

Accounting Higher Education Preparing the Future of Accounting

Subjects: Management | Education & Educational Research

Contributor: Tiago Cunha, Helena Martins, Amélia Carvalho, Cecília Carmo

The accounting profession is undergoing significant changes due to revolutions in technology and markets. It is ever more important for higher education institutions (HEIs) to understand how to prepare professionals and students for the not-so-distant future.

Keywords: accounting education ; soft skills ; digital transformation ; curricula

1. Introduction

The challenges faced by the accounting profession nowadays are unparalleled: shifts and changes generated by the acceleration of information technologies (IT) and artificial intelligence (AI), as well as social and economic changes, are so profound that the very nature of the field needs to be reimagined and reinvented, as the older, more repetitive tasks disappear from the job ^{[1][2][3]}.

A lot has been written about the future of the accounting profession, on topics including the role of higher education institutions (HEIs) in this process, although the field is still not saturated. One of the most common criticisms of HEIs is that curricula do not seem to reflect the trends, solutions, and changes divulged in the scientific literature ^{[4][5][6]}, which seems odd given the fact that most of this knowledge is produced by academics. This claim is usually made without concrete data to back it up and is based on researchers' individual perceptions about what is happening in the field.

2. How Is Accounting Higher Education Preparing the Future of Accounting

The accounting profession is unquestionably going through a revolutionary period, brought about by fast and furious transformations of the industrial economy into the information economy paradigm, increased globalization, and the increased availability of information, as well as the ability to process (big) data ^[7]. As accounting services become wider and more diversified, two seemingly contradictory consequences arise: (1) accountants need to increase their technical specialization ^{[8][9]}, and (2) the rapid and unpredictable changes in the profession bring forth the need for continuous learning, flexibility, and adaptation to new circumstances ^[10], which is to say that accountants need to become more specialized while simultaneously keeping their options open.

One clear implication of this conundrum is that accountants and accounting students will need to have strong transversal skills, including soft skills such as self-regulation, communication, and teamwork ^[11], as well as IT proficiency ^{[12][13][14]} and technological skills such as automated systems and accounting information systems (AIS), which allow for the collection, treatment, and dissemination of financial/accounting information ^[15] and are a more efficient and efficacious response to clients' needs, with faster and better-supported responses ^{[16][17]}.

The consensus in the literature revolves around the notion that simple book-keeping activity is nowadays considered an extremely narrow view of what the accounting profession is ^[18]. However, opinions are divided regarding the future of the accounting profession, including the fear of extinction brought about by AIS versus the more optimistic perspective that AI will not eliminate jobs but rather enable performance, and improve human capital, as boring and repetitive tasks will tend to disappear from accountants' to-do lists, which will make their jobs more focused on unexpected creative thinking challenges, generating an effect of 'augmented intelligence' in human capital ^{[19][20]}.

In line with the latter perspective, accountants are nowadays evolving from mere financial accountancy to the field of business financial reporting, which includes variables such as human resources, production control, and stakeholder relations in companies, adding complexity and nuance to accountancy ^[21]. Thus, the role of accountants becomes: (1) to

communicate the information produced in an understandable way for the companies' stakeholders and (2) to add value to the information produced [1][22].

As they move from bean counters to business decision-makers, accountants' competencies must change and open up to other challenges and technological processes [23][24][25]. Business intelligence and the ability to build interpersonal relationships with real decision-makers are more important than ever, which means that there is an increased emotional component to the job, so that communication, interpersonal, and organizational competencies are of crucial importance for accountants [26][27].

In globalized and competitive markets, companies must make decisions with higher speed and support. Accountants play a key role in companies as they collect, analyze, and disseminate information for decision-making [10][28]. Research indicates that capital markets react more favorably to financial reports that have had the intervention of professionals with an accounting degree [29][30]. Thus, accountants are required to play a more active role in assisting management in the decision-making process, for which a transformation of accountants' roles is needed, which requires a new approach to their skills.

The impact of accountants' input is more pronounced in small and medium enterprises, where these professionals undertake tasks that are performed by several departments in large companies [16]. In SMEs, which represent circa 80% of European companies, the accountant needs a greater polyvalence, which is to say they need more transversal skills, more adaptability, and better learning skills, since the training of accountants tends to focus mostly on technical skills bearing in mind more the needs of larger companies, rather than SMEs [31]. The main subject concerning the accountant's profile is related with ethical concerns [25][32][33] and the stereotype of accountants [24][34][35][36][37]. Therefore, academic training, as well as skills developed, are important to develop professional ethics and avoid financial scandals [21][38].

Thus, it is clear the alignment of labor market needs and accountants' training is fundamental in order to preserve the pertinence of the accounting profession as a whole. This is becoming increasingly urgent given the evolution of technologies and improvement of information systems that discard more trivial routine, predictable and structured actions, as well as globalization, which makes competition also global [39][40].

The concern with the fit between what higher education institutions (HEIs) teach and the labor market needs is not new [41], but the current circumstances make this issue paramount. However, HEIs have been slow to respond to this challenge. According to Albrecht and Sack [42], there are three main issues HEIs face concerning accounting courses are: (1) the diminution of students, (2) curricula becoming obsolete, and (3) the fact that students reportedly regret choosing accounting courses after they have started their training.

Students tend to choose the academic accounting path considering work stability, salary, the ability to use a specific skill set, high standards and ethics of the profession, career opportunities, and a friendly work environment [8][43]. However, family, friends, teachers, and other third parties seem to have a high interference in this choice, stressing the aforementioned factors as important, which may sway students who were otherwise inclined [41]. For HEIs, this means that course information and layout should be clear and well structured, focusing on the development of the competencies the job market needs in order to recruit and keep students motivated and decrease turnover [44].

Further, professional orders in accountancy have been creating preparatory courses for people to be able to register as professionals, which is clear evidence that HEI courses on their own seem to be unable to meet guild requirements [5][45]. To make matters worse, in the European context, the Bologna process contributed to the abbreviation of many graduate courses from 5 to 3 years, which brought about the need to change and reduce the variety and depth of topics in undergraduate courses [46][47], as is the case of Portugal.

So, the situation for the accounting profession and accounting education is quite challenging: on the one hand, there is a fast-changing labor market that includes technologically enhanced decision-making tools for a globalized world and discards the trivial, repetitive tasks accountants often performed in the past, and on the other hand, a slow changing HEIs landscape that is dealing with its own identity crises, with less motivated students and less time to impart all the knowledge believed to be necessary to perform the job adequately.

According to [30], excellence in technical skills is considered crucial to improving performance and creating legitimacy for the information produced; however, as years go by, non-technical competencies have been assuming greater ponderation in what the market requires of graduates [31].

Increased competitiveness in the market has made accountants sustain and develop a wider array of competencies, namely, where behavioral and IT competencies are concerned [8]. This type of competency helps perform daily tasks but also promotes the adaptation to unstructured, unexpected, new types of problems that may arise [12]. Yet, these types of competencies that are considered most critical for the future of the profession are the ones that seem to be most missing from accountants' HEI curricula [16][48].

The premise is that the development of soft skills and IT competencies will allow accountants to think and act more disruptively and originally vs. the traditional blind rule that is in tune with the stereotype most associated with the profession [24][34][37]. The idea is that education should come before training [18] in the same way that attitudes should come before skills and abilities. The International Accounting Education Standards Board (IAESB) subscribes to this idea in the International Education Standard (IES) 4, the document prescribing learning outcomes for professional values, ethics, and attitudes that the initial professional development of aspiring accountants should offer and states that behavioral competencies should be taught first and isolated from other technical skills, to intertwine both types of competencies further on to meet the needs of the labor market [27]. Others propose that transversal competencies should always be articulated with other more technical competencies [9][17][49][50]. Regardless, what seems to be unquestionable is the consensus on the need for these competencies to be encouraged and developed.

Considering that HEIs should strive to solve asymmetries between graduate competencies and labor markets' needs, both interests should be cared for in a balanced manner [31]. Yet, in accounting, there seems to be a big difference between what HEIs teach and what students need for their future profession [4][13][51].

Challenges exist in three separate perspectives: (1) differences between what scholars and employers understand are key competencies that HEIs should develop; (2) individual and institutional limitations that restrict the development of non-technical competencies and finally; and (3) professorial limitations that are reflected in teaching approaches and methods that constrain the development of competencies by students [8].

The focus on developing soft skills and IT proficiency together with specific solid technical skills has the potential to credit the accounting profession with new prestige and an enhanced reputation [52][53]. Therefore, HEIs must not only comply with international standards such as the IES 4 developed by IAESB but also with the technical requirements imposed by the Order of Certified Accountants (*Ordem dos Contabilistas Certificados—OCC*) so that their courses are accredited and will lead to certification as an accountant. For that reason, the OCC should also consider the future needs of the accountant profession to adapt to the requirements imposed on HEIs, ensuring that the need for HEIs to adapt to OCC requirements to have their courses accredited does not neglect the new needs of the profession.

References

1. Terblanche, E.A.J.; De Clercq, B. A critical thinking competency framework for accounting students. *Account. Educ.* 2021, 30, 325–354.
2. Goh, C.; Pan, G.S.C.; Seow, P.S.; Lee, B.H.Z.; Yong, M. Charting the Future of Accountancy with AI. 2019. Available online: https://ink.library.smu.edu.sg/soa_research/1806 (accessed on 9 December 2020).
3. Moore, W.B.; Felo, A. The evolution of accounting technology education: Analytics to STEM. *J. Educ. Bus.* 2022, 97, 105–111.
4. Asonitou, S. Impediments and pressures to incorporate soft skills in Higher Education accounting studies. *Account. Educ.* 2021.
5. Duff, A.; Hancock, P.; Marriott, N. The role and impact of professional accountancy associations on accounting education research: An international study. *Br. Account. Rev.* 2020, 52, 100829.
6. Mah'd, O.A.; Mardini, G.H. The quality of accounting education and the integration of the international education standards: Evidence from Middle Eastern and North African countries. *Account. Educ.* 2020.
7. Shortridge, R.T.; Smith, P.A. Understanding the changes in accounting thought. *Res. Account. Regul.* 2009, 21, 11–18.
8. Bui, B.; Porter, B. The expectation-performance gap in accounting education: An exploratory study. *Account. Educ.* 2010, 19, 23–50.
9. Murphy, B.; Hassall, T. Developing accountants: From novice to expert. *Account. Educ.* 2020, 29, 1–31.
10. Kavanagh, M.H.; Drennan, L. What skills and attributes does an accounting graduate need? Evidence from student perceptions and employer expectations. *Account. Financ.* 2008, 48, 279–300.

11. Strawser, J.A.; Flagg, J.C.; Holmes, S.A. Job perceptions and turnover behavior of tenure-track accounting educators. *J. Account. Educ.* 2000, 18, 315–340.
12. Bahador, K.M.K.; Haider, A. Information technology skills and competencies—A case for professional accountants. In *Business Information Systems Workshops*; Abramowicz, W., Domingue, J., Węcel, K., Eds.; Springer: Berlin/Heidelberg, Germany, 2012; Volume 127, pp. 81–87.
13. Dolce, V.; Emanuel, F.; Cisi, M.; Ghislieri, C. The soft skills of accounting graduates: Perceptions versus expectations. *Account. Educ.* 2020, 29, 57–76.
14. Melnyk, N.; Trachova, D.; Kolesnikova, O.; Demchuk, O.; Golub, N. Accounting Trends in the Modern World. *Indep. J. Manag. Prod.* 2020, 11, 2403–2416.
15. Guragai, B.; Hunt, N.C.; Neri, M.P.; Taylor, E.Z. Accounting information systems and ethics research: Review, synthesis, and the future. *J. Inf. Syst.* 2017, 31, 65–81.
16. Bahador, K.M.K.; Haider, A. A framework of information technology based competencies for professional accountants in small and medium-sized accounting practices. In *Proceedings of the 2012 Proceedings of PICMET '12: Technology Management for Emerging Technologies*, Vancouver, BC, Canada, 29 July–2 August 2012.
17. Uwizeyemungu, S.; Bertrand, J.; Poba-Nzaou, P. Patterns underlying required competencies for CPA professionals: A content and cluster analysis of job ads. *Account. Educ.* 2020, 29, 109–136.
18. Jackling, B.; De Lange, P. Do accounting graduates' skills meet the expectations of employers? A matter of convergence or divergence. *Account. Educ.* 2009, 18, 369–385.
19. Caglio, A.; Cameran, M.; Klobas, J. What is an Accountant? An Investigation of Images, *Eur. Account. Rev.* 2019, 28, 849–871.
20. Marshall, T.E.; Lambert, S.L. Cloud-based intelligent accounting applications: Accounting task automation using IBM Watson Cognitive Computing. *J. Emerg. Technol. Account.* 2018, 15, 199–215.
21. Carnegie, G.D.; Napier, C.J. Accounting's past, present and future: The unifying power of history. *Account. Audit. Account. J.* 2012, 25, 328–369.
22. Fontaine, R.; Khemakhem, H. A practitioner's perspective on management accounting graduates' competencies: A Canadian field study. *Account. Educ. J.* 2020, 30, 157–171.
23. Baldvinsdottir, G.; Burns, J.; Nørreklit, H.; Scapens, R.W. The image of accountants: From bean counters to extreme accountants. *Account. Audit. Account. J.* 2009, 22, 858–882.
24. Parker, L.D.; Warren, S. The presentation of the self and professional identity: Countering the accountant's stereotype. *Account. Audit. Account. J.* 2017, 30, 1895–1924.
25. Smith, M.; Briggs, S. From bean-counter to action hero: Changing the image of the accountant. *Manag. Account.* 1999, 77, 28–30.
26. IASB International Education Standards Board. IES 3, Initial Professional Development—Professional Skills; IFAC: New York, NY, USA, 2014.
27. IASB International Education Standards Board. IES 4, Initial Professional Development—Professional Values, Ethics, and Attitudes; IFAC: New York, NY, USA, 2014.
28. Jackling, B. Are negative perceptions of the accounting profession perpetuated by the introductory accounting course? An Australian study. *Asian Rev. Account.* 2002, 10, 62–80.
29. Akhter, A.; Sultana, R. Sustainability of accounting profession at the age of fourth industrial revolution. *Int. J. Account. Financ. Report.* 2018, 8, 139–158.
30. Vafeas, N. Is accounting education valued by the stock market? Evidence from corporate controller appointments. *Contemp. Account. Res.* 2009, 26, 1143–1174.
31. Hassall, T.; Joyce, J.; Montañó, J.L.A.; Donoso Anes, J.A. Priorities for the development of vocational skills in management accountants: A European perspective. *Account. Forum* 2005, 29, 379–394.
32. Ariail, D.L.; Khayati, A.; Shawver, T. Perceptions by employed accounting students of ethical leadership and political skill: Evidence for including political skill in ethics pedagogy. *J. Account. Educ.* 2021, 55, 100716.
33. Van Rooyen, A.A. Social media is so easy to share. *Account. Educ.* 2020, 29, 356–371.
34. Cory, S.N. Quality and quantity of accounting students and the stereotypical accountant: Is there a relationship? *J. Account. Educ.* 1992, 10, 1–24.
35. Kurek, B.; Górowski, I. Importance of gender, location of secondary school, and professional experience for GPA—A survey of students in a free tertiary education setting. *Sustainability* 2020, 12, 9224.

36. Leão, F.; Gomes, D.; Carnegie, G.D. The portrayal of early accountants in nineteenth century Portuguese literature. *Account. Audit. Account. J.* 2019, 32, 658–688.
37. Miley, F.; Read, A. Jokes in popular culture: The characterisation of the accountant. *Account. Audit. Account. J.* 2012, 25, 703–718.
38. Carnegie, G.D.; Napier, C.J. Traditional accountants and business professionals: Portraying the accounting profession after Enron. *Account. Organ. Soc.* 2010, 35, 360–376.
39. Mohamed, E.K.A.; Lashine, S.H. Accounting knowledge and skills and the challenges of a global business environment. *Manag. Financ.* 2003, 29, 3–16.
40. Andiola, L.M.; Masters, E.; Norman, C. Integrating technology and data analytic skills into the accounting curriculum: Accounting department leaders' experiences and insights. *J. Account. Educ.* 2020, 50, 100655C.
41. Sugahara, S.; Boland, G. Perceptions of the certified public accountants by accounting and non-accounting tertiary students in Japan. *Asian Rev. Account.* 2006, 14, 149–167.
42. Albrecht, W.S.; Sack, R.J. *Accounting Education: Charting the Course through a Perilous Future*; American Accounting Association: Sarasota, FL, USA, 2000.
43. Srirejeki, K.; Faturahman, A.; Supeno, S. Understanding the intentions of accounting students to pursue career as a professional accountant. *Binus Bus. Rev.* 2019, 10, 11–19.
44. Wells, P.; Fieger, P. High School teachers' perceptions of accounting: An international study. *Aust. J. Account. Educ.* 2006, 2, 1.
45. Wambsganss, J.R.; Dosch, R.J. The blame game: Accounting education is not alone. *J. Educ. Bus.* 2006, 81, 250–254.
46. Asonitou, S.; Hassall, T. Which skills and competences to develop in accountants in a country in crisis? *Int. J. Manag. Educ.* 2019, 17, 100308.
47. Bolt-Lee, C.; Foster, S. The core competency framework: A new element in the continuing call for accounting education change in the United States. *Account. Educ.* 2003, 12, 33–47.
48. Wessels, P.L. Critical information and communication technology (ICT) skills for professional accountants. *Meditari Account. Res.* 2005, 13, 87–103.
49. Bahador, K.M.K.; Haider, A. Maturity of information technology competencies: A professional accountants' perspective. In *Proceedings of the 2013 Proceedings of Technology Management in the IT-Driven Services (PICMET)*, San Jose, CA, USA, 28 July–1 August 2013.
50. Ballou, B.; Heitger, D.L.; Stoel, D. Data-driven decision-making and its impact on accounting undergraduate curriculum. *J. Account. Educ.* 2018, 44, 14–24.
51. Pratama, A. Bridging the gap between academicians and practitioners on accountant competencies: An analysis of International Education Standards (IES) implementation on Indonesia's accounting education. *Procedia Soc. Behav. Sci.* 2015, 211, 19–26.
52. Palmer, K.N.; Ziegenfuss, D.E.; Pinsker, R.E. International knowledge, skills, and abilities of auditors/accountants: Evidence from recent competency studies. *Manag. Audit. J.* 2004, 19, 889–896.
53. Berry, R.; Routon, W. Soft skill change perceptions of accounting majors: Current practitioner views versus their own reality. *J. Account. Educ.* 2020, 53, 100691.