

# Putting the Leader into Project Management

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## Abstract

Graduates of Computer Information Systems (CIS) programs are prepared to enter into the workforce bringing current IT skills. Most CIS graduates will obtain jobs in a small business where they will be expected to fill multiple roles in the organization, from introducing new technologies into the workplace to being the champion of projects which disrupt "business as usual" management in the organization. The CIS curriculum is technology focused, with little room for including "soft skills", that all employers crave in surveys, especially preparation to become leaders of change. This paper focuses on one aspect of that issue: The need to teach leadership strategies in a project management course to allow students to learn firsthand how to fill the roles of project sponsor and project champion as well as being the project manager. Because many CIS graduates will obtain jobs in small businesses in rural areas without the luxury of a fully staffed IT department, these graduates need to be prepared to fill many roles, including analyzing, designing, introducing, promoting and leading change in the businesses. Change leadership training should be added to the CIS curriculum.

**Keywords:** change leadership, project management, CIS curriculum

## 1. INTRODUCTION

The CIS discipline, as it prepares graduates for the professional workforce, continues to be affected by the rapid changes of technological advances as well as increased demands by organizations to leverage new technologies. The evidence of these changes and the challenges to these changes appear to be clear; the number of new IT projects are increasing, as well as the number of IT project failures. Small businesses are finding themselves at the center of many of these change events. With smaller IT staffs, and the need to utilize IT to better compete, project failure will often spell disaster for a given small business. Smaller IT staffs require a "many hats" approach, where fewer IT employees will need to take on additional duties/roles to meet the traditional curricular theory of how to bring new IT projects to implementation. This paper also advocates for

## 2. BACKGROUND

the need to update the IS 2010 model curriculum and to emphasize the IT "generalist", insuring that the model reflects the importance of teaching soft skills for IT positions within small business, as well as a more permanent timeline for future IS curriculum updates.

Since the recession of 2007-2008, the economic recovery has been seen in the IT sector with increases in the introduction and implementation of technology project activities. Enterprises have increased their spending on security technologies, cloud computing, business analytics, storage solutions and wireless & mobile (Columbus, 2014). However, somewhat surprisingly, technology project failure rates are also on the increase.

In 2007, 70% of respondents to a survey reported that they had been involved in a

project they knew would fail from the start (Why Projects Fail, 2015). In 2008, a report by IBM found that only 40% of projects met schedule, budget, or quality goals. (Making change work, 2015). In 2010, KPMG reported that survey results from Project Management practices found that 70% of organizations suffered at least one project failure in the past 12 months. (KPMG Advisory, 2013). In 2011, an interview-based study of about 600 people involved in software development projects found that many people expected their projects to fail (Why Projects Fail, 2015). And as recently as 2012, McKinsey and Company reported well known problems with IT Project Management are persisting. On average, large IT projects run 45% over budget and 7% over time. And, only 33% of all projects were delivered on budget in 2012 (KPMG Advisory, 2013).

While understanding that the tangible tasks like upgrading an IT system or addressing technology barriers may be expected to present difficulties, practitioners did not report them among their greatest challenges. Instead, the main obstacles they identified were changing mindsets and attitudes (58%), corporate culture (49%) and underestimating project complexity (35%). A report by McKinsey suggests that projects fail either because senior managers don't act as role models for change or that people in the organization defend the status quo (Boaz & Fox, 2014). Many surveys identify leadership, or lack thereof, at fault (KPMG Advisory, 2013). So, with the increasing chance of employees being exposed to failure, more resistance is created in organizations where failure has already occurred. Whatever the reasons, it is clear that when a project is to be designed and implemented, project managers are hired and trained to communicate a plan to employees and devise systems to monitor implementation (Kotter, 2001). Whatever the solution, project management is the key. When projects begin to fail, the confluence of lack of leadership and the resistance of gun-shy clients is where the project managers, our CIS graduates, find themselves. But, project managers who are well trained to manage the project are not trained to lead the change necessary to implement a quality project successfully, on time, and under budget.

### 3. CIS EMPLOYMENT

Graduate MIS programs may cover change leadership, as Masters' prepared CIOs are typically hired into specialized positions with concentrated responsibilities. Most

baccalaureate CIS programs do not have the room for a course in change leadership nor is change leadership a learning outcome in any of the current or previous IS proposed curricula. What employers look for in CIS graduates, or any graduates they wish to hire, are: intelligence, integrity, likeability, courage, leadership ability, inner strength, and competence (The Undercover Recruiter, 2015). Graduates from a typical CIS program have demonstrated in their success in CIS courses that they are competent and intelligent, and even have the inner strength to persevere through the requirements of a 4-year degree; the current CIS curriculum ensures this. The majority of CIS jobs require a Bachelor's degree and, in general, fall into the analyst sector: Network Analyst, Cyber-Security Analyst, Database Analyst, Systems Analyst and to a lesser extent, Programmer Analyst. And, many CIS graduates are destined to work in small businesses or in rural businesses as the entire IT department, wearing the hats of the single analyst in charge of all types of analysis, along with needing a solid foundation in the business world, command of business vocabulary, and fundamental understanding of business rules, transactions and accounting principles.

From a small business perspective, in 2011, according to U.S. Census Bureau data, there were 5.68 million employer firms in the United States. Firms with fewer than 500 workers accounted for 99.7% of those businesses, and businesses with less than 20 workers made up 89.8%. (Percentage of Small Businesses in the U.S., 2015) Small firms accounted for 63% of the net new jobs created between 1993 and mid-2013 (or 14.3 million of the 22.9 million net new jobs). Since the latest recession, small firms accounted for 67% of the net new jobs, up from 63% over a twenty year period from 1993-mid-2013 (SBA Office of Advocacy, 2014). Certainly a large percentage of the new jobs involved working with, or implementing new technology. In 2013, when small business owners were asked who is primarily responsible for the increasing need for technical support in their business, 76% answered that they or a staff member do it themselves, up from 64% in 2010; only 24% outsource their technology responsibilities (Small Business Technology Survey, 2013). Many business activities are now conducted online, with significant increases in the challenges companies face with the use of technology. The costs of maintaining technology, upgrading technology, addressing security issues, breaks in service, and addressing response times all have shown

increases from 2010 to 2013. (Small Business Technology Survey, 2013).

#### 4. ISSUES OF CHANGE

Organizations don't change; people do (Boaz & Fox, 2014). "Change is a constant in both our professional and private lives" (Lorenzi and Riley, 1999). And nowhere is the expectation of change greater than in the computer field. Teaching students in the CIS field is challenging as faculty not only have to stay proficient in their field to teach current fields of knowledge but also to prepare students to continue to learn after graduation. The speed of change in CIS is so vast that we should never underestimate it. And we as educators need to provide the tools / skills needed to embrace the inevitability of change and understand cultural reluctance.

"It is apparent in recent years that introducing major information systems into complex organizations requires an effective blend of good technical and good organizational skills. A "technically best" system can be brought to its knees by people who have low psychological ownership in the system and who vigorously resist the change" (Lorenzi and Riley, 1999). When systems analysts design, develop, and implement complex systems, a challenge to the system's success may be more behavioral than technical. For any system that requires change from employees, the change management plan needs to include tangible and intangible rewards to support that change in behavior (The Best Laid Plans, 2015). Practitioners rated only 41% of projects as successful, defined as meeting time, budget and quality goals. Yet, the top 20% of practitioners, called Change Masters, reported an 80% project success rate, nearly double the average. (Making Change Work, 2005)

#### 5. EXISTING CIS CURRICULA

A course in Project Management has been a part of CIS curricula since 1997. The most recent suggested curriculum for IS programs was published in 2010. According to IS 2010, the academic content of an Information Systems degree program therefore includes information technology, information systems strategy and management, information systems development and implementation, organizational functions, and concepts and processes of organizational management.

While researching proposed changes to the IS curriculum, only one proposal was found. This proposed model curriculum for undergraduate

degree programs in information systems built on the foundation of the current IS 2010. The proposed model retains the Project Management course as part of the curriculum (Rosenthal & Dhariwal, 2015). All previous curricula include an IS Project Management course, yet none of them have a Leadership course in the proposed curriculum, as was the case in IS 1997, IS 2002, and IS 2010.

The Project Management course is defined in the IS 2010 as follows:

"This course discusses the processes, methods, techniques and tools that organizations use to manage their information systems projects. The course covers a systematic methodology for initiating, planning, executing, controlling, and closing projects. This course assumes that project management in the modern organization is a complex team-based activity, where various types of technologies (including project management software as well as software to support group collaboration) are an inherent part of the project management process. This course also acknowledges that project management involves both the use of resources from within the firm, as well as contracted from outside the organization" (Topi, Valacich, Wright, Kaiser, Nunamkaer, Sipior, & de Vreede, G.J. (2010).

Although this course appropriately describes project management in complex organizations with hundreds of employees and resources to hire outside consultants, in smaller companies or those in rural locations, the IT team may be one or two persons who have to take on additional leadership roles besides that of the project manager. This course essentially is focused on the actual management of the project, but not the introduction and funding for the project management as led by the project "champion" or of the project implementation which is led by the project "sponsor". Introduction and implementation means changing the status quo, requiring the project manager in a small business to also serve as the champion and sponsor. This entails leadership skills not currently addressed in the Project Management course. As many CIS professionals often see promotion to management being a likely career ladder move (McAleer & Szakas, 2007), a Principles in Management, Organizational Behavior and Project Management are common business courses required in a CIS curriculum. In spite of ongoing efforts by educators in the field to better align this degree with opportunities, there is a lack of

acknowledgement of the very different professional requirements of a CIS graduate and a computer science graduate. The CIS single analyst needs the expertise and skills to fulfill the roles of the project "champion", the project "sponsor" and the project "manager", thereby serving as the "Change Master" who can lead the project to success and not failure. As mentioned previously, those project managers who focused on change leadership more than doubled the success rate of project implementation.

## **6. REVISING THE PROJECT MANGMENT COURSE**

Project Management is a complex topic. Aligning people is more of a communications problem than a technical problem; aligning means communicating with anyone who could be impacted by the change - managers, peers, subordinates, as well as suppliers and customers. Technology implementations impact not just those employees who are tasked with adopting new technologies without perhaps understanding the vision, the strategy, or the outcomes of the project but also anyone peripherally involved with the organization. (The Best Laid Plans, 2015). There is a difference between being a project manager and a project leader. Kotter says "Managers promote stability while leaders press for change" (2012). Maintaining stability is the nemesis of change. Project managers need to learn the skills and the required balance needed to become project sponsors who can lead the project from plan to implementation to evaluation.

Effective leadership is fundamentally about envisioning change and inspiring true commitment - not mere compliance - in others (Pearce, 2011). While management is about coping with complexity, leadership, by contrast, is about coping with change (Kotter, 1990). Leading an organization through a constructive change begins by setting a direction and communicating this new direction to those who can create conditions that promote the success outcome of the change. Leaders keep people moving in the right direction by satisfying human needs for achievement and recognizing and rewarding success (Kotter, 2001). Leadership is about interpersonal communication, team building, and personal interaction. It is described as a process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2007). Leadership of successful change requires vision,

strategy, empowerment, motivation, and inspiration of those involved or affected (Gill, 2003).

Our proposed revision of the Project Management course would promote the importance of teaching "change" in terms of management/ leadership/team dynamics/project sponsorship as being an agent of change with respect to business clients. The principal key components of this training would include basic leadership theory, motivation topics, descriptions of different leadership styles, assessment tools to determine one's leadership style, and case studies discussing projects that were successful and their attributes, and studies of project management failures and the reasons for that failure. Students could work in teams on projects, but a more realistic exercise could be that the students work independently designing the project, presenting the project to classmates, planning the implementation of the project, and devising an evaluative assessment of the success of the project to better simulate the small business experience. Throughout the process, students would have to communicate to the class how this change would benefit this organization and practice motivating employees to embrace the change.

Change management is the decision to move an organization to a future state, believing the future state is in the organization's best interest. Change leadership, on the other hand, facilitates the processes of moving forward to propel the organization from its current position to the desired future state. Management decides; leadership propels (Lorenzi & Riley, 1999).

To effectively lead change, the leader must create a sense of urgency by creating a deep awareness of why the organization needs to change and why it needs to happen now. Leaders are able to help people see how the change benefits them and portray the consequences of not changing (Guiliani, 2015). Communication is not enough, however. Delivering a complex message to a large and skeptical audience is difficult at best, and challenging to most (Kotter, 1990). Leaders need to ensure that those affected by change are educated as to why this change is necessary, participate in the implementation planning and scheduling of activities, and are committed to the success of the project rather than manipulating and coercing acceptance (Robbins & Judge, 2015).

For example, CIS graduates will function in many organizations as the agents of change. A classroom exercise could involve a student (or team of students) having to present a proposed technology upgrade to the other students - why the change is needed; what benefits there will be when the project is complete; and a realistic view of the problems that may occur during implementation. This presentation would incorporate a projected timeline of events; who is responsible for each event; the learning objectives of each event; and the metrics upon which the success of each stage will be measured. This assignment would be measured on students' performance in Kouzes' and Posner's five fundamental practices that enable leaders to accomplish goals through others: model the way, inspire a shared vision, challenge the process, enable others to act, and encourage commitment (Northouse, 2007).

Engaging subject matter experts to act in an advisory capacity in every phase of the project, and featuring them in change communications helps employees understand why the change is necessary and why it will ultimately benefit the organization. (The Best Laid Plans, 2015).

## 7. OTHER SOLUTIONS

A module on change leadership could also be added into existing courses besides Project Management; for example, into Principles of Management and/or Systems Analysis and design), or embedded throughout the curriculum, or covered in an entirely new course. An Organizational Behavior course may be helpful in the curriculum (McAleer & Szakas, 2007) as it not only reminds the CIS student of the organizational structures that they must navigate in their career ladder, but also may be a point for possible discussion on the topic of change leadership. In organizational behavior courses, a typical task is for students to take a Myers/Briggs Personality tests (MBTI). This is important for students because it reminds us on the variety of techniques to interact/deal with employees. INTP (introvert, intuitive, think, perceiving) students are more likely to be attracted to disciplines which require an ability to focus in depth to solve problems, including CIS degree programs. Not only are they quiet and the ones most likely to lose social interaction due to possible computer addiction, they are also be more reluctant to become active participants in any change effort and may be first to be disillusioned when the project fails.

## 8. CONCLUSION

As the field of CIS changes constantly, so should the curriculum. The graduates of Information Systems programs will be required to act in various collaborative roles during their professional careers, and it is likely that most of them will be assuming leadership positions at various levels. Increasingly, these roles are performed in a genuinely global context. It is essential that programs prepare their graduates to be effective collaborators and inspiring leaders. There was a proposed curriculum, IS 2002, and then IS 2010. This curriculum should be evaluated and updated every five years at a minimum to keep education and training for students as current as the technology used in the workforce. CIS curricula need to move beyond the strict technical skills needed in the computer field to adding the "soft skills" needed by the graduates who will wear many hats in a small business. Change leadership is critical for CIS graduates now.

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