

2-2011

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Recommended Citation

Urbaczewski, Andrew; Venkataraman, Ramesh; and Kontogiorgis, Paul (2011) "IT Services Management in the Curriculum: Challenges, Realizations, and Lessons Learned," *Communications of the Association for Information Systems*: Vol. 28 , Article 5.
DOI: 10.17705/1CAIS.02805

Available at: <https://aisel.aisnet.org/cais/vol28/iss1/5>

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Communications of the Association for Information Systems

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IT Services Management in the Curriculum: Challenges, Realizations, and Lessons Learned

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Abstract:

This panel report discussed three different ways that IT Services Management (ITSM) can be infused into the curriculum of university programs. One aspect of the panel focused on noncourse-specific means of infusing ITSM in a MSIS program, while another looked at a basic course in ITSM in the MSIS program. A final aspect described entire degree programs in ITSM and curricular support for them. Though this panel focused primarily on graduate programs, the lessons in some cases are applicable to undergraduate programs as well.

Keywords: ITIL, Services Management, IS Curriculum

Editor's Note: This article is based on a panel presentation at the Americas Conference on Information Systems, AMCIS 2010, Lima, Peru, August 13, 2010.

Volume 28, Article 5, pp. 59-64, February 2011

I. INTRODUCTION

Even fifty-plus years into the evolution into computing in the business, IT is still often known as a dysfunctional area, fraught with high project failure rates, worker burnout, and a sometimes business-unfriendly stereotype. IT Services Management (ITSM) is a management framework which means to change all that, building off of best practices in the industry to formalize processes and cure IT departments of many of the problems that plague it.

Though ITSM, and one of its best-known methodologies, the IT Infrastructure Library (ITIL), have been around since the late 1970s, it has been only in the last ten years that it has begun gaining more widespread acceptance in organizations, lagging particularly in North America. As such, the curricula for universities to offer this mode of thinking is nascent at best, and many students graduate from BBA and MS programs in Information Systems never having been exposed to ITSM or ITIL. As a result, the IT Services Management Forum (itSMF) in 2007 began an effort to expose academics to ITSM and ITIL and sponsored many efforts to have these principles included in university programs.

This article is thus a report from the panel at the Americas Conference on Information Systems in 2010, and is a progress report and guide to including ITSM in the curriculum. It is aimed at faculty members who have heard of ITSM/ITIL and want to learn more about its benefits as well as those who are familiar with ITSM/ITIL but haven't been able to figure out how to include it in the curriculum. The panelists explained three different ways to include ITSM in the curriculum through each of their unique experiences. There was an exchange of ideas among panel members and the audience regarding inclusion of these principles, which addressed many of the issues encountered by faculty in introducing different kinds of efforts.

II. ORGANIZATION OF THE PANEL

The panel was organized by Andrew Urbaczewski. The panelists are experienced faculty and professionals that have introduced ITSM in one format or another into the curriculum. Each panelist addressed the challenges and realizations of the curricular modification process, and of lessons learned. The presenters were, in the order of appearance: Ramesh Venkataraman from Indiana University (who had to appear via videolink), Andrew Urbaczewski of the University of Michigan–Dearborn, and Paul Kontogiorgis from IBM (a last-minute replacement for Sue Conger). Some of the areas addressed by the panelists included:

- Generating faculty interest in ITSM
- Obtaining faculty training if desired
- Finding available supplemental materials
- Generating student interest
- Marketing the course
- Marketing the degree program

III. ITSM IN THE CURRICULUM—THREE WAYS TO MAKE IT HAPPEN

Ramesh Venkataraman, Indiana University—ITSM in the Curriculum

One of the key obstacles in increasing the coverage of ITSM in academia is often the inability to “make room” for a full-fledged course in an undergraduate or graduate curriculum. Further, adding ITSM topics to existing courses, e.g., Systems Analysis and Design, does not always lead to a level of interest or expertise among students that is commensurate with the desired outcome, i.e., a well-rounded ITSM professional.

For reasons similar those stated above, in the MSIS program at Indiana University (IU), we have chosen to not integrate ITSM into courses in the curriculum. However, through a series of external activities, we have increased awareness, as well as knowledge, of ITSM concepts among our student body.

We achieved this using a three-pronged approach:

1. Creation of a Student Local Interest Group (S-LIG) in itSMF

2. Sponsoring student projects in ITSM
3. Guest speakers on ITSM

The IU S-LIG was formed in 2008 through a cooperative effort of the Ohio Valley Local Interest Group (OVLIG) and the MSIS program. It is the only active S-LIG in the country and boasts over fifty members. The S-LIG's primary mission is knowledge and professional development. To this end, the S-LIG organizes several activities to enhance the number and range of learning opportunities students have. Some key activities for 2009–2010 are listed below:

1. The S-LIG student members are active participants in Ohio Valley LIG events. Students have been speakers at two of the LIG conferences on topics such as service management, Lean IT, etc.
2. The S-LIG organized and hosted an entire OVLIG conference at the IU campus. Attendance was free to all student members. By listening to and networking with professionals on various ITSM topics, students were able to expand their understanding of these ITSM concepts and the profession as a whole.
3. Probably the highlight of the activities that the S-LIG organizes is the training for the ITIL foundations certification exam. In 2009, the S-LIG was able to form a self-study group that was mentored by an ITIL certified trainer (free of cost). After two months of regular meetings, lessons by the mentor and self-study, over twenty students sat for the ITIL foundations exam and passed it. In 2010, this same process was repeated, with a different trainer providing Web-based lectures to help with the preparation. This resulted in another twenty-five students passing the ITIL certification exams.

While the S-LIG and its associated activities are the primary mechanisms through which we impart ITSM knowledge and content to our students, we also provide other opportunities for exposure to ITSM in our MSIS program. The MSIS capstone project is a semester-long project that allows students to work closely with organizations on an IT-related project. In the MSIS program, we run between fifteen and twenty projects every Spring semester. We seek to have at least a third of the projects on topics related to ITSM. A few example projects are presented below:

1. MSIS students have worked on ITSM projects for a mid-sized firm for the past four years. In these four years, projects have ranged from developing an ITSM strategy for the firm, identifying and defining a service catalog, as well as selecting vendors/products for their configuration management database (CMDB).
2. MSIS students have also worked with a global consulting/professional services firm to help create a holistic framework that integrates concepts from multiple frameworks such as, CoBIT, ITIL, PMBOK, and ISO 27001, for assessing the maturity of an organization along various dimensions of service management.

A final component of keeping the ITSM focus alive is to ensure that about a third of the guest speakers brought in by the MSIS Association (our student organization) talk about topics that are related to ITSM. These speaker events are open to the entire student body (not just S-LIG members), thus ensuring that ITSM remains visible to the larger community.

In summary, as highlighted in the prior paragraphs, it is possible to work around the constraints of not being able to dedicate a course to ITSM and yet maintain a high-level of student interest in this area. However, successful execution of this strategy is dependent on three key components; (a) highly motivated faculty champion(s), (b) a student body that is highly engaged, and (c) the presence of a highly supportive industry community that believes in the importance of the ITSM paradigm.

Andrew Urbaczewski, University of Michigan-Dearborn—The Class in ITSM

The College of Business at the University of Michigan–Dearborn has had an MBA program since the 1980s, but did not have a concentration in MIS until 1999. In 2001, all of its programs started to go online, and in 2008 they launched its Master's of Science in Information Systems (MSIS) program. The goal of the MSIS program was to serve as a "fifth-year" of education as opposed to a mid-career CIO-in-training program. It was also designed to allow those studying undergraduate liberal arts the chance to earn a professional degree.

When creating the MSIS program, in addition to consulting the MSIS 2006 model curriculum, we also examined what students would need to be successful in the metropolitan Detroit area with an MSIS degree. To do this we created core, foundations, and elective courses. The three courses in the core are

- MIS 525: Introduction to MIS (survey course)
- MIS 526: IT Services Management
- MIS 527: Programming and Data Structures

The MIS 526 course was added to cover governance issues. It seems that most of our MSIS students, no matter what school or program from which they graduated, have no IT governance training or background. Hence, we created the MIS 526 course, with the following description:

Students in IT Services Management will learn how to organize and operate in an IT environment centered on processes and services. Students will learn major models like ISO 20000 and the Information Technology Infrastructure Library (ITIL) as tools for managing and controlling the IT function within an organization. Upon completion of the course, students should be prepared to pass the ITIL Foundations examination from the ITIL Certification Management Board.

This course was taught for the first time anywhere on our campus in Fall 2009 and launched with twelve students in an online format. The course was geared toward teaching ITSM, and ITIL became the consistent framework for teaching ITSM. The students in the course had experiences anywhere from implementing ITIL to working for a three-person medical group with no dedicated IT function.

Course administration at the time was really difficult. For example, simple things like finding a textbook to teach ITSM was a very challenging task, and finding one that covered ITIL 3.0 was even harder. In the end, Ron Palmer's 2005 text, *IT Service Management Foundations: ITIL Study Guide* (ISBN 0-9771469-0-1) was chosen for the course. The course was divided into twelve units, approximately one per week, guided by the text. Each unit had an overview, main points, discussion, and a unit-ending assignment. The course was also designed in a format to "close the loop," as the first assignment for the students had them document the processes in their work organizations, and the final assignment asked them to imagine they were coming back into their place of employment a year after they had taken the course and employed ITSM principles, and to document their organization again. No exams were expressly given, as the instructor did not want to introduce academic dishonesty issues, but sample ITIL Foundations exam questions were discussed. Two students at the end of the course expressed an interest in taking the exam.

Student feedback was surprisingly positive for the first time a course was offered. Students called it both intense and beneficial, but also made comments like ITSM was "nice in theory but difficult to implement..." and they also "wish[ed] it was more relevant to small business...."

The next time the course is offered, some changes will be made. For example, more ITIL 3.0 material will be added. The course will also use one or two cases from the e-Service Journal for teaching certain implementation topics.

Paul Kontogiorgis, IBM—ITSM Degree Programs

The IT Services Curriculum (ITSC) at IBM was developed to establish university courses, degree curricula, and a repository of university courses that foster in graduates the in-demand skills necessary for architecting, engineering, implementing, managing, and delivering information technology services. The ITSC Program is a specific implementation of SSME (Service Science Management and Engineering) where the class of services is those for operating Information Technology. ITSC has identified a set of over 100 IT services topics that combine to form courses, represent full semester courses, or combine or expand into full degree curricula. The courses are designed to be implemented across disciplines or within existing computer science, management information systems, or business administration degree programs. Course materials will be posted on the IBM Academic Initiative (AI) website accessible to participating universities for free use following an Open Source philosophy. Universities may use or modify the course material, and IBM will assist in developing courses of interest. The curricula may also be designed to provide the student the ability of obtaining industry certificates during study.

ITSC can be taught with or without the use of software or software agonistically—IBM software is available free of charge from enrollment in the AI Program. Classes and programs have been and continue to be developed for Bachelor and Master Degrees focused on IT Service Management, IT Infrastructure Management, IT Service Integration, Business Process Management, SOA, Autonomic Computing, Storage Management, and others. Although the program focuses on the practitioner approach of managing the IT Enterprise, the post-graduate degree tracks represent the frontier of IT services and offer significant opportunity for innovation and research by universities and candidates.

IV. CONCLUSION

This article reported on the panel discussion on IT Services Management at the AMCIS 2010 conference in Lima Peru. While ITSM is recognized as an important means of IT operations and governance, it seems agreed that it is woefully undercovered in most curricula. More needs to be done in terms of developing material that is exciting, particularly to undergraduate students, and salient to them in ways that database and networking are as well.

ABOUT THE AUTHORS

Andrew Urbaczewski is an Associate Professor of Management Information Systems and Chair of the Department of Management Studies at the University of Michigan-Dearborn. He received a Ph.D. in Information Systems from Indiana University, and also holds an MBA from West Virginia University and a BS in Finance (with honors) from the University of Tennessee. His research interests include electronic medical records implementations, wireless mobile collaboration, electronic commerce, and electronic monitoring of employees. His research has been published in several prestigious journals and conferences, including *Journal of Management Information Systems*, *Communications of the ACM*, *Journal of Organizational Computing and Electronic Commerce*, and *Communications of the Association for Information Systems*.

Ramesh Venkataraman, Ph.D., is an Associate Professor of Information Systems and Whirlpool Faculty Fellow at Indiana University's Kelley School of Business. He is also Chairman of the MS in Information Systems (MSIS) program. He has successfully grown the program from fourteen students in 2002 to more than 100 entering students in fall 2010. He has published over twenty-five papers in leading journals, such as *Information Systems Research*, *MIS Quarterly*, *ACM Transactions on Information Systems*, *Communications of the ACM*, *Journal of Management Information Systems*, etc. Along with Jeff Hoffer and Heikki Topi, Ramesh is a co-author on one of the leading database books, *Modern Database Management 10e*. He is the Editor-in-Chief of *e-Service Journal* and serves as Associate Editor for leading journals, such as *Information Systems Research* and *MIS Quarterly*. He is an active participant in both the ISACA and the IT Service Management Forum (itSMF) communities.

Paul Kontogiorgis is the Program Director of IBM's IT Service Curriculum (ITSC) program in the Software Group. ITSC was founded five years ago in the Research Division, and now has been incorporated in over 220 universities worldwide. Paul was recently appointed as the head of the Chicagoland Center for Advanced Studies (CAS). He has held multiple IBM positions including IT Architect, IT Consultant, and IT Project Manager for multiple Fortune 500 companies in multiple industries and sectors. Since founding the ITSC Program, Paul has visited over twenty countries, including the Czech Republic, Poland, and Thailand, meeting multiple ministers of education and tier 1 universities, assisting their local strategic plans for the future of their education policies. He earned his BS in Computer Science from DePaul University in Chicago, and serves on multiple university advisory boards worldwide. His background includes political science, civil engineering, and classical piano.



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Communications of the Association for Information Systems

ISSN: 1529-3181

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