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The Creation of a Communication Guide for the Project Manager Implementing a Student Information System

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THESIS PROJECT:
THE CREATION OF A COMMUNICATION GUIDE FOR THE PROJECT MANAGER IMPLEMENTING A STUDENT INFORMATION SYSTEM

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ABSTRACT

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The objective of this research project is to create a communication guide for the project manager responsible for implementing a student information system on a college or university campus.

The implementation of a student information system may be among the most difficult challenges that are faced in higher education due to the sensitivity of the data involved, the number of employees that will be involved in the project and the potential impact on the entire campus community. Most implementations take far greater than twelve months to complete and have been known to last for several years causing a substantial strain on those directly involved.

This guide identifies the ten steps that will help the project manager successfully implement the system. The steps identify work that can be done prior to the official start of the project, during the actual implementation and also after the implementation has ended. Although no two institutions follow the exact same path, many institutions follow a similar path to implement their systems. Unfortunately, there is currently no formal direction to how the implementation itself should be managed. This guide will provide the need-to-know information that will lead to an enjoyable and successful implementation.

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Chapter I

Introduction

I could never have imagined that firing 67 people on national television would actually make me more popular, especially with the younger generation.

~Donald Trump

Being named a project manager may be one of the most challenging and rewarding tasks to be given in the professional world. In recent years, project management has become "hip" especially with the success and popularity of Donald Trump's reality television show, "The Apprentice". The show has launched the phrase, "You're Fired!" into iconic proportions while giving the audience a sneak peek at the dynamics involved in project management. In everyday business, most projects are certainly not as high profile as one of Mr. Trump's, but the essentials are the same...the project must be clearly defined, the project manager must be an effective communicator and communication between the team and leader are essential.

Project management has been defined as, "The art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, quality, time, cost, and participant satisfaction" (Project Leadership –to-Project Manager", 2006). The person responsible for directing and coordinating those resources is the project manager.

The idea of project management has come a long way in the past five decades from military roots to a current mass appeal. "Project management was not used as an

isolated concept before the Sputnik crisis of the Cold War. After this crisis, the United States Department of Defense needed to speed up the military project process" ("Project Management", 2006). Since then, project management has gained fame with the popular television show, "The Apprentice" where each week millions of viewers watch as two teams are led by a project manager to accomplish a certain task knowing that one of the losers will be fired. And while these two examples may represent the extremes, when you peel back the layers, the tenets of project management are the same.

"Many of the problems that occur in an organization are the direct result of people failing to communicate. Faulty communication causes the most problems. It leads to confusion and can cause a good plan to fail" ("Communication and Leadership", 2006). While "The Apprentice" shows a Hollywood-style view of project management, this same principle can also be seen in a more common, everyday environment: the implementation of a student information system on a college campus.

Implementing a student information system is a massive undertaking and, unfortunately, there is usually very little understanding or guidance that comes with it. It is much like walking along a tightrope without a parasol or safety net and being afraid of heights. Each step that you take is critical to the overall success and should be viewed as an accomplishment, but each step can also be extremely dangerous due to the highly confidential and mission critical information that resides in the system. A college or university must first define what it views as a successful implementation and it is then up to the student module project manager to develop a plan that will lead there. Specific, high level goals of the implementation must be clearly communicated from an

executive level and then the project manager must work with a number of constituents to realize each and every one. Because of the nature of the higher education environment, a student information system implementation touches almost every facet of the community and each pocket of the institution may have its own "wish list" with this new system. One end result of the implementation is that you will find enhanced integration among campus departments that may never have connected or communicated before, therefore, it is essential that these areas be clear with their own goals and expectations. Whether in the form of open forums or small group discussions, it is important to hear what the community-at-large wants, needs and expects from the system. Without that knowledge, it may not be possible to call the implementation a success.

Background

The decision to conduct enterprise resource planning (ERP) may be among the most important decisions that any college or university can make. The modules to be implemented can include advancement, finance, financial aid, human resources, student information, and portal and the implementation of one or more leads an institution down what could be a "once-in-a-lifetime" path. The time, money and resources required are significant and the implementation itself is often a lengthy process which could create a difficult time on the campus. The size of the modules varies along with the amount of time needed to implement and the degree of difficulty for the implementation varies as well. The student information module is often

considered the most difficult to implement for those very reasons. Another factor that adds to the degree of difficulty with the student system is the amount of data that resides in the current or legacy system that will need to be converted into the new system. Depending on the institution, there may be up to fifty years of student records in the legacy system that needs to be carefully planned and mapped into the new system.

There are many reasons why an institution would choose to implement a new student system. It may be that the current system lacks certain functionality that today's student demands or it may be that the legacy system has become unreliable or aged, which can lead to performance issues. Regardless of the reason, the decision to conduct an ERP is not one that is made quickly or lightly and it will take a commitment from the entire institution for the project to be viewed as a success.

Purpose of the Project

This project is designed to develop a student information system communication guide that will facilitate the transition from an institution's legacy system. Due to the largess of an endeavor like this, it is easy to have issues either fall through the cracks or even worse, have issues that go unnoticed. One of the main components of a successful implementation is effective communication with a bevy of individuals from the functional, technical and executive areas of an institution and between the institution and the company providing the software and training. This guide will highlight the crucial communication areas that are in the most need of attention. A copy of this guide will benefit the project manager of a student implementation along with the members of

that team. A disastrous event can often be alleviated by being proactive instead of reactive during an implementation and by including all shareholders in the decision making processes. This guide will draw attention to those key processes.

Objectives

The purpose of this guide is to provide project management assistance during a student information system implementation. The guide will serve as a reference for a project manager prior to, during and after the implementation process.

Definition of Terms

The following terms may be referenced throughout this project.

Backfill Plan: The identification of resources needed to offset the gap created by individuals appointed to a project team.

Beadle: A 16th century term for a parish official charged with keeping local order or advising on policy.

Behavior Styles: The different categories of interaction styles that individuals display.

Business Process Analysis: The process of closely examining and documenting a current business practice step by step.

Effective Communication: When a listener not only hears what is being said, but understands it as well.

Enterprise Resource Planning (ERP): The integration of a management system that includes many or all facets of an organization.

ERP Project Manager: The individual responsible for leading the ERP.

Functional Areas: These could include: admissions, advising, bursar, financial aid, housing and student records.

Module Project Manager: The individual responsible for leading any component of an ERP.

Outcomes Assessment: A measurement of predefined goals or expectation of skills acquired after completion of a certain event.

Project Management: Maximizing the use of human and financial resources while defining and achieving goals.

Project Manager: The individual responsible for planning and achieving project goals.

Student Information System: The "housing" for a student's personal and academic information on a college or university campus.

Student Project Manager: The individual responsible for leading the student module implementation.

Limitations

The primary limitation in this communication guide is that it relates specifically to the implementation of a student information system in a higher education environment and none of the other software modules that campuses may choose to implement. Although project management is a universal term, the path for success varies for each

project discipline and each individual project manager. The variables for each campus ERP are as great as the number of higher education facilities going through the process, therefore, the information provided in this guide may not pertain to each implementation. Because of this, the scope is limited from discussing the impact that one module implementation has upon another. In practice, the impact is great because the student system is the one module that has a direct connection to each other and the breadth of the student system also increases the impact on other modules.

This guide does not focus on the functional training that will be a massive part of the implementation. Instead, the guide assumes that the training is taking place as the project proceeds through the process. Along with this, the guide does not focus on which software vender is used, but makes the assumption that a system has been purchased instead of the institution developing a home grown system.

While the concept of project management is not new, the utilization of the phrase and tools associated with it are. In examining some of the great feats of the past---the building of the pyramids, the construction of the world's greatest buildings, or even the construction of a bee hive for that matter---the essence of project management is evident, even if it has taken centuries for the phrase to be developed. As such, the literature review for project management dates back about five decades with government origins. There was very little literature to review that related specifically to the project management of a student information module thus making this a necessary study.

Chapter II

History of American Higher Education

The roots of education are bitter, but the fruit is sweet.

~Aristotle

With its humble beginnings as a center to develop community leaders during the earlier days of American history to today's multi-campus conglomerates with enrollment in the tens of thousands, the history of American higher education shows constant growth and development with each passing generation. "The central hypothesis is that American higher education changed fundamentally approximately every generation, or 30 years" (Geiger, 1992). But regardless of which aspect is examined---the purpose of a college, the number of students enrolled, the requirements for acceptance, the curriculum, the faculty, the depth of learning, the number or type of institutions, the cost, or the maintenance of student records---the progress that has been made to date is substantial. One idea remains constant, as America has changed throughout the years, so have its colleges and universities and it is important to understand the modesty from which it all began.

"From its beginnings in the seventeenth-century Puritan community to the modern day emergence of community colleges and historically black colleges and universities, the mission of higher education has been alternately entwined with and removed from the needs and dreams of the polity" (Brown & Witte, 1998). While no one institution is

reflective of all changes throughout the course of American higher education, there is much to be learned from examining the very beginning and this can be done by tracing the roots of Harvard University.

First established in 1636, Harvard has the distinction of being the country's oldest university. The Puritan settlers of Massachusetts Bay wanted to develop a process or entity by which they would begin training the political, cultural and educational leaders of their community. Much like the mission that steered them to establish a new world away from England, the mission to establish an entity that would teach and train their future leaders was crucial to their survival. Even though the idea of outcomes assessment had not yet been identified, one thing is known about the graduates of early Harvard during this time period and it reinforces the original need for the institution. "Nearly two-thirds of the graduates of seventeenth century Harvard for whom occupations are known entered the ministry" (Geiger, 1992).

"The Puritan community of the Massachusetts Bay Colony founded Harvard College in 1636 in order to train those who would govern its Christian commonwealth. The nature of Puritan society directly affected both who its governors would be and what they would study in college" (Snyder, 1998). Because this community needed the leadership of both lawyers and ministers, America's first college was created, thus beginning a cycle of educational birth and development that is still in place close to four hundred years later.

The Puritans in Massachusetts were not alone in their attempt to foster community leaders, although it took close to thirty years for America to see the founding of its second college. "In 1693 the College of William and Mary in Virginia was founded to

provide a supply of clergymen to ensure that the youth were piously educated in good letters and manners" (Rudolph, 1962, p. 7). The Anglicans expected their graduates to become public servants and lead their communities with a heightened sense of purpose.

Over the course of the next fifty years, the American colonies would see the birth of today's well known Ivy League schools starting with Yale being founded in 1701 by the Connecticut Congregationalists. Between 1746 and 1755, the Presbyterians founded the College of New Jersey (Princeton), the Baptists founded Brown, the Congregationalists founded Dartmouth, the Anglicans and Presbyterians founded Kings College (Columbia) and the Quakers founded the College of Philadelphia (the University of Pennsylvania). "Despite denominational sponsorship and control, however, these institutions were liberal arts colleges, not divinity schools per se; they served their particular communities by producing public leaders" (Snyder, 1998).

As the years passed, "Higher education began placing a greater emphasis on teaching undergraduates to exercise their own personal judgment rather than just absorbing the great truths. Colleges continued to train community leaders for civil society, but these leaders less often filled the pulpits and more often planned the revolution" (Snyder, 1998). While this does not necessarily represent a change to the core mission of these institutions, it does serve as a bridge from the simple, early beginnings to the growth and development soon to take place.

"Between 1800 and 1861, the number of colleges increased tenfold and that is only counting those that actually survived. Communities wanted their sons to be educated locally, and having a local college became a key component of civic pride"

(Snyder, 1998). This notion supports the idea that American higher education changed with each passing generation, especially as the country was about to enter one of its most difficult phases with the onset of the Civil War, where pride and civic duty were abundant. Again, these changes were directly related to the changes taking place in the American public. In the latter part of the nineteenth century, the emancipation of the slaves, the emergence of economic class distinction, changes in immigration, and the growth of American cities all resulted in a much more diverse American public. As the public evolved, so did the need or desire for more accessible higher education opportunities and the movement for the community college and the historically black college began.

As the progress continued, another significant change was on the horizon, this time to the delivery of education which was also consistent with the changes in American culture. From the ease and availability of the home computer to the speed of instant messaging and the magnitude of the gigabyte, technology was about to take over and the higher education industry did not put up a fight. Today's modern university is most likely offering a sizable number of courses in an online environment or possibly even offering an entire degree through that format; unless, of course, it is a distance learning institution whereby all course and program offerings are offered online. The increasing use of technology, primarily during the last thirty years, has changed the day-to-day business practices of today's institutions. This idea is best seen through the growth and development of the student information system.

As with many small organizations or endeavors, it is often possible to maintain business processes in a paper-dependent environment. In higher education, when the

number of enrolled students begins to grow and the complexity of the academic programs being offered increases, the traditional records-keeping process may no longer be sufficient. This is best seen by the development of "homegrown" institutional computer systems and the introduction of companies whose primary purpose was to build records-keeping software available for mass purchase. As the American culture became more technically savvy, so did the computer systems that housed student data.

History of the Registrar/Record Keeping

All things are difficult before they are easy.

~Thomas Fuller

"The Registrar's profession is an ancient one that dates back to the medieval university where the beadle was considered an official or academic officer who proclaimed messages and executed the mandates of the university authorities" ("History of the Registrar", 2005) . Times have certainly changed as the registrar's office of today does not only uphold academic mandates, but many college and university registrars find themselves with not only traditional responsibilities which range from records management to student information technology, but also more non-traditional responsibilities from overseeing the admissions office to overseeing enrollment management.

Gone are the days, in many cases, of managing arena registration and ordering pizza for students waiting (and waiting and waiting) in lines to add or drop a course. Today's registrar's office is now more focused on remotely monitoring the use of online

registration and training campus end users how to query their own dashboard reports. This is due, in part, to the focus on technology to meet student needs in order to maintain competitiveness. Whether an institution has developed its own highly customized legacy system or has contracted to implement a new student information system, one thing is sure...the "traditional" mode for student records keeping has undergone a massive makeover and been replaced by a newer and faster model.

Systems Development

I want to put a ding in the universe.

~Steve Jobs

To understand the history and progression of the student information system, it is important to first understand the history of the computer and its ability to calculate data and store the results.

"Devices to aid computation have evolved from simple recording and counting devices through the abacus, the slide rule, and more recent electronic computers" ("History of Computing Hardware", 2006). The most basic of devices to aid in the calculation of figures would have to be the hands and feet or more precisely, the fingers and toes. This method worked well as long as the items being counted were fewer than twenty for after that, a more advanced device would be necessary.

The abacus can be traced back to approximately 500 B.C. and it was used in a time pre-dating the existence of the numbering system. Even the abacus, with the multiple iterations that have been created and used, was no match for the computer.

"The first computers were analog and digital computers made with intricate gear systems by the Greeks. These computers turned out to be too delicate for the technological capabilities of the time and were abandoned as impractical" ("History of Operating Systems," 2006). After this, a variety of different calculators were created, but it wasn't until the beginning of the 19th century that another significant development was made.

"In the 1800's, the first computers were programmable devices for controlling the weaving machines in the factories of the Industrial Revolution. Created by Charles Babbage, these early computers used Hollerinth (Punch) cards as data storage (the cards contained the control codes for the various patterns)" ("History of Operating Systems," 2006). After this, a series of advances were made in both hardware and software development that brought the industry closer to the mega-produced, mega-speed, mega-processors that exists today. In the late 1960's one of those advances became the founding of a company that would one day corner the market in the production and installation of student information systems.

Emergence of SIS

I do not fear computers. I fear the lack of them.

~Isaac Asimov

"Most large universities built their own student systems in the late 1970s and early 1980s" (Hossler, D. R., 2004). And now, twenty to thirty years later, that technology is aged and in need of being updated or replaced, but replacing these systems is neither

easy nor inexpensive. With the advancement of campus business processes, the demands on a student information system have increased as well.

> Whether build-your-own or off-the-shelf, there are no easy and inexpensive solutions—only solutions that should be viewed as a complex set of contingencies for individual campuses. Many colleges that struggle with the costs of their decisions fail to understand the need to limit the scope of their new systems. Sometimes people insist that the new systems must do everything exactly as in the past, or administrators will see a new system as the answer to everything they have ever wanted a system to do. They forget that existing systems evolved over many years. No college can afford everything whether it is creating its own system or buying a product (Hossler, D. R., 2004).

In order to bridge the gap between these two extremes, it is important to first understand the current business processes that exist and then determine the areas that are most in need of being updated and plan according to those needs.

What an SIS System Does

To err is human - and to blame it on a computer is even more so.

~Robert Orben

"All administrative and academic units at institutions must be engaged in continuous assessment and improvement driven by data" (Dodd, D., 2006). In its most basic form, a student information system is designed to retain student records in a way that makes it easy to report on the data. That idea may sound simple, but think about the institution that enrolls tens of thousands of students at the graduate and undergraduate levels and needs to conduct registration for the entire campus within a ten day period while also assessing tuition and fees and producing official and unofficial transcripts at the same

time. This example shows how recent requirements have outgrown the use of fingers and toes, the abacus, the calculator and possibly even the legacy system. While this is certainly a complicated set of circumstances, also imagine the need to process thousands of admissions applications for the next year's class while beginning to compile the data on the incoming class for the year after while finding out that the graduate tuition fee is about to increase. Even a sixth toe would not help here, but these are the processes that a student information system does routinely and while some institutions develop their own systems to handle these processes, many others have chosen to undergo an ERP and contract with one of the many companies that now specialize in higher education software. "Many cost-conscious business officers say that colleges in the future will need to rely more on packaged commercial software and less on homegrown systems" (Olsen, F., 2004). A perfect example of this statement is seen by looking at a business practice at Cornell University.

> At Cornell, graduate students majoring in computing and information science now pay different tuition rates depending on whether their home college is arts and sciences or engineering. The homegrown software that runs Cornell's student-records system uses an unusual tuition algorithm, one that can—among other things—calculate graduate-student tuition 92 different ways depending on a student's academic affiliation. To continue this and other traditional practices, the university has struggled to keep the 20-year-old student-records system on life support (Olsen, F., 2004).

An important step prior to implementation would be an analysis of current business processes. The decision to continue using close to one hundred different tuition rates is a choice that needs to be weighed when evaluating the benefit of an implementation and also when trying to determine whether the implementation can ever be considered a success.

"Faced with similar choices, many campus-computing officials agree that colleges will need to be fiscally responsible by holding the line on their own costly modification of packaged big-systems software—known as enterprise resource planning, or ERP, systems" (Olsen, F., 2004). The Cal State Project is a prime example of just this situation.

In September 1998, the California State University System, which consists of twenty-three individual campuses, signed a $30 million contract to license administrative software from PeopleSoft and thus began one of the largest and most expensive projects in industry history and, unfortunately for those in the Cal State System, one of the most unpopular.

"The big price tag for the new management systems is not the only aspect of the overhaul that has stirred controversy. The approach that Cal State has undertaken requires all 23 universities to work together to standardize their business practices to a degree that they never have before" (Olsen, F., 2003). But Cal State shows the power behind the implementation. To take twenty-three independent campuses, with enrollments from the hundreds to the tens of thousands, and begin to unify the business practices is not only powerful for the institutions involved, but it creates a unified experience for the students as well.

Success Rate with SIS Systems

Success is dependent on effort.

~Sophocles

It is difficult to identify the success of a student information system implementation primarily because of the many contributing factors that are a part of the project. From the onset, the initial definition of a successful implementation could be quite specific with many campus supporters expecting the new system to replace the bells and whistles that may be found within the legacy system. What many people do not realize, however, is that most legacy systems grew while on campus and were fully developed over time. "Most state-of-the-art ERP's are based on best and current business practices. Existing institutional business practices often have evolved over many years, becoming outdated and arcane" (Swartz & Orgill, 2006). The current legacy system may be reflective of twenty years worth of code customizations; therefore, it is important to understand what is and is not possible with the system that is being implemented. For many institutions, the decision whether they will customize the baseline software code must be made immediately as this will have a direct effect upon the potential of the system and may then impact its ability to be considered successful.

In some cases, the definition of success may rest upon the ability to implement a new student system among multiple campuses in a statewide system, and in other cases the definition of success is very simple...can the new system process admissions applications and can it process course registration? The California State University project was one of the largest implementations ever undertaken, but how is the success

of a project of that size measured? Is the project a success if it comes in on task, on time, and on budget? Or is that too simplified? Is the project successful if less than $500 million is spent or if all twenty-three campuses have finished the implementation within ten years of the signing of a contract? No matter how it is examined, two things are certain; success can be measured in many different ways and effective project management will increase the chances of success.

Project Management

Welcome to Dogbert's School for Zombies and/or Certified Project Managers. The training is the same for either profession. The main difference is that zombies get more sun.

~Taken from the comic strip Dilbert written by Scott Adams. 2/9/2006

Although project management can be traced throughout the course of history, the term or concept can be traced back to the relatively recent past, but what, exactly, does project management mean? Simply put, project management is the practice or art of identifying goals or targets and utilizing all available resources to meet those targets over the course of a certain period of time. "Project management is quite often the province and responsibility of an individual project manager. This individual seldom participates directly in the activities that produce the end result, but rather strives to maintain the progress and productive mutual interaction of various parties in such a way that overall risk of failure is reduced" ("Project Management", 2006).

One of the most important responsibilities of the project manager is to communicate effectively to the members of the project team and other related stakeholders and because of this, a project being lead by an ineffective communicator has very little chance to succeed. Ineffective, poor or the lack of communication can lead to a series of problems within a project. These problems include undefined expectations, the high-hanging curveball effect and the feeling that time is running out and it is 4th down with 30 yards to go.

If a project has unclear or undefined expectations, there can be no measurement of success—or even failure for that matter---when the project has been completed or even during the process. Imagine a team that has been charged with making an innovative widget. They could very easily feel as if the project has been completed only to find out that executive management wanted the widgets to be made of an entirely different material. If it is not clear from the onset that the widgets were to be made of wood instead of plastic, the project has now consumed unnecessary valuable resources, both human and monetary, because the expectations were not clearly communicated.

Ineffective communication also leads to the high-hanging curveball effect when the project team is suddenly presented with an obstacle that was never on their radar screens and never planned for. The high-hanging curveball typically manifests itself in the form of an idea or challenge that sneaks up during the mid or final stages of the project where an emergency contingency plan must quickly be developed to offset the negative effect. The energies needed to avert the crisis will inevitably steer the team away from staying on the planned course.

The "fourth and 30" effect is most often felt during the final stages of a project when the calendar says that the project must be coming to a close, but the list of things to do does not. Because it may not be possible to restructure the completion date for the project, this is the time when panic sets in and team members wonder how they are ever going to finish on time.

These scenarios do not all relate back to the responsibilities of the project manager or any one person, but they do all relate back to communication. In each situation, communication has the ability, if both effective and proactive, to keep the project moving forward. Unfortunately, communication is not always identified as a project priority. "Many project managers place communicating proactively on the bottom of their priority list. When they do communicate, it tends to be short and cryptic, as if they are trying to get by with the minimum effort possible" ("Project Management Tips", 2005).

Based upon this, a more accurate description of the project manager is that of a project facilitator. "Great project managers and creative thinkers are masters of questions. They sense when things are getting off track, recognize the essential elements missing from a discussion or a plan, and inject them back in with a carefully timed and phrased question" (Berkun, S., 2005, p. 96). If this is done correctly, each of these scenarios should be avoided.

Another responsibility of the project manager is to develop the project plan. This document becomes the beacon that should guide the project from beginning to end. It is a written communication tool that, if developed correctly, will help reduce the potential for the situations referenced above to become a

reality. "From the pm's perspective, a good schedule gives a clearer view of the project, flushes out challenges and oversights, and increases the odds that good things will happen" (Berkun, S., 2005, p. 23).

> In early phases of a project, people should be referring to the vision all the time---in discussions, emails, and meetings--actively using it as a tool to help make decisions and, hopefully, progress. The pm should be on the lookout for this and be willing to modify and revise the vision to include unforeseen questions that will make it more useful to the team (Berkun, S., 2005, p. 70).

During the life of the project, the project team will reference and depend on the plan often. It will be an instrumental piece when making critical decisions that will affect the success of the project.

"Without clear, concise communication, the people on a project team will never be able to agree on goals and then meet them. The project plan is one major component of this communication" (Baker, K., & Baker, S., & Campbell, G. M., 2003, p. 9). Although there are a number of reasons why a project can fail, ineffective communication is one of the most obvious and most easily corrected. An effective project manager who is armed with a concise project plan will be able to work with the team to meet the goals of the project, even if the project is dependent upon the resources of an external party or vendor.

Companies That Provide an SIS

Technology is a gift of God. After the gift of life it is perhaps the greatest of God's gifts. It is the mother of civilizations, of arts and of sciences.

~Freeman Dyson

There are many companies that specialize in higher education software development and provide student information system solutions to institutions of all sizes. Among these companies there are several that stand out as being industry leaders with the various products that they market. The most popular companies would be Datatel, Jenzabar, Oracle (PeopleSoft) and Sungard Higher Education. Among these, Sungard Higher Education has the distinction of introducing the first custom student system for higher education during the 1970's. It is Sungard's flagship product "Banner", which is used by more than 900 of their client institutions, that has helped the company grow and flourish the most. Their clients currently represent 38% of the US two year public institutions and 50% of the US mid-sized four year institutions (personal communication, March 2006). With more than 1,400 client institutions serving more than ten million students, SunGard HE stands as the industry leader making it the largest of the major companies developing higher education software.

Communication Guide

The art of communication is the language of leadership.

~James Humes

After the decision to move to a new student information system and the conclusion of the vendor search to find the best solution, it is then time to implement the product. Unfortunately, there is no manual or communication guide to help the team responsible for the implementation's success.

A standard approach is to contract with the software company and have consultants travel to campus a number of times over the implementation schedule to show employees how to build the system to meet the needs of the institution. While these consultants often come armed with handouts and PowerPoint presentations, they may often leave having created a wide learning gap. The implementation team, which is charged with simultaneously building and testing and further developing the system, is often not prepared with the required tools to conduct the implementation. Having a communication guide from the onset of the project would not only provide a vision for the landscape of the project, but it would also become a powerful tool which would increase the project's potential for success.

If the software is viewed as the frame of the house that is about to be built, with consultants that routinely visit the site and provide feedback on the progress, a communication guide would essentially serve to interpret the architect's drawing thus allowing the project continuous progress, while offering useful insight along the way.

Communication guides have been developed to meet many different needs. The communication guide for a successful student information system implementation would help to bridge the gap between the handouts, the presentations and the reality.

Chapter III

Where the Idea Came From

As is often the case with the lessons of life, practice makes perfect. Anyone trying to create a communication guide aimed at assisting the project manager implementing a student information system should be well versed in two things, project management and a student information system, for it is not possible to accomplish this goal without a well-balanced background in both.

If a representative from one of the companies that develop higher education software was asked how well prepared its client institutions were to undergo the upcoming implementation, more than likely they would say that their clients are not very well prepared. They might also say that they would be surprised to find a client that knows what it means to go through this type of implementation or even how to plan for the next step during the process. One reason this is true is because most educational institutions do not have much experience in software implementation. It is not uncommon for an institution to utilize its software for many, many years and when the time comes to make another change, those that worked on the previous implementation are not the same as those working on the current project. Unlike that which may be found in other industries, the implementation of a student information system involves more than just installing a piece of software, it takes the knowledge and abilities of an air traffic controller who watches each plane successfully take off and successfully land.

Why does the idea that practice makes perfect apply to this situation? It is because this type of implementation can not be lead by a casual user and this type of communication guide could not be written by the casual writer. The germane knowledge necessary for both must come directly from hands on experience obtained by someone who has been directly involved and responsible for an actual implementation. Each new implementation team can learn from the past, from both successes and failures. As new client institutions begin the process of implementing the software, there is no need to reinvent the wheel each and every time. The lessons learned from implementation ancestors should forge the way.

This guide was developed to help those who will come next. Implementing a student information system is difficult enough under the best of circumstances. Since many individuals have single-handedly played the role of air traffic controller in the past, the lessons learned from even one past project manager can and should be handed on to those that will soon follow.

What is included and why

Those who have attempted to lead a student implementation in the past know that it is a daunting and humbling experience. From the onset of the project until the very end, attention must be directed every single day to every detail. That level of detail would not be effective for this type of communication guide since each institution brings its own personality and idiosyncrasies to the implementation. Specific details that worked for School A might not work well for School B especially if School A is a two

year public and School B is a four year private. A common ground must be identified that speaks to both the granular and global requirements across the institutional spectrum.

The ten salient steps included in this communication guide represent those that can best be used by a wide variety of institutions. It is neither a one-size-fits-all approach nor an individualized plan for any one school.

Development of the Ten Steps

The ten steps identified in this guide are the chronicled result of an actual implementation process. Depending on the complexity or goals of the institution involved, the implementation process can take anywhere from three months to three years or even longer. If the average implementation then requires eighteen months to complete, consider that there is a series of phases or steps that can be identified along the way. These steps do not necessary translate into a day-to-day list of things to do, but rather serve as a higher-level guidance system.

In the first step it is important to understand what it truly means to begin a student information system implementation. One explanation is that it means change is coming whether it is welcomed or not. Another explanation is that the institution will have a chance to adjust or redefine some currently existing business practices. A final explanation is that a group of dedicated individuals will have to work tirelessly to make the seemingly impossible possible. Regardless of which explanation may best suit the situation, one idea remains constant throughout them all and that is that no matter how

well prepared the individuals directly involved think they are before the process begins, more will be asked and required of them then they could ever possibly imagine.

The second step asks why the implementation is needed. The answer to this question is usually driven by the executive level of an institution and may not be widely understood by the more casual users of the current system. The factors that lead to this decision can be plentiful, but can be grouped together into similar areas: lack of advanced functionality, inability to report accurately, diminished support for current hardware of software.

The third step is the creation of the project team. This team will need to understand the current business processes and be empowered to make decisions based upon those processes that could impact the overall implementation. This group will be responsible for the project's successes and failures and will work closely with the software consultants over the upcoming months. Because of the time commitment that this group will be faced with, the institution should identify a staffing plan so that offices maintain coverage and services.

Before the implementation begins, there are several issues that should be taken into consideration that will soothe the implementation path. The fourth step in the process explains the need to conduct an analysis of the current business processes, identify the champion or sponsor for the project and determine how the team will communicate with the executive level of the institution. Each of these will help keep the lines of communication open and enable a forum for continued discussion.

The development of the project plan, or fifth step, may be the single most important step in the entire process. This document should ultimately identify the tasks

that need to be accomplished and when they need to be accomplished. The plan should be reviewed often and changes may be frequent and, if done correctly, it should keep the project on course. A first attempt to map the project plan may include tasks that are more global in nature, but as the project builds momentum and the team becomes embedded in the processes, the original global tasks on the plan will be replaced with more granular needs.

The sixth step, keeping the community involved, focuses on issues that are external to the project. The number of members on the project team will vary, but will certainly represent a small portion of the institution's overall staff. At some point though, members of the community-at-large will become involved in the project and all parties will benefit if these members have been updated along the way. Whether it is to develop good will or dispel rumors, a method of communication should be identified early and someone should be responsible for making sure that "progress reports" are passed along to those not working on the implementation.

Building a training matrix is the seventh step of the guide and it serves as a notice that the training component could become much larger than originally anticipated. Organization and attention to detail will aid in this process and it is not uncommon to have someone external from the project have ownership of training on campus. Consideration must be given to those end users that will enter data into the system and those that will only query information from it. The calendar of training for these two groups may be quite different as those that enter data may be required to support phases of the project once the building cycle is complete, but not yet available for use by the larger community.

The training matrix should be built independently of the business plan, but then added into it so that a global view of the project can be seen in one view. It may not be possible to even consider end user training until a later point in the overall implementation, but it is an essential component which may eventually become the first public viewing of the new system.

Step eight discusses the importance of time in the implementation. The business plan should be developed early in the project from a relatively high perspective and then should become focused on more granular needs as the process evolves. As this is happening, it is essential to review not only the business plan, but also the goals of the project as originally identified. In the early stages, it may seem possible to build, test and modify just about any want or need from the system, but the implementation cycle will begin to separate the possible from the impossible. When this happens, adjustments must be made to the plan and then communicated to those involved in the project. If this is not communicated in a timely manner, further difficulties will likely result.

The ninth step comes once the project has "gone live". The point at which the project is no longer being implemented may only represent the end of the first phase and the beginning of the second. This is a time to evaluate if the needs of the community are being met and if they are not, to develop a plan to meet them. This is also the time to identify those items that were abandoned during the implementation and identified as not being mission critical. A new project plan should be developed that captures these additional issues.

As end users become more familiar with the system, it may become necessary to train new users of the system or to retrain others. The original training matrix that was developed should also include a contingency plan that identifies the resources that will be needed to continue training in the future.

The final step serves as a reminder that it is the responsibility of the project manager to work with the project team. With an understanding of the different behavior theories, an understanding of how to communicate with the team, and an understanding (and sharing) of the vision for the project, the team should receive the support that is needed to make the project a success.

A familiarity of the ten steps will not guarantee a successful implementation due to the number of external factors that can influence the project and the team on a daily basis. The steps do, however, provide a foundation for managing a successful project.

The Intellectual Process

It is not uncommon to develop a bond with the people, places or things that we spend the most time with. The implementation of a student information system can take up to three years to complete and during that time the project can slowly become part of the manager's life. When the project ends, it will be necessary to slowly disconnect and begin to acclimate into life without the implementation. It is during this "down time" that a guide like this can be given life, especially if the project is viewed as a success. There may be very few people beyond the project manager who could identify how smooth the implementation was and how or where things could have been done differently. This is

the time to reflect upon the past and identify how things would be done differently next time.

Where the Steps Came From

The process for putting the ten steps together could only happen after having gone through an actual implementation of this nature. Unfortunately, the idea of the armchair quarterback does not apply in this situation. The average implementation process can last anywhere from three to thirty-six months and after dedicating that much time to the project, there are lessons that have been learned along the way. If given the chance, more than one project manager would like to turn back time and have the opportunity to do certain things differently. This guide gives those project managers that have yet to begin the process that chance. The guide will not implement the software for them, but it will help develop the vision of the project landscape that a successful project manager must have in order to manage a successful project.

Chapter IV

Enjoying Implementation in Ten Easy Steps
A Communication Guide for the Project Manager Implementing
A Student Information System

1. SIS Implementation---What It Really Means

A very wise person once said that implementing a new student information system is much like being presented with just the frame of a house and being expected to build it yourself. "You must become the carpenter, the plumber, the electrician and the roofer with no training and very few tools" (personal communication, April 2004).

There are many ways to interpret what it means to implement a new student information system. You could look at it from either a functional perspective (those who enter or query information in the system) or a technical perspective (those who maintain or support the system) and one of the largest challenges will be having those two sides communicate, as it can be difficult to find functional and technical staff that truly understand the role of the other. The functional perspective looks at the data system that they currently know and are probably very comfortable with and know that it is going to be replaced with a newer and possibly more sophisticated model. When the new system is purchased, essentially all that you begin with is a piece of software. A very sophisticated piece of software that resembles the frame of an un-built house. As the project leader, your job is to go into the frame of the house and make sure that the house is built according to the specifications and ensure that it is built on time. The structure is already there, you now just need to develop the house around the frame. If

you have never built a house before this may sound like a daunting challenge and you may want to rely on a carpenter to do some of this work for you. In this case, you assume the carpenter represents the technical perspective. These individuals must be better equipped to build the house, but in many cases, they speak a slightly different language infused with high tech buzz words and technical-sounding jargon. As it turns out, their job is to support the functional builder as the blueprints of the new house are traversed room by room.

As you examine each new room of the house, decisions must be made to plan for how the room will ultimately look. As you plan to drywall the catalog room, you question whether you will convert the catalog from your legacy system into the new system or manually build the catalog from scratch. When installing the plumbing for the registration room you decide if you will utilize the self service features or if you will begin with in-person registration only. And when wallpapering the data conversion suite you must decide how much wallpaper you need and if you have the resources to take all of the paper from the old house and put it into the new house.

As the project manager, your greatest challenge is to keep the project moving forward while keeping a synergy between the technical and functional sides. This synergy is developed upon the two sides' ability to communicate in a timely and effective manner. Without the open and ongoing flow of communication among all shareholders from the onset, the project may be doomed.

So, what does it mean to implement a student information system? It means a lot of hard work from a team of dedicated staff. It means understanding the way that you currently do business so that you can assess the best way to do business in the

future. It means understanding each facet of the project and knowing who to communicate with, when and why. It means always asking the next question because you often do not know what you do not know. It means sharing the progress of the project with the entire campus community. It means building a project plan to keep the team on task and on target. And, finally, it means understanding that the implementation never truly ends, the future just brings with it new phases of implementation.

2. Why Implementation And Why Now?

The decision to implement a new student system usually stems from the top of the institution (the executive level) and may or may not trickle down into each division and each department. One reason to make the move may be due to the fact that the current legacy system lacks the advanced functionality necessary to keep pace in today's market. Another reason could stem from the inability to report accurately from the current system or, if the system is aged, there may be diminished support for either the software or hardware. Once the decision has been made, it is critical that the information be shared with the campus-at-large so that all areas feel included. The implementation of a new student information system is a massive undertaking that will involve representatives from many facets of the campus. As the project manager, the project is best served if feelings of secrecy or exclusion are not present as inclusiveness is more powerful. This proactive approach will also help eliminate the eventual rumor mill which, again, will not help the spirit of the project. You will need to be publicly supportive of the decision to change systems at every opportunity presented to you.

3. Putting Together Your Team

For a student implementation to be successful, two things are essential; you need to identify the decision makers from the different functional areas that will rely heavily upon the system and then appoint them to the team. Ultimately, it will be the responsibility of these individuals to "build" the system and decide how it will function. Your group needs to understand not only their own functional processes, but they will need to have an idea of how other areas work as well. This is not to say that each member will necessarily become a specialist in a variety of functional capacities, but the project will benefit if multiple perspectives are shared along the way. Because the new system may be more integrated than the old, a diverse understanding of the way things are done in the present will be advantageous.

Once the implementation process begins, it will soon take on a life of its own. On-site training may begin once every six weeks and can accelerate quickly to every other week. And make no mistake; there is an incredible amount of work that must be done for the implementation to be called a success. Because of this, it is important that you clearly identify the level of commitment that each team member is expected to have. At some point during the implementation, individual team members may be devoting anywhere from 10 to 100% of their time to the project. They may be working on the project during the early morning hours, late into the evening and weekends as well, especially when a completion date is near. This level of commitment will need the support of the executive level of the institution because if a staff member is spending 100% of his or her time working on the implementation, that time is not being devoted to the job that they were hired to do. It is not uncommon to have a "backfill plan" in place

so that during peak times on campus and during the implementation, the staffing gaps are not as evident. You may face resistance in gaining approval for this plan since it addresses the needs of the future, but without one, your project may be doomed.

The benefit of a "backfill plan" is to help reduce the feeling of being overwhelmed by any member or members of the team. At the onset of the project it is not possible to identify exactly when backfill will be needed, but it is possible to evaluate the role of each team member in his or her individual departments and determine when the flow of business in that area is the greatest. Since it may be necessary to train any individual that will be part of a backfill plan, the earlier this is addressed the greater the likelihood that the backfill will be effective.

4. Several Things Before You Begin

One of the most important first steps may be to document your current business practices. By doing a business process analysis you will learn the ins and outs of the day-to-day operations on your campus. It is common to face resistance in taking this approach because the front line staff that is most directly involved in these processes may believe that the current approach is the best because it has been working well for years. What you may find, however, is that a process that currently takes fourteen steps to complete, can be streamlined to half if the right decision makers are able to look at the process from all angles. In these situations, it is common to hear someone say, "I didn't know we did that" and then proceed with a puzzled look. The business process analysis may not produce immediate results, but during the implementation and training processes, when these same processes are being discussed and developed, it

is crucial to have the implementation team speaking the same process language and conducting an analysis allows for that commonality. If the old adage that two heads are better than one holds any validity, then the more members who understand how the institution currently functions at a granular level, the better.

You must decide if the analysis will be led by either an internal or external facilitator and the key is to document the entire process. All participants should receive a copy of the final product and changes to the current processes can and should be made immediately if applicable. Another key step is identifying which processes should be reviewed. Make a list of the most common and most complicated processes in the functional offices and rank them in the order of priority because it may not be possible to address them all prior to the beginning of training. You may find that you currently know processes that should be changed, but the opportunity had never presented itself in the past. The implementation will provide a unique opportunity for change and the more work that can be done before the actual implementation begins, the greater potential gains you may find.

Another decision that must be made relates to the project champion or sponsor. When a campus makes the decision to begin an ERP, a project champion will be appointed. This is usually an executive level position that works to ensure that the project is moving forward from a very high level. This individual is usually not concerned with the day-to-day progress, but is more responsible for clearing any roadblocks that may come along. From the onset, it is important to identify what your method of communication will be with this individual. Will there be weekly or monthly meetings and who will participate? And how will the progress and peril of the

implementation be documented? As the project manager for the student implementation you should identify how project information will be communicated--to whom and how often--and make sure that schedule is followed. In many cases the ERP will have an overall project manager with module project managers reporting to that person. The role of the ERP project manager will be to communicate the needs of one team to another and help facilitate the acquisition of additional resources from external areas. If there is one thing that should never be discounted during this overall process, it is the importance of communication. Those at the executive level need to know what is happening with the student implementation regardless of whether it is good news or bad. Before the project takes on too much speed, you must agree upon who will meet and how often. There will be no one person better suited to communicate the granular needs of the student implementation than you and you will need direct access to the executive level.

Now that you have picked the team and identified the method and frequency of communicating with the executive level, it is important to take a step away from the project before you are able to truly move forward. The student implementation team may have anywhere from five to fifteen individuals working on it and each comes with a unique frame of reference. Before any directed implementation work begins, it is important to understand who the team is and to help them work together as a cohesive unit. The work that needs to be done during the implementation is difficult enough, behavior styles do not need to be an additional obstacle to communication.

A project of this nature will require total cooperation from every member of the team that has been assembled. It will be essential for the team to have effective

communication between themselves and to you in order for the goals to be achieved. Because of the diverse background of all the team members, having the team come together to participate in team building activities will enhance the strength of the team and their ability to communicate and understand each other and you as well. By understanding the behavior styles of each member, the team will gain strength and a new appreciation for their differences and they will begin to bridge any communication gaps that may exist.

When working with the team to learn more about behavior styles, it is important to keep the team engaged in the process while making it clear how the process will benefit the project. Team work can be challenging when the group is comprised of some individuals who always want to be the asker and some who always want to be the teller. Those that hide their emotions may be uncomfortable working closely with those that are constantly displaying their emotions. There are a number of instruments that can be used to work towards becoming a team that understands their personal similarities and differences and a team that embraces the elements of high performance.

The downside of not setting aside time for these types of exercises may not be evident in the beginning of the project, but when the team has been together month after month, working through difficult training sessions together, tempers and patience can wear thin and it is at this point that mutual understanding is most powerful. Once the project begins and then picks up speed, an interpersonal setback can have a devastating effect. Depending on the size of your institution and the goals of your implementation, the team may be working very closely together for well over a year, the

investment in teamwork will certainly pay off if it is planned at the onset of the project and the team understands the purpose and expectations.

5. Developing a Project Plan

One of the fundamentals of project management is the creation of a project plan. This document becomes the navigational beacon once the project begins to develop momentum. If the campus is involved in an ERP, that project manager will most likely be responsible for developing the overall project plan, but will need to rely heavily upon each module project manager for information and guidance. It is then your responsibility to develop a feasible plan structured with tasks, goals and due dates throughout the duration of the implementation to keep the project on target. From the onset of the student implementation, you should sit with key team members to develop this source document. This will become a weekly timeline that keeps the team focused. As the project progresses, it will become necessary to make changes to the tasks, goals or dates associated with them. When these changes are made the entire team will need to be informed as each member's responsibility will be adjusted accordingly.

There is no one best way to communicate the plan to the team or even to develop the plan itself. A variety of tools should be evaluated, including Microsoft Project, Excel, Word and Visio to see which works best for you. The way in which the project is driven---whether by task or by calendar---can help to determine the best tool or tools to use. No matter which direction you choose, you must make sure that each team member has access to the programs, files or shared drives so that there are no lapses in communication. When updates are made to these files you should notify the

team about what has been changed and where the new file resides. The small effort this may take will not compare to the frustration a team member will face if he or she is unable to locate an important document in a timely fashion.

Once the project plan has been put together the road ahead should begin to take shape. It will be important to decide upon the frequency of team meetings which should take place before the formal training begins and also during that time as well. These meetings become the forum where issues can be discussed and decisions can be made. Because of this, it will be important for the meetings to be structured both in meeting time and format. It may be advantageous to identify a standing meeting time(s) so that the team can block out the time from their calendars. It may also be advantageous for the meeting to follow a consistent format so that the team is able to stay focused.

One of the most important features of the meetings is that they are documented. If a template is created ahead of time, identifying who attended the meeting, the day and time it was held, agenda topics and relevant discussion points, and any action items that may have been created, a history of the project can begin to be captured and preserved. You may want to rotate each team member as being responsible for taking and distributing notes or you may be fortunate enough to have someone external from the project designated as the note taker. Either way, determine the deadline for note distribution and have the team read over the notes and comment on any areas that may have been missed or misinterpreted.

6. Keep The Community Involved

Given the number of individuals who work on any college campus, even the smallest of institutions will find that only a fraction of the overall staff is involved with the ERP. Because of this, it will be important to let the community know what is happening with the project on a regular basis. The student module implementation may take the longest amount of time of any other implementation and it will involve key individuals that will no longer have the availability that they once had. With these individuals being removed from the daily grind, other operations may suffer as a result, and with that other campus constituents may become frustrated with either a perceived lack of service or, at the very least, an increased response time for voice mail, e-mail, etc. It is impossible to explain to those not working on the project the amount of time and energy that must be dedicated to it, but you have a responsibility to not only acknowledge those individuals working on the team, but to also explain to the community the status of the project. This should not be done at too granular a level, but to the extent possible, updates should be shared widely. The updates can also serve to inform the campus of upcoming goals and milestones. Keeping the campus informed of the project's status will help create much needed "buy in" and an overall sense of good will at the institution during this unsettled time. This communication will also allow them to be involved as much as possible. Again, a backfill plan will also help to alleviate these situations.

As the student team reaches certain milestones, you should acknowledge those responsible and celebrate as often as possible. Each goal and milestone that has been achieved is a true triumph and would not be possible without a tremendous amount of hard work and dedication. Campus support for these occasions is possible if the

milestones are shared and more than just the team has an understanding of the work that is being done.

It may be beneficial to have the student team available at the onset of the project to have a question and answer session. As the project progresses, you may again want to bring the team together in a public forum to discuss the status to date. This environment invites questions that might not normally be asked in casual conversation or through e-mail. It also allows more individuals to be part of the process and progress.

Another means of communicating with the campus is through email and the Internet. You should establish a monthly email or newsletter that is sent to all employees which will help create the feeling of inclusiveness. Another option would be to create a web site devoted to the project where you could post relevant documents, team updates, and the project plan. This same web site could later be used as the communication method for the training sessions that many members of the campus will be required to attend. The project will have a number of specific target dates upon which certain functionality becomes "live" and is being used day-to-day. As these dates become closer, having a countdown clock added to a popular campus web page will keep the campus informed in a passive way.

7. Build A Training Matrix

Once the project is in full swing, it will be time to look further down the road and assess the needs of the institution once you are fully implemented. The challenge to train the campus so that they are able to work within the new system requires careful

planning, identifying available resources and an abundance of time. Your first step may be to reach out to small groups on campus and meet with them to find out exactly how they use the current system. From these conversations you can begin to understand exactly who will need to be trained and what areas they will need to be trained in.

Once you have this information, you can begin to build a training matrix that outlines the training topics to be covered, who will be doing the training and where the training will be held. The utilization of a web based training registration system will enable the process to remain fluid and timely. Here you can post relevant project information, and have users sign up for upcoming training sessions. You can also create an online evaluation form so that you can identify each user that attended training, the date and topic covered and have them evaluate the session's strengths and weaknesses. This information will be helpful to evaluate the current training system and can become the springboard for future modifications.

8. Never Turn Your Back On Time

As the project progresses, it may be necessary to adjust some of the original goals and dates that were created at the onset of the implementation. While everything may have seemed possible on day one, by the time you reach the mid-point of the project you may be looking at a separate timeline for the implementation of the newly identified Phase Two and Phase Three. The earlier you identify these changes the more prepared your team will be as tasks that have now been reclassified as no longer mission critical can be moved into a second phase of implementation and a revised

timeline can be created to keep the most pressing issues on target. This ensures that your team stays focused on the most important tasks at hand.

When you make these decisions, it is important to communicate them to all levels so that there is no misunderstanding at a later date. The ERP project manager will then be responsible for identifying if the decision to postpone implementation of a certain feature for an additional period of time has any effect on other modules that are also being implemented. Decisions like this will likely require additional discussions among various project managers working on the project (finance, financial aid, etc). You should also discuss these decisions with the functional training consultant from the software vendor. That individual is in the unique position of having been through multiple implementations and should be able to provide an educated assessment of the ramifications of your decisions.

9. Now That You're "Live", What Next?

Once you have reached the target date for implementation (of either a piece or the entire project) the process does not end. Inevitably, you will now be faced with the next phases of the implementation including the training of end users. Even when the additional phases have been successfully implemented and end user training has been completed, the project does not just end. It may take up to one full year or more to truly "test" the implementation and identify corrections to the system that may be necessary. Again, it is important for you to share this information with the campus as there are often misperceptions that the project is done once the deadline date has been met.

It is also at this time that the business processes of each department need to be evaluated as there may now be a change to the way the work is done. The work itself does not change, but the way in which it is processed may. These changes may create the need for staff to develop additional skill sets that were not needed before. And these changes may lead to the evaluation of staffing levels.

10. Things To Remember...

The implementation of a student information system will often leave the project manager wondering what is lurking behind the next corner as it can be an unforgiving adventure. There will be times when you feel that you have no control over the project and that the project is in complete control over you, but there are ways to improve your position. Remember that effective communication makes things happen. The student module project manager may be the only individual on campus that has a true vision of not only how the finished product will look and function, but also how to navigate from beginning to end. For the other members of the team, it is beneficial if your vision is shared and shared in a way that is understood by all. The entire group may not agree with your decisions or your methodology, but they can not begin to do so unless they understood what is being said to them.

Also, remember the fundamentals of behavior theory and know that it takes the commitment of an entire team to make the project a success. It is your responsibility to understand the dynamics of the team that you lead and the positive energy must first begin with you.

ChapterV

Summary and Conclusions

The ten steps identified in the guide are designed to assist in the implementation of a student information system. They will enable the project manager to frame a holistic approach to the project which should then create a clear view of the project's three main phases.

The first phase of the implementation actually begins before a consultant is ever met. The focus of the first phase is on steps one through four where preliminary work external to the implementation process is required. The goals in this phase are to help the institution understand what it means to begin this process and why it is being done at this time, to understand the requirements of putting together a project team and to understand the current business processes that exist at the institution. The work that is done in this phase will help not only the college community, but also the individuals that will be directly responsible for the project implementation. Some of these steps may not seem as imperative as others, but if the decision is made to routinely update the campus community from the onset of the project, the project should take on the support of others. As additional employees are brought into the mix, the ideas and concepts will not be foreign to them and will help to lessen the learning curve that will exist when making the change from one system to another. The key to this success is effectively communicating project updates on a regular basis.

The other two steps in the first phase are more closely related to the project team itself. If an average implementation can last between three and thirty-six months, the group of people that will be spending that much time together will need to be able to

work together in an effective manner. It will be important to choose members of the team that will have a functional understanding of the necessary business practices and are also open to the change that will be required during this time. The project manager will be charged to work closely with this team to meet the institution's goals and will have to fluctuate between a micro and macro-managed approach at times. To be successful, the project manager will need to be well versed in the principles of project management theory and also in the practices of the institution.

The second phase of the implementation takes place between steps five through eight. It is during this phase that the project plan and training matrix are built, that project successes or milestones are communicated and the true implementation work begins. While each institution will create a different schedule with their software consultant, some aspects of the process are universal. The student module consists of a series of smaller modules and each of these modules will lead to at least one training session with the consultant. The goal here is to be given an overview of the module and then apply institutional business practice and progressive thought so that the tables and rules that support the system can then be developed to meet the current or future needs of the institution.

After the training session with the consultant, the project team will then be responsible for building the system around the functionality that has been demonstrated. This work should already be identified on the business plan that had previously been created. The plan will need to be reviewed and possibly modified frequently as changes to the current ideology may need to be made based upon the work that has been developed with or without the software consultant. During the early

days of the implementation, the business plan may reflect work or tasks that have been identified at a higher level than the day-to-day operations currently function. As the project continues, a shift will take place and these higher level tasks will slowly, but surely, be replaced with items at a more granular level. Again, this is possible if the project plan is developed and viewed to be a guiding force for the implementation. If it is created and then never referred to, its usefulness will have been extinguished.

A training matrix will also be created during this phase of the implementation. During the project's early days, training may have seemed like the last thing on anyone's mind because of the work that needed to be accomplished before the idea of training anyone else could be approached. If project goals are being met and the team is functioning well together, the time to think about training end users will soon arrive. For the most part, there are two main types of users that will need access to the system: those that maintain data and those that query data.

Training for those that maintain data will usually occur first since their work in the system may begin before the entire complement of modules has been fully implemented. When developing the matrix for this training, adequate time must be set aside because it is not possible to forecast how well users will make the transition from the system they currently know to the system that will originally seem foreign to them.

Training for those that will only need to query information can be conducted much closer to when the new software has gone live. The requirements for this group will be less and there should be fewer transitional issues identified. This group may, however, require more attention due to their reduced familiarity with the system as compared to the group that enters data. If the training matrix is developed and

communicated to those that will be required to attend, the chances for overall success will improve.

The remaining steps in phase two speak to having a keen awareness of how the project is being viewed across campus and how the project is being tracked during the implementation timeline. The fundamental constant between these two issues is communication and the ability to share it effectively among diverse campus groups. The project manager will need to maintain constant lines of communication with the project team so that the group shares a similar vision. While some members of the team may be working on segmented portions of the module, the project manager will have a vision of the entire project and will know how one piece fits into another. In a healthy project environment, that vision should come into focus by viewing the project plan that is constantly being maintained to adapt to the changes identified along the way. The vision should also be abundantly clear during the frequent team meetings that will be held during the implementation and in campus wide updates.

The project's final phase focuses on life after the implementation and need-to-know information that will make it possible to make it through the process. After many months of implementation, the milestones that were originally identified during the more naïve early days may not be the same milestones that have been celebrated along the way. This is not uncommon as unforeseen gremlins will appear throughout the project making what may have once seemed possible, impossible. Another reason that the list of additional things to do may grow is because of the complexity of the implementation. Since many institutions may not have had the opportunity to experience a project like this in the past, most teams are not always keenly aware of what to do when technical

or functional issues arise. When faced with these situations, it may at times be necessary to reevaluate those items that are mission critical and work to ensure their successful path. For those items that are not identified as being mission critical, it may be that a post-implementation timeline will need to be developed so that these features can be incorporated into the system.

This communication guide is designed to assist the project manager charged with implementing a student information system. The steps included focus more on the manager, team and institution than the actual software itself. It is not designed to be a user's guide and demonstrate how to build a table of values or a set of rules that will help to make the system work. It is designed to focus on the human resources by providing a framework to move forward based upon what would or could be done differently if given the chance to start over.

Recommendations for Future Research

An institution of higher education has its own personality in much the same way that people have their own personalities. There may be similar characteristics among a group of diversified schools, but they are ultimately unique in their own way. Because of this, it is difficult to apply a single methodology to a project that has so many variables, but that is what institutions face when they contract with a software vendor for implementation consulting. The needs of the two year community college in Wyoming are likely to be vastly different from the multi-campus state university system in New York and, unfortunately, they will be exposed to the same training because the software

vendor uses a standard approach. The investment on the part of the institution is great from both a human and financial resource perspective and if the initial training sessions are not productive the project can feel the devastating effects. The software vendors need to realize that the approach that is taken when demonstrating and teaching the software should be more in line with the approach that is taken to teach the institution's students. In another industry this may not be as important a cause, but in higher education it is. It is also important to understand what makes each client unique so that they are able to maximize their resources. Because of this, additional research and development is needed on the part of the software vendor to overhaul their methodologies to become more in tune with the needs of their clients.

Additional research and development is also needed in the communication guide itself. The ten steps presented here are designed for an average implementation at an average institution, but additional benefits could be realized if the guide was to be adapted beyond its original use. It is quite possible that there are similarities among all private institutions, for example, in the way they go about an implementation project. The same may be true of all community colleges, medical schools or law schools as well. If research was conducted to examine the specific path that institutions take during the project, as well as their individual accomplishments and setbacks along the way, the guide could then be adapted accordingly making it an even more powerful and beneficial tool.

Countless books and articles have been written about project management and how it is applied in different industries, but reading about different management theories will not necessarily have a positive impact on the project that you will be leading. The

ten step communication guide provides the unique perspective from someone that has previously forged the same path and successfully made it through to the other side. As more and more institutions begin to identify the need to upgrade their current student information systems, the need to reexamine the overall implementation process will increase as well. This guide does not guarantee success based upon its words, but if followed, the path to success will be made that much easier.

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