Are graduate programs offered by IS relevant in the age of digital disruption?

Panel
Munir Mandviwalla
Temple University
mandviwa@temple.edu

Mark Thouin
The University of Texas at Dallas
mark.thouin@utdallas.edu

Rassule Hadidi
University of Illinois Springfield
rhadi1@uis.edu

Andrew Wasser
Carnegie Mellon University
awasser@cmu.edu

Balasubramaniam Ramesh
Georgia State University
bramesh@gsu.edu

ABSTRACT
This panel will discuss the demographics, preparedness, and jobs of recent Masters graduates from IS programs in the United States in the context of digital disruption. First, we will review results from the Information Systems Job Index, a longitudinal national project, which in 2017 assessed more than 2100 recent IS graduates from 58 universities across the nation. Next, the panelists, all of whom have extensive experience managing and developing nationally recognized graduate programs, will discuss implications focusing on placement and salary, demographics, knowledge level and jobs, especially in light of the opportunities and threats posed by digital disruption. The panel is unique because for the first time the discussion will be informed by data from the IS Job Index. The results of the panel will influence the management and teaching of existing graduate programs in IS, analytics, healthcare, and other areas as well as the development of new programs.

Keywords
Master’s programs, MIS, Analytics, Healthcare IT, Placement, Jobs, Demographics, Knowledge, Curriculum, digital innovation, digital disruption

OVERVIEW AND OBJECTIVE
This panel will discuss the demographics, preparedness, and jobs of graduate Information Systems students in the United States overall. First, we will review relevant results from the Temple University and AIS, Information Systems Job Index (Mandviwalla, Harold, and Boggi, 2018), a longitudinal national project, which in 2017 assessed more than 2100 information systems (IS), management information systems (MIS), and computer information systems (CIS) recent graduates from 58 universities across the nation. Next, the panelists will discuss the implications of the results focusing on placement and salary, demographics, knowledge level and jobs.

The panel is unique because for the first time the conversation will be informed by reliable longitudinal data from the IS Job Index. We expect significant interest in the panel given how critical the topic is to the future relevance of IS programs in the age of digital disruption. The results will influence the management and teaching of existing graduate programs in IS, analytics, healthcare, and other areas as well as the development of new programs.

LAYOUT AND DESIGN
The panel will discuss the opportunities and threats facing graduate Programs in IS focusing on the following specific topics. In the write-up below we present a small subset of the results of the IS Job index followed by illustrative questions. The overarching question is whether IS Masters programs are more (or less relevant) in the era of digital disruption.
Placement and salary

The placement rate for Master’s in IS programs included in the study dropped to 39% near graduation in 2017, as compared to 65% in 2015, and 76% in 2013. Yet, the salaries continue to increase, going from about $65,000 in 2013 to about $72,000 in 2017. Moreover, salaries for 2017 IS Master’s graduates are higher than other Business school Master’s graduates (National Association of Colleges and Employers, 2017).

Given the above, do IS programs face a threat in placing their students? Is this the start of a slowdown in enrollment or something else? How can IS programs take advantage of the (relatively) higher salaries of their graduates as compared to other Business school specialized Master’s programs? Can we better position our graduates as leaders in managing and implementing digital transformation in organizations?

Demographics

The demographic characteristics for Master’s IS program graduates include 64% male and 36% female. The female percentage has steadily increased from 31% in 2013. In contrast, female representation in Computer Science is at 29% and has only increased 2 points since 2013 (Zweben and Bizot, 2016). 71% of IS Master’s are International students. 73% are Asian, in contrast only 13% of Business School graduates in 2017 were Asian (AACSB, 2016).

Given the above, does IS have an opportunity to attract even more females? Does the marketing, admissions, advising, and curriculum have to change to accommodate the large numbers of International Asian females? What can IS do to attract other groups?

Knowledge level

According to the self-reported knowledge levels of IS Master’s graduates, ones who have detailed advanced knowledge only receive slight higher salary offers than ones who are just aware and literate (about $74,000 vs. $68,000). Moreover, the self-reported knowledge levels of students from 2013 are about the same as ones from 2017. The graduates rate cyber-security as the topic they are least confident in, followed by managing and controlling risk, and enterprise architecture. This list has not changed substantially since 2013.

How does the above data reconcile with the massive investment in MS in analytics programs in IS? Is analytics simply a code word for traditional IS? Given the rise in cyber-security does IS face a future threat because it is ceding that area to other disciplines? What are the implications for teaching? Does the reported skill set prepare IS graduates to play a significant role in digital transformation and take advantage of the opportunities presented by digital disruption?

Jobs

32% of Master’s IS graduates get jobs in Data / Analytics with software development a distant second at about 10%, followed closely by analyst and advisory roles. The majority gets jobs in very large firms (58%) and software application development is the easily highest paid job role at about $92,000. Master’s IS students are 1.7 times more likely to get a job offer if they have worked in one or more internship positions. More generally, females have an advantage over males, while race and international status are disadvantages.

What does it mean that systems analysis, which for many was the core of the IS function, is no longer the dominant job function for IS graduates? Does IS face a future threat in enrollment and placement by focusing its efforts on large firms (primarily)? What can (or should) we do about the potential existence of positive or negative bias toward our graduates?

PANELISTS

Munir Mandviwalla

As a department chair for 17 years, Munir managed Master’s programs in IS, Health Informatics, IT Auditing and Cyber-security, and Digital Innovation in Marketing. He is also the lead author of the Information Systems Job Index. Munir will focus on the job index data and apply his experience in creating and managing different types of Master’s programs to moderate the panel.

Mark Thouin

As the director of the MS in information technology management, Mark manages approximately 900 students who specialize in areas such as analytics, enterprise systems, cyber security, consulting, and healthcare. The program, established more than 15 years ago, is one of the largest in the country. Mark will apply his experience in managing at scale to comment on current and future macro trends relating to the above discussion topics.
Rassule Hadidi
As a department head/chair for more than 30 years, Rassule has extensive experience in navigating what it takes to create successful programs that apply the AIS model curriculum, are STEM designated, and include face to face and fully online options as well as multiple graduate level certificates. Rassule will apply his experience to comment on the challenges faced by smaller Master’s IS programs in the face of changing demographics, relevance of the AIS curriculum as reflected in the knowledge level of students, and involving full-time faculty in instruction.

Andrew Wasser
After spending eight years in industry, five as a CIO, Andy has spent the last 13 years as Associate Dean building highly ranked Master’s programs in IS management, IT, security, and policy that involve close to 500 students. Andy will apply his experience in building programs that focus on critical thinking to discuss how to adjust to market conditions as jobs evolve. He will also discuss the role of face-to-face and online programs in context of changing demographics.

Balasubramaniam Ramesh
Bala led the creation of a successful Masters program in IT audit and control 8 years ago, while also serving as Masters program director of established IS programs. More recently, he managed the creation of new concentrations in cyber-security, enterprise systems, and analytics as a department chair for the last 4 years. Bala will discuss how industry engagement is an important tool in providing new opportunities for IS programs, as well as a tool to address the threats discussed above relating to knowledge level and jobs.

PANEL FORMAT AND STRUCTURE
Munir Mandviwalla will moderate the panel and focus on summarizing the data and its direct implications. The panelists, all of whom have extensive experience managing and developing nationally recognized Masters programs, will discuss and debate the above questions.

REFERENCES