

2017

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Recommended Citation

Urbaczewski, Andrew and Keeling, Kellie, "Chasing the Next Fad: The Changing Nature of the IS Discipline" (2017). *2017 Proceedings*. 8.

<http://aisel.aisnet.org/siged2017/8>

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CHASING THE NEXT FAD: THE CHANGING NATURE OF THE IS DISCIPLINE

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Abstract:

This research explores the changing nature of the IS discipline by focusing on academic job ads over the last 18 years to, in turn, show how we are preparing our students for jobs in the IS field. Three time periods are examined to see what topics were in need for IS departments. As expected, the skills requested have changed over time, but even with a current focus on “analytics”, skills such as Data Warehousing and Systems Analysis and Design are still in demand.

Keywords: IS Discipline, Job Skills, Topic Analysis

I. INTRODUCTION

A discipline by definition implies order and control. Traditional research communities such as economics, politics, sociology, psychology or statistics look to define order and control to allow them to “pursue their particular conception of systematic research.” A discipline could therefore be “defined by its community according to the functions that they seek to perform.” [McKenzie et al., 1997, p. 85]

A field is therefore what we produce and hire. Our community has unofficially defined what functions are needed for IS by the skills that we provide to our students. Therefore, this research will examine the consistency between the functional definitions of IS and the skills of the professors that we hire to produce these IS students.

II. LITERATURE REVIEW

Keen’s [1980] oft-cited paper first challenges the field to develop its reference disciplines and cumulative traditions. Not yet willing to call MIS a discipline or a “coherent research field” (p.9), but making the assumption “...that MIS can become a coherent ‘classical’ area,” (p.9), he challenges the field to identify a dependent variable.

Moreover, Keen also challenges the field to differentiate itself from consulting or other technological fields. He does this twice on page 10, where he asks the field to define its relationship to practice as well as in his assertion that the “...relationship to technology and relationship to practice are improving...” and then states that we are “no longer quite so dominated by fads, although the jump on the Office of the Future bandwagon is distressingly familiar.” Though this paper was written almost four decades ago, a time before the IBM PC or the Macintosh were even invented (let alone fixtures on desktops or now in briefcases), this challenge still remains, and henceforth lies the purpose for this paper.

Several others have wondered aloud about the importance of the field. Avison [1997] raises the question in terms of “IS” standing amongst its sister disciplines in regards to financial and political status within the university and the academy at large. Nicholas Carr’s essay titled “IT Doesn’t

Matter” [2003] set both the practice and the academy back on its heels, in a defensive position trying to prove it’s worth. Several popular trade publications throughout the rest of 2003 were published with titles of some variation on the theme of “Why IT Does Matter” [e.g., Evans 2003, Keefe 2003, Melymuka 2003].

Moreover, academic articles also appeared, though much more delayed with the publishing cycle. George et al. [2005] address the MIS field after the dot-com implosion and global outsourcing that the Internet fostered at the beginning of the decade and the declining student enrollments that MIS departments saw in the middle of the decade, but conclude that the discipline is strong and that it will continue to mature and get stronger. They also discuss practical issues for the IS field’s survival, such as topics for the survey of MIS courses adapted from Ives et al. [2002] and the relative size of Ph.D. programs to address supply and demand of IS professorships. A few years later, Sidorova et al. [2008] went on to examine the intellectual core of the IS discipline, and through a semantic analysis of over twenty years of published work in the three FT-50 MIS journals, identified five core research areas: IT and organizations, IS development, IT and individuals, IT and markets, and IT and groups.

While considering these papers and positions, we still must acknowledge that the discipline remains largely fractured. Upon entering any random university, we would have a good idea where to go to find the physicists, mathematicians, aerospace engineers, biologists, or even the accountants and marketers. But where do we find the MIS professors?

The names of the departments in the US and Canada who posted job vacancies on AISWorld in the second half of 2017 are listed below:

- Department of Information Systems and Statistics (Baruch College, CUNY)
- Department of Information Systems (Virginia Commonwealth University)
- Management Information Systems Division/Department (Oklahoma, Arizona)
- Department of Information Systems and Analytics (Miami-Ohio)
- Department of Computer Information Systems and Business Analytics (James Madison)
- School of Information Technology (Illinois State)
- Information Systems and Decision Sciences Department (South Florida)
- Applied Information Technology Department (University of Baltimore)
- Department of Business Analytics, Information Systems, and Supply Chain (Florida State University)
- Information Technology Management Department (SUNY-Albany)
- Accounting and Information Systems Department (University of British Columbia)
- Information Systems and Technology Management Department (Pittsburgh)
- (and two others where it appears there may not be departments – Simon Fraser and Ottawa)

While admitting this is a convenience sample (the entire dataset will be mentioned later), it is interesting that only two universities of these fifteen have a department/division that has the same name (Oklahoma and Arizona). Moreover, those two schools are the only ones using the name “Management Information Systems”. Two other schools use the word Management in their titles (SUNY-Albany, Pittsburgh) and two others use Business (Florida State, James Madison), but as a modifier for the term “Analytics”. Even if we look at other monikers for the field, we can see where the brand of the field differs:

“Management Information Systems”	“Information Systems”	Others
<i>MIS Quarterly</i> <i>Journal of MIS</i> <i>MIS Quarterly Executive</i>	<i>Information Systems Research</i> Association for Information Systems MSIS Model Curriculum AMCIS/ECIS/PACIS/ICIS	Society for Information Management Hawaii International Conference on Systems Sciences

III. METHODOLOGY

To examine the consistency of the field, we have obtained 2118 faculty job ads that were posted to AISWorld from 1998-2017. These ads were for faculty positions within the US and Canada only, and eliminated position announcements for things that were clearly not faculty (i.e. Dean, Associate Dean) and also not primarily within our field, such as interdisciplinary chairs or entrepreneurship positions. These were grouped by expected start date, so many ads posted through 1998 and early 1999 were labeled as “Fall 1999” starts. The occasional ad that had a winter or spring start, such as “Winter 2000”, was grouped with the following Fall (“Fall 2000”).

A topic analysis will be done with this data using R and Hadoop to derive themes across the years. In the interest of time for the publication date of the conference, we examine three subsets of the data manually. These include faculty job ads from 1999, 2008, and 2017 to cover the beginning, middle, and end of this period.

	1999	2008	2017
Schools/Departments	146	64	198
Positions	195	69	227

IV. PRELIMINARY RESULTS

A brief keyword (or synonym of) analysis and frequency count of these positions are as follows:

Keyword	1999	2008	2017
E-commerce	21	6	9
Visual Basic	6	1	2
Networking	15	8	9
Analytics	0	0	108
Data Warehousing	3	0	7
C++	8	0	0
Systems Analysis and Design	19	17	43
Telecommunications	28	4	13

From this keyword analysis we can see some terms that have decreased in use (Visual Basic, C++), some terms that have appeared (Analytics), and some terms that have seen a resurgence (Systems Analysis and Design).

Job ads for the IS field will be added to this academic job keyword analysis by the time of the conference for presentation and discussion.

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VI. ABOUT THE AUTHORS

Kellie B. Keeling is an Associate Professor in the Business Information & Analytics Department at the University of Denver. She earned her Ph.D. in Management Science from the University of North Texas and a B.S. and MBA from Wayland Baptist University. She is an Associate Editor for the Decision Sciences Journal of Innovative Education. Her research interests focus on data mining and computer simulation. She has published in *The American Statistician*, *Computational Statistics and Data Analysis*, and *Computers and Operations Research*. She is a member of DSI, Southeast DSI, INFORMS and ASA.

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