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Energizing an Information Systems Program by Empowering Student Leaders

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ENERGIZING AN INFORMATION SYSTEMS PROGRAM
BY EMPOWERING STUDENT LEADERS

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Abstract:

This paper describes an ongoing four-year project involving the development and implementation of a student-driven "IT Leadership" program to support an undergraduate academic program for Management Information Systems (MIS). The motivation for initiating the IT Leadership program was to enhance promotion of the MIS discipline and the career development of MIS students. The outcomes of implementation have been positive, including increased student interest in the MIS discipline, the creation of new professional development opportunities for students, and a rapid and significant increase in MIS graduates. The expenses associated with the program have been modest. Based on the findings of this project, it appears that empowering student leaders can be an effective way to support an MIS program.

Keywords: Action research, Enrollment, IS Education, Professional development

I. INTRODUCTION

The growth of the digital economy has increased the demand for workers in the area of Information Systems (IS). Based on projections from the United States (US) Bureau of Labor Statistics, it is predicted that job growth in the IS sector for the US will continue to grow faster than average during the next decade [US Bureau of Labor Statistics, 2014]. As a result of this demand, there continues to be a need for more IS workers as the technology industry struggles with the talent gap [McCafferty, 2013]. For example, a recent study highlighted the shortage of IS employees in the United States in areas such as software development and data science [Xue and Larson, 2015]. Software development skills in demand span a broad range of job roles including web development, systems analysts, IS project management, and software quality assurance [Lombardi, 2013].

One of the key ways to develop the next generation of the IS workers is through university programs. However, despite the industry demand for university IS graduates, the number of undergraduate degrees awarded in the United States declined by 63% from 2003 to 2011 [Benamati and Rajkumar, 2013]. The issue has been such a concern that business organizations such as the IS consulting firm Accenture have created feeder programs to attract college students to study in the technology area [Sager, 2014]. Within universities, the challenge of encouraging students to pursue a degree in the IS area has been reported and discussed by faculty members at numerous universities [e.g., Granger, et al., 2007].

At our US-based institution, similar to other universities, we found that the decline in student interest in IS started in the early 2000s following the Internet "bust" and continued into the early 2010s. Despite the increased interest from employers in our region following the financial crisis of 2007-09, we found that our program enrollment remained low and did not attract enough IS

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students to meet industry demand. In addition, we observed that our undergraduate IS program was lacking in the student critical mass and energy necessary to provide a vibrant and diverse learning environment for the students. Class sizes for some of the upper-division courses were quite small and extracurricular activities such as professional development activities (e.g., student club events) were limited due to the low student numbers.

To address the situation of low student interest in IS, our MIS faculty members explored different ways to raise the visibility of the IS profession among students. Four years ago, we introduced a new program run by a selected group of student leaders who have been empowered to develop and deliver events and activities related to the IS profession. The program was inspired by an approach that had been created by Baylor University [Koch and Kayworth, 2009]. However, as our program evolved, it adopted distinctive characteristics with respect to program organization and resource requirements. Based on our observations, it appears that the program has been successful with respect to infusing our IS program with more energy and increasing student awareness about the IS field.

The purpose of this paper is to describe our experiences with the development and implementation of our student-based "IT Leadership" program to support our IS program. The project outcomes have been very positive, as new professional development activities for students were established and IS enrollment increased significantly in the first three years. As the IT Leadership program was developed to work within an environment with tight budget and resource constraints, we anticipate that it would be feasible to implement at other universities. In the following sections, we provide a brief overview of our institution and IS program, describe the methodology used for the study, and summarize the project's evolution and outcomes. Lastly, we discuss the generalizability of the program to other institutions.

II. BACKGROUND

The study was conducted at Western Washington University's College of Business and Economics. The College is part of a medium-sized regional state university in the western portion of the United States (US). Western Washington University (WWU) is located in a city of 70,000 people and is 85 miles from the nearest large city and center of commerce, Seattle, WA. Similar to other state-based regional universities, WWU has faced declining budgets during the past twenty years and is constrained with respect to operational and discretionary funding.

The College of Business and Economics offers a variety of degree options for business students with approximately 1,200 students declared as a business major. Typically, students will declare a specific academic "concentration" area of business study (e.g., finance, marketing) during their second or third year of study. One of the concentration areas is Management Information Systems (MIS). In addition to the general business courses required for an undergraduate degree in business, the MIS concentration requires seven MIS courses, including five required courses and two elective courses. The MIS faculty group consists of seven faculty members. The academic calendar is based on a quarter system, with fall, winter, spring, and summer academic quarters.

Consistent with a pattern experienced by other university MIS programs [Koch, et al., 2010; Looney and Akbulut, 2007], the undergraduate enrollment in the MIS program at WWU swelled to high levels during the late 1990s, but declined dramatically following the dot-com collapse in the early 2000s. As shown in Figure 1, the number of MIS graduates in WWU's program dropped from a high of 94 students during the 2000-2001 academic year to a low of 24 students during 2011-12. The low enrollment numbers were troubling for several reasons: industry recruiters were starting to express concerns about recruiting at a school with a relatively small enrollment, there were concerns about the utilization of faculty resources due to small class sizes for upper-division courses, and the size of the student cohort was not large enough to support a vibrant set of MIS-related extracurricular activities (e.g., student club events). In an effort to address the situation,

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the MIS faculty developed and implemented a student-based "IT Leadership" program to increase interest in the MIS profession and bolster enrollments.
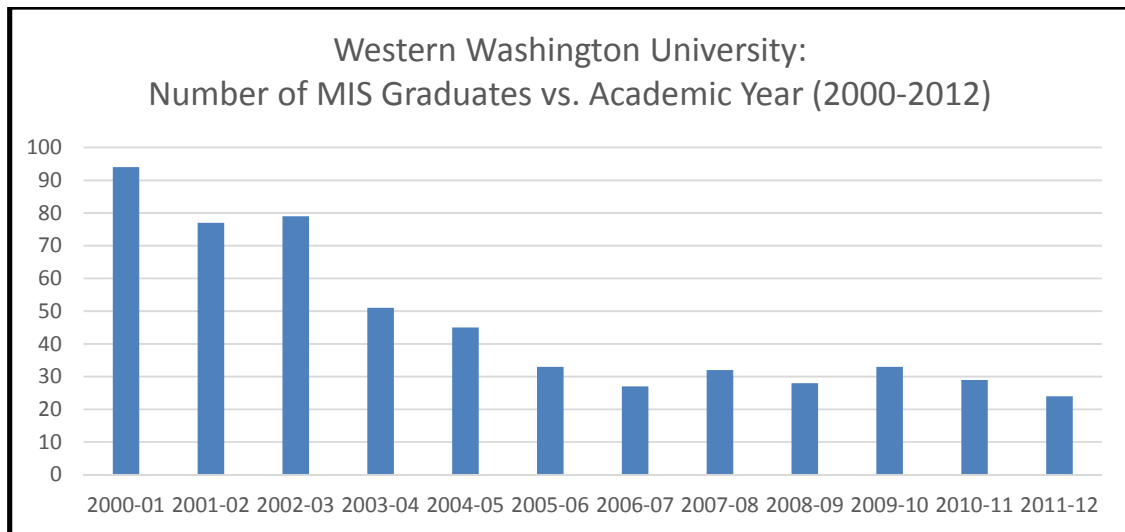

Figure 1: WWU - Number of MIS graduates vs. Academic Year (2000-2012)

III. METHODOLOGY

For this study, the MIS faculty adopted an action research approach. As suggested by Stringer [2004], the action research approach is a practical method to employ to solve problems and make improvements in an educational setting. Action research is different from traditional research methods in that it does not involve creating a null hypothesis. Instead, action research involves assessing and defining a problem, taking action to solve the problem, and assessment of the findings. The emphasis is on the practicality and feasibility of solving a specific issue [Tomal, 2003]. While different models of action research exist, the method typically involves an iterative cycle consisting of the following process components: problem identification and planning, implementation, and evaluation [Mills, 2003]. Based on the findings and insights gained from the initial cycle of learning from action research, subsequent cycles of action research are often undertaken as the project evolves. The iterative nature of the action research method is illustrated in Figure 2, which shows two action research cycles. In this paper, the discussion will focus on the initial action research cycle for the IT Leadership project, which spanned the first two years of the project.

IV. PROGRAM PLANNING

As noted earlier, the first step in the action research process is to identify the problem and then develop a plan for addressing the problem. This section describes the early period of the development of the ITL program.

Problem Identification

The issue that stimulated action by the MIS faculty members was low student awareness and interest regarding the MIS profession. As enrollments appeared to stagnate and then decline during the late 2000s, the MIS faculty members sought to identify underlying reasons for the problem. At the time, there was a widespread unease associated with the "Great Recession" that started in late 2007, so one theory was that students were scared away from MIS and other business-related degrees by the bad economy. However, during this period we found that enrollments for other areas of business study in our College remained relatively steady or

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increased (during the period of 2006-2010, the overall undergraduate enrollment in the College actually increased by 18%). It was not clear to us why enrollment in other areas of business were growing while MIS was shrinking. The trends in enrollment in our College were not what one would expect based on the job placement for our students, as surveys of graduates conducted by the university Career Services Center indicated that the starting salaries and placement rate for our MIS graduates exceeded the mean for business graduates from the College. To help encourage students to consider MIS as an academic discipline, new informational materials (e.g., flyers, posters, web site) to raise the profile and awareness regarding the IS profession were created and distributed. Nonetheless, student enrollment in the MIS program remained low.
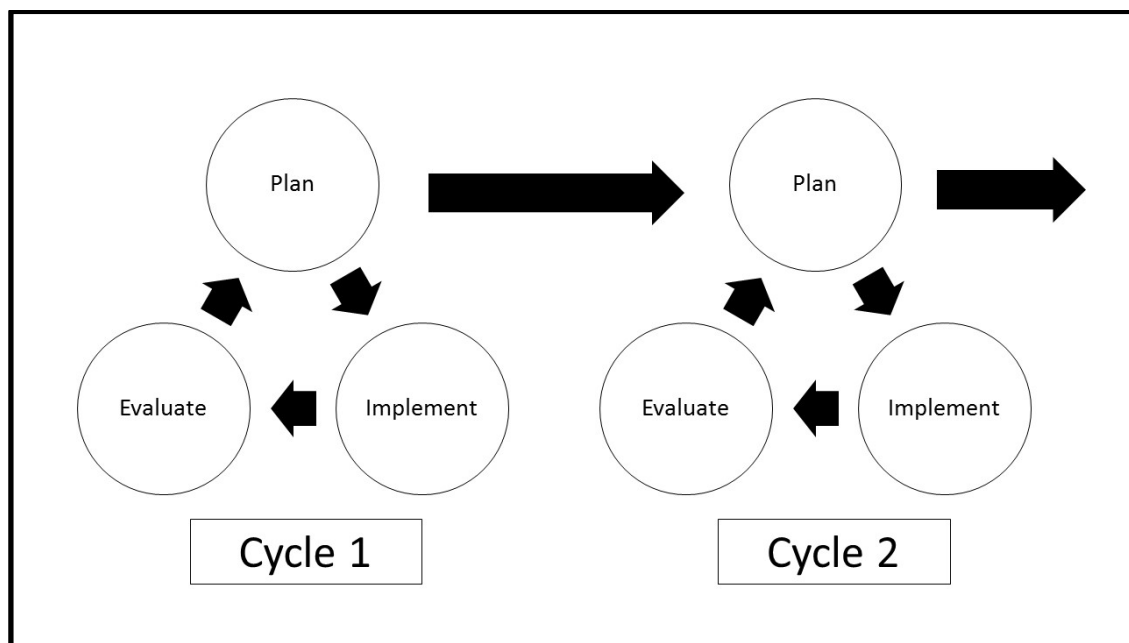

Figure 2: Action Research Model

To gain a better understanding of the enrollment trends from the students' perspective, the MIS faculty members spoke informally with junior-level business students. Based on discussions with students, one of the key issues appeared to be that – despite the efforts to promote awareness – business students still did not have a good idea of what the field of "Management Information Systems" involved. While the business students seemed to have a strong sense of the areas of accounting, finance, management, and marketing, they did not have a clear understanding of MIS career opportunities or how MIS was different from computer science. Although the College offered a required a core business course in MIS that was taught by qualified and well-regarded faculty members, a number of business students took the course during the senior year of their academic program, after they had already declared another type of major. Hence, by the time many students learned more about MIS it was too late in their academic career to change majors and pursue MIS.

Developing a Plan for Action

In an effort to identify more innovative and effective ways to increase student awareness regarding the MIS profession, the MIS faculty members explored the IS education literature. A number of topical papers offered suggestions related to improving student interest and enrollment in MIS through interventions such as enhancements of the introductory MIS course [Firth et al.,

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2008; Looney and Akbulut, 2007], curriculum revisions [Granger et al., 2007], and awareness campaigns [Koch et al., 2010]. However, one approach seemed particularly relevant for our situation. An article entitled "Partnering with the Majors" by Koch and Kayworth [2009] described a student-driven approach used at Baylor University to promote MIS student recruitment and professional development. At Baylor, students – not faculty members – took the lead in spreading the word regarding the MIS profession to other students. The MIS faculty at WWU decided to implement a version of the Baylor model under the direction of a MIS faculty member who volunteered to be the program's advisor.

Drawing on the Baylor experience, a new student-driven program entitled the "IT Leadership" (ITL) program was launched at WWU during the spring of 2011. The time that the program was initiated coincided approximately with the low point of enrollment for the MIS program. The program was founded on two assumptions: 1) that most students are uninformed about MIS, and 2) that the best way to reach students was through students. The faculty members agreed from the beginning that student candidates selected for the ITL program must exhibit enthusiasm for IS careers, a desire to serve fellow students, and have a demonstrated record of strong academic performance. The initial team of ITL students was made up of four high achieving and energetic students.

During the summer of 2011, the four ITL students met weekly in virtual meetings, planning their strategies and developing their mission. The first team of IT Leadership students (and those who followed) wanted to enhance the MIS experience at WWU, not only by making MIS more visible to all WWU students, but also by creating opportunities outside the classroom for MIS students to grow professionally through on-campus and off-campus activities that bring them closer to IS professionals. During the course of the first two years of the program, the students in the ITL program developed the following mission statement:

> *Mission Statement: IT Leadership strives to enrich the academic experience of MIS students through industry involvement, extracurricular activities, and preparation for the professional world. Through our efforts, we hope to contribute to high quality standards within the MIS concentration which will result in exceptional professionals entering the workforce.*

V. PROGRAM IMPLEMENTATION: ORGANIZATIONAL ISSUES

After the planning and mission for the ITL program took shape, the next step was to implement the vison for the program. Over time a set of guiding principles for the organization of the program emerged. As described below, key organizational implementation issues have included student selection and team size for the program, the roles of the faculty advisor and students, processes for the weekly team meetings, and the educational foundation.

ITL Student Selection

To become an ITL candidate, a student needs to be nominated by at least one MIS faculty member. The ITL faculty advisor then meets privately with each candidate to describe the mission of the ITL program and interview the candidate. The faculty advisor then makes the selections based on each student's enthusiasm the mission of the ITL program and availability to commit time. Initially, we thought that it may be difficult to recruit students to participate in the ITL program since the program may be viewed as an unwelcome responsibility. However, we have found just the opposite. Soon after the program was initiated, MIS students quickly became aware of the ITL program and viewed an offer to join ITL as a coveted honor. In fact, we have also had several students who have actively lobbied to join the ITL program. Virtually all students who have been invited to join the ITL team have quickly accepted the invitation.

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Size of ITL Student Team

During the life of the ITL program, the number of students in the program at any given time has been limited to 4-12 students, depending on the program's activity load for the quarter and the availability of qualified students. The academic year usually begins with 4-5 students. Two to three additional new students may be invited to join the ITL team during each of the subsequent quarters (winter and spring quarters). During the spring quarter, as many as 12 students have been part of the ITL program as the team works on putting on the program's annual main event (the *Western IS Connection* -- discussed below). Typically, most of the ITL members graduate in the spring, but to promote continuity the faculty advisor carefully ensures that at least two experienced students will be returning the following fall.

Role of Faculty Advisor

Since the beginning, the advising faculty member's primary role has been to serve as a facilitator and guide for the ITL student team, rather than a boss or manager. The goal has been for the student team to take the initiative in selecting and executing the specific types of activities that will be employed to promote the MIS program. In addition, the advisor has attempted to help the students attain professional readiness by instructing them in the fundamentals of leadership and communication skills and by introducing them to professional associations and industry leaders.

Role of ITL Students

A key component of the program is that the students are empowered to direct their own activities (under the guidance of their faculty advisor) like a small enterprise. They conduct weekly business meetings and brainstorming sessions; they delegate tasks; they work collaboratively in sub-teams; and they plan and execute events that promote the MIS concentration. While there was initial trepidation on the part of some MIS faculty members with respect to empowering students to this extent, we have found that the students who are selected for the ITL program readily approach their responsibilities in a very serious and effective way.

ITL Team Organization

The team is encouraged to experiment with its internal roles and norms. When working as a whole, they tend to act as a steering committee in which they set ITL goals and seek buy-in from "management" (i.e. from the ITL faculty advisor, the department chair and the MIS faculty). They have never elected an ITL team leader and most decisions are made by consensus. To address subtasks or coordinate a specific event, the group will typically organize into sub-teams of 2-4 students. Since several members of ITL have also served concurrently as an officer of the student MIS club, the students have made strong efforts to coordinate ITL activities with MIS club activities.

Meeting Processes and Skills Development:

The ITL students – not the faculty advisor – lead the ITL group meetings. The students are encouraged to experiment with and refine their own leadership skills. Typically, a different student leads each meeting in a rotation. However, they have also tried other models (e.g., a 4-5 week rotation cycle). In addition to the leader, who draws up the agenda in advance, other students take roles as facilitator (nudging derailed discussions back on track), timekeeper, and scribe (taking notes and projecting them on a screen as the meeting progresses). One interesting innovation is a pre-meeting "check in", during which each student lets the others know their state of mind (e.g. "I'm feeling overwhelmed this week" or "I have extra energy this week because …"). Their current norm for ending a meeting is to draft a brief agenda for the next meeting and to list each of the tasks each student has committed to completing in the following week. Over time, these practices and norms have varied as different ITL team members join the group and work on improving their leadership and management skills.

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Educational Foundation

Students in the ITL program have the option to earn two credits of independent study each quarter, repeatable up to 8 credits. Up to 4 credits can count as an MIS elective, but ITL students typically take the ITL credits as additional course credits. They are advised to budget 4-6 hours per week for ITL. Academically, the ITL students are expected to apply skills learned in other academic management courses (e.g., the "Teamwork Basics" course that is taken by most MIS students). However, they also do some reading for the course, including the "Partnering with the Majors" article by Hope and Kayworth [2009], the book entitled "Haunting the CEO" by John Hughes [2011], and various journal articles on leadership.

VI. PROGRAM IMPLEMENTATION: EVENTS

As the program developed, the ITL students decided to promote awareness about the MIS field through two types of events: a quarterly "MIS Information Night" and an annual "Western IS Connection" (WISC) event. The events targeted both MIS students and other students across the university. Although the departmental resources available to support these events has been limited ($200 dollars US for each MIS Information Night and $1,000-$2,000 for the WISC event), the ITL students readily accepted the challenge to create informative and interesting events despite a tight budget. To promote these events, the ITL students:

- Announce the events in business courses (with instructor's permission).
- Send targeted E-mail and social media messages.
- Place posters on well-trafficked bulletin boards.
- Staff information tables and accept registrations in the business college lobby.

The MIS Information Night and WISC events are described below:

MIS Information Night Events

The MIS Information Nights have largely been scheduled for the fall and winter quarters (while WISC takes place in the spring). The ITL team and the student MIS club usually collaborate, with the ITL team doing the planning and the MIS club officers promoting the event to club members. Careful attention is given to keeping the event fast paced and interesting. A brief summary of the schedule follows:

- Timing: 60-75 minutes, usually on the MIS club meeting night.

- Schedule: Each segment is led by a different ITL student, MIS club officer, or faculty member.

    o Check-in: Volunteers check in each student and give them a door prize ticket.

    o Introductory remarks: An energetic welcome to the students.

    o "What is MIS?": An overview of the professional opportunities for MIS graduates and the differences/similarities between MIS and computer science careers.

    o MIS program: A brief overview of required courses for the MIS concentration.

    o Meet the Alumni: One or two of the program's successful – and dynamic – MIS alumni speak about their career(s) in IS.

    o Student Panel: Current MIS students discuss why they chose MIS. Most have done an internship and describe their experiences in the workplace.

    o Closing Remarks and Door Prize Drawing: The guest speakers and ITL organizing team is recognized for their contributions. As the final activity, door

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prizes are announced. Low priced items are provided for the door prizes (e.g., movie theater or coffee shop gift certificates).

Western IS Connection (WISC) event

Baylor University's "IS Summit" [Koch and Kayworth, 2009] inspired the creation of the Western IS Connection (WISC). The vision for WISC is to celebrate careers in IS by connecting the MIS students with industry professionals. However, WISC is not a "job fair". Instead, WISC's interactive activities aim to educate students about IS as a career option. The four annual WISC events held so far have varied in some details, but basically follow the same game plan:

- Duration: 120 minutes during early evening of a weekday.

- Calendar timing: Held the evening prior to the university's spring Career Fair. This date enables industry professionals coming for the Career Fair to also experience firsthand the energy of our MIS students.

- Student and professional registration: Attendance has ranged from 80 to 120 participants (IT professionals and students combined). In order to order catering, etc. in advance, participants are urged to register in advance. To help reduce no-shows, students pay a modest $5 US registration fee, but $7 to register at the door. Industry professionals are guests and do not pay any fee.

- Site of event: The event is held in a large room at the university's student union.

- Budget and Funding: WISC has cost $3,000-3,500 each year. Typical funding includes:

    o Academic department funds: $1,000

    o The MIS student club: $1,500

    o The IT business community: $1,000

- Participants: Over the four years of WISC, attendance has grown from 80 to 120 people:

    o 55-80 students

    o 15-30 MIS alumni and other IS professionals

    o 3-4 guest speakers

    o 5-6 MIS faculty

- Event Activities:

    o Check-in: Staffed by ITL team and MIS club members.

    o Pre-event Social Time: Students are encouraged to mingle with the industry professionals for a 30-minute "pre-event social time" with refreshments.

    o Introductory remarks: An ITL student serves as the master of ceremonies and invites participants to go to their assigned table. The schedule for the evening is briefly described.

    o Guest Speakers and Topics: Each WISC features 3 speakers from the IT/IS working world. The speakers are high-ranking IT executives or professionals and have come from large corporations and consulting firms (e.g., Nintendo, Ernst & Young), as well as smaller organizations. The speakers talk about themselves

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and their personal careers, about the future of IT/IS, or trends and issues in IS. Speakers are explicitly asked not to provide a recruiting pitch for their organization. The ITL students ask the speakers to have fun, or to "inspire," but the specific topics are left up to the speakers.

- o Speed Networking: One or two professionals sit at each table with 4-6 students. The professionals talk about their work/careers; the students can ask questions. After 7-10 minutes, the professionals move to the next table to speak with other students. Generally, 3 cycles of speed networking are done.

- o Closing Remarks and Door Prize Drawing: The guest speakers and organizers are recognized for their contributions. Door prizes are announced.

- o Post-event social time: Before leaving the event, students are encouraged to approach the speakers and other professionals for a few more minutes of face time their favorite IT/IS professionals. We have observed that many students do stay for this part of the event, as students tend to have gained confidence in interacting with the professionals over the course of the evening.

VII. EVALUATION AND RESULTS

Following the action research process, we have continuously monitored and evaluated the outcomes from the ITL program since its inception four years ago. In this paper, we will focus on an overview of the findings associated with the first two years of the ITL program. As is typical for an action research study, we could not control the research environment for factors that could affect the study outcomes [Mills, 2003]. For example, during the time that the ITL program was implemented, changes in the economy or changes in student perspectives of the technology field could have influenced the findings of the study. Although tight controls were not possible, our findings have provided useful information regarding the potential impacts of the program on MIS enrollment and student development. A summary of the findings from the first two years of the ITL program study are summarized below.

MIS Enrollment

The first ITL program event, an MIS Information Night, occurred during the fall quarter of 2011. Since a minimum of 1 year (and often 2 years) is needed to progress from MIS declaration to graduation, the first year of the ITL program would not have affected the 2011-12 graduation numbers. Therefore, the number of graduates in 2011-12 (24 students) can be considered the baseline. Therefore, the potential impact of the first two years of the ITL program on student enrollment would be seen in academic years in 2012-13, 2013-14 and 2014-2015. As indicated in Figure 3, the number of MIS graduates increased steadily and significantly following the implementation of the ITL program, from 24 students during 2012-13 to 67 students for 2014-15. This represented a 175% increase in MIS graduates in 3 years.
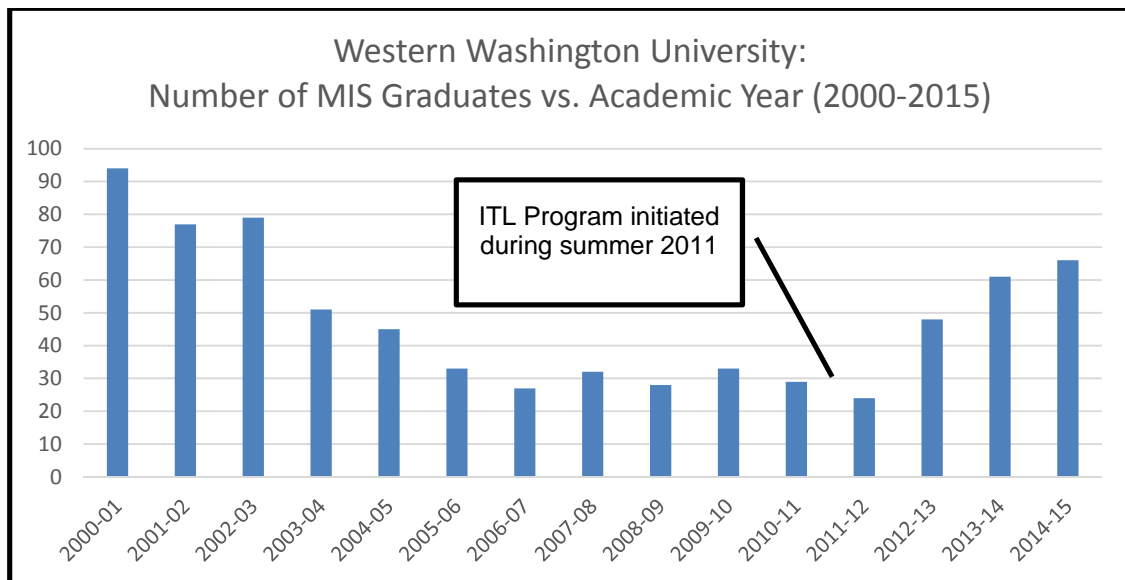
Figure 3: WWU - Number of MIS graduates vs. Academic Year (2000-2015)

The rapid growth in the MIS enrollment surpassed expectations. Indeed, by the time of registration for classes during fall 2013, the demand for several of the MIS courses exceeded the number of seats available, resulting in a capacity issue for the MIS program. During the 2013-14 academic year, several MIS course sections needed to be expanded in size and supplemented with additional teaching resources to handle the course demand and enable students to graduate in a timely manner.

While most of the growth in MIS enrollments came from students who were doing only the MIS concentration, a number of the new students who joined the MIS program during this time (about 15-20%) were business students who decided to add MIS as a second concentration to supplement their career prospects (e.g. Marketing concentration plus MIS concentration).

While factors which could not be controlled (e.g., the ongoing improvement in the economy) may explain some of the rapid increase in MIS enrollments, the MIS faculty members believe that the activities organized by the ITL students had a very favorable impact with respect to revitalizing the program with respect to enrollment and energy.

Directed Independent Study Course versus Student Club

As described above, the IT Leadership program was structured as a directed study course instead of being integrated as part of the existing student club. We chose the curricular approach for several reasons:

- Our MIS club has an established history, program and goals of its own, established by its officers. The club focuses on helping declared MIS students prepare for graduation and employment. ITL focuses on reaching out to non-MIS students about IS career opportunities. Our MIS faculty felt that we should not try to redirect the MIS club from its important mission and goals.
- The ITL students need excellent communication and leadership skills, as well as a solid academic record. They are handpicked by the faculty, and they can be taught to improve

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these attributes through the course: a significant portion of their time is spent reading and discussing articles on leadership, communication and professional development.

- The ITL team and MIS club, in fact, often work together. Although WISC and the MIS Information Night was initiated by ITL, the MIS club has always been a partner. The ITL team has also developed relationships with the IT community that have helped the MIS club identify and select guest speakers for their meetings.

Student Perceptions of MIS Field

Survey data collected from students following each of the ITL-sponsored events indicated that the events were well received and that the students found both the MIS Information Night and WISC events to be very worthwhile. In particular, students found the structured speed networking at WISC to be an excellent and comfortable way to learn about career opportunities and to develop their networking skills. Also, the students noted that they found the professional speakers at both types of events to be enthusiastic and helpful in helping undeclared students understand more about MIS careers. Two examples of student comments regarding the WISC events are provided below:

- *"Last* night's *WISC event was something that opened my eyes even more to the idea of graduating from [WWU] with a degree in MIS. Between the speakers, the professionals, and fellow students, I realized just how great, and challenging, this degree will be. There was so much to learn and take in it was slightly overwhelming, but in a way that got the juices flowing and made me extremely excited to be going down the path that I'm on."* – Comment from a student majoring in MIS
- *"During the structured networking period it was reinforced how business and MIS was integrated. I had the pleasure of speaking with someone who makes warehouse management systems. I realized how crucial it was for me to understand some aspects of MIS in order for me to be better equipped to deal with systems such as those. I thoroughly enjoyed the WISC event and learned how much MIS is – and can be – correlated to my career   aspirations."* – Comment from a student majoring in MIS and Operations Management

Feedback from Professionals

Regarding the IS Information Night and WISC events, feedback from the participating IS professionals has been positive. The professionals enjoyed the speed networking and speakers at WISC. Although the WISC event is not designed to be a job recruiting event, some professionals found the speed networking and social aspects of WISC helpful in identifying prospective employees. (As mentioned earlier, WISC is held on the evening prior to WWU's annual Spring Career Fair.) Overall, the ITL-sponsored events have provided our MIS program with a new way to engage with our MIS alumni and the regional IS professional community, resulting in stronger ties with industry and additional opportunities for our students.

Professional Development for ITL Team Members

Based on exit interviews, ITL students have found their time with the ITL program to be enjoyable, as well as valuable for their professional development in leadership, networking, project management, teamwork skills, and public speaking. Provided below are sample comments from the interviews:

- *"ITL changed my life in many ways. … everything that's helped me in my internship came from the project planning management that I learned from ITL." – Exit interview from ITL Student #1*
- *"ITL isn't only just a class or an independent course; it's real life work experience." – Exit interview from ITL Student #2*

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- *"There was a lot of opportunity for all of the members to have as big of a part in leadership as they were looking for. The size of the group allowed that flexibility for leaders to take initiatives in their own directions."* – Exit interview from ITL Student #3
- *"There was room for me to take a leadership position, and actually work with a small team of just five of us, I believe, and to do an entire event planning in that environment, with myself as the coordinator, was very unlike anything else that I've experienced through my other leadership experiences at WWU."* – Exit interview from ITL Student #4

VIII. CONCLUSIONS

We have found that empowering the student leaders has greatly energized our MIS program over the past four years. As discussed above, the IT Leadership program appears to have been a strong success in several dimensions: developing new student awareness of the MIS field, increasing enrollment, providing professional development opportunities for students, and enhancing engagement with the IS professional community. Overall, we have been very pleased with the results of the program.

Similar to Koch and Kayworth [2009], we have also found credence in the notion that selected student leaders may play a key role in supporting a MIS program. Although the IT Leadership program at WWU was inspired by the success of Baylor University's program, it is important to note that we needed to adapt Baylor's student-driven program model to fit our circumstances. As a state-funded, regional university, we needed to modify the program in a way that would be compatible with limited means. In our case, following donations from industry, the annual costs to the department have been about $2,000 plus one course assignment for the faculty advisor. Despite this small budget, the program has yielded very positive results and has been a solid investment. While it may be premature to generalize the positive findings at our institution (and Baylor University) to other settings, based on our experience we would encourage other MIS programs to consider the idea of empowering student leaders as a way to support a MIS program.

ACKNOWLEDGEMENTS

REFERENCES

Benamati, J. and T. Rajkumar (2013) "Undergraduate Student Attitudes Toward MIS: Instrument Development and Changing Perceptions of the Field Across Gender and Time," *Communications of the Association for Information Systems*, 33, pp. 241-266.

Firth, D., C. Lawrence, and C. Looney (2008) "Addressing the IS Enrollment Crisis: A 12-Step Program to Bring about Change through the Introductory IS Course," *Communications of the Association for Information Systems*, 23, pp. 17-36.

Granger, M., G. Dick, J. Luftman, C. Van Slyke, and R. Watson (2007) "Information Systems Enrollment: Can They Be Increased?," *Communications of the Association for Information Systems*, 20, pp. 649-659.

Hughes, J. (2011) *Haunting the CEO*, Seattle, WA: Spotless Books.

Koch, H., C. Van Slyke, R. Watson, J. Wells, and R. Wilson (2010) "Best Practices for Increasing IS Enrollment: A Program Perspective," *Communications of the Association for Information Systems*, 26, pp. 477-492.

Koch, H. and T. Kayworth (2009) "Partnering with the Majors: A Process Approach to Increasing IS Enrollment," *Journal of Information Systems Education*, 20(4), pp. 439-449.

Lombardi, A. "Software Development Ranks as the Most In-Demand Skill for Tech Jobs," Wanted Analytics, December 3, 2013, https://www.wantedanalytics.com/analysis/posts/software-development-ranks-as-the-most-in-demand-skill-for-tech-jobs (current August 13, 2015).

Looney, C. and A. Akbulut (2007) "Combating the IS Enrollment Crisis: The Role of Effective Teachers in Introductory IS Courses," *Communications of the Association for Information Systems*, 19, pp. 781-805.

McCafferty, D. (2013) "Tech Industry Struggling With Talent Gap," *CIO Insight*, December 11, 2013, http://www.cioinsight.com/it-news-trends/slideshows/tech-industry-struggling-with-talent-gap.html (current August 13, 2015).

Mills, G. (2003) *Action Research: A Guide for Teacher Researcher*, Upper Saddle River, NJ: Prentice Hall.

Sager, I. (2014) "With a Shortage of STEM Graduates, Accenture Hopes to Grab Them Early," *Bloomberg.Com*, January 24, 2014, http://www.bloomberg.com/bw/articles/2014-01-24/with-a-shortage-of-stem-graduates-accenture-hopes-to-grab-them-early.htm (current August 13, 2015).

Stringer, E. (2004) *Action Research in Education*, Upper Saddle River, NJ: Prentice Hall.

Tomal, D. (2003) *Action Research for Educators*, Lanham, MD: Scarecrow Education.

United States Bureau of Labor Statistics (2014) *Occupational Outlook Handbook – Computer and Information Technology Occupations*, January 8, 2014, http://www.bls.gov/ooh/computer-and-information-technology/ (current August 13, 2015).

Xue, Y. and R. Larson (2015) "STEM Crisis or STEM Surplus? Yes and Yes," *Monthly Labor Review*, May 2015, pp. 1-14.