PANEL: Information Systems (IS) Education in Australia – where from here?

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Abstract

Debates around the academic field of Information Systems (IS) has been recurring for many years with topics around IS as an academic discipline, the variety of IS educational programs and curriculum, and where IS unit is located within a university (See Guy 2006, Clarke 2006). There is a general trend in ICT education becoming driven by the new technology innovations. Defined as having the major focus on information systems development (Hassan, N. R., & Mathiassen, L. 2018) the discipline of IS is, once again, requires a constant and dynamic focus change because of commoditization of IT drives the needs for IS skills becoming a matter of management capabilities development (Peppard & Ward, 2004). The purpose of this panel is to facilitate a constructive discussion about the advantages and disadvantages of the current trends in IS education across Australasia, and the impact they have on the IS profession.

Keywords: IS education, IS curriculum, IS body of knowledge, ICT accreditation, IS Future.

1 INTRODUCTION: OVERVIEW OF ISSUES

For many years, there have been debates in the academic field of information systems (IS) about IS as an academic discipline, the variety of IS educational programs and curricula, and where IS Units are located in terms of their administration within a university (see Guy 2006, Clarke 2006).

There is a general trend in ICT education regarding the increasing use of technology innovations. The discipline of IS has been defined as having a major focus on IS development (Hassan & Mathiassen 2018) and requires a constant and dynamic change in focus. This is because the commoditisation of IT drives the need for IS skills, which necessitates management capabilities development (Peppard & Ward 2004).

In Australia, challenges have arisen, because the local context of ICT education is often driven by universities' strategic priorities and market forces rather than being connected to or concerned with the development and dissemination of a scholarly, discipline-specific body of IS knowledge.

We have observed some positive signs that benefit our national IS community, which are as follows:

- The IS discipline has been recognised as a separate field of research code 0806.

- IS graduates have appropriate skills for industry as evidenced by their high employability rates.

- IS educational programs and curricula in Australia have a consistent structure and follow international guidelines, such as the ACM, AIS (2010) and have certain core courses.

- The ACPHIS (2017) study on IS curricula indicated that the majority of IS programs have ensured the fulfillment of the ACS Core Body of Knowledge and have obtained professional accreditation.

- IS Unit location within university structures is varied, but ACPHIS (2018, 2019) showed that the majority (about 70%) of IS Units or Departments in Australia were located within business schools, with the remainder spread across Schools of Engineering, Science, and ICT.

2 EMERGENT ISSUES

Rapid development in and increasingly large employment markets for emerging ICT-related areas, including data science, digital business, business analytics, cyber security, artificial intelligence, and robotics and automation have created educational demand in these areas. Business and other schools in which IS resides have responded to this demand by creating new programs or majors in these areas. However, several issues have emerged from these trends and others.

2.1 Issue 1 – Status of IS programs

New programs are often introduced as extensions or additions to IS programs, and in some cases, as replacements for IS programs, while existing IS programs are discontinued or suspended. What does this mean for the growing demand for well-developed IS capabilities?

2.2 Issue 2 – New program format

New programs may have new structures and include new models with shorter form of credits, such as micro-credentials and RPL to accommodate different learning styles. While these approaches may deliver equivalent student engagement and graduate outcomes, they have yet to be tested. What should be the minimum standard of IS training?

2.3 Issue 3 – Professional accreditation requirements and expectations

Most IS programs in Australia are accredited by the ACS, which is the main accreditation body for ICT programs. Recently, the ACS introduced an ICT accreditation specialism, cyber security, to respond to the increasing demand for cyber security professionals. How do such sub-disciplines manifest themselves in relation to the IS body of knowledge, and who is responsible for maintaining standards, such as the inclusion of relevant content in university curricula?

In view of the above, the purpose of this panel is to facilitate a constructive discussion about the advantages and disadvantages of current trends in IS education across Australasia and the impact they have on the IS profession. The objective of the panel is to achieve some consensus on the specific aspects of IS education that must be maintained in new programs and what flexibility should exist in IS offerings across academic and training institutions to ensure the sustainable future of the IS discipline.

3   TARGET AUDIENCE

University management e.g. Deans, Head of Schools/ Departments, IS academics, ICT accrediting bodies

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PRESENTERS

Caroline Chan is a Professor of information Systems and former Dean/Head of School of Business IT and Logistics, RMIT University. She is also the president of the Australian Council of Professors and Heads of Information Systems (ACPHIS) and the current chair of the Academic Committee responsible for national accreditation of the Australia Computer Society (ACS). Caroline undertakes research in the areas of information systems and technologies use in eBusiness and supply chain management. She has been involved in and worked with various industry and government bodies. These include being the chief investigator for projects such as the Australian federal government's low value parcel processing for online shopping (2012–13), the scoping study and development of the Australia food composition database with the Department of Health and Ageing (2010, 2012), and the Department of Education and Training (DET) and Australia Indonesia Centre (AIC) on Australian Bachelor Recognition (2018). She also chaired the international team of the World Bank review of logistics programs in Moscow (2014/2015).

Frada Burstein is Professor of Information Systems at the Faculty of Information Technology (IT), Monash University. As a member of this Faculty for more than 25 years she has observed a massive transformation of the computing education especially at the graduate level. Prof Burstein has been awarded Vic State iAward as ICT Educator of the Year in 2013. From her perspective research-led and industry-informed teaching is still the main drivers for IS education for the future.

John Venable is an Associate Professor and Discipline Lead for Business Information Systems (BIS) at Curtin University. He is a former Head of School and Director of Research in the School of Information Systems at Curtin. He has held academic positions in Information Systems (IS) and Computer Science in the USA, Denmark, New Zealand, and Australia. He has published extensively in international conferences and journals including The European Journal of Information Systems, Journal of Information Technology, Information & Management, The Information Systems Journal, Information Technology & People, Communications of the Association for Information Systems, The Scandinavian Journal of Information Systems, The Australasian Journal of Information Systems, The Journal of Community Informatics, Wirtschaftsinformatik, and The Electronic Journal of Business Research Methods. He serves in editorial roles on five international journals and regularly serves as chair, track chair, and program committee member of international research conferences. Dr Venable is an internationally recognised expert in Design Science Research (DSR).

Joan Richardson is from RMIT. Her substantial record of Information Systems (IS) research includes PhD completions and more than 80 peer reviewed book chapters, journals and conference publications. She states: I present my research publications and professional achievements, such as, accreditation documentation addressing the Skills For the Information Age (SFIA) framework at national and international conferences. I received an ALTC citation that recognised my contribution to Higher Education through the use of emerging technologies and changed pedagogies to meet the opportunities created by the new generation learning spaces and have been involved in significant IS research projects, including, Web 2.0 authoring tools in higher education: new directions for assessment and academic integrity and Narratives of Digital resilience. In addition, I was the principal author of the first

Information Systems (IS) Australian text published by Pearson Education Australia in from 2001 to 2019 and creation of a multi-media resource library have kept us as recognised leaders in the area of Digital Literacy.