

A Shift in Strategy to Increase IS Majors

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Abstract

The paper will describe the strategy that the faculty at Loyola University Chicago School of Business adopted in light of declining enrollment in the IS area. In the face of Y2K overhang, the dot com bubble, and the popular press extolling the ramifications of offshoring technology to India, the faculty felt that a new strategy and focus had to be taken in order to stimulate interest in the area of information systems management. A long term strategy will be explained in terms of curriculum change and a change in emphasis to "Business Analysts". We realize that this approach may not be the best for all schools. But, if you have not been successful in revitalizing your IS major, we hope that this paper will demonstrate that there is another approach that could be viable.

Keywords: IS Curriculum, Business Analyst, Systems Analyst

1. INTRODUCTION

Many undergraduate programs have seen a serious drop in the number of majors in Computer Science and Information Systems (IS) over the past several years (Farkas and Murthy, 2004). Currently at Loyola University Chicago's School of Business Administration IS majors represent only 1.5% to 2% of the total business school enrollment, which is down from a high of 16.4% in the year 2000. In order to help increase the total enrollment of IS majors, the IS faculty at Loyola University Chicago School of Business Administration developed a strategy to increase these numbers over the next several years. This strategy is not a one-year, short-term, shot in the arm. It is built upon attracting freshmen, and making them aware of Information Systems before they make a final decision regarding their major come their junior year. This paper describes our strategy, its rationale, and the steps we have taken.

2. CHALLENGES IN IS ENROLLMENTS

We see several challenges to IS Enrollments: Y2K overhang, implosion of the dot.com bubble, and continued press reports about offshoring of I.T. See, e.g., Van Lengen (2003), Weber (2004).

- Y2K overhang. In the run up to the year 2000, the IS area was booming. One joke was that "if you can spell C++, you have a job." Many systems were updated to avoid the Y2K bug and many other systems were replaced, often by ERP systems. Because of the shortage of skilled IS labor, e.g., programmers, some foreign countries, e.g., India, had started to attract IS work. After the hard deadline of December 31, 1999, however, most of that work ended, and many IS jobs simply disappeared or transitioned to dot.com work.
- With the advent of the web under-way for about five years or so, and

with the Y2K fix behind them, many companies started to focus on the potential of eCommerce, inspired by the success of prominent "dot com" companies, such as NetScape and Amazon. Feverish activities and investments grew a "dot com" bubble, sparking the phrase "irrational exuberance." IS jobs were plentiful again. However, all bubbles come to an end, and so it went with the dot com bubble turning into a dot com "bomb." In the meantime, some jobs, e.g., in call centers, moved offshore.

- The popular press (general press as well as business press) continues to report about offshoring of I.T., e.g., to India. While some IT-related jobs have been offshored, e.g. programmers or call center positions, others have not, e.g. project managers or business analysts. Jobs that are going offshore are of the more "technical" nature. In other words, the perception that IT jobs are being offshored is correct only to some extent. However, for other IS jobs that perception is not correct, although "perception is reality."

Because of these recent developments (all occurring within one decade...), many of our freshmen are ignorant or weary of anything that has IT associated with it. Students may not see the relevance of IS to their future job success (Moser et al., 2000). Many parents and students are weary of the career potential in IS and, understandably, do not investigate the truth and nuances of the press's headlines, despite the opportunities in the IS field. (Olson, 2007) We believe IS presents tremendous opportunities, because of the continual growth of eCommerce, increasing ubiquity of the Web, and increasing global business opportunities, all of which require IS. Therefore, we want to make students and parents aware of the exciting entry-level positions that are available with an IS degree or major. We believe that we can show a positive picture and one that has potential.

3. A NEW STRATEGY

In our undergraduate program we have embarked on a two-pronged strategy: Aim the IS major towards Business Analyst as the target job for our graduates, and bring the IS major to the attention of freshmen students. The latter prong is perhaps more specific to our specific curriculum at Loyola University Chicago School of Business Administration. However, the first prong represents a change that we expect to be relevant to many IS programs. Like many IS programs, our curriculum used to focus on IS as *tools* to be used in business (Lauckner, 2001). Accordingly, we focused on topics such as programming, databases, networking technologies, decision support systems, artificial intelligence technology, etc. Instead of focusing on tools and technologies, we have shifted our focus towards how businesses use and manage IS, which is consistent with the IS2002 Model Curriculum (Gorgone et al., 2002). Accordingly, our curriculum has started to focus more on, e.g., the role of ERP in business, business intelligence, and project management. In addition, we will focus specifically on business analysis.

4. BUSINESS ANALYSIS

We have started to aim the major toward a title of "*Business Analysts*." Wikipedia defined a "Business Analyst" as someone who "is responsible for analyzing the business needs of their clients and stakeholders to help identify business problems and propose solutions." The International Institute of Business Analysis (IIBA) defined a 'Business Analyst' as one "who works as a liaison among stakeholders in order to elicit, analyze, communicate and validate requirements for changes to business processes, policies, and information systems" (IIBA, 2008) According to the IIBA, this type of person "understands business problems and opportunities in the context of the requirements and recommends solutions that enable the organization to achieve its goal." We also checked in-house with the CIO of Loyola University, Susan Malisch. She stated that a Business Analysts is expected to "analyze business problems and translate business needs into requirements for information systems and business processes." Among these three sources, as well as others, there is consen-

sus that Business Analysts focus on requirements, business problems, business processes, and stakeholders. We regard Business Analysis as a set of tasks, knowledge, and techniques required to identify business needs and determine solutions to business problems. In order to improve our program, we feel that focusing on "Business Analyst" is a good strategy.

5. PROFESSIONAL CONNECTION

Many times students will more readily accept things if they realize that there exists after graduation, a professional business organization of people who currently work in an area of study or have titles connected with it, e.g. AICPA for accounting, or AMA for marketing. The IIBA is a professional organization for Business Analysts, described on its website as an:

"independent non-profit professional association serving the growing field of Business Analysis. Whatever your role—requirements management, systems analysis, business analysis, requirements analysis, project management, or consulting; the IIBA can help you do your job better."

Clearly, a number of terms used in the IIBA's quote above are also used in IS. We felt that this would provide an easy bridge from "IS as tools," which has turned off many students, to "IS for business."

The IIBA is quick to point out that business analysts can work in various industries and may have different titles such as:

Business Consultant
Business Process Analyst
Data Analyst
Business Architect
Requirement
Analyst/Specifier
Systems Analyst
Management Consultant

Previous research by Morrell, et al (2001) study, showed a comparative list of job titles for "Systems Analyst". The IIBA also points out that the domain of Business Analysis is distinct from financial analysis, project management, quality assurance,

organizational development, testing, training and documentation development. However, depending on the organization, a business analyst may evolve into some or all of these related domains. It would seem that this would make our graduates' careers flexible over time and marketable to numerous industries. And isn't this what we would like are new graduate to be, flexible and marketable to many industries?

6. ANTICIPATED BENEFITS OF THE NEW STRATEGY

By using the terms "Business" and "Analyst," we are catering to a broad classification which allows the student to evolve a career in different business functions. The term "Business Analyst" is also less connected with "technology" and less threatening, and therefore has less of the perception of a threat of being offshored. The "Business Analyst" title is commonly used for entry-level positions, but also for positions requiring 5-10 years of experience. For example, in January of 2007 Monster.com had a total of 559 "business analyst" jobs with 25% of those for entry-level and 949 openings as of August 18, 2008. DICE.com during the month of January 2007 had 618 "business analyst" type job openings, and in August of 2008 there were 509 posted openings within 50 miles of Chicago. Nationwide, there were a total of 11,412 "Business Analyst" openings (Dice, 2008). Employment for Business Analyst type jobs in the U.S. is expected to increase 18-27 percent or more between the years 2004-2014 (U.S. Department of Labor, 2008). We believe that these facts all point out that Business Analyst is an attractive target for our current and future graduates. Indeed, while our school has placed numerous graduates in Business Analysts positions over the past decade or so, solid empirical results of the benefits towards increased IS enrollments have not yet materialized, as we have recently embarked on our new strategy. However, anecdotal data from our administration suggest that the number of students interested in a IS major or IS minor seems to have increased somewhat already.

7. CURRICULUM CHANGES

Our new strategy does not require wholesale changes in our current IS curricula. A number of existing IS courses that are part of the IS2002 Model Curriculum will continue to be useful for this new strategy. Various courses can simply weave in related topics of Business Analysis, or the connection with Business Analysis. For example, an Intro course can highlight the "Business Analyst" job, its role in I.S., and its future prospects. A current "Systems Analysis" course may already provide some tools to identify business needs. A current "Systems Development" course, which may include topics of process improvement as well as organizational change, also fits with the new strategy. However, the IS2002 Model Curriculum does not emphasize requirements gathering, analysis, or prioritization. At Loyola University Chicago, we had a course about Strategic Management Information Systems (ISOM 393). This course has been changed to "Requirements Analysis and Communication." The contents have been changed accordingly in order to better equip our graduates with knowledge and skills necessary for a Business Analyst position. Some of the topics in this course are: requirements gathering, analysis and prioritization, and related communication skills (which are emphasized in the IS2002 Model Curriculum), such as interviewing, listening, presenting, and negotiating. This concurs with the results of research done by Mawhinney in 2006 that found "soft skills" were more important than "hard skills".

The second curriculum change we implemented was to change the current ISOM 247 course which is currently a sophomore level course, to be renumbered to ISOM 147. By renumbering the course, it can now be offered on the freshman level. This would allow the students to have exposure to this intro-level course earlier, so that they could make a more informed decision about their major. The content will focus more on how information technology is used in organizations to further their organizational strategies and goals. This will be in line with what a business analyst does and needs. Exposure to personal productivity tools such as Excel and Access will remain an integral part of this course.

The diagram in the appendix shows the changes between our previous curriculum and the current curriculum, reflecting the strategy described in this paper.

8. CONCLUSION

The faculty in the ISOM (Information Systems and Operations Management) Department of Loyola University Chicago are very optimistic this strategy will help improve and increase the enrollment in IS majors. We believe that the strategy of emphasizing "Business Analysts" is very attractive for our future graduates. It provides them with flexibility in a career path that we do not see being outsourced.

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Appendix

		Current Curriculum	New Curriculum	
Core	ISOM 247	Computer Concepts & Applications	ISOM 147	Computer Concepts & Applications
Major	ISOM 346	Database Mgmt Systems	ISOM 346	Database Mgmt Systems
	ISOM 347	Systems Analysis & Design	ISOM 347	Systems Analysis & Design
	ISOM 370	Structured Programming in Java	ISOM 370	Structured Programming in Java
		Two additional 300 level IS courses		Two additional 300 level IS courses
Additional IS Courses	ISOM 349	Project Mgmt	ISOM 349	Project Mgmt
	ISOM 355	O-O Programming in C++	ISOM 355	O-O Programming in C++
	ISOM 393	Strategic Information Systems	ISOM 393	Requirements Analysis & Communication
	ISOM 397	Website Planning & Design	ISOM 397	Website Planning & Design
	ISOM 398	Telecommunications for Managers	ISOM 398	Telecommunications for Managers
	ISOM 399	Selected Topics in IS	ISOM 399	Selected Topics in IS

