Panel – Preparing the Next Generation of Computer Personnel

Leigh Ellen Potter
Griffith University
170 Kessels Road
Nathan, Queensland, Australia
+61 7 3735 5191
L.Potter@griffith.edu.au

Diane Lending
James Madison University
MSC 0203, 342 Zane Showker Hall
Harrisonburg, VA 22807
+1 540 568 3273
lendindc@jmu.edu

Michelle L. Kaarst-Brown
School of Information Studies
Syracuse University
Syracuse, NY 13244 USA
+1 315 443 1892
mlbrow03@syr.edu

ABSTRACT

The purpose of this panel is to explore different techniques and approaches that are currently in use within the tertiary sector to prepare students in the technology industry for the move to working in the industry. A growing demand from employers for soft skills, and from university bodies for positive graduate employment outcomes is leading to a re-imagining of our approach to coursework. Work integrated learning and industry involvement within coursework and assessment will be presented, together with approaches for encouraging students to engage with industry and the development of non-traditional course offerings.

Categories and Subject Descriptors

K.7.1 **The Computing Profession:** Occupations

General Terms

Human Factors.

Keywords

IT Workforce, assessment approaches, employability, industry readiness.

1. INTRODUCTION

Employability: “A set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy” (Knight & Yorke, 2003; The Higher Education Academy, 2014).

Despite a range of academic arguments, there has been a growing demand over the last fifteen years for the development of employability outcomes and industry readiness for university graduates (Lowden, Hall, Elliot, & Lewin, 2011). Most universities now embed employability aspects within their graduate outcomes. Within the Information Technology industry, this means producing graduates who have a broad base of technology knowledge, together with specific knowledge and experience in one or more key areas, and an understanding of

what will be required of them in the workplace. There is now a growing focus within technology schools and faculties on establishing what the technology industry requires in a potential graduate, and on what the student needs to know in order to satisfy those requirements.

Internationally, universities are meeting this challenge through the use of capstone programs, work integrated learning, and accreditation programs for students. There is room for greater innovation in this regard. This panel will present the key measures the presenters are using within their own local context, and open discussion for attendees to describe the approaches that they have found help or hinder. We will discuss the different elements that affect our approach, together with the lessons we have learned from our experience. We will outline our experience with both university colleagues and industry representatives.

The aim of this panel is to explore innovative practices and approaches for preparing students for working in industry, and to share these practices.

2. OVERVIEW OF PRESENTATIONS

Leigh Ellen Potter will present her experience teaching an undergraduate capstone course, and her work with industry engagement in undergraduate and masters level coursework. She will discuss the approach she has taken with work integrated learning, and the outcomes this has produced for students in terms of connections with industry, networking opportunities, skills development, and the development of student confidence. She will also outline her work incorporating ‘real world’ elements in the assessment pieces for second year courses, and student feedback regarding their experience with this approach.

Diane Lending will discuss getting students involved in the IS profession. She has made this a course objective for the first course that IS majors take in their junior year. The approach uses a combination of class work, a very active student organization, young alumni who want to give back to the university, and internships. She will discuss the outcomes that this has produced in terms of a program-industry partnership, student jobs, and growth of the major. She will also talk about potential pitfalls of this approach.

Michelle L. Kaarst-Brown will share how employer demands for “soft skills” are shaping non-traditional course offerings, employer engagement in designing academic courses, and view of certification. She has been engaged in new course creation for over twenty years, integrating practitioner views, experiential opportunities, and community and employer engagement in evaluating student performance outcomes. Her presentation will

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share several diverse examples of these types of courses, and cover key lessons learned in collaborating with employers. Michelle will also present some of the new opportunities how thinking beyond traditional MIS curriculum and basic certification training has increased students' career choices within and outside IT, added resume building experiences, and aided in building students' career networks within and outside the university.

3. PRESENTERS

Leigh Ellen Potter is a lecturer in the School of Information and Communication Technology, Griffith University in Australia. Her background is in industry, where she worked as a business analyst and user experience advocate prior to commencing her PhD. She completed her doctorate in Information Systems at Griffith University, exploring the attributes of IT professionals, and what draws them to the industry. Her research interests include user centred design and usability, and emerging technology. She is team lead for the Seek and Sign Project, a research project exploring how technology can support young Deaf children to learn sign language.

Diane Lending is the Capital One Information Security Scholar and a Professor of CIS at James Madison University in Virginia. Her research interests are in information systems education, the adoption of information technology, and assessment. Her doctorate is in Management Information Systems from the University of Minnesota. Dr. Lending has written papers published in several journals including the Journal of Information Systems Education; the Journal of Computer Information Systems; Computers, Informatics, Nursing; and Data Base. Prior to joining academia, she was a programmer, systems analyst, and manager of systems development projects.

Michelle L. Kaarst-Brown is an Associate Professor and former Director of the Professional Doctorate Program in Information Management at the School of Information Studies, Syracuse University. Much of her recent research has been in partnership with practitioners in government, industry, and education. Drawing upon prior management and consulting experience, her research studies how social, cultural, knowledge and generational factors influence IT governance and the IT workforce. Dr. Kaarst-Brown has published in a number of top academic and business journals including MIS Quarterly, Information Technology and People, the Journal of Strategic Information Systems, CIO Canada, and MISQ Executive.

4. REFERENCES

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