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https://www.emerald.com/insight/0040-0912.htm

Received 9 August 2021
Revised 11 February 2022
16 May 2022
Accepted 24 July 2022

Non-technical skills and students' overconfidence in accounting

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Abstract

Purpose – Despite the institutional calls to include the development of non-technical skills as objectives in accounting curriculum and the attempts to do so, a gap between the level of skills exhibited by graduates and those needed to succeed as a professional is still perceived. One of the possible causes could be students' overconfidence, defined as a very optimistic assessment of their own abilities. The main objective of the paper is to assess the existence of overconfidence.

Design/methodology/approach – Two samples, students and employers were surveyed regarding the exhibited level of accounting graduates in a set of 22 non-technical skills, highlighted as relevant in the literature. This enabled a comparison of the opinions of employers with the perceptions of students concerning the demonstrated level of such skills.

Findings – The results of this study support the existence of students' overconfidence. In all the skills students score their ability higher than employers do with those differences being statistically significant in 21 out of 22 skills. Employers who are in closer contact with entry level accountants perceive even lower exhibited skills levels in graduates.

Research limitations/implications – Overconfident students would be less motivated to actively participate in activities designed to improve skills resulting in underachievement and in lower performance. This low performance in highly valued skills could potentially harm their employability.

Originality/value – Although the literature focussing on non-technical skills in accounting is prolific there are few papers comparing the views of employers and students, and there are no previous studies focussing on overconfidence.

Keywords Accounting, Skills development, Overconfidence, Skills expectation gap

Paper type Research paper

Introduction

Since the publication in 1986 of the Bedford Report (American Accounting Association, 1986) through to the last version of the International Education Standard nº 3 by the International Federation of Accountants (IFAC, 2017), there has been a constant institutional call for the inclusion of non-technical skills development into the accounting curriculum.

Those calls have been supported by the results of research that highlight the relevance of such skills for an adequate performance of accounting tasks in practice, e.g. Arquero *et al.* (2001) for management accounting; Lim *et al.* (2016) for auditors; or Tempone *et al.* (2012) for

Education + Training
Vol. 64 No. 5, 2022
pp. 716-733
Emerald Publishing Limited
0040-0912
DOI 10.1108/ET-08-2021-0309

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accounting employers amongst many others and these have resulted in numerous attempts to change the pedagogy in order to attain the desired skills development. The literature specialising in accounting education has published many papers in which different pedagogic methodologies and approaches have been used to develop skills (see, for instance, the systematic reviews of the accounting education literature by Rebele *et al.*, 1998a, b; Apostolou *et al.*, 2001 and more recently, Apostolou *et al.*, 2015, 2016, 2017, 2018).

However, as Arquero and Fernández-Polvillo (2019) note there is still a perception of a gap between what is needed to succeed as an accounting professional and the level of skills actually exhibited by entry level professionals. Students' perceptions are one of the causes of this gap (Bui and Porter, 2010), specifically their perceptions about their own capabilities compared to the actual skills requirements. A very optimistic and positive assessment of one's own abilities, *overconfidence* as defined by Koellinger *et al.* (2007), could create an erroneous sense of competence that restricts the development of students leading to disengagement with the learning process (Hack-Polay, 2018).

Therefore, the main objective of the paper is to evaluate the existence of overconfidence by comparing the views of accounting students on their level at certain key skills versus the opinions of employers about the actual demonstrated levels they perceive in entry-level accounting employees. Although the topic of non-technical skills in accounting has been covered in the literature, most papers tend to focus on the perceived importance or relevance (e.g. Dolce *et al.*, 2020). The focus of the present research is different given that it is the perceived level of ability and the possible existence of students' overconfidence which is studied. Students could perceive that certain skills are of the major relevance for their career but still considers that their development is enough to fulfil the professional requirements while employers consider the demonstrated level as not yet satisfactory. This could result in a lack of motivation from students to improve their skills further when this development is still needed. The possible effect of contact with the professional world (work experience or placements) on student perceptions is also examined. This different focus is the main contribution of the present research to the existing literature. The rest of the paper is structured as follows. The next section describes the background of the study reviewing briefly the literature on the skills expectation gap in accounting and the concept and implications of overconfidence. The third section presents the objectives and research questions, followed by a methodology section. The findings are presented and discussed in the last two sections, results and the discussion and conclusions. Along with the conclusions, relevant implications, limitations and lines for further research are provided and discussed.

Background and literature review

Skills expectation gap in accounting

The research literature as well as institutional statements support the existence of a skills expectations gap in general (e.g. Baird and Parayitam, 2019; Confederation of British Industry, 2019; Lowden *et al.*, 2011; UK Commission for Employment and Skills, 2009). Specifically, in accounting between the non-technical skills that employers expect to find in potential employees and those that applicants actually possess. This gap is known as the *skills expectation gap* (Hassall *et al.*, 2013) or the *expectation-performance gap* (Webb and Chaffer, 2016), and the most recent literature warns of its continued existence in accounting (e.g. Chaffer and Webb, 2017; Douglas and Gammie, 2019; Howcroft, 2017; Jones, 2014; Phan *et al.*, 2020).

As Arquero *et al.* (2017) note in accounting this gap led to a fruitful debate starting in the USA with the publication of a series of institutional reports (American Institute of Certified Public Accountants–AICPA, 1988; American Accounting Association -AAA, 1986;

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Arthur Andersen & Co. *et al.*, 1989) resulting in the conception of the Accounting Education Change Commission. This commission, in its statement position number 1 (AECC, 1990), fully endorsed the views of the professional associations on the extreme relevance of non-technical or generic, skills. This relevance was incorporated in similar statements by relevant international accounting institutions (e.g. Common Content Project, 2017 or any of the International Accounting Standards of the IFAC from 1996 to 2017) and it is present in most recent communications (e.g. Association of Chartered Certified Accountants–ACCA, 2018; Accountancy Europe, 2020).

Research in the area of accounting education supports those institutional views about the extreme relevance of the non-technical skills (e.g. Arquero *et al.*, 2001; Deppe *et al.*, 1991; Hassall *et al.*, 2005; May *et al.*, 1995; Novin *et al.*, 1990) with clear empirical evidence that those skills remain essential nowadays (e.g. Tsiligiris and Bowyer, 2021; Uwizeyemungu *et al.*, 2020). It should be noted that students themselves are aware of the relevance of these skills; Bui and Porter (2010) highlight that students, although positively valuing the technical coverage of accounting programmes, consider that some courses are too theoretical asking for a better alignment between accounting course objectives and the development of the skills sought by employers.

Despite this relative consensus on the relevance of such skills, there is still a gap reported by employers, mainly in the interpersonal skills (team-working and communication skills), leadership potential, etc. of accounting graduates (e.g. Fouché, 2013; Howcroft, 2017; Jackling and De Lange, 2009; Lim *et al.*, 2016; Kavanagh and Drennan, 2008; Montoya del Corte and Farías Martínez, 2018).

Bui and Porter (2010, p. 27), after reviewing the literature [1], classified the possible causes of this gap into four categories:

- Differences in the expectations of accounting academics and employers (e.g. different preferences in educational objectives or contents to be taught)
- Institutional constraints (resources, class sizes, conflict research – teaching, etc.)
- Ineffectiveness of university teaching (e.g. reliance on traditional methods).
- Student perceptions

The last category is the most relevant for the purposes of this study. Student perceptions are of the highest importance; not only their perceptions about the profession and the skills needed to succeed as an accounting professional (see, e.g. Arquero and Fernandez-Polvillo, 2019; Byrne and Willis, 2005; Sin *et al.*, 2012) but also their perceptions about their own capabilities compared to the level required by their potential employers, an aspect that has not been covered in the literature. Students may still consider these skills very relevant, but if they feel that they have been developed to a sufficient level, there could be no reason to dedicate additional efforts to these educational objectives. This is the consequence of *overconfidence* and is why this research differs from previous papers, mainly focussed on the perceived relevance.

Overconfidence

As Koellinger *et al.* (2007) note overconfidence has been defined differently across disciplines, but in general it is described in terms of a very optimistic (even unreal) positive assessment of one's own abilities. Following Gustavson and Nall (2011) and Moore and Healy (2008, p. 502) this overvaluation can be (1) an *overestimation* of one's actual skills, performance or chance of success, (2) an *overplacement*, that is an overestimation of one's own ability relative to others or (3) *overprecision,* linked to an excessive certainty about the accuracy of one's beliefs.

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Focussing on skills development for the purpose of this study we follow Giambatista and Hoover (2014) in defining overconfidence as the optimistic gap between self-assessed perceptions of one's skills when compared with actual demonstrated levels.

Overconfidence is of the highest relevance in education because as it involves an inflation of self-value when assessing ones owns capabilities against real demands. It creates an erroneous sense of competence which harms students' development leading to the disengagement with the learning process (Hack-Polay, 2018). Consequently, Giambatista and Hoover (2014) affirm:

> One of the many troublesome manifestations of overconfidence is a general inability or unwillingness for an individual to perceive a need or desire for personal growth and development [. . .] As a result, such individuals would have little motivational basis to attend to skills improvement (p. 269).

Many authors stress the academic implications of overconfidence: Chiu and Klassen (2010) indicate that this gap leads to poor preparation and therefore to lower performance. Dunlosky and Rawson (2012) reach the same conclusion by linking overconfidence and lack of knowledge monitoring accuracy: overconfident students tend to prematurely terminate studying erroneously judging that the contents or skills are well learnt when they are in fact not. The inaccurate monitoring of their learning results in poorer learning outcomes and underachievement (p. 277).

As Hack-Polay (2018) notes overconfidence poses a problem for both educators and employers, because it "blurs potential support mechanisms to attain grater basic skills in graduates and improve their employability" (p. 5) acting as a severe constraint that hampers educational efforts.

Objectives and research questions

The main objective of the paper is to provide initial evidence on the existence of overconfidence in accounting students concerning their non-technical skills. Following Giambatista and Hoover (2014), overconfidence was defined, for the purposes of the present research, as the optimistic gap between students self-assessed perceptions of their own demonstrated skills in comparison with actual demonstrated skill levels. Therefore, to gather evidence that could point to the existence of overconfidence, the views of students, as a group, are compared with the demonstrated level by entry-level graduates as perceived by those who could hire their services to work as accounting professionals: accounting employers. Thus, the first and main research question is stated as follows:

RQ1. Are accounting students overconfident about the level of their non-technical skills?

The opinions and assessment of student performance could be affected by several factors. In the case of employers, Bui and Porter (2010) found that the competence required of accounting graduates varied between firms of different sizes. Also, some employers could have direct first-hand experience with entry-level employees, whilst others may not have such direct first-hand experience it being reasonable to expect differences in the assessment between these two groups.

In the case of students, gender seems to be a factor relating to differences in the perception of the importance of the skills needed for career success (Usoff and Feldmann, 1998) and this may also be similar for employers. Those students who possess experience with professional requirements (through relevant work experience or placements) could have different perceptions about the actual requirements, and therefore a different opinion about their relative performance compared to those fellow students who do not

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have that practical experience. These arguments allow us to pose the following research questions:

RQ2. Are differences in the assessment of students' performance associated with the size of the firm?

RQ3. Do the opinions of employers with training responsibilities differ from those of their colleagues who do not?

RQ4. Are there differences in perceptions due to gender?

RQ5. Are there differences in students' perceptions associated with the contact with the professional world (work experience or placements)?

Methodology

Instrument and procedure

The questionnaire used was the instrument developed by Arquero Montaño (2000), used later by Hassall *et al.* (2003, 2005). The core of the instrument consists of a list of 22 items describing key non-technical skills assigned to six categories:

- Communication skills (five items)
- Team working skills (three items)
- Problem solving skills (four items)
- Time and stress management skills (three items)
- Information technology skills (two items)
- Ethical and professional values (five items)

Keeping the original wording of the questionnaire (Arquero Montaño, 2000), students were asked to answer for each skill the level actually exhibited by their fellow students. As Kavanagh and Drennan (2008) note judgements made by humans are especially prone to error and as Douglas and Gammie (2019) highlight measuring skills development through perceptions is subject to over or under estimation by respondents. Asking about their fellow colleagues as a group instead of a personal view of each student's own skills, was originally intended to obtain a more global, average vision that minimises this error. Therefore, our measures of students' overconfidence do not include the effect of *overplacement*, being more focussed on group-level *overestimation*.

Employers were asked to answer, in their experience and for each item, the level of these skills that new graduates entering in the profession exhibited. The scale ranged from 0 (*very low*) to 10 (*very high*) being 5 *"just acceptable"*.

A convenient sample of students enrolled in accounting courses in the Sheffield Hallam University was chosen [2]. To minimise the common method variance, the recommendations by Podsakoff *et al.* (2003) for research design were followed. Questionnaires were distributed during class time and a member of the research team, present during the supply of the questionnaire, gave a brief introduction explaining the main objective of the project, to obtain the students' opinions on their performance level in a set of non-technical skills, without suggesting any direction in the answer or relationship with other variables. It was stressed that responses were confidential and will only be used for research purposes at an aggregated level. The students were asked to answer the questions as honestly as possible and that there were no correct or incorrect answers. The member of the research team also clarified that the information provided would not

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have any impact on the course assessment, there were no offers of rewards and participation was voluntary. These and the broad objectives of the research were discussed with the students prior to the distribution of the questionnaire.

The ethical approval process checked and approved this project, considered a very low risk human participation study. The major factors being students' informed consent, anonymity and the right of students not to participate in the survey or to withdraw at any time when participating.

The questionnaires from employers were collected with the help of one of the largest professional associations worldwide, the Chartered Institute of Management Accountants (CIMA). The choices in the design of the instrument (questionnaire, cover letter, etc.) and the procedure to access the target population were driven by the objective of maximising completion and minimising nonresponse (Douglas and Gammie, 2019). Therefore, we follow the recommendations by Dillman (1978) and Collier and Wallace (1992), amongst them, the identification of institutional support in the research is identified as one of the best strategies to improve response rate. Consequently, we considered that access to employers through, and with the active implication of, the CIMA could allow us to get access to a wider range and number of employers that access them through the Careers Office of the university.

The CIMA distributed the questionnaires to its list of UK-based organisations that employ accountants (CIMA students and members). These employers do not necessarily hold an accounting degree or have a CIMA qualification, but have a close contact with entry-level accountants and in most cases, possess experience in their selection and training. All questionnaires were distributed in the same time interval to both groups.

Sample

A total of 454 questionnaires were obtained: 214 UK-based employers and 238 students enrolled at accounting subjects at Sheffield Hallam University (UK; 67.5% of them at the third year of the degree and 32.5% at the fourth year. The distribution by gender (Table 1) is substantially different, and more than 78% of employers are male, whereas the majority of students (58%) are female.

The size of the organisation for which these employers work is very varied. It ranges from three to more than 160,000, with a mean close to 7,500 employees and more than 50% of the sample work in firms with 1,000 or more employees. The majority of employers (78%) had responsibility in the training of entry-level accountants.

Regarding contact with the professional world, 44.8% of the students indicated that they had relevant work experience versus 55.2% who indicated no previous experience at all; and 35.9% of the students indicated that they had completed a placement. Combining the two sources of contact with the professional world, 16.4% of students have both types of experience, 48% one of them and 35.6% have no contact at all.

Typically, from this course 70 to 80% would start a professional accounting career path. It would be expected that fewer would actually reach the final qualification. The numbers

	Male	Female	Total
Employers	168	46	214
	78.5%	21.5%	100%
Students	100	138	238
	42.0%	58.0%	100%
Total	268	184	452

Table 1. Composition of the sample

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pursuing a career with a CIMA qualification would normally be around 60% of those who initially pursue a professional accounting career. In the recent CIMA Excellence Awards, Sheffield Hallam was commended for "Pass rate excellence at Strategic Level Exams. Prominent number of CIMA exams taken in the United Kingdom per university campus with above-average pass rates".

Results

The comparison of the opinions between employers and students (Table 2) shows that in all the 22 skills students perceive a performance level above the demonstrated level as perceived by employers. In general terms, employers perceive the level in new graduates as being merely acceptable (5.5 inter-item mean), with four items with a mean below the acceptable level (5): *have a comprehensive and global vision of the organisation* (4.52 vs. 6.27 perceived by students; 39% of difference), *have knowledge of the accounting profession – work areas, professional values, etc* – (4.84 vs. 6.76; 40% of difference), *organise and delegate tasks* (4.92 vs. 7.0; 42% of difference) and *organise the workloads to meet conflicting demands and unexpected requirements* (4.95 vs. 6.52; 32% of difference). In all these four items, the difference between the perceptions held by employers and students is not only statistically significant but relevant exceeding the 30% of variation. In other five items, the differences in perceived level exceed the 25% of difference: the remaining time and stress management skills, *organise the workloads to recognise and meet tight, strict and coinciding deadlines* (5.08 vs. 6.96; 37% of difference) and *organise the workloads to select and assign priorities within time constraints* (5.1 vs. 7.09; 39% of difference); the problem solving skill related to knowledge integration, *integrate multidisciplinary knowledge to solve problems* (5.14 vs. 6.4; 25% of difference); the team working skill related to leadership, *assume leadership positions when necessary* (5.16 vs. 6.81; 32% of difference) and finally the ability to *use visual aids in presentations* (5.29 vs. 7.09; 34% of difference).

In general terms, students rate themselves as possessing a more than acceptable level in all the studied skills with an inter-item mean of 6.77 (being 5 *just acceptable*). Even the skills with the lowest score, in the opinion of students (value5-*have a comprehensive and global vision of the organisation,* com1-written communication and com2-oral communication) receive scores between 6.27 and 6.36. Furthermore, there is only one item in which the significance of the differences is only marginal ($p > 0.1$): to *have a commitment to life-long learning* (6.41 for employers vs. 6.67 for students).

Therefore, the results support the existence of overconfidence (RQ1), given that the students' perceptions of their own demonstrated skills as a group significantly exceed the demonstrated levels of the new graduates as assessed by the employers, and all items are rated by the students above the acceptable level. The group of skills that concentrates more acute differences is *team working skills* (difference in perceptions over 20% for all the items, being team2, *organise and delegate tasks*, the item with the highest difference: 42%) and *time and stress management* skills (difference in perceptions above 30% in all the three items).

Table 3 presents the views of employers by distinguishing between those with responsibility for training of new hires and those who do not. Employers with first-hand experience in training and a closer contact with entry level employees have a more pessimistic opinion about the exhibited level by new graduates indicated by giving lower scores in all the 22 skills that their colleagues with no training responsibilities.

Although the differences are systematically negative (lower perceived levels by those with training responsibility), they are statistically significant only in four out of the 22 items. It is to be noted that all items ascribed to *time and stress management* present significant differences,

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		Employers (*n*: 214)		Students (*n*: 238)		Differences		*t*-test
		Mean	SD	Mean	SD	Mean dif.	% of var.	Sig.
tag	*Communication skills*							
com1	Present and defend points of view and outcomes of their own work, in writing, to colleagues, client and superiors	5.37	1.50	6.36	1.57	−0.99	18%	0.000
com2	Present and defend points of view and outcomes of their own work, verbally, to colleagues, clients, and superiors	5.37	1.53	6.28	1.67	−0.91	17%	0.000
com3	Use visual aids in presentations	5.29	1.79	7.09	1.67	−1.80	34%	0.000
com4	Listen effectively to gain information and to understand opposing points of view	5.64	1.63	6.91	1.57	−1.27	23%	0.000
com5	Critically read written works. Making judgements on their relevance and value	5.95	1.57	6.52	1.71	−0.57	10%	0.000
	Team working skills							
team1	Work with others in teams adopting a relevant role	5.96	1.52	7.22	1.52	−1.26	21%	0.000
team2	Organise and delegate tasks	4.92	1.71	7.00	1.61	−2.08	42%	0.000
team3	Assume leadership positions when necessary	5.16	1.82	6.81	1.77	−1.65	32%	0.000
	Problem solving skills							
solving1	Identify and solve unstructured problems	5.62	1.65	6.82	1.51	−1.20	21%	0.000
solving2	Find creative solutions	5.54	1.76	6.47	1.68	−0.93	17%	0.000
solving3	Integrate multidisciplinary knowledge to solve problems	5.14	1.86	6.40	1.63	−1.26	25%	0.000
solving4	Perform critical analysis	5.41	1.78	6.42	1.66	−1.01	19%	0.000
	Time and stress management skills							
manag1	Organise the workloads to meet conflicting demands and unexpected requirements	4.95	1.71	6.52	1.85	−1.57	32%	0.000
manag2	Organise the workloads to recognise and meet tight, strict, and coinciding deadlines	5.08	1.79	6.96	1.81	−1.88	37%	0.000
manag3	Organise the workloads to select and assign priorities within time constraints	5.10	1.77	7.09	1.75	−1.99	39%	0.000
	IT skills							
IT1	Use relevant software (e.g. databases, spreadsheets and word processors)	6.86	1.64	7.83	1.52	−0.97	14%	0.000
IT2	Use electronic information sources	6.83	1.68	7.50	1.63	−0.67	10%	0.000
	Ethical and professional values							
value1	Have a commitment to life-long learning	6.41	1.72	6.67	1.92	−0.26	4%	0.067
value2	Ability to develop methods of effective learning	6.36	1.58	6.67	1.73	−0.31	5%	0.028
value3	Be aware of their social and ethical responsibilities	5.72	1.79	6.41	1.91	−0.69	12%	0.000
value4	Have knowledge of the accounting profession (work areas, professional values [. . .])	4.84	1.80	6.76	1.71	−1.92	40%	0.000
value5	Have a comprehensive and global vision of the organisation	4.52	1.95	6.27	1.77	−1.75	39%	0.000
	Overall mean	5.55		6.77		−1.22	23%	

Note(s): One tailed test was performed given that the existence of overconfidence implies an assumption of a sign (negative) in the comparison

Table 2. Comparison of the opinions between employers and students

scoring all below the acceptable level (5) in the opinion of trainers. The fourth item with significant differences is com5–*critically read written works, making judgements on their relevance and value* (5.84 vs. 6.6; *t*-test sig 0.013).

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tag		Yes (*n*: 167) Mean	Yes (*n*: 167) SD	No (*n*: 31) Mean	No (*n*: 31) SD	Differences Mean dif.	Differences % of var.	*t*-test Sig.
	Communication skills							
com1	Present and defend points of view and outcomes of their own work, in writing, to colleagues, clients and superiors	5.33	1.462	5.61	1.726	−0.28	5.3%	n.s.
com2	Present and defend points of view and outcomes of their own work, verbally, to colleagues, clients and superiors	5.33	1.495	5.55	1.69	−0.22	4.1%	n.s.
com3	Use visual aids in presentations	5.22	1.727	5.53	2.063	−0.31	5.9%	n.s.
com4	Listen effectively to gain information and to understand opposing points of view	5.61	1.62	5.83	1.724	−0.22	3.9%	n.s.
com5	Critically read written works. Making judgements on their relevance and value	5.84	1.519	6.6	1.632	−0.76	13.0%	0.013
	Team working skills							
team1	Work with others in teams adopting a relevant role	5.96	1.467	6.03	1.903	−0.07	1.2%	n.s.
team2	Organise and delegate tasks	4.85	1.687	5.3	1.86	−0.45	9.3%	n.s.
team3	Assume leadership positions when necessary	5.09	1.825	5.53	1.814	−0.44	8.6%	n.s.
	Problem solving skills							
solving1	Identify and solve unstructured problems	5.6	1.684	5.77	1.501	−0.17	3.0%	n.s.
solving2	Find creative solutions	5.51	1.781	5.8	1.562	−0.29	5.3%	n.s.
solving3	Integrate multidisciplinary knowledge to solve problems	5.09	1.858	5.5	1.852	−0.41	8.1%	n.s.
solving4	Perform critical analysis	5.37	1.81	5.7	1.557	−0.33	6.1%	n.s.
	Time and stress management skills							
manag1	Organise the workloads to meet conflicting demands and unexpected requirements	4.82	1.682	5.73	1.53	−0.91	18.9%	0.006
manag2	Organise the workloads to recognise and meet tight, strict and coinciding deadlines	4.94	1.745	5.87	1.655	−0.93	18.8%	0.008
manag3	Organise the workloads to select and assign priorities within time constraints	4.99	1.723	5.8	1.75	−0.81	16.2%	0.019
	IT skills							
IT1	Use relevant software (e.g. databases, spreadsheets and word processors)	6.8	1.638	7.03	1.629	−0.23	3.4%	n.s.
IT2	Use electronic information sources	6.8	1.69	6.9	1.647	−0.1	1.5%	n.s.
	Ethical and professional values							
value1	Have a commitment to life-long learning	6.36	1.732	6.47	1.57	−0.11	1.7%	n.s.
value2	Ability to develop methods of effective learning	6.32	1.623	6.53	1.332	−0.21	3.3%	n.s.
value3	Be aware of their social and ethical responsibilities	5.64	1.799	6.07	1.721	−0.43	7.6%	n.s.
value4	Have knowledge of the accounting profession (work areas, professional values [. . .])	4.75	1.76	5.2	2.007	−0.45	9.5%	n.s.
value5	Have a comprehensive and global vision of the organisation	4.42	1.859	4.97	2.353	−0.55	12.4%	n.s.
	Overall mean	5.48		5.88		−0.39	7.6%	

Table 3.
Opinions of employers by responsibility for training

The answer to RQ2 partially positive, there are systematic differences in the perceptions by training responsibility, although those differences are not statistically significant for all the items. These results also reinforce the positive answer to RQ1, given that the differences

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between the perceptions of employers with training responsibilities and the students' perceptions about their performance are even bigger.

In order to test for differences by company size (RQ3), the *polar extremes approach* was used (Hair *et al.*, 2014a). This method (Hair *et al.*, 2014b) allows constructing a categorical variable from a metric variable. Following this method, employers were classified into three groups based on the distribution of the independent variable (firm size); discarding the central range group for comparison purposes (George and Prybutok, 2015; Arquero *et al.*, 2021). The firm size values that split the distribution in three equal groups (terciles) are 500 and 2,300. The subsequent comparison between extreme groups, T1 (500 employees or less, *n*: 72) and T3 (2,300 employees or more, *n*: 70), yielded no clear pattern of differences [3]. Only in one item there was a significant difference: com5 – *critically read written works, making judgements on their relevance and value*, in which employers at smaller firms indicated a lower perception of level in comparison with employers in larger firms (5.7 vs. 6.28; *t*-test sig. 0.039).

Given the size of the firms included in the sample, the classification by terciles grouped large enterprises even in the lower tercile (T1), a second redistribution was made, assigning small and medium enterprises – SMEs (fewer than 250 persons employed, as defined by Eurostat) to one group (*n*: 46) and firms over 1,000 employees to the comparison group (*n*: 108). Again, the comparison between the two extreme groups resulted in no clear pattern of differences, and in this case no item presented significant differences in scores. Therefore, the answer to RQ3 is negative, no differences were found due to firm size.

RQ4 questioned whether there are differences in perceptions due to gender. This question will be answered for each sub-sample separately. Regarding students, the differences by gender were small (less than 2% on average), unsystematic and not statistically significant. Only in three items are the differences greater than 5%, although in none the differences are statistically significant (*t*-test, $p \leq 0.05$). However, it should be noted that in these three items, female students present higher levels of confidence:

- com3: use visual aids in presentations (6.87 for males vs. 7.24 for females; *p*: 0.09)
- team2: organise and delegate tasks (6.79 for males vs. 7.14 for females; *p*: n.s.)
- value3: be aware of their social and ethical responsibilities (6.22 for males vs. 6.54 for females; *p*: n.s.)

When comparing the views of employers by gender, again no significant differences arose. The two items that present the most noticeable differences are:

- value1: have a commitment to life-long learning (6.31 for males vs. 6.78 for females; *p*: n.s.)
- value4: have knowledge of the accounting profession – work areas, professional values [. . .] – (4.73 for males vs. 5.36 for females; *p*: n.s.)

Therefore, the answer for RQ4 is negative, and there are no differences due to gender for any of the two groups.

RQ5 focussed on the differences associated with contact with the professional world, work experience or placements. Students were grouped into two categories, those with no previous experience at all (no work experience or placements, 35.6% of students) and those with any kind of contact (64.4% of students). Comparison of the opinions of students who indicated they had any contact with the professional world with those who did not yield small and unsystematic differences. Only two items presented significant differences: team2 *organise and delegate tasks,* in which experienced students indicated lower levels of confidence that their fellow colleagues with no previous professional contact (6.77 vs. 7.34; *p*: 0.014) and

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value1 *have a commitment to life-long learning,* in which experienced students indicated a higher score (6.99 vs. 6.21, *t*-test sig. 0.004). In general terms, the contact with the professional world that students could acquire through previous work experience or placements does not seem to have a great influence on their views on their own abilities.

Discussion and conclusions

Overconfidence, described in terms of a very optimistic (even unreal) positive assessment of one's own abilities (Giambatista and Hoover, 2014), can impact negatively on academic efforts to develop non-technical skills. Even if students are considering them as relevant for their future but perceive that the skills are exhibited at an adequate level, any further pedagogic effort directed to improve the skills performance could be ineffective (Dunlosky and Rawson, 2012), given that it is considered by students as unnecessary. Therefore, it is unlikely that the students would allocate the resources that such tasks require or that they could be motivated to enrol in such activities if not compulsory. Despite the potential relevance of the effects of overconfidence on skills development, this topic has received virtually no attention in the accounting education literature. Thus, this paper aims to provide initial evidence in this area that, even with its limitations, draws attention to this largely neglected problem.

In our research students were asked about the perceived level in the group (not their individual own levels) therefore we are not measuring what Moore and Healy (2008) identified as *overplacement,* and to some extent our measures of students' views could be even prudent. Despite *overplacement* not being measured the opinion of students about their group performance when compared with the employers' views clearly points to an overconfidence problem. In all the skills the performance level as perceived by employers is lower than the exhibited levels as assessed by the students. These differences being even larger when comparing the views of students with the views of those employers with a closer experience with entry level employees.

The most noticeable differences are found in time and stress management skills, a set of key abilities to survive in a multitasking professional setting in which requirements and demands are to be fulfilled in tight deadlines. These were labelled by employers as extremely important coming just after oral and written communication skills, which were listed in the first and second positions in importance by Arquero *et al.* (2001). Regarding communications skills, students present overconfidence in all the items in this category. These being especially high in the use of visual aids in which students rate their level over 7, when employers assess this level at 5.3. However, the students' IT skills, including the use of relevant software are equally assessed by employers (close to 7). In our experience, this apparent contradiction could be explained as follows, the problem of the use of visual aids is not related to the technical use of the software but more to the communication strategy needed to develop an efficient and structured presentation using these aids (professional style, adaptation to the audience, selection of contents, efficient use of chart and tables, etc.).

Two other skills in which there are relevant differences are the ability to integrate multidisciplinary knowledge (solving3) and the global vision of the organisation (value5), being this last skill labelled as the top priority for development according to the results by Hassall *et al.* (2005). In this case the compartmentalised structure of curriculum content at the university, divided into independent subjects with no relationships between areas could be a part of the problem.

Employers also point to problems in one of the most valued skills in our profession: team-working skills. The exhibited abilities to (1) organise and delegate tasks and (2) assume leadership positions when necessary, which are increasingly needed as a professional career

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progresses in order to be promoted (Bhamornsiri and Guinn, 1991; ACCA, 2018), are clearly overrated by students.

One of the most interesting results is the lack of effect of professional experience or work placements on students' views. If employers are requiring a higher level of performance in the vast majority of skills, it would be expected that those students with work experience would have changed their views presenting a more realistic assessment of their own skills in comparison with the demands. However, this is not the case. A feasible explanation is as follows: the relevance of those skills increases as a professional career progress to higher positions (Bhamornsiri and Guinn, 1991; ACCA, 2018), while the work experience of placements allows a contact with lower-level tasks, more focussed in basic, technical and routine aspects. If those students do not have access to higher-level tasks and their skills demands, in any form, they could not become aware to what extent they are -or are not- prepared to fulfil the requirements.

The main conclusion of the present research is that there is initial evidence to consider that accounting students could be overconfident about their non-technical skills, rating them above the actual performance level. The most relevant consequence of this is that students would be less motivated to actively participate in activities designed to improve those skills if they perceive any existing adequate levels. Should they participate, Dunlosky and Rawson (2012) note that the lack of accuracy when monitoring their own abilities leads them into prematurely concluding their efforts as far as they (erroneously) consider the skills to be developed, sufficiently resulting in underachievement and in lower performance (Chiu and Klassen, 2010). This low performance could finally harm their employability given that it relates to skills highly valued in personnel selection processes (Arquero *et al.*, 2001).

Implications

This research has several implications.

Pedagogical effort to develop non-technical skills could be ineffective even if students consider those skills relevant. Furthermore, efforts to increase the perceived importance of these skills may not be sufficient, given that a part of the problem lies in the evaluation of their own abilities. Therefore, the emphasis should be placed on giving them a clear view of the required level for non-technical skills at an entry and further professional levels.

Exposure to professional views on the desired capabilities (in terms of relevance and required level) should be increased. This contact with professional environments could be reached through placements/internships (Urquía-Grande and Estébanez, 2020), which should become a crucial part of the curriculum. A complementary way is to increase contact with the business and accounting community throughout the degree, as suggested by the Pathways Commission (2012). One of the alternatives is inviting practitioners to collaborate in the class as guest speakers (Metrejean *et al.*, 2002; Schwartz and Cherry, 2012). This collaboration could take advantage of technology, e.g. videoconferences, discussion forums or offline videocasts. Asynchronous communication, such as videocasts, has the advantage of avoiding class-time constraints (Evans, 2008). The use of realistic simulations (e.g. Bautista-Mesa *et al.*, 2018; Levant *et al.*, 2016) could be of help not only in the development of soft skills, but also to get students aware of the expected level in such skills.

One of the skills in which a critical difference was found is to have a comprehensive and global vision. The Pathways Commission (2012, p. 107) highlighted the need to overcome the "silo effect" where subjects and courses are viewed as independent and unrelated. Additional efforts should be made to integrate multidimensional practical problems and global applications.

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Those firms collaborating with universities in placements should make an effort to facilitate the contact of students with higher-level tasks, highlighting the key capabilities needed to perform these higher-level tasks.

Limitations and further research

This study, as with most research studies, is subject to limitations. The first of these is it is specifically UK focus. In the same way, all employers are accessed through the CIMA, presuming that their views are representative of the average opinion of any employer. However, despite the international consensus about the relevance of the skills, it is possible that the firms contacted in this research might have different levels of requirements, with regard to non-technical skills from other employers.

The sample of students has been obtained from one university, Sheffield Hallam University, assuming that it could be representative of the average accounting student/future new graduate. However, it is likely to expect differences in the level of actual performance and self-perceived level between students in different universities, due to differences in the pedagogy used, individual characteristics of students, etc. Even for the same university, some differences between cohorts of students could be expected.

Finally, the comparison is not matched, that is, employers are giving their views about the new graduates hired in general, not about the specific sample of students (cohort-university). Consequently, the results could not be generalisable.

However, it is to be noted that the objective of the paper is not to obtain an exact measure of the overconfidence level, but to provide evidence of the existence of overconfidence as a constraint for skills development, something that has not been done in the literature, even in recent reviews (see for instance Asonitou, 2022). The lack of recognition of this constraint could be neglecting a relevant problem and therefore, closing the possibilities to implement actions that could remove this restriction.

Futures lines of research could be designed to overcome the limitations of the present study. For instance:

- Measuring individual overconfidence by contrasting the views of each student with an assessment of the actual performance in a real or realistic situation.
- Studying the relationship between overconfidence and previous educational experiences.
- Testing to what extent overconfidence is hindering the predisposition to invest additional effort in developing non-technical skills.
- Increasing the samples including not only more universities, but also other countries.

Notes

1. A complete and updated review of the literature about impediments to skills development can be found in Asonitou (2022), who uses 11 categories to classify the published studies, being "students' attitude and capabilities" one of them; however, overconfidence does not appear as a constraint in any of the reviews.
2. The Sheffield Hallam University, in terms of *ranking* and *graduate prospects*, could be considered an average university in the specific area of this study: *accounting and finance* (University League Rankings, https://www.thecompleteuniversityguide.co.uk/league-tables/rankings).
3. The inconclusive results are not fully reported, given the length of the tables needed.

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