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# THE ROLE OF PROJECT ACCEPTANCE IN THE SUCCESSFUL PEOPLESOFT HUMAN RESOURCES MANAGEMENT SYSTEM IMPLEMENTATION FOR THE KENTUCKY COMMUNITY AND TECHNICAL COLLEGE SYSTEM

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## Abstract

*In July 1998 House Bill 1 formed the Kentucky Community and Technical College System (KCTCS). A statewide ERP information system was initiated to seamlessly integrate the functional requirements of Human Resources, Student Administration, and Financial Systems for all KCTCS institutions statewide. This paper describes how the project was planned, designed, and implemented in the short span of 35 months, ahead of schedule, operationally on target, and \$3,775,000 (21%) under budget. The lessons learned draw attention to the fact that attention to detail in the planning, resource allocation, and schedule execution were important, but not the key reasons for the project's acceptance. As Umble and Umble (2002) point out, there are four primary reasons why ERP implementations fail at the time of project acceptance: inadequate education and training, poor leadership from top management, resistance to change, and unrealistic expectations. This paper shows how these potential pitfalls were addressed.*

**Keywords:** Project acceptance, technology adoption, technology implementation., ERP, KCTCS, PeopleSoft

## Introduction

In July 1998, under the authority of Kentucky Postsecondary Education Improvement Act of 1997 (HB 1), the Kentucky Community and Technical College System (KCTCS, <http://www.kctcs.edu/>) came to life. Today KCTCS consists of 16 administrative districts with 62 established (or under construction) community and technical colleges. Enrollment was over 66,000 full- and part-time students in Fall 2002 (Armstrong 2002). KCTCS provides access to the higher education needed for jobs in the global system of commerce, industry, and technology brought about by the Internet and other advances in telecommunications (CITE 2002). With the passage of HB 1, there was suddenly a need for a statewide ERP system with modules able to support the Financial, Payroll, Human Resources, Institutional Advancement, Student Records, and Financial Aid functions of KCTCS. These modules were implemented according to the timetable shown in Figure 1.

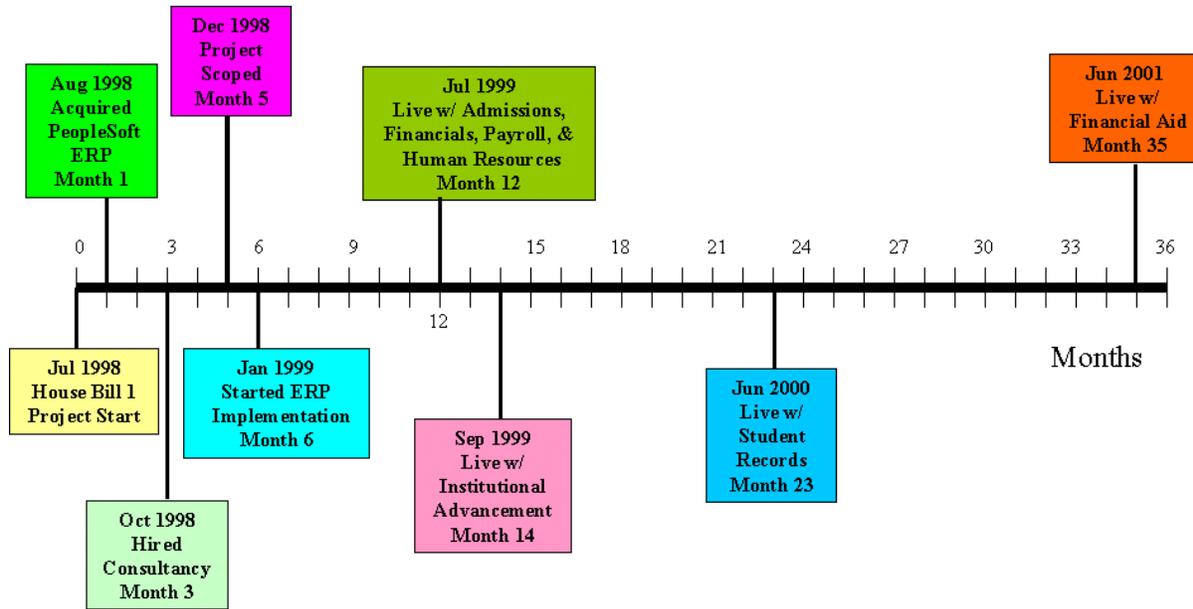


Figure 1. Software Module Implementation Timetable, As Delivered

## Approach

KCTCS senior administrators provided a general overview of the PeopleSoft ERP implementation initiative. They also provided documents prepared in the course of the 36-month implementation (Schedule 1, 1998), including project schedules (completed with Microsoft Project) and KCTCS Status Reports for the various project domains under their responsibility. Additional documentation included information on contracts and outsourcing activities along with General Issues Logs. Follow up information and answers to questions were obtained from additional meetings and e-mail exchanges.

Written commentaries that invited self-expression were used to obtain a non-judgmental after-the-fact user perspective of the entire implementation from certain project implementers (and now users) of the new ERP system. Initially, a group of twelve employees had been designated to work in conjunction with project managers from a consultancy on the overall project. The team members were separated into three team sub-units. One sub-unit worked primarily on the Human Resources function, the second on the Payroll function, and the third on the Benefits function. Efforts were made to contact a team member from each of these functional areas. In the end, one study participant was an officer who was also a functional team member for the implementation of the Human Resources module. Another participant had worked primarily on the implementation of the Payroll portion. A third team member (and now user) consulted for this study had been involved with the Student Administration side of PeopleSoft, but not the Human Resources module. The fourth participant was a member of the Benefits implementation team. This individual later became responsible for day-to-day operations of the retirement programs at KCTCS.

## Literature Context

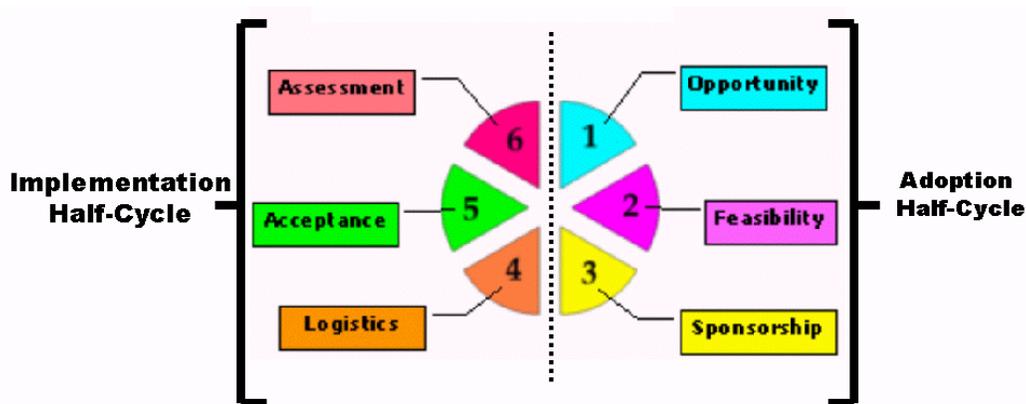
As recognized by Ribbers and Schoo (2002), there is only limited empirical research on the critical success factors that can deterministically guide and shape ERP initiatives to the point of being able to ensure a project is successfully managed. For this study, a successfully managed ERP is defined as one that hands over to management - on time and within budget - an enterprise knowledge transfer engine that delivers sound business functionality. A search of the indexed research literature revealed little published research on the management of public sector ERP projects like the one presented in this study. Similarly, what little work has been published on ERP projects in educational settings has not been of a definitive nature. In 1996, as PeopleSoft was beginning to develop its Student Administration application, the University of Wisconsin at Madison (<http://www.wisc.edu/>) became one of the first PeopleSoft ERP higher education customers (Waldman 1999). A PeopleSoft implementation by the Texas Education Agency sought to better manage a network of 1,200 school districts serving four million K-12 students (PeopleSoft

1998). Sturdevant (1999) conducted interviews with officials on the Wisconsin Technical College System's (WTCS) 11 campus PeopleSoft ERP implementation. These interviews took place halfway before the completion of the project, and at a time when the project was already six to eight months behind schedule due to mismatches between the capabilities of the software and the discovery of different needs of the college.

Bonnal et al. (2002) reviewed life-cycle models applicable to technical project management, and differentiated between process-, control-, quality-, risk-, and fractal-oriented project life-cycle models. Within the process-based approach, Bonnal et al. (2002) also differentiated between two major project phases: *a project adoption phase* and *project implementation phase*.

Kumar et al. (2002) in turn addressed organizational behavior and innovation adoption research work within ERP projects. They identified a project *post-implementation phase* within Bonnal et al.'s (2002) implementation half-cycle, one important enough to be separately recognized as an Assessment phase. Essentially, this Assessment phase ensures the new capabilities enabled by the ERP implementation are specifically recognized in some form that can be tracked and quantitatively measured. Without it, there would be no point in undertaking the ERP implementation in the first place. As Adam and O'Doherty (2000) report, as many as 45% of all firms *perceive no improvement* whatsoever even after a successful ERP implementation, and 43% claim *no* business process cycle reduction. Not surprisingly then, in the absence of emphasis on a specifically identified project Assessment phase, Jugdev and Thomas (2002) note that over the last 30 years of project management research, there has not been much advancement past simple critical success factor lists and towards more holistic frameworks.

This study and a companion work (Blades et al. 2003) adopt and adapt this work by Bonnal et al. (2002) and Kumar et al. (2002). Figure 2 establishes the presence of two project management half-cycles, one for technology adoption and the second for technology implementation. Each half-cycle has three identifiable phases that are fixed in sequence but variable in their relative workload, duration, or importance. The first three phases of *Opportunity*, *Feasibility*, and *Sponsorship*. The last three phases, *Logistics*, *Acceptance*, and *Assessment*, incorporate the implementation and post-implementation phases identified by Bonnal et al. (2002) and Kumar et al. (2002).



**Figure 2. The Six Phases Within the Technology Adoption and Technology Implementation Project Management Half-Cycles**

Figure 2 includes an *Assessment* phase to address the PMBOK® expectation (Globerson and Zwikael 2002) that a project manager will serve all four project life-cycle components of *initiation*, *planning*, *execution*, and *closure*. It also includes an *Acceptance* phase. According to Umble and Umble (2002), there are four reasons why ERP implementations fail when they reach the fifth phase of Figure 2—*Acceptance*. Similar experiences have been related by Markus et al. (2000). The reasons are:

1. *Inadequate Education And Training.* Employees are not adequately trained to take full advantage of the new system capabilities, and otherwise fail to understand how to fully use the ERP in the organization's daily operations.
2. *Poor Leadership From Top Management.* Top management does not demonstrate a strong commitment to the project, and so fails to plan adequately for change.

3. *Trying To Maintain The Status Quo.* Employees will experience a natural tendency to view a new project initiative with fear and uncertainty.
4. *Unrealistic Expectations.* Both managers and workers underestimate the necessary project effort and too often believe that performance will begin to improve almost immediately.

## **KCTCS and the Six-Phase Project Management Model**

The section below presents each of the six phases of the theoretical half-cycles of Figure 2 in the context of the KCTCS PeopleSoft ERP implementation.

### ***Opportunity and Value***

Immediately upon passage of HB 1, KCTCS sought accreditation from the Southern Association of Colleges and Schools (SACS). SACS appears on the U.S. Department of Education list of recognized non-governmental, peer evaluation-based accrediting agencies for educational institutions (U.S. Department of Education, n.d.). Having achieved the SACS accreditation, the KCTCS Board of Regents beginning on July 1, 2004 will award degrees to all KCTCS students completing an associate degree program. Previously, the University of Kentucky Community College System (UK-CCS) had awarded these degrees. However, SACS accreditation criteria provide that “the governing board of an institution of higher education must have among its responsibilities the granting of degrees,” and further that “the board must not be subject to undue pressure from political, religious or other external bodies.” (SACS Criteria, n.d.). The SACS accreditation criteria also states that this responsibility cannot be shared by two boards: “the educational function of an institution must not be controlled through the use of budgetary techniques or controls by financial officials outside the institution” (ibid.). These SACS safeguards made it necessary to clearly distinguish between the KCTCS Board of Regents and the University of Kentucky Board of Regents (KCTCS Degrees, n.d.) with the implementation of separate ERP systems.

### ***Feasibility***

Selected project feasibility aspects related to technological, economic, and organizational considerations are briefly described below.

#### **Technological Feasibility**

Consideration was given concerning whether to purchase “best-of-breed” software from various vendors versus an integrated solution from a single provider. The KCTCS stakeholder consensus view to select an integrated solution finds support in the literature. Hecht (1997) believes that integration packages are better because they reduce the necessity “to reconcile data across modules, support more detailed drill-down analysis, and allow for consolidation of system tuning, backup, and other maintenance activities” (Hecht, 1997, p. 2). KCTCS solicited proposals from ten different software companies. Only PeopleSoft (<http://www.peoplesoft.com/>) and SCT (<http://www.sct.com/>) responded. In addition, KCTCS staff reviewed hardware requirements, determined where to centralize what, decided what technology functions could be farmed out to the various KCTCS sister campuses, and studied how to build and support the statewide information system department mandated by HB 1 when staffed with only a small number of qualified professionals.

#### **Economic Feasibility**

A Return On Investment (ROI) calculation was not attempted in the initial economic feasibility planning of the ERP project. The in-house view that surfaced from the interviews was that ROIs for any start-up project can only be assessed with results involving intangibles. When asked directly, project participants felt KCTCS could have assigned some possible ROI values to the ERP implementation. At one point when preparing the detailed project budget, KCTCS did consider estimating the value of a single-vendor integrated system over a fragmented best of breed implementation of the type encountered by the WTCS PeopleSoft ERP project (Sturdevant 1999), but did not further pursue the matter.

## Organizational Feasibility

The implementation of the KCTCS HRMS module (as well as the remainder of the ERP) because of its size and legislative urgency faced some organizational challenges that few statewide college systems will ever experience. The decision in favor of an enterprise-integrated package for all administrative and physical facilities was in the eyes of the stakeholders an easy one. The reasoning was that one couldn't otherwise expect the original 28 separate institutions that had been operating their own systems to be able to provide the same statewide functional interface to all KCTCS personnel mandated by HB 1.

## Sponsorship

Sponsorship was provided by the official mandate resulting from the passage of HB 1. Normally, sponsorship as a phase serves to obtain the buy-in of senior management on a project initiative. It also sees to the apportionment of project authority and responsibility on the shoulders of a designated Project Director. Here also monetary and staff resources are allocated and general parameters on deliverables and timetables set. The State Treasury was the financial angel of the project. To implement the new system KCTCS received non-recurring budget appropriation monies tied to HB 1 from the state legislature. In the interest of apportioning authority and responsibility for the project implementation, a Steering Committee was formed. Members consisted of high-level employees from Financials, Human Resources, and Student Services, along with the Project Director.

## Logistics

The implementation was a daunting logistical endeavor. KCTCS have to start from scratch configuring software for the complex human resources requirements of approximately 4,000 employees. Oracle was selected as the database, UNIX as the operating system, and of course the various PeopleSoft modules of Figure 1 as the integrated ERP software solution. Hardware such as production-size servers was secured from IBM. Interim employees made the majority of the purchasing decisions.

Markus et. al. (2000) report that high-quality data along with good reporting procedures are simply essential for the success for any ERP implementation. Indeed, these factors helped with the KCTCS implementation. During the course of the KCTCS project, the overall strategy as well as issues tracking used detailed project schedules created with Microsoft Project. General Issues Logs and periodic KCTCS Status Reports were also used extensively. Issues large and small were documented, including the "need to notify vendors of KCTCS address change" (KCTCS General Issues Log, 1999). The Status Reports had sections labeled *Accomplishments This Week*, *Tasks Planned For This Week Not Completed And Why*, *Next Week's Plans*, and *Major Issues*. Entries were very detailed. For example: *Prototype the following tables: National ID, Regulatory Regions, Location Table, Job Code Table, Department Table, Salary Plans/Grades* (KCTCS Status Report, 1999). Attention to detail is one reason why the Project Director believed that there were no major logistical setbacks: "things went pretty smoothly."

## Acceptance

This section discusses the four reasons given by Umble and Umble (2002) why ERP implementations fail when they reach the fifth phase of Figure 2--Acceptance.

## Education and Training

Umble and Umble's (2002) first Acceptance issue, *Inadequate Education And Training*, did not express itself in the KCTCS project detailed in this study in a harmful way. In the eyes of the study participants, this was because, as an educational institution, KCTCS is inherently receptive to training. Initial training was provided by the consultancy charged with the turnkey project implementation. In the case of the HRMS module, training dealt with just entering data and running reports. No explanations of how the various systems worked together were offered. This approach created some resentment voiced independently by all three project participants approached on the issue of training. The schedule pressures, the scope, and the qualifications of each individual were all perceived as constraining the ERP implementation and subsequent usage of the software. Markus et. al. (2000) points out that end-user training is usually one of the last events to occur in an ERP project, and is often rushed and shortchanged when in reality extensive follow-on training is often required. Therefore, problems often were handled reactively when with better training they might have been prevented. As one implementation team member pointed out:

*“Depending on the type of training you received, the reactions at the college varied. I guess since I was on the implementation team, when I came back to the college, I had sufficient training so everything went smoothly. However, there were some instances where the training was not sufficient and this caused several issues over a period of time.”*

Markus et. al. (2000) associate personnel difficulties with negative outcomes in the Acceptance phase. Difficulties encountered by KCTCS involved performance problems, errors made by the users placing data into the system, turn-over of personnel or having to increase staffing levels, a need for transitional manual procedures for tasks that had previously been automated, and the lack of accessible knowledgeable help. Indeed, as one project participant stated:

*“It was difficult to implement and run the system originally with so few team members, of whom few were dedicated only to the implementation project. This made for long hours for a very long time for those of us who were “super users”, as we often acted as the help desk for those first few months.”*

By June 2000 when the Student Records module went live, KCTCS had abandoned the consultancy training and instead developed its own training procedures and staff. At the time of this paper, the training staff has begun producing high-quality user manuals on its own.

### **Leadership from Top Management**

The second Acceptance issue identified by Umble and Umble (2002), *Poor Leadership From Top Management*, was pre-empted by the fact that there was no invested upper management present at the time the statewide ERP implementation was first contemplated. There was not an issue of poor leadership from top management; rather, there was no top management. The President and Chancellor of KCTCS had not yet been hired when the ERP project was first initiated. This fact essentially left the implementation to be headed by the consultancy, and arguably in the end contributed to the success of the project because there was no divergence between the recommendations of the consultancy and the impositions of internal leadership.

The Steering Committee did meet semi-monthly with the Project Director to address concerns and track progress along to determine policy and make the necessary operational decisions. To aid in the planning and implementation of the project, senior project managers from the contract consultancy as well as representatives from the hardware and software vendors provided on-site guidance to KCTCS on a sustained basis. Additional assistance was sought on occasion from the Governor’s Office of Technology.

### **The Status Quo**

As for Umble and Umble’s (2002) third Acceptance issue, *Seeking To Maintain The Status Quo*, the sunset provisions of the HB 1 legislation provided a persuasive argument against seeking to maintain the status quo. The legislative mandate made no provision for the issuance of degrees, the funding of retirement benefits, or for the issuance of paychecks, other than under the authority of the new KCTCS Board of Regents. If the project did not go forward, degrees would not be granted, benefits vested, or pay issued.

The Project Director noted that the ERP project at first was a difficult one in the eyes of many employees. Key reasons were the speed at which the implementation took place, the centralization of student records which deprived some employees of their sense of ownership of the data, and the rapid changes involving one’s daily routines. Also, the Project Director felt that the process itself became a lightning rod for employees to express concerns that did not have anything to do with the KCTCS project. As time passed and the evidence of a successful implementation of the ERP grew, employees gradually became accustomed to using the new modules, and resistance in favor of the status quo rapidly decreased.

Human Resources is often subject to numerous (and sometimes conflicting) requests for information from any number of different parties. To the frustration of ERP users, how the information is accessed and presented is often at the mercy of the design and security configuration of the underlying ERP databases. In the KCTCS case, resistance was often rooted not in love for the old system, but lack of appeal of the new system. For example, if a department chairperson needed a report concerning the salaries of departmental instructors, such a report had existed in the old HRMS system, but in the new could only be made available with considerable effort. Another example named was having to switch between more than one display to view an employee’s salary and benefits when previously a single screen had been needed. Still, in the end, the KCTCS staff perceived the new reporting

capabilities to be a vast improvement over the previous system. The added reporting flexibility also provided staff with a sense of ownership of the data and participation in the decision making process that had not been possible before. Overall these factors greatly facilitated their acceptance of the new system. As one study participant noted:

*“This [new system] gave the colleges, and the system as a whole, autonomy in these systems not experienced under the legacy HRMS/Benefits/Payroll situations under the state and UK. Previously, to correct any “mistakes” in benefits, one had to deal with the legacy system and all the bureaucracy that came along with it. Under PeopleSoft we were able to anticipate and correct problems before an incorrect check was finalized. By July of 1999 we were able to produce checks that were correct regarding pay, taxes, and benefits. The fact we had so few manual check requests point directly to the positive end of the project.”*

## Expectations

Lastly, on Umble and Umble’s (2002) issue 4, Unrealistic Expectations, the existing expectation threshold was low because the system being replaced either did not exist at all in a computerized form at a number of KCTCS locations, was not fully automated at others, and otherwise had few friends. The new system in whatever form realized was expected to be an improvement. In hindsight, as the magnitude and complexity of the project unfolded, the expectation came to be seen as naïve. The actual complexity of the KCTCS personnel system cannot be underestimated, for the newly developed college system had to accurately incorporate and continually track the benefits of no fewer than three primary personnel classification systems: former University of Kentucky personnel, 18As/151Bs (“state workers” who “crossed over” to the college), and “regular KCTCS” employees. Each classification had its own set of often intractable regulations. For example, faculty or staff labeled as 151B may accrue comp time, while “KCTCS” personnel earn “flex time” hours which are not formally recorded and must be used up within two pay periods or they are lost.

## Assessment

The major goal for KCTCS was to get the ERP working as soon as possible so as to permit 28 separate institutions to begin operating as one cohesive system as quickly as possible. In the end, not only was the entire project completed in 35 months, it was also under the projected budget of \$18,000,000 by about \$3,775,000 (21%). Examples of the costs incurred versus budgeted amounts are: \$4.6 instead of \$9.0 million for consulting services fees; \$2.2 versus \$2.5 million for the PeopleSoft software licenses; \$620,000 instead of \$1.5 million for the Oracle database licenses; and \$575,000 versus \$1.5 million for computer and network hardware.

Once the ERP system was brought online and the comfort level the staff with the new system increased, cost reductions in recurring and anticipated future expenses were sought. These cost reductions involved both outsourcing in-house functions, and repositioning earlier outsourcing decisions. For example, the day-to-day server hosting activities were at first outsourced to the University of Louisville. Today, they are performed under contract by a third party. Other functions, such as printing W2 Tax Statements and employee semi-monthly salary statements, which had earlier been kept in house, were outsourced.

As had been the intent of HB 1, the new ERP system has assisted KCTCS in providing uniform educational opportunities and personnel administrative procedures statewide that earlier had been offered in fractured form at single local or regional locations. The new KCTCS system had the flexibility to be extended and adapted as needed, another design purpose of HB 1. For example, KCTCS on April 15, 2002 announced the physical formation of ACT workforce development centers at four new locations (KCTCS announces opening of ACT Centers, 2002). Additionally, to meet the training needs of local employers such as Osram Sylvania Inc., a virtual center was been established at the KCTCS System Office in Lexington, Kentucky. These new centers were added transparently to the new KCTCS ERP system. In addition to this new flexibility, the following intangible benefits of the new KCTCS ERP system were realized (after Allard, 2002):

1. *Ease of revision/realignment:* It is now seen as easier for KCTCS to either update or revise pay and benefits on a statewide basis. Error awareness is greater, and so errors are identified and corrected earlier, at a lower cost and man-hour loss.
2. *One database, one message:* All employees are receiving the same message about their pay and benefits. The unified statewide dataset ensures all employees see themselves as strategic assets of a larger entity.

3. *Time for more important work*: For example, designated KCTCS employees are now able to find important HRMS information on job functions, salary structures and performance evaluations on a statewide basis, something that could not be done before. Time is saved because employees now have access to updated forms and consistent submission procedures that can be acted upon by a supervisor in a more timely manner.

## Conclusions and Project Management Implications

This paper:

1. Serves to clearly differentiate between the Project Adoption and Project Implementation of ERP systems in a way that is easy to understand and visually appealing (Figure 2).
2. Extends the process-based Project Management Model identified by Bonnal et al. (2002) and Kumar et al. (2002) into six well-defined phases, three in a half-cycle related to Project Adoption (Opportunity, Feasibility, and Sponsorship), and three in a half-cycle related to Project Implementation (Logistics, Acceptance, and Assessment).
3. Adds to the limited case literature of successful ERP implementations in the public sector, and also helps fill the literature gap in ERP project management in educational settings.
4. Shares some of the valuable experience acquired by the successful KCTCS project managers and implementation participants, lessons that can be applied to future projects. Below are the key stewardship issues as expressed by the Project Director in synthetic form one year after the KCTCS project had been completed:
  - a) Watch out for mission creep.
  - b) Use and praise your best people.
  - c) Obtain top-management support for the project.
  - d) Ensure that there is sufficient funding for the project.
  - e) Hire the proper consultants for the areas of the project in which you lack expertise or experience.
  - f) Conduct the ERP implementation in “plain vanilla” form: only address the essential modifications that are required.
  - g) Take the time to select the best software for the project. Do not ever select the software strictly on functional recommendations alone.
  - h) Recognize that ERP Systems are not simply technical projects, they are people projects that implement change.

These observations closely reflect those of Umble and Umble (2002) and Hartman and Ashrafi (2002) and offer a national model for directors of project initiatives that are similar to the one undertaken by KCTCS.

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