

## Accounting Information Systems is Losing Ground in the Accounting Program

Emilio Boulianne, PhD, FCPA, FCGA  
Associate Professor of Accounting  
Director, CPA Research Center in Accountability  
John Molson School of Business - Concordia University  
Montreal, Quebec, Canada  
Email: [Emilio@JMSB.Concordia.ca](mailto:Emilio@JMSB.Concordia.ca)

**Abstract:** Business schools and accounting associations are faced with the challenge of providing accounting students with adequate training in accounting information systems (AIS). We examine the following: What place does AIS occupy in the Canadian CPA program? How have the challenges to develop AIS courses impacted the CPA education program? To answer these questions, we compare the coverage of AIS of the new CPA with that of the three former Canadian accounting associations (CA, CGA and CMA) prior to their unification. We examine how AIS is now integrated in university accounting programs. Results indicate that the emphasis on AIS was greater before unification, when the courses offered and required were greater. In many cases, students cannot anymore study AIS. Overall, the CPA program today place more emphasis on finance, strategy and governance, and less on IT and the application of IS to accounting.

### INTRODUCTION

In January 2012, the Canadian Institute of Chartered Accountants (CICA), the Society of Management Accountants of Canada (CMA Canada) and the Certified General Accountants of Canada (CGA-Canada) issued a unifying framework for guiding the unification of the three Canadian accounting designations. The unification was intended to allow them to better meet the changing needs of both Canadian accountants and the national and international business community. The unifying framework included the creation of a new designation, namely Chartered Professional Accountant (CPA), as well as the development of a new competency map, education program and exams. The province of Quebec was the first, in May 2012, to fully achieve the unification of the three accounting bodies (CA, CMA and CGA) at the provincial level. Now it is only a matter of time for the remaining Canadian professional accountants to be all unified under CPA Canada.

For managers of accounting associations and accounting professors of business schools, a recurrent question that remains to be answered is: What type of education program and professional exams are needed in order to train competent professional accountants? To answer this question, a number of working groups and committees have been set up to discuss and issue reports on the future of accounting education. All of these initiatives agree on the importance of accounting information systems (AIS) and information technology (IT) in education programs (in the present text, AIS and IT are used interchangeably). For instance, Albrecht and Sack (2000) maintain that accountants who have obtained enhanced AIS/IT knowledge through their education program will be able to deliver a better performance for clients, customers and employers. More recently, the Pathways Commission (2012) calls for the integration of new AIS/IT courses into curricula to improve technological skills of future accountants.

These reports on accounting education, which gained broad coverage, echoed and stimulated the discourses of various stakeholders on the importance of advanced-level AIS/IT education. However, despite the growing consensus on this matter, the actual step of adding AIS content to accounting curricula poses a significant challenge in terms of course material to develop, teach and update (Sveum & Schlough, 2013; Fulford, 2011). More specifically, the development of relevant courses for hands-on problems is demanding on resources and educators (Banham, 2010).

An additional difficulty of including AIS in curricula is the lack of recognition and incentives for developing and improving the courses and learning resources. The current strong focus on research as a sole key criterion for the recruitment, tenure and advancement of professors does not work to spur the development of AIS courses and related materials. Many professors simply lack the knowledge to invest in AIS courses, and of those who do have the knowledge, most have no motivation to engage in the effort.

The main objective of my study is to examine to what extent the Canadian CPA education program covers the AIS component. The two main research questions are: Has AIS gained or lost ground in the CPA professional education program? And have the challenges to develop courses and materials to teach and test AIS impacted the structure of the CPA education program? To answer these questions, we compare the AIS requirements made by the three former Canadian accounting associations (CA, CGA, CMA) before the unification of the Canadian accounting professionals, with those of the new Canadian CPA program, thus after the unification.

## **DEVELOPMENT OF RESEARCH QUESTIONS**

To most stakeholders, professional accountants must possess AIS/IT competencies if they are to perform their jobs efficiently. Accordingly, these stakeholders advocate that a set of courses covering key AIS/IT topics should be included in accounting curricula.

The fact that AIS does not, yet, occupy the place it should is most often attributed to the challenges to develop courses and materials to properly teach and test AIS topics. In a business/accounting program, some courses and subjects can be more easily taught than others, with some representing a real challenge. For example, courses related to computer-based AIS have been reported to be among the most challenging ones to teach (Banham, 2010; Fulford, 2011; Sveum & Schlough, 2013). Continual changes in AIS/IT, such as software sophistication and updates, architecture design, hardware components, ERP systems, networks and security issues, just to name a few, render education in this field of expertise more demanding. The ideal instructor profile would be a professional having both accounting and information systems education, training and experience—a rather rare combination. Thus, when given the choice, most professors shy away from taking on this subject, preferring instead to teach the more traditional courses in financial accounting or management accounting areas. This in turn makes accounting departments more inclined to reduce the offer of AIS/IT courses to a minimum or even to let these courses be taught by the MIS/IT departments, in which case there is no specific focus on the application of IS/IT for accounting purposes.

Difficulties to teach and test AIS/IT may explain the inadequate and insufficient inclusion of AIS/IT topics in the competency maps, education programs and professional exams of professional accounting associations. Our main research objective is to examine how the new Canadian CPA education program covers the AIS component. Research questions are: Have the challenges to develop courses and materials to teach and test AIS impacted the accounting education program design? Has AIS gained or lost ground since the unification of the Canadian professional accountants associations? To answer these questions, we compare the AIS/IT requirements set forth by the three Canadian accounting associations (CA, CGA, CMA) before their unification with those of the new Canadian CPA program, thus after the unification.

## **DISCUSSION AND CONCLUSION**

The main research objective is to examine how the current Canadian CPA education program covers the AIS/IT component following the unification of the three Canadian accounting associations. In other words, despite stakeholders' emphasis on the importance of more advanced-level IS/IT education, what place does this field occupy in the current education program? Has it gained or lost ground? To answer these questions, we compared the AIS/IT requirements by the Canadian accounting associations (CA, CGA, CMA) before their unification with the CPA requirements after the unification.

Results indicate not only that AIS/IT is not a priority topic in the new program, but also that it is even less important now than before the unification. The number of AIS/IT courses required in the CPA program dropped, namely from three to two, or from two to one, depending on the business school. Some courses that were formerly mandatory are now either electives or eliminated entirely from the course offer. We also observed that prior to the

unification, many AIS/IT courses were developed and offered directly by the accounting departments, hence ensuring the focus on accounting that qualified them as “AIS” courses. Now, by contrast, IT/IS is offered through the MIS departments, with an MIS focus. When we examine the twelve universities in Quebec, the AIS/IT component lost ground with the establishment of the new CPA program. This loss is mainly due to increasing course requirements in the fields of Finance, Strategy and Governance. To meet these new requirements, new courses were created, existing courses revamped and, to free up resources, some existing AIS/IT courses were eliminated. Challenges to develop courses and materials to properly teach AIS/IT is without a doubt a significant factor in the decreased mandatory courses in this area.

Future research should monitor the evolution of AIS/IT coverage in the CPA education program. CPA Canada is a very young association and its education program is still in the making. For example, more advanced-level IT competencies may be required in the future. A natural extension of the current study would be to conduct interviews with CPA Canada decision-makers in order to understand their rationale and justification for their selection and prioritization of competencies. As well, interviews with professional accountants working in the AIS/IT field could feed us on the proper match between the education program coverage in IT, and the IT competency needs on the job market.

For years, professional accounting associations and accounting departments have had to deal with an important question: Which competencies, education program and professional exams are required in order to train skilled accountants? The present research, in identifying the IT coverage of the current education program, could serve as a starting point for a discussion on what might be the appropriate minimum level of AIS/IT training to be included in accounting education programs, as well as for addressing the challenges of developing AIS/IT courses.

## REFERENCES

- AICPA (2013). American Institute of Certified Public Accountants; [www.aicpa.org](http://www.aicpa.org)
- AICPA (2013). American Institute of Certified Public Accountants, *Core competency framework*; [www.aicpa.org](http://www.aicpa.org)
- Albrecht, W. S., & Sack, R. J. (2000). *Accounting education: Charting the course through a perilous future*. Sarasota, FL: The American Accounting Association.
- Banham, R. L. (2010). Dynamics as a teaching and learning tool: The first step – restructure the AIS course, *Proceedings of DYNAA*, 1(1), 7–15.
- Bonner, S. A., Hesford, J. W., Van der Stede, W. A., & Young, S. M. (2006). The most influential journals in academic accounting. *Accounting, Organizations and Society*, 31, 663–685.
- CICA (2013). Canadian Institute of Chartered Accountants, Uniform Evaluation Exam (UFE) Candidates' Competency Map; [www.cica.ca](http://www.cica.ca)
- CPA (2013). Chartered Professional Accountants Canada; [www.cpacanada.ca](http://www.cpacanada.ca)
- CMA-Canada (2013). Certified Management Accountants; [www.cma-canada.org](http://www.cma-canada.org)
- Colapinto, R. (2013). It's a global village, *CA Magazine*, December 2013.
- Fulford, R. (2011). Effective education using information systems as cognitive tools, *DYNAA Proceedings*, 2(1), 8–14.
- Krippendorff, K. (2013). *Content analysis: An introduction to its methodology* (3<sup>rd</sup> ed.). Beverly Hills, CA: Sage Publications.
- Pathways Commission (2012). *Charting a national strategy for the next generation of accountants*.
- Sveum, E., & Schlough, S. (2013). Development and implementation of a minor in enterprise technology. *DYNAA Proceedings 2013*, 4(1), 42–4.