

**EXPLORING THE INTERSECTION BETWEEN TECHNOLOGY AND PUBLIC SECTOR ACCOUNTING  
EDUCATION - A SYSTEMATIC LITERATURE REVIEW**

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**ABSTRACT**

This systematic literature review explores the intersection of technology and public sector accounting education (PSAE). Despite the growing importance of PSAE for preparing competent public servants and implementing public sector reforms, research in this area remains limited compared to private sector accounting education. This study aims to address this gap by examining the evolution of technology trends in PSAE and identifying future research directions. The findings reveal a significant focus on the urgency to acquire technological skills, integrating technology into teaching, and developing conceptual frameworks. This highlights the need for continual adaptation of PSAE curricula to incorporate modern tools and respond to global challenges. Future research should explore the integration of advanced technologies, such as artificial intelligence and blockchain, into PSAE to enhance public sector reforms and educational practices. Comparative studies across different countries are also necessary to understand cultural and systemic factors influencing PSAE. Addressing these gaps will ensure that PSAE remains relevant and effective in preparing graduates for the evolving demands of the public sector.

**Keywords:** Public Sector Accounting Education (PSAE), Public Sector Accountability, Technology Integration, Digitalization

**REFERENCES**

Al-Htaybat, K., von Alberti-Alhtaybat, L., & Alhatabat, Z. (2018). Educating digital natives for the future: Accounting educators' evaluation of the accounting curriculum. *Accounting Education*, 27(4), 333-357. <https://doi.org/10.1080/09639284.2018.1437758>

- Andiola, L. M., Masters, E., & Norman, C. (2020). Integrating technology and data analytic skills into the accounting curriculum: Accounting department leaders' experiences and insights. *Journal of Accounting Education, 50*, 100655.
- Apostolou, B., Dorminey, J. W., & Hassell, J. M. (2020). Accounting education literature review (2019). *Journal of Accounting Education, 51*, 100670.
- Baylis, R. M., Widt, D. de, Helikum, L. J., & Ashworth, R. (2024). Debate: The lack of public sector accounting education within universities and what is next. *Public Money and Management*.
- Bakkalbasi, N., Bauer, K., Glover, J., & Wang, L. (2006). Three options for citation tracking: Google Scholar, Scopus and Web of Science. *Biomedical Digital Libraries, 3*, 1-8.
- Beckett-Camarata, J. (2007). Using critical thinking in a web-based public budgeting course. *International Journal of Public Administration*.
- Black, E. L., Stainbank, L., Elnathan, D., Giner, B., Gray, S. J., Meljem, S., ... & Wood, D. A. (2017). Usage of journal rankings: An international perspective. *Journal of International Accounting Research, 16*(3), 1-15.
- Brown, R., & Johnston, K. (1963). *Paciolo on accounting*. New York: McGraw-Hill Book Company.
- Campbell-Kelly, M. (Ed.). (2003). *The history of mathematical tables: from Sumer to spreadsheets*. Oxford University Press.
- Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Harvard Business School Publishing.
- Cohn, M., & Bellone, R. H. (1997). A history of accounting software. *Accounting Technology, 13*, 18-37.
- Cohen, S., & Karatzimas, S. (2022). New development: Public sector accounting education for users—Embedding eLearning and technology in teaching. *Public Money and Management*.
- Coleman, J. C. (1949). Facial expressions of emotion. *Psychological Monographs: General and Applied, 63*(1).
- Daniels, B. W., Gupta, R. D., & Pridgen, A. K. (2007). Faculty perspectives on governmental and nonprofit accounting topics. *The Accounting Educators' Journal*.
- Dow, K. E., Jacknis, N., & Watson, M. W. (2021). A framework and resources to create a data analytics-infused accounting curriculum. *Issues in Accounting Education, 36*(4), 183-205. <https://doi.org/10.2308/ISSUES-19-071>
- Englund, H., & Gerdin, J. (2014). Structuration theory in accounting research: Applications and applicability. *Critical Perspectives on Accounting, 25*(2), 162-180.
- Felski, E. A., & Empey, T. B. (2020). Should blockchain be added to the accounting curriculum? Evidence from a survey of students, professionals and academics. *The Accounting Educators' Journal, 30*.

- Franceschini, F., Maisano, D., & Mastrogiacomo, L. (2016). Empirical analysis and classification of database errors in Scopus and Web of Science. *Journal of Informetrics*, 10(4), 933-953.
- Frizzo-Barker, J., Chow-White, P. A., Adams, P. R., Mentanko, J., Ha, D., & Green, S. (2020). Blockchain as a disruptive technology for business: A systematic review. *International Journal of Information Management*, 51, 102029.
- Gould, S. (2017, May 24). Disrupting the accountancy profession. *International Federation of Accountants (IFAC)*. Retrieved September 29, 2022, from <https://www.ifac.org/knowledge-gateway/developing-accountancy-profession/discussion/disrupting-accountancy-profession>
- Grossmann, A., Mooney, L., & Dugan, M. (2019). Inclusion fairness in accounting, finance, and management: An investigation of A-star publications on the ABDC journal list. *Journal of Business Research*, 95, 232-241.
- Heiling, J. (2020). Time to rethink public sector accounting education? A practitioner's perspective. *Journal of Public Budgeting, Accounting & Financial Management*, 32(3), 505-509. <https://doi.org/10.1108/JPBAFM-05-2020-0059>
- Heiling, J., Jorge, S., Karatzimas, S., & Aggestam-Pontoppidan, C. (2022). Editorial: CIGAR mini-theme: Public sector accounting education—stocktaking, challenges, and innovations. *Public Money and Management*.
- Hinkley, S. (2023). Technology in the public sector and the future of government work. *Labor Center, University of California, Berkeley*. Retrieved from <https://laborcenter.berkeley.edu/technology-in-the-public-sector-and-the-future-of-government-work/>
- Hood, D. (2015, September 28). Losing sleep. *Accounting Today*. Retrieved October 2, 2022, from <https://www.accountingtoday.com/news/losing-sleep>
- Iacuzzi, S. (2022). An appraisal of financial indicators for local government: A structured literature review. *Journal of Public Budgeting, Accounting & Financial Management*, 34(6), 69-94.
- Izzo, M. F., Fasan, M., & Tiscini, R. (2022). The role of digital transformation in enabling continuous accounting and the effects on intellectual capital: the case of Oracle. *Meditari Accountancy Research*, 30(4), 1007-1026.
- Jackson, D., & Meek, S. (2021). Embedding work-integrated learning into accounting education: The state of play and pathways to future implementation. *Accounting Education*, 30(1), 63-85.
- Jeacle, A. (2008). Beyond the boring grey: The construction of the colourful accountant. *Critical Perspectives on Accounting*, 19(8), 1296-1320. <https://doi.org/10.1016/j.cpa.2007.02.008>
- Kaden, S. R., Lingwall, J. W., & Shonhiwa, T. T. (2021). Teaching blockchain through coding: Educating the future accounting professional. *Issues in Accounting Education*, 36(4), 281-290.
- Karatzimas, S., Heiling, J., & Aggestam-Pontoppidan, C. (2022). Public sector accounting education: A structured literature review. *Public Money & Management*, 42(7), 543-550. <https://doi.org/10.1080/09540962.2022.2066356>

- Kee, R. (1993). Data processing technology and accounting: A historical perspective. *Accounting Historians Journal*, 20(2), 187-216. <https://doi.org/10.2308/0148-4184.20.2.187>
- Krumwiede, K. (2017). How to keep your job. *Institute of Management Accountants (IMA)*. Retrieved September 29, 2022, from <https://www.imanet.org/insights-and-trends/the-future-of-management-accounting/how-to-keep-your-job?ssopc=1>
- Langer, C. (1958). Paciolo-patriach of accounting. *The Accounting Review*, 33(3), 482-484.
- Leitner-Hanetseder, S., Lehner, O. M., Eisl, C., & Forstenlechner, C. (2021). A profession in transition: actors, tasks and roles in AI-based accounting. *Journal of Applied Accounting Research*, 22(3), 539-556.
- Marrone, M., & Hazelton, J. (2019). The disruptive and transformative potential of new technologies for accounting, accountants and accountability: A review of current literature and call for further research. *Meditari Accountancy Research*, 27(5), 677-694. <https://doi.org/10.1108/MEDAR-06-2019-0508>
- Massaro, M., Dumay, J., & Guthrie, J. (2016). On the shoulders of giants: undertaking a structured literature review in accounting. *Accounting, Auditing & Accountability Journal*, 29(5), 767-801.
- Mesa, W. B. (2019). Accounting students' learning processes in analytics: A sensemaking perspective. *Journal of Accounting Education*, 48, 50-68. <https://doi.org/10.1016/j.jaccedu.2019.06.003>
- Moll, J., & Yigitbasioglu, O. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. *The British Accounting Review*, 51(6), 100833. <https://doi.org/10.1016/j.bar.2019.04.002>
- Moody, M., & Marlowe, J. (2009). Recent iterations in the public financial management curriculum: Is what practitioners need being taught? *Journal of Public Affairs Education*.
- Murphy, E. A. (2005). Enhancing student learning with governmental accounting Jeopardy! *Journal of Public Budgeting, Accounting & Financial Management*.
- Napier, C. J. (2006). Accounts of change: 30 years of historical accounting research. *Accounting, Organizations and Society*, 31(4-5), 445-507. <https://doi.org/10.1016/j.aos.2005.12.004>
- Nowotny, F. A., Razek, J. R., & Hosch, G. A. (1982). Off-campus training for local government finance employees. *The Journal of Continuing Higher Education*.
- Pauluzzo, R., Fedele, P., Dokalskaya, I., & Garlatti, A. (2024). The role of digital technologies in public sector coproduction and co-creation: A structured literature review. *Financial Accountability & Management*. Advance online publication. <https://doi.org/10.1111/faam.12391>
- Peddle, M. T., & Thurmaier, K. (2011). Reformulating and refocusing a fiscal administration curriculum. *Journal of Public Affairs Education*.
- Pericolo, E., Fedele, P., Iacuzzi, S., Pauluzzo, R., & Garlatti, A. (2023). Public sector accounting education: International trends and Italian curricula. *Public Money and Management*.

- Pitulice, I. C., Profiroiu, A. G., & Ștefănescu, A. (2018). Government accounting education for university undergraduates. *Transylvanian Review of Administrative Sciences*.
- Ramassa, P., & Leoni, G. (2021). Standard setting in times of technological change: accounting for cryptocurrency holdings. *Accounting, Auditing & Accountability Journal*, 35(7), 1598-1624.
- Reichard, C., Kuchler-Stahn, N., & Siegel, J. (2023). Education in public sector accounting at higher education institutions in Germany. *Public Money and Management*.
- Riley, J., Eldridge, S., & Venkatesh, R. (2021). Engaging the experts to embrace the future: An interactive professional learning experience. *Issues in Accounting Education*, 36(4), 41-58.
- Santis, S., Grossi, G., & Bisogno, M. (2018). Public sector consolidated financial statements: a structured literature review. *Journal of Public Budgeting, Accounting & Financial Management*, 30(2), 230-251.
- Sarkar, S., Gray, J., Boss, S. R., & Daly, E. (2021). Developing institutional skills for addressing big data: Experiences in implementation of AACSB Standard 5. *Journal of Accounting Education*, 54, 100708.
- Schwab, K. (2017). *The fourth industrial revolution*. Crown Currency.
- Sciulli, N., & Sims, R. (2007). Public sector accounting education in Australian universities: An exploratory study. *Sunway Academic Journal*, 4, 44-58.
- Sellami, Y. M., & Gafsi, Y. (2020). Public management systems, accounting education, and compliance with international public sector accounting standards in sub-Saharan Africa. *International Journal of Public Sector Management*.
- Senarathna, I., Wilkin, C., Warren, M., Yeoh, W., & Salzman, S. (2018). Factors that influence adoption of cloud computing: An empirical study of Australian SMEs. *Australasian Journal of Information Systems*, 22. <https://doi.org/10.3127/ajis.v22i0.1603>
- Stanley, T., & Xu, J. (2019). Work-Integrated Learning in accountancy at Australian universities—forms, future role and challenges. *Accounting Education*, 28(1), 1-24.
- Suarta, I. M., Suwintana, I. K., & Sudiadnyani, I. G. A. O. (2021). Persyaratan Keterampilan Teknologi Digital Untuk Profesional Akuntan: Analisis Iklan Lowongan Kerja. *Prosiding Simposium Nasional Akuntansi Vokasi-[SNAV]*, 9(1), 41-53.
- Treleaven, P., Brown, R. G., & Yang, D. (2017). Blockchain technology in finance. *Computer*, 50(9), 14-17.
- Tsiligiris, V., & Bowyer, D. (2021). Exploring the impact of 4IR on skills and personal qualities for future accountants: a proposed conceptual framework for university accounting education. *Accounting Education*, 30(6), 621-649. <https://doi.org/10.1080/09639284.2021.1938616>
- Twyford, E., & Dean, B. A. (2023). Inviting students to talk the talk: Developing employability skills in accounting education through industry-led experiences. *Accounting Education*, 1-23.

- Valentinetti, D., & Muñoz, F. F. (2021). Internet of things: Emerging impacts on digital reporting. *Journal of Business Research*, 131, 549-562.
- Venter, J., Coetzee, S. A., & Schmulian, A. (2022). Developing accounting students' team innovation through assessment. *The International Journal of Management Education*, 20(3), 100673.
- West, D. M. (2005). *Digital government: Technology and public sector performance*. Princeton University Press.
- Wilson, E. (2013). An historical perspective on governmental accounting education. *Journal of Accounting Education*.
- Wulandari, S.S., & Ali, S. (2019). Incorporating XBRL topics into the accounting curriculum: empirical evidence from Indonesia. *Accounting Education*, 28(6), 597-620, DOI: 10.1080/09639284.2019.1679205.
- Zekany, K. E. (2020). Curricular Study of AACSB Accounting Programs: What Core Accounting Courses are Required to Earn an Accounting Generalist Degree? *The Accounting Educators' Journal*, 30.
- Zemankova, A. (2019). Artificial intelligence and blockchain in audit and accounting: Literature review. *WSEAS Transactions on Business and Economics*, 16, 568-581.
- Zynda, M. R. (2013). The first killer app: A history of spreadsheets. *Interactions*, 20(5), 68-72. <https://doi.org/10.1145/2509224>