Key Considerations for Successful Outsourcing of IT Functions in Higher Education

Emilia Kancheva, INPUT
Many institutions of higher education have been reluctant to outsource their IT functions for fear of losing control over a vital resource. This fear is even more pronounced when IT is an integral part of delivering a mission-critical product or service. In addition, colleges and universities go to great lengths to differentiate themselves from the commercial world by placing special emphasis on job security. Outsourcing is often believed to undermine this principle.

However, higher education's need for IT resources—not just infrastructure resources, but a lengthening list of new products and services—will continue to grow at a fast pace. Various factors will drive substantial growth in IT requirements in higher education over the next few years, including:

- the transition to enterprise resource planning software to link administrative, financial, and student-related records electronically;
- Internet-enabled, interactive, distance-learning systems requiring new IT capabilities, including enterprise Web portals for course management and for student/faculty interaction;
- continued interest in and demand for postsecondary education by individuals, corporations, and government; and
- the continued pace of change in technology, including advances in speech recognition, video processing, collaboration, advanced simulation, electronic books, and Internet-enabled, hand-held devices.

Higher education may consider one or more forms of outsourcing IT operational services to deal with increasingly complex and time-sensitive demands. By considering the experiences of their peers and taking certain proactive steps, institutions can avoid common problems and ensure greater success when outsourcing IT functions.

### Highlights of Outsourcing

The concept of outsourcing has existed for many decades under different names. Outsourcing was called “facilities management” in the 1960s and 1970s and “systems operations” in the 1980s and 1990s. Generally speaking, outsourcing can be defined as a long-term (greater than one year) contract between a customer and a vendor in which the customer delegates all, or a major portion, of an organizational operation or function to the vendor.

Today, IT outsourcing vendors provide a variety of services in support of customers’ information systems and electronic business requirements. The vendor can plan, control, provide, operate, maintain, and manage any or all components of the customer’s information systems environment (equipment, networks, applications systems), either at the customer’s or the vendor’s site. The equipment involved may be owned by the
customer or the vendor. In some markets, such as that of the U.S. federal government, these options are described by the terms “COCO” (contractor-owned, contractor-operated) and “GOCO” (government-owned, contractor-operated).

The critical components that define an IT outsourcing service are

- the customer delegates an identifiable area of IT operation to a vendor;
- a single vendor is responsible for performing the delegated function;
- an intended, long-term relationship exists between the customer and the vendor in which (1) the contract term is for at least one year and (2) the customer’s intent is not to perform the function with internal resources; and
- the contract may include non–information-systems outsourcing activities, but information-systems outsourcing must be an integral part of the contract.

**Reasons for Outsourcing in Higher Education**

In a recent EDUCAUSE Center for Applied Research (ECAR) survey, higher education institutions indicated operating efficiencies and lack of in-house IT skills as the primary reasons to outsource (see Figure 1). These are also the main reasons why commercial and government entities outsource. Overall, cost savings ranked relatively low as a reason to outsource among survey respondents. However, given their greater focus on cost savings, more budget restrictions, or both, public institutions placed higher importance on cost savings than private colleges and universities.

When the ECAR survey responses were analyzed by institution type, some specific concerns emerged as more important than others. Lack of in-house skills as a reason to outsource was most pronounced among baccalaureate (BA) institutions. Master’s (MA) institutions were more concerned than the rest with operating efficiencies. Institutions that award associate’s (AA) degrees were most concerned with cost savings and access to innovative services.

**Figure 1. Reasons to Outsource by Institution Type**
Outsourced IT Functions in Higher Education

Among those higher education institutions that already outsource IT functions, there is minimal differentiation in type of functions they outsource. According to the survey, the functions most frequently outsourced are almost evenly distributed in terms of percentages, with IT infrastructure, application services, and e-learning being most frequently outsourced.

However, with regard to type of institution and outsourced IT functions, the survey data revealed significant differences among certain categories of respondents. For example, there is a wide divergence of view between public and private institutions regarding the suitability of distributed services and e-learning for outsourcing. Public community colleges were most positive about outsourcing e-learning functions. Large private universities, whose primary commitment is to research, show more interest in outsourcing e-learning and are more inclined to maintain direct control of their IT networks internally. Private universities are much more likely to outsource functions not directly related to instruction, such as network services, network operations, and infrastructure operations.

As shown in Figure 2, the most common type of outsourcing among research institutions was e-learning, and the least common was distributed and application services. Of all institution types, BA institutions reported the highest outsourcing levels in the area of IT infrastructure. The areas least outsourced by BA institutions were distributed services and e-learning; business process outsourcing was nonexistent (0 percent). Finally, community colleges showed greater enthusiasm to outsource in almost all areas compared to BA colleges and universities, except in the processing services area, which is their least-preferred area for outsourcing.

Figure 2. Outsourced Function by Institution Type
Major Problems of Outsourcing IT Functions

When asked to identify the major problems encountered in the process of outsourcing IT functions, survey respondents ranked implementation problems the highest. While the problems ranged in scope, the primary concerns cited were

- vendors did not fulfill their promises;
- implementation took longer than expected; and
- the project went over budget.

Government and commercial clients experience similar problems when outsourcing IT functions. Poor project management and insufficient requirements management, particularly when a new IT function is being outsourced, are usually the culprits.

Private institutions are more likely to suffer from implementation issues than public institutions. Private institutions also are more likely to encounter lack of cooperation among internal units. Successful implementations occur with the most cooperation and communication across all affected units. However, public institutions appear to experience more problems with vendors lacking an understanding of the specific needs of higher education. Public institutions also suffer slightly more often from technical problems, flawed internal processes, and resistance from collective bargaining units.

Different types of institutions encounter different problems and issues when outsourcing IT functions (see Figure 3). Research institutions perceive the biggest issue to be that vendors do not fulfill their promises satisfactorily. MA institutions are most concerned with long project implementations. BA institutions are most likely to suffer from budget overruns and technical problems. AA institutions most frequently encounter lack of cooperation among internal units.

Figure 3. Outsourcing Problems and Issues by Institution Type
What It Means to Higher Education

In general, organizations go through four key stages of project implementation when outsourcing:

- problem identification and evaluation,
- planning and vendor/system selection,
- implementation, and
- post-implementation assessment and realignment.

Because of the specific concerns regarding IT outsourcing in higher education, an extra step is introduced in this process: consensus building (see Figure 4).

**Figure 4. The IT Outsourcing Process in Higher Education**

The common problems discussed in the previous section occur at different stages of the IT outsourcing process. Early recognition and elimination of these problems can dramatically increase the chance that an IT outsourcing project will be successful. Some issues should be considered at each stage of the IT outsourcing process. Institutions can take some proactive steps to improve the probability of project success.

**Stage 1. IT Problem Identification and Evaluation**

A problem that usually leads to outsourcing of IT functions in higher education arises when a given IT function can be provided and managed more efficiently and effectively by someone outside the institution. The first step is to determine what functions are suitable for outsourcing. In general, colleges and universities are more likely to outsource supporting functions and services, such as laundry, cafeteria, or grounds keeping, that are not directly related to the institution’s core mission of teaching,
research, and service. Services that are usually considered sensitive and less likely to be outsourced include university press, computing, and housing.

Because computing spills into the academic arena and is not merely a supporting function, the issue of outsourcing IT services becomes complicated. A variety of stakeholders will typically resist outsourcing IT operations. Those functions that do not have direct impact on sensitive data or the educational process are most likely to be outsourced. These include IT infrastructure, application management, and application services. When the function to be outsourced is more mission-critical, gaining approval to outsource is more likely if outsourcing that function has been legitimized by larger, more prominent institutions.

Another factor to consider is whether the service to be outsourced generates revenue. Colleges and universities look at revenue generation more now than ever before, and computing falls in the category of non–revenue-generating services, relying on enhanced efficiencies. As a result, the outsourcing of non–revenue-generating services, such as financial services, payroll, retirement, some aspects of human resource administration, and procurement, will likely increase.

After an IT function has been identified as a candidate for outsourcing, the institution must perform a risk/benefit assessment of outsourcing versus in-house operation. According to the survey, approximately 34 percent of respondents indicated that they are considering bringing already outsourced IT functions back in-house. Had a risk/benefit analysis been performed in advance, it might have eliminated unsatisfactory outsourcing experiences.

In the event that outsourcing proves unsatisfactory, institutions should have contingency plans. Contingency planning for funding may be particularly difficult. For example, colleges and universities should consider the buy-out of resources associated with outsourcing to make a shift to in-sourcing possible. When a function is outsourced, the freed funds are usually allocated to support other areas within the institution. If in-sourcing becomes necessary, the resources might not be available to complete the transition.

Before outsourcing, higher education institutions should consider their organizational structure and the impact it might have on the outsourcing decision. Although the majority of survey respondents reported having centralized IT organizations, a higher percentage of outsourcers reported having decentralized organizations, leading to the observation that decentralization has a positive correlation with outsourcing.

Stage 2. Consensus Building

Resistance to outsourcing may come from a multitude of stakeholders, including faculty, IT staff, administration, and students. These stakeholders must be identified and consensus reached on major issues before the outsourcing process is too far along. Consensus building should begin as early as the problem evaluation and identification stage of the outsourcing process. In the initial phases, discussion is usually limited to the IT decision makers. It should include those who decide what functions to outsource; the
parties that would organize the request for proposals (RFP), bidding, and selection process; and those who would authorize procurement. Although these functions may reside with the same person, the majority of the respondents reported that different officials hold those responsibilities. The formation of a committee or task force dedicated to managing the outsourcing process from start to finish, whether outsourcing is realized or not, has proven beneficial.

Other constituents and outside entities may influence the decision to outsource IT functions. These include faculty, staff, and collective bargaining units, as well as state and local authorities. Such groups need to be identified early in the outsourcing process; their reaction to the outsourcing decision should be anticipated and properly managed. One mechanism of managing the resistance to outsourcing by such groups is to include them in the outsourcing process. Representative individuals should be invited to participate on committees and task forces. By allowing these individuals to be “co-owners” of the outsourcing endeavor, institutions can better secure their support or, at the least, understand their objections.

Research related to state and local policies on outsourcing should be conducted prior to any formal vendor-selection activity. As might be expected, state and local governments have influence over the outsourcing decision, particularly at public institutions. Both outsourcing and non-outsourcing institutions in the survey indicated that state and local governments had some influence on their decisions regarding outsourcing.

Regardless of the level of involvement of concerned parties, institutions planning to outsource IT functions will decrease resistance and increase the odds of success by keeping all concerned parties informed. In a number of outsourcing cases, considerable resistance was generated due to false or misinterpreted information.

Stage 3. Planning and Vendor Selection

A poorly timed or unnecessarily long implementation can lead not only to the failure of the project, but also to other serious repercussions. Unplanned system downtime, unavailability and loss of data, and limited functionality are likely to halt important operations and have a serious financial impact on the institution. To ensure a smooth transition to service provision by an outside vendor, and to limit disruptions to vital organizational functions, higher education institutions need to evaluate the impact of the implementation timing and the duration. A prudent implementation schedule optimizes the benefits and minimizes the risks of the outsourcing process.

Selecting the right vendor is crucial for the success of the IT outsourcing project. Higher education institutions can approach vendor selection in two different ways: through sole sourcing with a “trusted partner” and through competitive bidding. While 42 percent of the survey respondents indicated that they had awarded contracts on a sole-sourced basis, the majority (58 percent) used competitive bidding to select an outsourcing vendor. Public institutions, which are often subject to state procurement regulations, show a stronger preference than private institutions for competitive bidding (61 percent versus 54 percent). All types of institutions, except BA institutions, show a strong preference for competitive bidding.
The decision concerning whether to select IT outsourcing vendors on a sole-sourced or competitive-bid basis can be deceptively simple. The choice to bypass the sometimes lengthy, expensive, and cumbersome process for organizing, evaluating, and awarding of contracts is a convenient way to satisfy internal clients and external vendors alike. On the other hand, the decision to undertake the less-convenient competitive-bid process, if completed properly, assures transparent, cost-effective, and efficient contract awards. It also ensures compliance with institutional and state regulations. The key to taking the correct approach is to balance the benefits with potential risks.

Overall, competitive bidding appears to be more effective in IT vendor selection. The benefits of sole sourcing offset the risks only in situations when

- the pool of qualified and available vendors is well known, they can be identified and contacted directly, and their IT-related accomplishments within higher education are well documented;
- cost is not the highest criterion in the procurement, and decision makers can adequately document the reasonableness of the vendor's price; and
- the institution has a very good understanding of its requirements and a high level of trust in the vendor based on prior relationships.

One of the common problems encountered by higher education institutions is working with a vendor unfamiliar with the needs of higher education. For this reason, institutions should carefully evaluate vendors to ensure that their capabilities and experience closely meet the institution's needs. Overall, survey respondents considered vendor capability as the most important criterion; experience in outsourcing also ranked relatively high. Attitudes toward experience in higher education and price varied, with price often near the bottom of the list.

Some institutions do not have the resources and expertise to make informed decisions about outsourcing, including vendor selection. Others are outsourcing an entirely new IT function that has not previously been run in-house and, because of that, cannot set specific vendor requirements. In such situations, the institution should consider the services of an external consultant. Seventy-two percent of those survey respondents that outsource IT functions reported using the services of a consultant.

**Stage 4. Implementation**

After a vendor is selected and before the implementation begins, institutions should consider drafting a service level agreement (SLA), a contract between a service provider and the customer that specifies, usually in measurable terms, what services the provider will furnish. Some metrics that SLAs may specify include

- percentage of time services will be available (system uptime or application availability), including dial-in access;
- number of users that can be served simultaneously;
specific performance benchmarks to which actual performance will be periodically compared;

- the schedule for advance notification of changes, including maintenance and upgrades, that may affect users;

- help desk availability and response time for various categories of problems;

- spare part and/or loaner services available; and

- provision of usage statistics.

In IT outsourcing, the SLA ensures that the vendor delivers the uptime, service, security, and bandwidth required. The SLA is also very useful in evaluating the performance of the outsourcing vendor and imposing sanctions or financial penalties for a vendor’s inability to meet the required targets.

When implementing an outsourcing solution, higher education institutions need to ensure that they retain control over critical data. Vendor contracts should provide for the security and ownership of data and guidelines regarding the handling of data during and after implementation. Responsibilities of both the vendor and the institution must be clearly identified to ensure the security of data should the relationship be terminated.

Stage 5. Assessment and Realignment

Post-implementation assessment is important for a number of reasons. Most importantly, it gives the institution the opportunity to evaluate the vendor performance against the SLA and to make adjustments before any serious problems occur. The biggest problem that institutions encounter is the perception that outsourcing vendors do not fulfill their promises. An objective, third-party assessment of the vendor performance, sometimes on a rolling basis, benefits the vendor and the client.

Institutions should make sure contracts include problem-resolution and opt-out clauses for both parties in the event that serious issues are identified in the assessment. Pre-identification of neutral forums or third-party consultants to engage when serious technical or implementation problems occur can prevent work stoppage. Outsourcing contracts sometimes involve substantial early termination penalties that can effectively trap an institution into a relationship that does not meet its needs. Colleges and universities must avoid being “penalized” for poor or unsatisfactory vendor performance.

Conclusions

When completed successfully, outsourcing of IT functions at higher education institutions can be quite rewarding. Among the outsourcing benefits reported by the survey respondents are access to superior technical resources (both staff and technology), lower infrastructure risks, and cost savings.

All institutions believe that the primary benefit of IT outsourcing is access to superior technical resources. This clearly corresponds to the primary reason (lack of in-house
skills) to outsource IT functions. When addressed separately, the responses of public and private institutions vary slightly on this subject. Although public institutions still consider access to superior technical resources the primary benefit, private institutions consider better functionality to be the primary benefit. Lower risk and cost savings are also cited as significant benefits among all types of institutions. In all cases, reduction of IT staff ranked low on the benefits list.

Figure 5 shows the benefits of IT outsourcing by institution type. Again, almost all types of institutions (with the exception of BA institutions) see access to superior technical resources as the primary benefit of outsourcing. Also, most respondents listed lower risk and cost savings as perceived benefits of IT outsourcing. Certain benefits, however, are weighted differently according to the type of institution. For example, research institutions clearly believe that they can streamline operations by outsourcing IT functions. This might be due to the size and, generally, the more decentralized organizational structure of research institutions. MA institutions focus on cost savings and lower risk. BA institutions seek better functionality, lower risk, and IT staff reduction. In fact, a much higher percentage of BA institutions than other types of institutions see IT staff reduction and better functionality as benefits. AA institutions benefit from better technical solutions and lower risk.

The unique organizational structures of colleges and universities, along with their special sense of purpose, create staff concerns and reasons for caution that have few counterparts in the commercial market and are less critical in the government market. As a result, IT outsourcing is growing more slowly in higher education than in commercial and government markets. Despite the slow start, however, colleges and universities are cautiously optimistic about outsourcing. While a slight majority (58 percent) of U.S. and Canadian higher education institutions do not outsource their IT functions, a substantial number (42 percent) do. This number is likely to grow based on IT needs and reported...
plans for the next five years. Higher education institutions will have to weigh the rising costs and risks of attempting to operate their own complex IT infrastructures with the unfamiliarity and unease of using outside resources. Over time, with a more proactive stance, higher education will become increasingly comfortable with external service vendors, and IT outsourcing will find an appropriate place in higher education.

Key Questions to Ask

- What benefits do we seek to realize through outsourcing? Access to resources? Streamlined operations? Better functionality? Lower cost? Lower risk?
- What IT functions, if any, can be provided and managed in a more efficient and effective way by an external vendor rather than by in-house resources? What are the benefits and risks of outsourcing these functions?
- What resistance are we likely to encounter in the outsourcing process? How do we overcome this resistance?
- Are there any policies or regulations regarding outsourcing that will affect our institution?
- Do we have the skills and resources to conduct the necessary due diligence, or do we need to hire consultants?
- What criteria should be included in an SLA? Would it be useful to develop an “in-house SLA” that could be used for comparative purposes if an outside vendor is engaged?
- If we choose to outsource, when should implementation begin, and how long should it last? What will the implementation effects be on the operations of the institution?
- What happens if we decide to bring the IT function back in-house? Will we have sufficient resources to do so?
- If we enter into an outsourcing contract and then decide to opt out, can we? If so, what are the associated penalties?

Where to Learn More

- Caroline M. Gills, “Lead or Bleed: Colleges, Universities and E-Universe,” 
  *Business Officer*, April 2000. 

- Tessa Kaganoff, “Collaboration, Technology, and Outsourcing Initiatives in 

  <http://www.nacubo.org/website/members/bomag/privd196.html>

- Information Technology Association of America’s ASP SLA Guidelines. 

### About the Author

*Emillia Kancheva (ekancheva@input.com) is a Senior Analyst with INPUT.*