findings of this study show that 94.6% of WH and 96.9% of graduates contend that future accountants should possess EI skills. The Mann-Whitney U test shows no statistically significant difference ( $P=0.379$ ) between perceptions on whether future accountants should possess EI skills, suggesting that on average, perceptions of WH and graduates in this regard vary marginally.

This importance of EI skills has been mainly attributed, by both WH and graduates to the profession having become people-oriented and its importance in becoming a successful professional accountant. This lends support to the claims made by Lambert and Morales (2017, p. 12) who argued that accountants can no longer work in solitude within an 'ivory tower'.

83.3% of graduates and 85.1% of WH also believe that non-EI skills are equally important to EI skills, as opposed to relatively more or less important. Again, the Mann-Whitney U test shows no statistical significance ( $P=0.277$ ) between perceptions of WH and graduates. This finds support in past literature contending on the need for accounting graduates to develop a broader skill set to pursue a career in the accounting profession, as noted earlier on (Kavanagh and Drennan, 2008; Borzi and Mills, 2001; Coady *et al.*, 2018; Elo *et al.*, 2023).

A more detailed analysis is depicted in Table 2, which shows the rankings of importance of non-EI skills and EI skills, as perceived by WH and graduates, with the order of presentation being determined by the WH ranking.

**Table 2.** Perceptions – The importance of EI and non-EI skills

Skill area	Warrant Holders		Graduates		p-value
	Mean	SD	Mean	SD	
Written communication	4.487	0.864	4.695	0.649	*0.013
Adaptability	4.477	1.051	4.682	0.752	0.125
Teamwork and collaboration	4.456	1.037	4.670	0.633	0.169
Transparency	4.455	0.957	4.382	0.909	0.836
Self-confidence	4.438	0.897	4.596	0.622	0.168
Oral communication	4.410	0.929	4.600	0.671	0.185

Skill area	Warrant Holders		Graduates		p-value
	Mean	SD	Mean	SD	
Analytical skills	4.405	0.836	4.469	0.667	0.998
Integrative thinking	4.368	0.824	4.334	0.824	0.765
Service	4.325	1.042	4.214	0.749	*0.002
Accurate self-assessment	4.304	0.952	4.130	0.823	*0.020
Self-control	4.272	0.999	4.216	0.807	0.123
Emotional self-awareness	4.265	1.036	4.016	0.909	*<0.001
Initiative	4.243	1.008	4.589	0.746	*<0.001
Building bonds	4.239	1.016	4.434	0.840	*0.034
Conflict management	4.230	1.065	4.252	0.823	0.291
Financial accounting	4.223	0.862	4.368	0.763	*0.036
Influence	4.204	0.951	3.778	0.873	*<0.001
Achievement	4.159	1.001	4.142	0.958	0.453
Optimism	4.155	1.004	4.240	0.671	0.734
Audit and assurance	4.142	1.053	4.239	0.870	0.634
Taxation	4.141	0.844	4.065	0.964	0.716
Organisational awareness	4.138	1.072	4.122	0.833	0.440
Inspiration	4.127	1.022	4.022	0.828	0.056
Change catalyst	4.103	0.919	3.858	0.879	*0.005
Empathy	4.100	1.025	4.028	0.930	0.523
Developing others	4.017	1.084	4.059	1.022	0.457
Finance	3.993	1.028	4.061	0.831	0.736
Bookkeeping	3.938	0.941	3.911	0.917	0.922
Management accounting	3.921	1.038	3.612	1.038	*0.007
Information technology	3.895	1.002	3.641	1.046	0.077
Strategy and governance	3.849	1.018	3.255	1.006	*<0.001
Grey shaded skills represent non-EI skills Scale from 1 (very irrelevant) to 5 (very relevant) *The perceptions of WH and graduates vary significantly when the p-value is less than the 0.05 significance level					

**Source:** *Own study.*

Table 2 shows that the most important non-EI skills are deemed to be written and oral communication skills, analytical skills and integrative thinking skills with such skills' ranking surpassing that of the traditional financial accounting. Both WH and graduates share a common perception of the importance of written and oral communication skills with the Mann-Whitney U test showing a statistical significance between the perceptions of WH and graduates in relation to written communication with the different categories of graduates consistently sharing their view of written communication being the most relevant skill. This could be due to academic work relying heavily on such written communication (Leveson, 2000).

The ability to use appropriate communication in the accounting profession is not new and has been deemed to be important in past research (De Lange, Jackling and Gut, 2006; Jackling and de Lange, 2009; Baker and McGregor, 2000; Borzi and Mills, 2001; Kavanagh and Drennan, 2008; Parham *et al.*, 2012).

An accounting professional also needs to be trained and possess analytical and integrative thinking skills displaying the ability of articulating and of problem-solving together with the capability of critical thinking when solving a problem (Crawford *et al.*, 2011; Lin, 2008; Jackling and de Lange, 2009; Kavanagh and Drennan 2008; Hassall *et al.*, 2005). Such higher-order skills are becoming even more important with the automation of traditional accounting tasks (Hunton, 2002).

What is unexpected is the resulting low importance given to Information Technology skills. This could be specific to the programme only requiring one study-unit related to such skills, which might influence the graduates into deeming Information Technology skills, as taught in the accounting programme, as being not important relative to the other skills which attract more attention in the accounting programme.

Furthermore, Table 2 reveals that adaptability and teamwork are deemed to be two essential skills for future professional accountants with the Mann-Whitney U test showing no statistical significance between the perceptions of WH and graduates. Adaptability is considered key due to the changing and uncertain conditions of the working environment as the profession transforms (ACCA, 2021).

It is a skill that is in fact consistently identified in literature (Tsiligiris and Bowyer, 2021) and is considered to be a critical general business competency for accounting graduates to possess (De Lange *et al.*, 2006; Pan and Perera, 2012) in order to overcome obstacles and address changing situations.

The view that cooperatively working with others is crucial and is a skill that is most highly valued in the recruitment process of new accounting graduates is shared by other researchers as well (Novin *et al.*, 1990; Hassall *et al.*, 2005; Jackling and De Lange, 2009; Crawford *et al.*, 2011; Parham *et al.*, 2012).

Table 2 portrays all the skills as being to some extent important. For this reason, a more detailed analysis follows and the important areas that are being adequately addressed and others that need more attention in the accounting programme delivered at the university, are identified.

## **8. Extent to which Graduates' EI and Non-EI Skills Have Been Developed**

The second objective of the study seeks to examine the extent of development of EI and non-EI skills during the accounting programme at university. Table 3 illustrates the results of the Extent Index which shows, through a higher score, those skills that are relatively underdeveloped given their level of importance.

Table 3 shows the Extent Index and ranking for each skill for both WH and graduates, with the ranking of WH determining the order of presentation.

**Table 3.** *Extent Index scores and rankings*

Skill area	WH	Graduates	WH	Graduates
	Extent Index		Rank	
Integrative thinking	5.06	4.53	1	7
Analytical skills	4.74	4.49	2	8
Conflict management	4.65	4.20	3	17
Self-control	4.61	4.19	4	18
Change catalyst	4.49	4.67	5	4
Adaptability	4.49	4.07	6	20
Self-confidence	4.45	4.79	7	2
Service	4.41	4.16	8	19
Influence	4.39	4.01	9	23
Accurate self-assessment	4.39	4.59	10	5
Initiative	4.36	4.32	11	14
Oral communication	4.30	4.40	12	11
Transparency	4.29	3.92	13	24
Written communication	4.29	4.02	14	21
Taxation	4.24	4.24	15	16
Emotional self-awareness	4.19	4.49	16	9
Empathy	4.16	4.28	17	15
Organisational awareness	4.13	4.71	18	3
Inspiration	4.10	4.34	19	12
Developing others	4.10	4.57	20	6
Audit and assurance	4.08	3.87	21	26
Teamwork and collaboration	4.07	3.60	22	30
Optimism	4.05	4.33	23	13
Information technology	4.02	5.73	24	1
Strategy and governance	3.95	3.77	25	27
Building bonds	3.94	3.58	26	31
Achievement	3.91	3.75	27	28
Finance	3.84	3.92	28	25
Bookkeeping	3.81	4.45	29	10
Financial accounting	3.76	4.02	30	22
Management accounting	3.70	3.61	31	29
Grey shaded skills represent non-EI skills				

**Source:** *Own study.*

Integrative thinking and analytical skills were the highest ranked EI skills by WH. Given their importance in the workplace, this indicates that these skills have the lowest relative development in graduates. The importance of these skills was also noted in Table 2 and was relatively highly ranked as well in the findings by Coady *et al.* (2018).

On the other hand, students have ranked Information Technology skills as being the most relatively poorly developed in graduates and this supports the view noted earlier on in relation to Table 2. The non-EI skills of financial accounting and management accounting have low Extent Index scores from the perspectives of WH

and graduates with the latter scoring Teamwork and Building Bonds skills lowest. This suggests that given how well developed such skills are deemed to be, they need the least development in graduates and such scores find support in Coady *et al.* (2018). Overall, the mean extent of skill development for WH ( $\bar{x} = 2.9878$ ) and graduates ( $\bar{x} = 3.2749$ ) are slightly higher than those derived by Coady *et al.* (2018), being 2.78 for WH, and 2.92 for graduates. This could reflect differences in perceptions and accountancy programmes implemented in the jurisdictions.

While it seems that the university is developing several EI and non-EI skills in its graduates during the accountancy programme, one needs to consider the importance of developing such skills during the programme. Therefore, the following section addresses the third objective of this study which is to examine the extent to which graduates' perceptions converge with those of the WH in relation to the specific EI and non-EI skills that are expected to be developed during the accountancy programme.

### 9. Extent to which EI and Non-EI Skills Should Be Developed During the Programme

Table 4 details the results of the Where Index which shows, through a higher score, those skills that are relatively most expected to be developed in university given their level of importance. Table 4 shows the Where Index and ranking for each skill for both WH and graduates, with the ranking of WH determining the order of presentation.

**Table 4.** *Where Index scores and rankings*

Skill area	WH	Graduates	WH	Graduates
	Where Index		Rank	
Written communication (WC)	4.86	5.09	1	2
Integrative thinking (IN)	4.76	4.67	2	8
Analytical skills (AS)	4.75	4.77	3	6
Oral communication (OC)	4.69	5.01	4	4
Teamwork and collaboration (TC)	4.57	5.37	5	1
Taxation (TX)	4.49	4.53	6	11
Adaptability (AD)	4.48	4.83	7	5
Financial accounting (FA)	4.43	4.71	8	7
Transparency (T)	4.42	4.66	9	9
Audit and assurance (AA)	4.39	4.39	10	13
Finance (F)	4.30	4.05	11	18
Self-confidence (SC)	4.22	4.42	12	12
Building bonds (BB)	4.22	5.04	13	3
Initiative (I)	4.21	4.63	14	10
Service (S)	4.17	3.99	15	20
Bookkeeping (B)	4.14	4.04	16	19
Conflict management (CM)	4.12	4.18	17	15

Management accounting (MA)	4.10	3.43	18	30
Influence (IF)	4.08	3.51	19	29
Achievement (AC)	4.06	4.06	20	17
Emotional self-awareness (ES)	4.03	3.87	21	23
Accurate self-assessment (ASA)	4.01	3.64	22	27
Inspiration (IS)	3.99	3.82	23	24
Optimism (OP)	3.95	4.23	24	14
Self-control (SO)	3.95	3.94	25	22
Information technology (IT)	3.95	3.53	26	28
Empathy (E)	3.94	4.15	27	16
Change catalyst (CC)	3.88	3.65	28	26
Organisational awareness (OA)	3.87	3.74	29	25
Strategy and governance (SG)	3.80	2.85	30	31
Developing others (DO)	3.79	3.95	31	21
Grey shaded skills represent non-EI skills				

**Source:** Own study.

Both groups ranked the non-EI skills of written communication and oral communication in the top four skills and this is consistent with the findings in Coady *et al.* (2018) and with the evident perceived importance of these skills in Table 2. Written communication received the highest ranking from WH, and teamwork and collaboration received the highest ranking from graduates, thus being considered the most appropriate skills for development in the university.

Such skills surpass the more traditional non-EI skill of financial accounting which skill received the highest ranking from both WH and graduates in Coady *et al.* (2018). The lowest ranked skill by WH is Developing Others, and that by graduates is Strategy and Governance, with the latter also ranking low in Coady *et al.* (2018). This suggests that such skill should be least developed in graduates, given its lower level of importance in the workplace.

The mean extent EI and non-EI skills for WH ( $\bar{x} = 3.87$ ) is slightly higher than that derived by Coady *et al.* (2018), being 3.64 for employers. Possibly, this higher mean figure for WH could be attributed to the mentality that skills should be developed at the university instead of at the workplace. Furthermore, it is interesting to note that the mean extent the EI and non-EI skills for graduates ( $\bar{x} = 3.74$ ) is identical to that derived by Coady *et al.* (2018) for graduates ( $\bar{x} = 3.74$ ). This could be due to graduates having similar perceptions on what skills should be developed at university, irrespective of the jurisdiction.

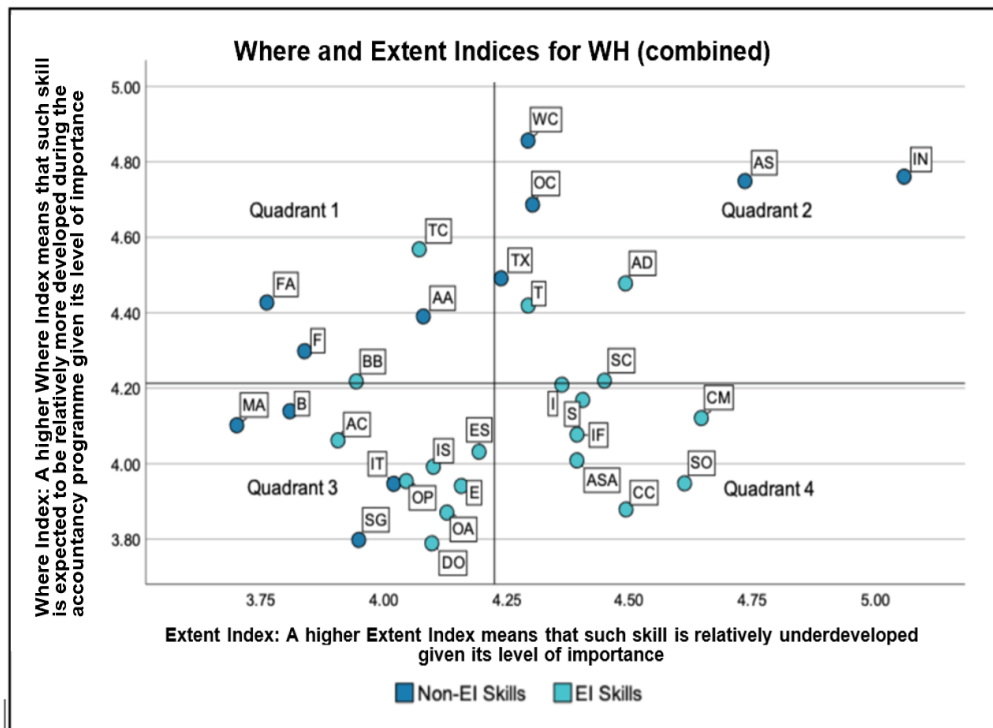
## 10. The Integration of the Extent and Where Indices

The strategic maps in Figures 1 and 2 combine the Extent and Where Indices for WH and graduates respectively. The abbreviations in such figures are explained in Table 4. Based on the neo-correspondence theory, these maps identify skills in two

particular quadrants which may be earmarked for improvement in the accounting programme: (i) **Quadrant 2** depicting skills that are expected to be relatively developed at the university but are not adequately developed during the programme and therefore these skills might require further attention during the programme; and (ii) **Quadrant 3** identifying skills which are adequately developed during the programme but are relatively not highly expected to be developed at the university and therefore might require less focus during the programme.

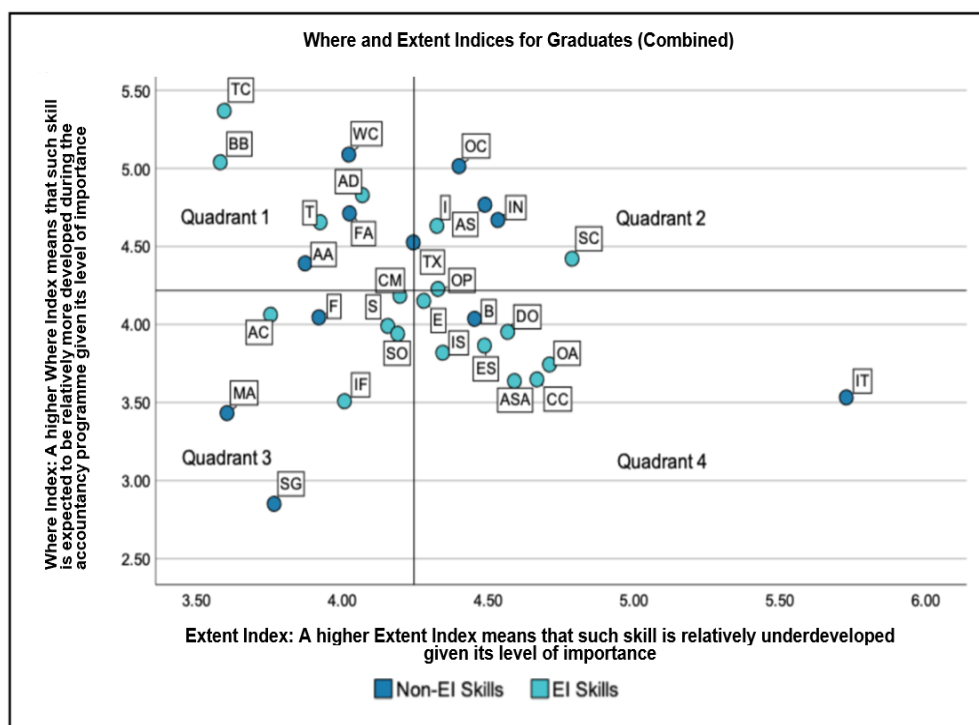
Quadrant 1 and Quadrant 4 do not suggest major changes to the programme as the extent of development of the respective skills corresponds to the expected extent of development of that skill during the programme and therefore this is congruent with the neo-correspondence theory and the university is utilising resources well. Quadrant 1 depicts those skills that are relatively highly expected to be developed and are also very well developed. Quadrant 4 represents those skills that are relatively not highly expected to be developed and are also not highly developed during the programme.

**Figure 1.** Strategic map – Extent and Where Indices (WH)



Source: Own study.

**Figure 2.** Strategic map – Extent and Where Indices (Graduates)



*Source: Own study.*

Each of Quadrants 1 - 4 in Figures 1 and 2 are presented in Tables 5 - 8 respectively, in the following sections. The arrows in such tables indicate congruence between the perceptions of WH and graduates. In the following tables, grey shaded skills represent non-EI skills.

### 10.1 Quadrant 1: Skills that Are Relatively Well Developed

The findings indicate that WH and graduates agree that the core technical skills in financial accounting, and audit and assurance are relatively well developed considering their importance.

This finds support in other studies as well (Kavanagh and Drennan, 2008; Jackling and De Lange, 2009; Berry and Routon, 2000) and is rather expected considering that these reflect the key services offered by the main employers being the Big-Four and mid-tier firms, and they are also part of the specific discipline foundation, thus presumed (Jackling and De Lange, 2009).

Furthermore, it could well be that as Rebele and St. Pierre (2019) contend, in accounting education the development of technical accounting skills is prioritised

over the development of professional skills. Table 5 also shows that both groups are in agreement on the non-EI skills relating to teamwork and collaboration and building bonds.

Teamwork skills are considered important skills by employers (Paguio and Jackling, 2016; Montano *et al.*, 2001; Tempone *et al.*, 2012) and this finding agrees with Coady *et al.* (2018) who also find that both skills feature in Quadrant 1 and are agreed upon by both the employers and the graduates, evidencing skills convergence.

**Table 5.** Skills that are relatively well developed considering their importance

Quadrant 1		
WH		Graduates
Financial accounting	↔	Financial accounting
Audit and assurance	↔	Audit and assurance
Teamwork and collaboration	↔	Teamwork and collaboration
Building bonds	↔	Building Bonds
Finance		Taxation
		Written communication
		Adaptability
		Transparency

*Source:* Own study.

This is somewhat in disagreement with Jackling and De Lange (2009) and Dolce *et al.* (2020), who identified a clear gap between graduate perceptions of the teamwork skills acquired at university and employer expectations. One possible reason could be the limited generalisability of these studies since the samples were not representative.

It is also in disagreement with Wells *et al.* (2009) and Bui and Porter (2010) who contend that teamwork and collaboration skills require further development in education in New Zealand. The difference may be due to contextual issues and different cultural contexts.

## 10.2 Quadrant 2: Skills that Are Not Adequately Developed

Consistent with Coady *et al.* (2018), both analytical skills and integrative thinking were deemed in need of further attention by both the employers and graduates. Gray *et al.* (2001) found that accountancy firms saw a deficiency in critical thinking skills of accounting students and Douglas and Gammie (2019) found that accounting graduates perceived their development of analytical and critical thinking skills to be significantly lower than those of non-accounting graduates with accounting academics attributing this to the higher level of technical content on accountancy degrees (Table 6).

On the other hand, this finding is in contrast to observations by Elo *et al.* (2023) that such skills were the most comprehensively developed. Perhaps this is due to contextual differences with respect to Finland.

**Table 6.** Skills that are not adequately developed considering their importance

Quadrant 2		
WH		Graduates
Oral communication	↔	Oral communication
Analytical skills	↔	Analytical skills
Integrative thinking	↔	Integrative thinking
Self-confidence	↔	Self-confidence
Adaptability		Optimism
Transparency		Initiative
Written communication		
Taxation		

*Source:* Own study.

Analytical skills were also deemed to be lacking in other research (Kavanagh and Drennan, 2008; Theuri and Gunn, 1998; Douglas and Gammie, 2019) and similarly, De Lange *et al.* (2006), Dolce *et al.* (2020) and Towers-Clark (2015) found that communication was not emphasised during the accounting programme. The only EI skill agreed upon by both parties, that is in need of more attention in the accounting programme, is self-confidence.

This lends itself well to the findings in Smith *et al.* (2018) where self-confidence was found to lack the appropriate emphasis in education. Perhaps increased focus on the skills identified in this quadrant could be achieved by decreasing the focus on the skills in Quadrant 3.

### 10.3 Quadrant 3: Skills that Might Require Less Focus

Congruent with Coady *et al.* (2018) management accounting is perceived by both parties as being relatively well developed although such emphasis is not expected from the university programme. This is understandable considering that the main employers are the Big-four and mid-tier accountancy firms and further supported by Table 2 showing the relative low importance attributed to management accounting by both parties. On the other hand, research involving management accounting practitioners shows a gap between management accounting practice and education (Botes and Sharma, 2017).

Strategy and governance, defined as the role of corporate governance within an organisation and strategy formulation, is also deemed by both parties to fall within this quadrant. Getahun and Mersha (2020) contend that a professional accountant should be able to analyse financial information within the context of their

organisation, its strategy and its culture. It is somewhat in line with Coady *et al.* (2018) where the graduates' perceptions placed it in this quadrant. Similar to management accounting, this could be due to the students being mostly employed by accounting firms as opposed to moving into industry (Table 7).

**Table 7.** Skills that might require less focus considering their importance

Quadrant 3	
WH	Graduates
Management accounting	Management accounting
Achievement	Achievement
Strategy and governance	Strategy and governance
Optimism	Influence
Information technology	Service
Inspiration	Self-control
Emotional self-awareness	Conflict management
Empathy	Finance
Organisational awareness	
Developing others	
Bookkeeping	

*Source:* Own study.

Achievement is the only EI skill that is mutually agreed between the parties as not requiring further emphasis in the accounting programme. Such skill is evidenced by an effort to enhance or achieve a high standard. To be eligible for admission to the Masters in Accountancy degree at the university, students need to obtain a minimum average mark of 65% in the study-units studied during years 2 and 3 of the Bachelor of Commerce degree with accountancy as the main area of study.

This method of entry requirements instils a desire to achieve in the students as it is a deciding factor in the admission for the Masters in Accountancy degree. This could be an underlying reason for this skill being positioned in this quadrant. There are several EI skills which either party have placed in this quadrant suggesting that perhaps a trade-off can be made between such skills and those in quadrant 2.

Of interest is that, consistent with Coady *et al.* (2018), WH placed Information Technology, defined as proficiency in the latest information technology sources, in this quadrant. This supports the low relative expectation of this skill being developed at the university in Table 4. Table 3 also depicts graduates ranking this skill as the most relatively poorly developed in graduates and being placed in quadrant 4 by the graduates. Similarly, De Lange *et al.* (2006) conclude that graduates deem computing skills to be poorly developed. Both quadrants 3 and 4 suggest that no further emphasis on such skill is required.

Furthermore, this supports Hassall *et al.* (2005) who stated that information technology is less of a requirement to be developed within accountancy graduates progressing into the working world. Additionally, this is consistent with Howieson

(2003), who argued that although information technology is fundamental, it is of less importance when compared to analytical and communication skills.

It could also be due to most accountancy firms boasting of in-house learning academies offering training in various skills, including data analytics (PwC, 2023; KPMG, 2023b; 2023c), and providing all the training support to employees addressing a range of skills (Times of Malta, 2015). This backs up Bakarich and O'Brien's (2021) claim that new data analysis techniques and technology will alter how a significant portion of a professional accountant's work is carried out. Such in-house training could reduce the importance of such skill being taught at university.

Consistent with this line of thought, Jackling and De Lange (2009) contend that some technical accounting skills could be eliminated from university accounting programmes to be instead catered for by the profession. This would allow universities to reallocate resources to developing other skills.

#### **10.4 Quadrant 4: Skills that Are not Highly Expected to Be Developed and not Highly Developed**

WH and graduates are in agreement in placing Accurate self-assessment and Change catalyst in this quadrant. Both are consistent with Coady *et al.* (2018). Most of the skills in this quadrant are EI skills with 63% of the EI skills being allocated to this quadrant. This suggests that some EI skills should be considered on the lower end of the development scale at university when compared to other skills, and/or perhaps developed in a more efficient way. For example, Pertegal-Felices *et al.* (2017) found that working in interdisciplinary teams at university improved emotional skills without the need to design particular courses that could have a detrimental impact on the time students could spend studying (Table 8).

**Table 8.** Skills that are not highly expected to be developed and are not highly developed, considering their importance

Quadrant 4		
WH		Graduates
Accurate self-assessment	↔	Accurate self-assessment
Change catalyst	↔	Change catalyst
Initiative		Empathy
Service		Inspiration
Influence		Bookkeeping
Conflict management		Developing others
Self-control		Organisational awareness
		Information technology
		Emotional self-awareness

*Source:* Own study.

## **11. Conclusion**

The data presented in this study reveal that both WH and graduates contend that a broad skill set, encompassing both EI and non-EI skills, is important for a career in accounting with the Big-four or mid-tier accounting firms, even more so in the future. Written and oral communication skills, integrative thinking skills and analytical skills are the most valued non-EI skills, even outranking the technical skill in financial accounting. WH and graduates also share a common perception of adaptability, teamwork and collaboration, and self-confidence being the most important EI skills in today's ever-changing environment.

Strategic mapping shows that overall, both WH and graduates share similar views on which skills are relatively well developed in university considering their importance. These are the non-EI skills of financial accounting, audit and assurance and the EI skills of teamwork and collaboration, together with building bonds. Views are also aligned on those skills which are considered as not requiring more focus during the programme, including management accounting, strategy and governance, and achievement.

Most importantly, their views on which skills need further attention in university considering their importance at the workplace are also converged with such skills being deemed to be analytical skills, integrative thinking skills, oral communication and the EI skill of self-confidence. Both parties' views also aligned in not expecting some EI skills to be developed in university in preparation for the workplace, and these skills are in fact not currently highly developed. The results will undoubtedly assist the university in the development of future lines of action related to the revision of the university programme. Considering the extensive curriculum and tight schedules in place to provide a varied programme, some resources could be redirected for a trade-off of the development of some skills for others.

However, considering that the possibility of the effective development of certain non-technical skills within the classroom is doubted (Cranmer, 2006), other courses of action could be also considered including structured work experience. Consistent with the neo-correspondence theory, the university should hold additional discussions with the employers to better understand possible skill gaps experienced in accounting education and align its accounting programme with changing expectations.

## **12. Research Limitations**

These findings are reported in the light of a number of limitations. First, this study is limited by the low response rate of WH which may limit the generalisability of the findings. The questionnaire is based on the perception of WH and recent graduates as a measure of skill importance and development.

However, it is susceptible to respondents' over or underestimation (Douglas and Gammie, 2019) and therefore care must be taken to ensure the results are viewed in this context. Complementing the survey with interviews would provide additional insights into the underlying reasons for the reported findings. These limitations should be considered when interpreting the results of this study.

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