

The Accounting Professional's Competency Gaps*

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Abstract

This paper reviews the accounting education literature focusing on the supply of and demand for accounting professional's competencies. The main objective is to identify the adjustment between the university and the market and present a conceptual framework representing our findings. Through a critical literature review, constructs that substantiate a theoretical model of supply-demand adjustment were defined. Likewise, the gaps in this relationship were identified and characterized. The main result of the review is the identification of several constructs, among which seven gaps have been recognized, representing potential adjustment failures. Thus, this study provides an integrated understanding of the adjustment between the university and labor market of accounting professional's competencies, presenting a conceptual framework that can be used in future research.

Keywords: Competencies, skills, accounting professional, gap, university-market adjustment

Introduction

The accounting profession has been subject to substantial changes in recent decades. Rapid technological developments, more globalized and easily facilitated communications, and legislative and regulatory alterations (Bui and Villiers, 2017; Burns and Scapens, 2000; Olivier, 2000; Warren et al., 2015) are some of the factors that have caused these changes. In this constantly changing context, the job market adjusts itself, looking for professionals with the appropriate competencies for the new or expected context. This competency requirement is directly reflected in recently graduated students and indirectly in higher education. If the competencies developed in education do not match the needs of the labor market, society will be affected (Ridwan, 2017; Yorke, 1992). So, monitoring this adjustment between demand and supply is crucial for the accounting profession to keep evolving.

Academic research in this field has been generous. A substantial volume of studies has addressed the competencies of accounting graduates to date (e.g., Dolce et al., 2020; Gray, 2010; Howcroft, 2017; Jackling and Lange, 2009; Kavanagh and Drennan, 2008; Lange et al., 2006). However, a uniform conclusion or common strategy did not emerge yet. No consensus theory addresses the development of competencies among accounting graduates or students. This shortcoming is consistent with the reviews of higher education research, where there have been criticisms of the very limited extent and type of theory used in accounting education research (Haggis, 2009; Tight, 2004).

Two papers describe conceptual frameworks that represent accounting education's expectation-performance gap. Bui and Porter (2010) were the first to identify four supply-side gaps, placing the burden entirely on the universities' side. Howcroft (2017) developed this framework further, adding a new stakeholder to the equation (professional accounting bodies) and improving some previously used concepts. Still, the focus remains on education and not on the adjustment between the demand side (market) and the supply side (university).

As this interconnection is fundamental for the accounting profession, we propose to study the adjustment between demand and supply of the competencies of the accounting professional. On the supply side, we will limit the study to higher education, which provides most professional accountant's competencies. On the demand side, we will consider the labor market, adopting a perspective that envisions society (labor market) to be the consumer of the services provided by higher education (Richardson, 2005; Ridwan, 2017; Waldmann and Ratnatunga, 2011) instead of the student. The final objective is to propose a conceptual framework that may be used for meta-analysis and future investigation.

Two research questions guide this study:

1. Which gaps can be identified in the relationship between demand (market) and supply (university) of accounting professional's competencies?
2. How can these gaps be represented in a conceptual framework to support future research?

This work will answer these research questions by critically reviewing the recent literature in the field.

The rest of the paper is organized as follows. Section 2 presents a brief literature review and identifies the articles that substantiate the construction of the conceptual framework. Section 3 presents the conceptual framework, characterizing each of the gaps. Section 4 concludes this paper, pointing out its limitations and weaving some final considerations.

Literature Review

The literature that investigates the competencies of accounting professionals is extensive and still in vogue. We found the first articles in the late 70s and early 80s of the last century (Andrews and Koester, 1979; Waller and Gallun, 1985), and the amount of studies has been growing ever since. In the context of the adjustment between supply and demand of these competencies, the authors have dedicated themselves to studying the perceptions of the various actors, mainly based on interviews, surveys, and focus groups. The most cited articles in this field date from the first decade of this century (Jackling and Lange, 2009; Kavanagh and Drennan, 2008; Lange et al., 2006) and are no exception, using interviews and questionnaires. More recently, some authors used other methods, such as analyzing job advertisements (Tan and Laswad, 2018; Uwizeyemungu et al., 2020) or evaluating accounting course programs (Banasik and Jubb, 2021; Reddrop and Mapunda, 2019).

As for the focus of the investigation, both the demand side (e.g., Gray, 2010; Siriwardane et al., 2015; Tan and Laswad, 2018) and the supply side (e.g., Keneley and Jackling, 2011; Lange et al., 2006; Rackliffe and Ragland, 2016) are investigated in similar quantity. Authors dedicated to exploring only one side are concerned with comparing their results with previous studies to conclude about the existing adjustment. Some authors chose to examine both sides in the same paper (e.g., Jackling and Lange, 2009; Kavanagh and Drennan, 2008; Wells et al., 2009) and conclude with both these results about the existing adjustment. Authors explicitly focusing on the adjustment are residual and quite recent (e.g., Anis, 2017; Dolce et al., 2020; Low et al., 2016). Articles addressing one or several gaps were used in constructing our framework and are presented in Table 1 according to the gaps they address.

Table 1- Articles by gap category

Gap	Articles
GAP University perception – market expectation gap	A Abayadeera and Watty (2014); Abayadeera and Watty (2016); Ahmed (2019); Anis (2017); Aryanti and Adhariani (2020); Awayiga et al. (2010); Baker (2013); Ballou et al. (2018); Coady et al. (2018); Crawford et al. (2011); Dolce et al. (2020); Howcroft (2017); Jackling and Lange (2009); Kavanagh and Drennan (2008); Lim et al. (2016); Lin et al. (2013); Maali and Al-Attar (2020); McLaren (1990); Memiyanty et al. (2010); Mgaya and Kitindi (2008); Nicolaescu et al. (2017); Ragland and Ramachandran (2014); Senik et al. (2013); Shahwan and Roudaki (2009); Yanto et al. (2018)
GAP University perception competencies specification gap	B Abayadeera and Watty (2014); Alshbili and Elamer (2020); Araujo et al. (2015); Crawford et al. (2011); Kavanagh and Drennan (2008); Lange et al. (2006); Memiyanty et al. (2010); Rackliffe and Ragland (2016); Smith et al. (2018); Towers-Clark (2015); Zaid and Abraham (1994)
GAP Competencies specification – competencies delivery gap	C Bui and Porter (2010); Howcroft (2017)

GAP Competencies delivery perceived competencies gap	D –	Coady et al. (2018); Howcroft (2017); Maali and Al-Attar (2020); Ragland and Ramachandran (2014)
GAP Expected competencies perceived competencies gap	E –	Abayadeera and Watty (2014); Adhariani (2020); Anis (2017); Asonitou and Hassall (2019); Daff (2021); Gray (2010); Gray and Murray (2011); Siriwardane et al. (2015); Siriwardane et al. (2014); Howcroft (2017); Kunz and Jager (2019a); Kunz and Jager (2019b); Low et al. (2016); Memiyanty et al. (2010); Lai and Nurul (2010); Rackliffe and Ragland (2016); Ridwan (2017); Spraakman et al. (2015); van Romburgh and van der Merwe (2015)
Gap University perception competencies delivery gap	BC –	Al Mallak et al. (2020); Anis (2017); Asonitou and Hassall (2019); Bui and Porter (2010); Dolce et al. (2020); Howcroft (2017); Oussii and Klibi (2017); Rackliffe and Ragland (2016)
Gap Competencies specification market expectation gap	CDE –	Abayadeera and Watty (2016); Agrawal et al. (2021); Akande and Atiku (2021); Jackling and Lange (2009); Mandilas et al. (2014); Montoya-del-Corte et al. (2014); Pan and Perera (2012); Wells et al. (2009)

Conceptual Framework

We propose a conceptual framework that comprehensively represents the adjustment between the demand and supply of the accounting professional's competencies.

Theoretical background

Based on previous literature, Bui and Porter (2010) presented a comprehensive framework for accounting education's expectation-performance gap. They validated the framework using a case study where they interviewed a small number of employers, students, graduates, and educators. The small number of participants is a limitation of the study, indicated by the authors, thus highlighting future research opportunities to improve the model. Since the study's publication, several authors have used the suggested framework to investigate the expectation-performance gap. We found research focused on Sri Lanka (Abayadeera and Watty, 2014), Egypt (Anis, 2017), and Saudi Arabia (Al Mallak et al., 2020). Even though these authors found empirical evidence supporting parts of the model, none questioned its comprehensiveness. From an educational point of view, it appears to be adequate; however, it lacks a market perspective.

Howcroft (2017) adapted the Bui and Porter framework to the United Kingdom and Irish reality, incorporating the perspective of professional accounting bodies. At the same time, he adjusted the model to a measurable reality, investigating the educational viewpoint and a more generic reality, showing a market perspective. For this, he changed the designation of the 'educators' performance gap' to the 'graduate competence assessment gap', evidencing the difference in assessment between the two actors (university and market). He also changed the name of the 'constraints gap' to 'education constraints gap'. Thus, he distanced the framework from its internal educational focus, making it more objective and connected to reality.

Several authors adopted theoretical frameworks from other research areas, of which we highlight the SERVQUAL model. SERVQUAL is a multidimensional research instrument projected by A. Parasuraman, Valarie Zeithaml, and Leonard L. Berry (1985) to capture consumer expectations and perceptions of a service, measuring service quality. The correspondent service quality model, popularly known as the *gaps model*, has been applied in various contexts and cultural settings.

Richardson (2005) chose to apply this model in his research since it is a perceptions-minus-expectations construct that compares customers' expectations with their perceptions of the level of service. In the relationship between the market and university, he understood employers as the 'consumers' of graduates' competencies, as several other authors in this research area do (Ridwan, 2017; Waldmann and Ratnatunga, 2011; Yorke, 1992). He states that "it could be argued that considering employers as 'customers' of university teaching departments is not only valid, but also that the SERVQUAL model forms an appropriate basis for understanding employers' perceptions of the coverage of topics in the university curriculum, and whether there are any gaps in the preparation of graduates for, say, entry-level positions." (Richardson, 2005, p. 56). This point of view seems appropriate to our investigation from a perspective of adjustment between supply and demand, that is, university and market. So, our conceptual model (Figure 1) is built considering the previously presented models and the literature review.

Model Construction

The service quality model was adapted to our study by creating three constructs (components) on the supply side and two on the demand side. Supply-side and demand-side are represented respectively by 'university' and 'market'. The first includes perceptions of academics, students, and graduates, while the latter contains perceptions of employers and practitioners.

Although little studied, professional accounting bodies and education regulatory bodies were referenced in almost all articles. In most parts of the world, these bodies greatly influence the attributes of accounting graduates. Professional bodies determine accounting graduates' desired skills, competencies, and expected attributes through the accreditation process of

accounting programs (Mhlongo, 2020). Education regulatory bodies guarantee the quality of higher education through the assessment and accreditation of higher education institutions and their study cycles. Therefore, these bodies were included in the framework as influential entities.

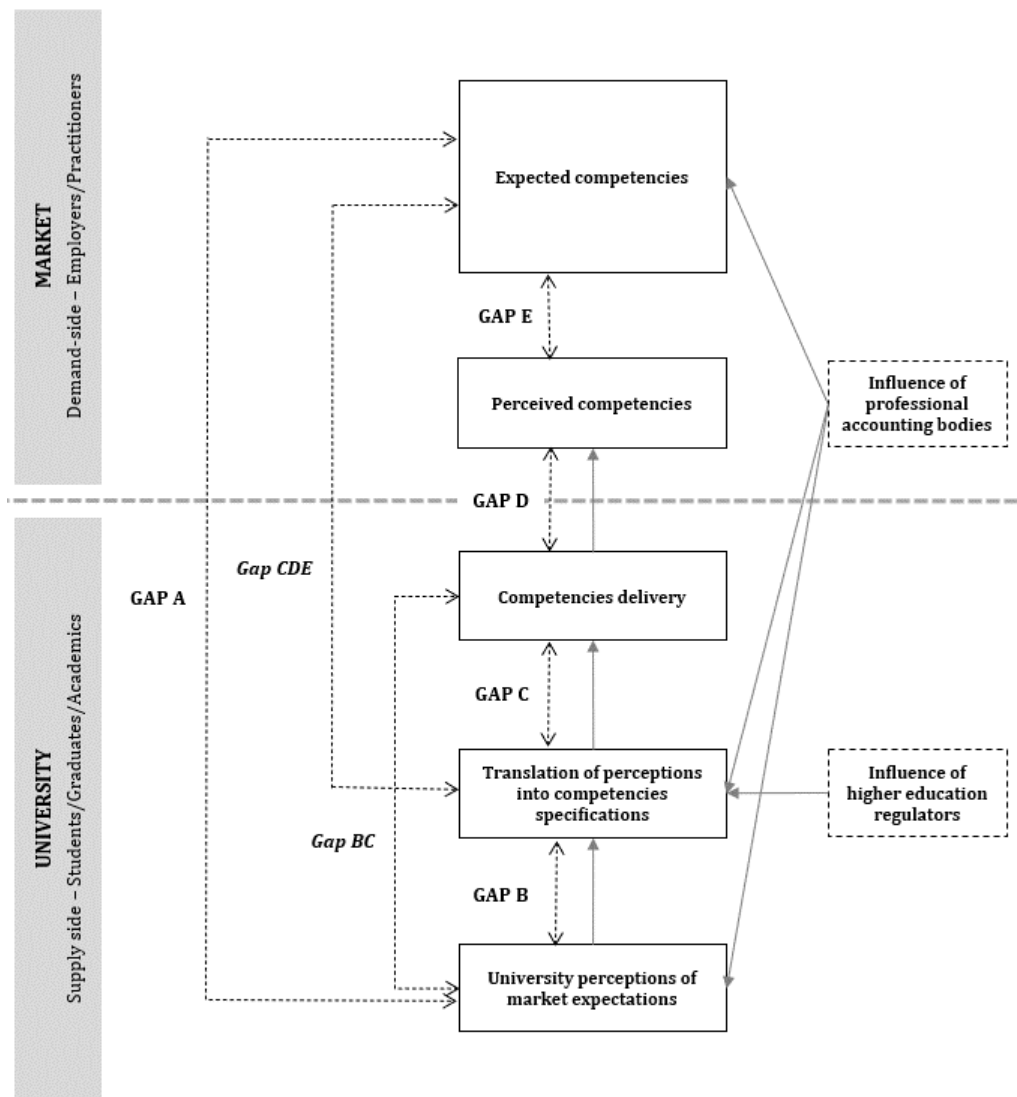


Figure 1 - Conceptual model of the university-market adjustment of accounting professional’s competencies

The placement of constructs in the framework followed the actual order of their existence, starting with the supply side (at the bottom). An arrow with a solid line links those constructs that impact others. For example, university perceptions of market expectations affect how competencies are specified in accounting course curricula. Likewise, these specifications will impact the delivery of competencies and so on.

The literature review confirms the existence of several gaps between these constructs. The gaps were identified and classified according to the two opposing constructs, as in the service quality model. We found seven different gaps, three on the supply side, three between the supply and demand sides, and one on the demand side. Our framework represents gaps with a two-way arrow with a dashed line. All gaps will be discussed in the next section considering the literature review conducted.

Gap characterization

The five main gaps (from A to E) represent individual misfits between the various constructs, while the BC and CDE gaps represent clusters of adjustments. In Table 2, we briefly characterize each gap to allow the production of future research on them.

Table 2 - Gaps characterization

Gap	What is it?	What causes it?	How to correct it?
GAP A University perception – market expectation gap	The existence of discrepancies between university's perceptions and market expectations regarding accounting graduates' competencies (entry-level accountants).	Failure of the market to convey their needs to university: - Different views on who should take responsibility for the skills development of graduates. - Various understandings of the skills approached. - Distinct skills expectations.	- Reinforcement of university-industry cooperation. - Use the influence of professional bodies on both sides (supply and demand) to align their perceptions.
GAP B University perception – competencies specification gap	The difficulty felt by universities in defining the contents, methods, and formats of their courses so that their students develop the desired competencies.	- University priority constraint: graduates' employability is not a priority. - External influences: professional bodies, higher education accreditation bodies, educational standards, benchmarking. - Internal influences: academics' beliefs or assumptions; internal rules; time and resources constraints.	- Identify priorities, both in terms of the university's mission and in terms of competencies to be developed. - Professional bodies assuming responsibility for training specific competencies.
GAP C Competencies specification – competencies delivery gap	The existence of discrepancies between the competencies' specification and the competencies the students demonstrate at the end of their courses.	- Educator's difficulty in passing on knowledge: teaching effectiveness (teaching methods and materials). - Student's difficulty in developing knowledge (lack of motivation, lack of knowledge about the most in-demand skills). - Institutional constraints: time constraints, class sizes, funding.	- Train educators to adopt teaching methods that enhance students' overall competencies. - Show students which are important competencies for career success and motivate them to develop those competencies.
GAP D Competencies delivery – perceived competencies gap	The existence of discrepancies between the university's perception of graduates' competencies and the market perception of these graduates' competencies.	Differences in competence assessment related to different backgrounds (experiences) from the appraisers.	No suggestions.
GAP E Expected competencies – perceived competencies gap	It is fundamental that (graduates) perceived competencies meet or exceed (graduates) expected competencies to validate a general adjustment between the demand and supply side.	A gap or a series of gaps from A to C	Correcting those gaps with problems
Gap BC University perception – competencies delivery gap	The existence of discrepancies between the university's perceptions of needed or expected competencies and the competencies students demonstrate at the end of their courses.	- Causes of Gap B (competency specification). - Causes of Gap C (competency development).	- Corrections of Gap B. - Corrections of Gap C.
Gap CDE Competencies specification – market expectation gap	The non-conformity of the specification of competencies by universities with market expectations.	Strict compliance with accreditation guidelines.	- Greater involvement (influence) of professional bodies. - Reinforcement of university-industry cooperation.

Final Considerations

In this paper, a critical literature review was executed to gather information about the adjustment between the demand of the labor market and the supply by higher education of the competencies of the accounting professional. The focus was the adjustment on which a conceptual framework was built.

In response to the first research question, seven gaps were identified, five direct and two clustered gaps. Each of these gaps can be the subject of a separate investigation to understand what causes the mismatch between demand and supply. The identification and characterization of the various gaps are thus two of the main contributions of this study.

In addition, and to facilitate the understanding of the entire framework, a conceptual model was developed that contains the constructs, gaps, and respective connections identified in the literature. This model is the third contribution of this study, structuring the knowledge already accumulated in this field and instigating the development of future research. With this model, it is possible to "walk the path" from the university's perceptions to the market's expectations in a given context, realizing what is going well and what still shows opportunities for improvement. So this framework is particularly useful for researchers. Based on this framework, researchers may continue building theory and solve practical problems evolving the various stakeholders.

As with all studies, this one also has its limitations, which should be considered when interpreting it. The first limitation is the choice of articles to be included in the literature review. Although we believe that we have found and used the most relevant articles, there may be others that could have somehow influenced the results. On the other hand, the gaps were identified and characterized based on the authors' subjective analysis, which might not have come out identical if other authors had done the same.

Despite these limitations, the analysis allowed us to conclude that this area of investigation still has much to offer. Future research should explore the conceptual framework presented and complement the findings already drawn from published studies. Above all, we suggest developing studies to better understand the reasons for the various gaps between supply and demand. When the reasons for their existence are understood, eliminating them will become much more manageable.

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References

- Abayadeera, N. and Watty, K. (2014) 'The expectation-performance gap in generic skills in accounting graduates', *Asian Review of Accounting*, vol. 22, no. 1, pp. 56–72.
- Abayadeera, N. and Watty, K. (2016) 'Generic skills in accounting education in a developing country: exploratory evidence from Sri Lanka', *Asian Review of Accounting*, vol. 24, no. 2, pp. 149–170.
- Adhariani, D. (2020) 'The influence of the ASEAN economic community on the future of the management accounting profession', *Meditari Accountancy Research*, vol. 28, no. 4, pp. 587–611.
- Agrawal, P., Birt, J., Holub, M. and van Zyl, W. (2021) 'Professional scepticism and the accounting classroom', *Accounting Education*, vol. 30, no. 3, pp. 213–233.
- Ahmed, I. E. (2019) 'Bridging the gap between governmental accounting education and practice', *Accounting*, vol. 5, no. 1, pp. 21–30.
- Akande, J. O. and Atiku, S. O. (2021) 'Developing Industry 4.0 accountants: Implications for higher education institutions in Namibia', *Development and Learning in Organizations*, ahead-of-print, ahead-of-print.
- Al Mallak, M. A., Tan, L. M. and Laswad, F. (2020) 'Generic skills in accounting education in Saudi Arabia: Students' perceptions', *Asian Review of Accounting*, vol. 28, no. 3, pp. 395–421.
- Alshbili, I. and Elamer, A. A. (2020) 'The vocational skills gap in accounting education curricula: Empirical evidence from the UK', *International Journal of Management in Education*, vol. 14, no. 3, pp. 271–292.
- Andrews, J. D. and Koester, R. J. (1979) 'Communication difficulties as perceived by the accounting profession and professors of accounting', *The Journal of Business Communication*, vol. 16, no. 2, pp. 33–42.
- Anis, A. (2017) 'Auditors' and accounting educators' perceptions of accounting education gaps and audit quality in Egypt', *Journal of Accounting in Emerging Economies*, vol. 7, no. 3, pp. 337–351.

- Araujo, V. d. S., Santos, D. G., Cavalcante, P. R. N. and Barbosa, E. T. (2015) 'Academic formation in accounting sciences and its relationship with the labor market: The perception of the accounting sciences' students of a higher education federal institution', *Revista de Gestão, Finanças e Contabilidade*, vol. 5, no. 1, pp. 123–139.
- Aryanti, C. and Adhariani, D. (2020) 'Students' Perceptions and Expectation Gap on the Skills and Knowledge of Accounting Graduates', *The Journal of Asian Finance, Economics and Business*, vol. 7, no. 9, pp. 649–657.
- Asonitou, S. and Hassall, T. (2019) 'Which skills and competences to develop in accountants in a country in crisis?', *The International Journal of Management Education*, vol. 17, no. 3, pp. 1–19.
- Awayiga, J. Y., Onumah, J. M. and Tsamenyi, M. (2010) 'Knowledge and skills development of accounting graduates: The perceptions of graduates and employers in Ghana', *Accounting Education*, vol. 19, 1-2, pp. 139–158.
- Baker, W. M. (2013) 'Empirically assessing the importance of computer skills', *Journal of Education for Business*, vol. 88, no. 6, pp. 345–351.
- Ballou, B., Heitger, D. L. and Stoel, D. (2018) 'Data-driven decision-making and its impact on accounting undergraduate curriculum', *Journal of Accounting Education*, vol. 44, pp. 14–24.
- Banasik, E. and Jubb, C. (2021) 'Are accounting programs future-ready? Employability skills', *Australian Accounting Review*, vol. 31, no. 3, pp. 256–267.
- Bui, B. and Porter, B. (2010) 'The Expectation-Performance Gap in Accounting Education: An Exploratory Study', *Accounting Education*, vol. 19, 1-2, pp. 23–50.
- Bui, B. and Villiers, C. de (2017) 'Business strategies and management accounting in response to climate change risk exposure and regulatory uncertainty', *The British Accounting Review*, vol. 49, no. 1, pp. 4–24.
- Burns, J. and Scapens, R. W. (2000) 'Conceptualizing management accounting change: an institutional framework', *Management Accounting Research*, vol. 11, no. 1, pp. 3–25.
- Coady, P., Byrne, S. and Casey, J. (2018) 'Positioning of emotional intelligence skills within the overall skillset of practice-based accountants: employer and graduate requirements', *Accounting Education*, vol. 27, no. 1, pp. 94–120.
- Crawford, L., Helliard, C. and Monk, E. A. (2011) 'Generic skills in audit education', *Accounting Education*, vol. 20, no. 2, pp. 115–131.
- Daff, L. (2021) 'Employers' perspectives of accounting graduates and their world of work: Software use and ICT competencies', *Accounting Education*, vol. 30, no. 5, pp. 495–524.
- Dolce, V., Emanuel, F., Cisi, M. and Ghislieri, C. (2020) 'The soft skills of accounting graduates: Perceptions versus expectations', *Accounting Education*, vol. 29, no. 1, pp. 57–76.
- Gray, F. E. (2010) 'Specific oral communication skills desired in new accountancy graduates', *Business Communication Quarterly*, vol. 73, no. 1, pp. 40–67.
- Gray, F. E. and Murray, N. (2011) 'A distinguishing factor': Oral communication skills in new accountancy graduates', *Accounting Education*, vol. 20, no. 3, pp. 275–294.
- Haggis, T. (2009) 'What have we been thinking of? A critical overview of 40 years of student learning research in higher education', *Studies in Higher Education*, vol. 34, no. 4, pp. 377–390.
- Howcroft, D. (2017) 'Graduates' vocational skills for the management accountancy profession: Exploring the accounting education expectation-performance gap', *Accounting Education*, vol. 26, 5-6, pp. 459–481.
- Jackling, B. and Lange, P. de (2009) 'Do accounting graduates' skills meet the expectations of employers? A matter of convergence or divergence', *Accounting Education*, vol. 18, 4-5, pp. 369–385.
- Kavanagh, M. H. and Drennan, L. (2008) 'What skills and attributes does an accounting graduate need? Evidence from student perceptions and employer expectations', *Accounting & Finance*, vol. 48, no. 2, pp. 279–300.
- Keneley, M. and Jackling, B. (2011) 'The acquisition of generic skills of culturally-diverse student cohorts', *Accounting Education*, vol. 20, no. 6, pp. 605–623.
- Kunz, R. and Jager, H. de (2019a) 'Exploring the audit capabilities expectation-performance gap of newly employed first-year trainee accountants in Gauteng: Audit managers at large firms' perceptions', *South African Journal of Accounting Research*, vol. 33, no. 2, pp. 145–162.

- Kunz, R. and Jager, H. de (2019b) 'Performance of newly employed trainee accountants in Gauteng, South Africa, versus the skills expectations of employers: How big is the gap?', *Industry and Higher Education*, vol. 33, no. 5, pp. 340–349.
- Lai, M. L. and Nurul, H. A. N. (2010) 'Integrating ICT skills and tax software in tax education', *Campus-Wide Information Systems*, vol. 27, no. 5, pp. 303–317.
- Lange, P. de, Jackling, B. and Gut, A.-M. (2006) 'Accounting graduates' perceptions of skills emphasis in undergraduate courses: an investigation from two Victorian universities', *Accounting and Finance*, vol. 46, no. 3, pp. 365–386.
- Lim, Y.-M., Lee, T. H., Yap, C. S. and Ling, C. C. (2016) 'Employability skills, personal qualities, and early employment problems of entry-level auditors: Perspectives from employers, lecturers, auditors, and students', *Journal of Education for Business*, vol. 91, no. 4, pp. 185–192.
- Lin, P., Krishnan, S. and Grace, D. (2013) 'The Effect of Experience on Perceived Communication Skills: Comparisons between Accounting Professionals and Students', in *Advances in Accounting Education: Teaching and Curriculum Innovations*, Emerald Group Publishing Limited, pp. 131–152.
- Low, M., Botes, V., Rue, D. D. and Allen, J. (2016) 'Accounting employers' expectations - The ideal accounting graduates', *E-Journal of Business Education & Scholarship of Teaching*, vol. 10, no. 1, pp. 36–57.
- Maali, B. and Al-Attar, A. M. (2020) 'Accounting curricula in universities and market needs: The Jordanian case', *SAGE Open*, vol. 10, no. 1.
- Mandilas, A., Kourtidis, D. and Petasakis, Y. (2014) 'Accounting curriculum and market needs', *Education + Training*, vol. 56, 8/9, pp. 776–794.
- McLaren, M. C. (1990) 'The place of communication skills in the training of accountants in New Zealand', *Accounting and Finance*, vol. 30, no. 1, pp. 83–94.
- Memiyanty, H. A. R., Rozainun, H. A. A. and Lin, B. (2010) 'Perception on professional capabilities of accounting graduates', *International Journal of Management in Education*, vol. 4, no. 1, p. 61.
- Mgaya, K. V. and Kitindi, E. G. (2008) 'IT skills of academics and practising accountants in Botswana', *World Review of Entrepreneurship, Management and Sustainable Development*, vol. 4, no. 4, pp. 366–379.
- Mhlongo, F. (2020) 'Pervasive skills and accounting graduates' employment prospects: Are South African employers calling for pervasive skills when recruiting?', *Journal of Education*, no. 80, pp. 49–71.
- Montoya-del-Corte, J., Fariás-Martínez and Gabirela Maria (2014) 'Accounting training received in college vs. labor market demands: The case of Mexico', *The New Educational Review*, vol. 36, no. 2, pp. 168–181.
- Nicolaescu, C., David, D. and Farcas, P. (2017) 'Professional and transversal competencies in the accounting field: Do employers' expectations fit students' perceptions? Evidence from Western Romania', *Studies in Business and Economics*, vol. 12, no. 3, pp. 126–140.
- Olivier, H. (2000) 'Challenges facing the accountancy profession', *European Accounting Review*, vol. 9, no. 4, pp. 603–624.
- Oussii, A. A. and Klibi, M. F. (2017) 'Accounting students' perceptions of important business communication skills for career success', *Journal of Financial Reporting and Accounting*, vol. 15, no. 2, pp. 208–225.
- Pan, P. and Perera, H. (2012) 'Market relevance of university accounting programs: Evidence from Australia', *Accounting Forum*, vol. 36, no. 2, pp. 91–108.
- Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1985) 'A Conceptual Model of Service Quality and Its Implications for Future Research', *Journal of Marketing*, vol. 49, no. 4, pp. 41–50.
- Rackliffe, U. R. and Ragland, L. (2016) 'Excel in the accounting curriculum: perceptions from accounting professors', *Accounting Education*, vol. 25, no. 2, pp. 139–166.
- Ragland, L. and Ramachandran, U. (2014) 'Towards an understanding of excel functional skills needed for a career in public accounting: Perceptions from public accountants and accounting students', *Journal of Accounting Education*, vol. 32, no. 2, pp. 113–129.
- Reddrop, A. and Mapunda, G. (2019) 'Listening skills: Accountancy educators in retreat?', *Australasian Accounting, Business and Finance Journal*, vol. 13, no. 1, pp. 76–89.

- Richardson, W. (2005) 'Curriculum requirements for entry-level management accounting in Australian industry and commerce', *Journal of Applied Management and Advanced Research*, vol. 3, no. 1, pp. 55–66.
- Ridwan (2017) 'Analysis of the competencies of accounting department graduates based on stakeholders perspective in the central Sulawesi province, Indonesia', *International journal of Civil Engineering and Technology*, vol. 8, no. 8, pp. 45–53.
- Senik, R., Broad, M., Mat, N. and Kadir, S. A. (2013) 'Information Technology (IT) knowledge and skills of accounting graduates: Does an expectation gap exist?', *Jurnal Pengurusan*, vol. 38, pp. 87–100.
- Shahwan, Y. and Roudaki, J. (2009) 'Entry-level accounting positions competencies in the UAE: perceptions of accounting educators and financial managers', *Journal of Global Business Advancement*, vol. 2, no. 4, pp. 301–317.
- Siriwardane, H. P., Kin Hoi Hu, B. and Low, K. Y. (2014) 'Skills, knowledge, and attitudes important for present-day auditors', *International Journal of Auditing*, vol. 18, no. 3, pp. 193–205.
- Siriwardane, H. P., Low, K.-Y. and Blietz, D. (2015) 'Making entry-level accountants better communicators: A Singapore-based study of communication tasks, skills, and attributes', *Journal of Accounting Education*, vol. 33, no. 4, pp. 332–347.
- Smith, B., Maguire, W. and Han, H. H. (2018) 'Generic skills in accounting: Perspectives of Chinese postgraduate students', *Accounting & Finance*, vol. 58, no. 2, pp. 535–559.
- Spraakman, G., O'Grady, W., Askarany, D. and Akroyd, C. (2015) 'Employers' perceptions of information technology competency requirements for management accounting graduates', *Accounting Education*, vol. 24, no. 5, pp. 403–422.
- Tan, L. M. and Laswad, F. (2018) 'Professional skills required of accountants: what do job advertisements tell us?', *Accounting Education*, vol. 27, no. 4, pp. 403–432.
- Tight, M. (2004) 'Research into higher education: an a-theoretical community of practice?', *Higher Education Research & Development*, vol. 23, no. 4, pp. 395–411.
- Towers-Clark, J. (2015) 'Undergraduate accounting students: prepared for the workplace?', *Journal of International Education in Business*, vol. 8, no. 1, pp. 37–48.
- Uwizeyemungu, S., Bertrand, J. and Poba-Nzaou, P. (2020) 'Patterns underlying required competencies for CPA professionals: A content and cluster analysis of job ads', *Accounting Education*, vol. 29, no. 2, pp. 109–136.
- van Romburgh, H. and van der Merwe, N. (2015) 'University versus practice: A pilot study to identify skills shortages that exist in first-year trainee accountants in South Africa', *Industry and Higher Education*, vol. 29, no. 2, pp. 141–149.
- Waldmann, E. and Ratnatunga, J. (2011) 'A marketing approach to service quality in accounting: A case study', *International Business & Economics Research Journal (IBER)*, vol. 2, no. 5.
- Waller, T. C. and Gallun, R. A. (1985) 'Microcomputer competency requirements in the accounting industry: A pilot study', *Journal of Accounting Education*, vol. 3, no. 2, pp. 31–40.
- Warren, J. D., Moffitt, K. C. and Byrnes, P. (2015) 'How Big Data Will Change Accounting', *Accounting Horizons*, vol. 29, no. 2, pp. 397–407.
- Wells, P., Gerbic, P., Kranenburg, I. and Bygrave, J. (2009) 'Professional skills and capabilities of accounting graduates: The New Zealand expectation gap?', *Accounting Education*, vol. 18, 4-5, pp. 403–420.
- Yanto, H., Fam, S.-F., Baroroh, N. and Jati, K. W. (2018) 'Graduates' accounting competencies in global business: Perceptions of Indonesian Practitioners and academics', *Academy of Accounting and Financial Studies Journal*, vol. 22, no. 3, pp. 1–17.
- Yorke, M. (1992) 'Quality in Higher Education: A Conceptualisation and Some Observations on the Implementation of a Sectoral Quality System', *Journal of Further and Higher Education*, vol. 16, no. 2, pp. 90–104.
- Zaid, O. A. and Abraham, A. (1994) 'Communication skills in accounting education: Perceptions of academics, employers and graduate accountants', *Accounting Education*, vol. 3, no. 3, pp. 205–221.