

Are IS Candidates Pivoting to Meet New University Teaching Needs?

Emergent Research Forum (ERF)

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Abstract

This research study looks at the teaching expectations for IS professors by content analyzing the IS placement advertisements for the academic recruiting year 2018-2019 and identifying the top teaching skills and knowledge requirements. In addition this study will content analyze the vitas of the IS candidates who are on the market for 2018-2019 to identify the top listed skills and interests that the candidates possess. The main questions that will be explored are (1) Is there a discrepancy between the most sought-after teaching needs of the universities and the skills of the job candidates? (2) Through the examination of the top teaching needs of the universities and the candidates' skills do certain teaching trends emerge? Results of the analysis will be presented at AMCIS 2019.

Keywords

IS teaching needs, IS faculty, content analysis, doctoral student teaching interests

Introduction

IS academic demand is cyclical. For example, in the early 2000s faculty positions far outnumbered faculty applicants (Freeman, Jarvenpaa, and Wheeler 2000). This trend started to reverse in the mid-2000s and has recently shifted back towards the imbalance of the early 2000s possibly due to the tremendous growth in Business Analytics. In 2016, a career in data science was one of the top careers in the US and over half of the AACSB IS programs added data science courses to their offering between 2011-2016 (Mills, Chudoba and Olsen 2016). In their 2012 paper, Chiang, Goes, and Stohr recognize the challenge of developing faculty and new PhD graduates with the required data analytical skills and knowledge that will be needed as industry needs in data science continue to grow.

Prior Research

There has been extensive research on the knowledge, skills, and abilities of IS professionals (e.g., systems analysts, programmers, IT managers, and webmasters) (Cappel 2001; Cheney, Hale and Kasper 1990; Maier, Clark and Remington 1998; Todd, McKeen and Gallupe 1995; Yen, Lee and Koh 2001; Wade and Parent 2001) and the match between industry requirements and academic preparation for IS jobs (Lee, Trauth and Farwell 1995; Nelson 1991). While some of the literature emphasizes the importance of the relationship between IS curricula and industry IS careers (Lee et. al. 1995), others stress the need of frequent IS skills requirements research to be able to better align IS curriculum and industry needs (Lee and Han 2005).

It is recognized that the IS profession is a changing one and hence the skills required by those within the profession must also change. The preparation, be it academic- or industry-based, of future IS professionals needs to be closely monitored in order to provide properly trained, educated and employable IS professionals (Tan, Nakata and Paul 2018).

This research differs in one substantial way in that it looks at knowledge and skills required of IS doctoral candidates in the IS academic marketplace, especially in teaching area requirements.

Research Study

The principal aim of this research-in-progress is to provide IS doctoral candidates guidance in preparation for teaching requirements in an ever-changing IS marketplace. We seek to answer five research questions:

- (1) In 2018-2019, which teaching skills are being sought by recruiting universities?
- (2) In 2018-2019, in which teaching areas are candidates most interested and skilled?
- (3) Is there a discrepancy between the most sought-after teaching needs of the universities and the skills of the job candidates?
- (4) How do the sought-after teaching needs and the skills of the IS candidates in 2018-2019 differ from those in 2003-2004?
- (5) Through the examination of the top teaching needs of the universities and the candidates' skills do certain teaching trends emerge?

Proposed Methodology

In order to answer the first research question, this study will content analyze (Weber 1990) the IS placement advertisements for the academic recruiting year 2018-2019 (for positions starting in Fall 2019) and identify the top teaching skills and knowledge requirements. The study will limit inclusion to placement notices that specifically state the university is seeking assistant professor positions or open positions (all senior positions will be omitted). Following Todd et al. (1995), we will use content analysis to categorize the placement listings based on the number of times the job skill is listed as a requirement and the number of times it is listed as a skill.

To answer the second research question, the study will also content analyze the vitas of the IS candidates who are on the market for 2018-2019 (positions starting in Fall 2019) to identify the top listed skills and interests that the candidates possess. The candidates' interests will be sorted and the top teaching and research interests will be identified. This study will limit its analysis to recent candidates with degree completion (or expected completion) between academic year 2019 and 2020.

To answer the third research question, we will compare the needs of the universities and the preferences of the job candidates in order to determine any disparity between the two.

To answer the fourth question, we will take a retrospective view of the teaching skills and candidate preferences during the 2003-2004 and compare them with the data we will collect for the 2018-2019 recruiting period. A study by Everard, Jones, and McCoy (2005) provided a snapshot of the market for the 2003-2004 recruiting year.

To answer the fourth research question, a comparison of the overall results from both the universities' needs analysis and the candidate's skills and interests analysis will be examined across the 2-year period. A list of overlapping interests and needs will be recorded and compared to current IS literature to investigate any apparent correlation or link to recent industry trends.

Finally, by examining the top university teaching needs and candidate teaching preferences we will be able to ascertain whether any teaching trends emerge. It is our hope to discover that the recent IS candidates' skills are able to fulfill the teaching requirements of IS academic positions.

Proposed Analysis

The analysis we will perform will provide data-based evidence to confirm our anecdotal suspicions that Analytics and the concomitant required technical skills are in increasingly high demand (see NC State Institute for Advanced Analytics website). The Business Intelligence Congress 3 found that demand for Business Intelligence/Big Data students continues to outpace supply, employers are not satisfied with the practical experience of college graduates and that the number of Business Intelligence/Big Data program offerings has increased since 2010 (Wixom, Ariyachandra, Douglas, Goul, Gupta, Iyer, Kulkarni, Mooney, Phillips-Wren, and Turetken 2014). While they provide suggestions for undergraduate, MBA, Executive education and Master of Science curriculum, they do not mention PhD programs and curriculums. It is our hope that the results of this research will provide evidence to support the changes required of IS doctoral program curriculum to supply the much needed skills and knowledge in the area of data analytics.

While we do expect to be able to confirm that Big Data and Business Intelligence represents a major shift in IS teaching requirements for new PhD graduates in IS, it is also our hope to be able to shed some light on other shifting areas of teaching requirements and emerging teaching areas.

The findings of this research will be of great benefit to both academic institutions and graduate students. The trending and emerging teaching foci in IS education and curriculum that we hope to uncover through this research will help graduate students better prepare themselves for the academic teaching environment they will be joining, and the institutions will be able to gather information on whether a pool of qualified candidates exists. It is our aim that this research will provide some guidance and predictability to new IS doctoral candidates as they enter an ever-evolving arena.

Presentation at AMCIS

Data collection for the 2018-2019 recruiting year is being collected. The AIS Placement website and the AISWorld archives are the source for the job posting placement data and the candidates' vitas. Once the data collection is complete, it will be analyzed and results and findings will be presented at the conference.

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