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Public Accountability and Higher Education:

Soul Mates or Strange Bedfellows?

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Overview

American higher education has many strengths and virtues, but self-reflection and public accountability are seldom counted among them. Faculty and administrators have relied on self-regulation to control quality. Accreditation is voluntary. As Peter Ewell and others so trenchantly point out, higher education excels at shining the analytical light on just about any social issue, institution, or problem imaginable—with the exception of itself.[1] Nowhere is that more evident than for funds allocated to information technology.

This Research Bulletin explores different types of accountability and how they apply to higher education and information technology. The hope is that higher education institutions and IT organizations can use this as a foundation for how they address accountability issues.

Background

Public accountability has strong historical roots in American government and law. This "accountability ethos" encompasses both moral and political values of legitimacy and democracy, and has made substantial contributions to, and demands on, a society committed to mass public education. Although much of the academic literature on accountability is legalistic, theoretical, or philosophical, the general frameworks can be adapted for applied and decision-making environments such as higher education and IT.

Educational accountability has a long and turbulent history in the nation's K-12 system. Although standardized testing and learning outcomes have been the hallmarks of K-12 accountability for several decades, both public and professional perceptions of the results have not been positive. A variety of "report cards" document the shortcomings of the K-12 system. As a result, the value of spending devoted to public education has been questioned, leading some to call for vouchers and competition as means to increase institutional accountability.

The use and results of accountability in higher education have been mixed at best. Most institutions periodically find themselves going through the motions of program reviews, self-studies, and disciplinary and institutional accreditations. Some institutions occasionally participate in the national outcomes assessment movement or in statewide testing and performance funding experiments. Accreditors focus on "quality assurance" yet seldom, if ever, mention public accountability. Peer review is the cornerstone of accreditation, essentially an internal judgment about programmatic quality, even though accountability includes far more. In the IT realm, what passes for accountability (at least of an internal nature) often amounts to conducting equipment inventories or instituting a capital asset management program.

With few exceptions, these efforts to be accountable seldom result in major or long-term consequences, positive or negative. Despite the American historical legacy, higher education has largely been a Lone Ranger caught in a time warp of frontier values—

independent, self-regulating, autonomous, and committed to the comfortable proposition that "society's interests are served by advancing our own."[2]

The interest in accountability for IT projects is easy to understand: they tend to be large and costly. Investments in IT appear to be never ending; the shelf life of IT products is short; and new products and services are continually introduced. Because of the built-in obsolescence wrought by ever-increasing advances in technology, large, one-time investments are often needed, immediately followed by substantial requests for ongoing operational funding, maintenance, and replacement. Often some form of special funding for technology infrastructure is also needed, such as general obligation bonds, which can require approval by legislators, voters, or other external groups.

It is frequently difficult to tie investment in IT directly to improved learning outcomes or greater access to higher education. Therefore, IT projects can make tempting targets for disgruntled technology skeptics. Large IT investments, with the rationale of future productivity gains, can become the focus of unions fearing lost jobs and opportunities. The call for IT accountability is exacerbated when faculty organizations and employee unions wield their combined influence with state legislatures.

For a variety of reasons, accountability in higher education as a whole is a challenge. Understanding those challenges may, however, help institutions deal more effectively with accountability.

Measurement. It is relatively easy to document costs; they tend to be quantitative, direct, and immediate. Benefits, the other half of the accountability equation, tend to be qualitative, indirect, and long-term. This discontinuity represents a measurement challenge.

Offense or defense. Institutions must decide whether to treat accountability as a threat or as an opportunity. The resulting strategies are either defensive or offensive in nature. Accountability is typically seen as a threat, which fosters resistance.

Halo effect. American higher education is widely perceived to be the best in the world, and there are few incentives to test or challenge that assumption. Even as costs escalate, that reservoir of good will can often substitute for genuine accountability.

Locus of responsibility. If learning outcomes are the ultimate test of educational accountability, assessing either credit or blame is never easy. Who is responsible if students fail to learn—teachers, the institution generally, parents, peer groups, government, students themselves, or all of the above? When everyone is theoretically responsible, the practical inclination is to hold no one responsible.

Technology dilemma. Technological interventions may have little to do with learning outcomes, administrative efficiencies, or other outcomes, per se. For example, the real causal agent for change may have been process redesign rather than IT, creating a cause/effect dilemma.

Culture. Finally, there is a deeper and more pervasive reason why public accountability and higher education make strange bedfellows at best. The collegial culture elevates the

discipline, faculty peer review, and the autonomous scholar as the only legitimate pillars of accountability. Trust is substituted for accountability. Attempts to apply traditional forms of accountability and "bean counting" to an academic institution are considered by some to be unnecessary, irrelevant, misleading, and insulting.[3]

Despite these challenges, higher education and IT organizations can draw useful lessons from accountability models and practical examples.

Highlights of Public Accountability

Notwithstanding its long tenure in Western philosophical thought and its application in American political and legal systems, public accountability is a complex conceptual notion and an imperfect policy tool. In simple terms, it suggests that specific individuals, groups, or institutions must answer to public stakeholders (parents, taxpayers, government officials) for achieving specific outcomes with attendant consequences. The Education Commission of the States describes accountability systems as "the systematic collection of input, process, and outcome data, as well as the use of these data, to make decisions about the effectiveness of schools, districts, or states."[4]

Accountability has many conceptual dimensions that in turn carry their own policy implications. For example, accountability might be based on regulation that results in external control. It could be used to establish standards, thereby invoking a more passive form of responsibility to meet them. If performance outcomes are emphasized, formal evaluations may be required. When accountability is the product of negotiation, some form of reciprocity is usually implied. Finally, to the extent that accountability means measurement, a reporting system is the logical result.

The generally accepted understanding of accountability is that it sets parameters for who answers, to whom, for what. Accountability can be delegated, but responsibility cannot. Administrators in higher education may be accountable for that over which they have little responsibility or control.

There are several types of accountability. They fit into a continuum based on degrees of institutional control. The first three types discussed below (legal, fiscal, and programmatic) pose more constraints than the last three (negotiated, discretionary, and anticipatory). This bulletin argues that successful institutions must learn to accommodate and balance the conflicting demands of all six, yet learn to implement and emphasize systems that offer the greatest flexibility.

Legal Accountability

At one end of the accountability spectrum is legal accountability, which requires obedience to regulatory or bureaucratic authority. Examples specific to managing information technology include the Americans with Disabilities Act, the Telecommunications Act of 1996, and the Digital Millennium Copyright Act. In such cases, accountability becomes synonymous with compliance.

Fiscal Accountability

"Following the money" is the most traditional form of compliance auditing and accountability. The basic issue is whether dollars are being spent in the appropriate categories and in the proper amounts. Resource allocations may or may not be explicitly linked to performance outcomes.

For example, many colleges and universities collect student technology fees. At some of these institutions, the administration is accountable to students for the use of those funds. Students sometimes participate in determining how the funds will be allocated. It is relatively common for expenditures of student technology fees to be published. Students can question the validity of the use of the fees and in many cases suggest changes.

Perhaps the most stringent form of all accountability is performance funding, where resources are awarded or denied based on specific behavioral outcomes. According to a 1998 State Higher Executive Officers (SHEEO) report and a 2000 study by SUNY's Nelson Rockefeller Institute of Government, 37 state governments or higher education coordinating boards were using institutional performance measures in some way, more than double the number earlier in the decade.[5] The SHEEO survey found that 8 states used such indicators directly to determine funding levels, while 15 states considered performance in budgeting but did not make direct linkages. Typical performance indicators included graduation rates, faculty workload, student satisfaction surveys, placement data, and accredited programs, among others.

Programmatic Accountability

For programmatic accountability the issue is whether the institution has met publicly stated goals and objectives. This form of accountability typically relies heavily on standardized testing, often accompanied by experimental or statistical controls. While failure may ultimately bring fiscal consequences, there is no direct or specific link between dollars and performance.

When the National Center for Public Policy and Higher Education issued its first report card on higher education, "Measuring Up 2000,"[6] all 50 states received grades of "incomplete" on the grounds that representative and comparable data on student learning outcomes were not available. The Center then asked the National Center for Higher Education Management Systems (NCHEMS), which has been studying outcomes assessment and accountability efforts over 15 years, to conduct a survey of statewide assessment activities. It found that only six states had common statewide testing programs in place: Arkansas, Florida, Georgia, South Dakota, Tennessee, and Texas. Two other states, Missouri and Oklahoma, had state-mandated assessment programs with local choice of nationally normed tests.[7] Although it offers an example of programmatic accountability, the "program" may be too large to provide meaningful accountability.

Programmatic accountability is the rationale behind one of the best-known report cards on K-12 performance: the National Assessment of Educational Progress (NAEP).[8] Since

1969 the NAEP has provided data on student learning outcomes in eight subject areas. The political and methodological challenges to standardized assessment of student learning are so numerous that statewide, much less national, testing may be of little use as a practical accountability strategy unless used in conjunction with other approaches that employ smaller units of analysis.

Negotiated Accountability

Negotiated accountability exists when the rules are not explicit or written into statute but are agreed upon by the parties involved. The advantage of this type of accountability is that it is a two-way street; reciprocity is either implied or guaranteed.

The California State University's (CSU) Integrated Technology Strategy (ITS)[9] is an example of negotiated accountability. Beginning in 1999 and continuing through 2008, the CSU system is required to produce an annual report to the state legislature on the results of significant investments in information technology. The report, "Measures of Success,"[10] takes the components of the system's strategic plan for information technology and shows progress toward the achievement of four goals: excellence in learning and teaching; administrative productivity and quality; quality of the student experience; and personal productivity.

In the process of developing the strategic plan—one that relied heavily on the iterative input of major constituencies—CSU determined that the success of all of the ITS goals rested on completion of a minimum baseline infrastructure. Baseline was defined as a specified level of access to information technology hardware, software, networks (intra-campus, inter-campus, and worldwide), as well as end-user training and support services. Analysis indicated that the funding gap between what the system could provide and what was needed on all 23 campuses to achieve baseline across all categories was $70 to $120 million in annual operating funds and almost $200 million in one-time capital dollars.

In exchange for the required funding from the legislature, CSU agreed to measure systematically how the improved infrastructure supported the goals of the strategic plan. Data to produce the annual "Measures of Success" report come from representative biennial surveys of 35,000 faculty and staff and 365,000 students about access to, use of, and satisfaction with a wide range of information technology equipment and services. In addition, the system conducts annual institutional surveys of the campuses. All CSU campuses also must participate in the national Campus Computing Project annual survey.

Discretionary Accountability

Discretionary accountability requires judgment. No formal rules apply, and perhaps no immediate threats (or opportunities) exist. If legal accountability translates into "just do it," then discretionary or professional accountability can mean "just trust me" because of status or expertise.

The TLT Flashlight toolset, which provides a form of discretionary accountability, helps administrators determine the success of information technology efforts in improving the

academic environment. The TLT Group[11] collects and provides information on how the tools are used, the successes achieved, and the challenges faced. It creates information and guidelines on how to apply generally accepted professional standards and sound judgment to the use of information technology for learning and teaching.

Anticipatory Accountability

Anticipatory accountability, or "positioning," lies at the other end of the accountability continuum from legal accountability. It requires administrators to look ahead at what is changing in the environment and what may be of interest to those who exert control over or influence decisions about the institution. Proactively volunteering to be part of the design team that determines standards is one example.

After the University of North Carolina system received funding from the state legislature in support of its IT strategy, the Information Resources Division anticipated the need to account for how funds supporting the 16 campuses were being spent. In August 2000, the Information Resources Division began publishing the "IT Strategy Annual Report," which reminded internal and external constituencies of the vision, goals, and timeline of the IT strategy. It detailed accomplishments, challenges, and next steps. Part of the rationale behind the state's IT investment was that the university would leverage the funds for maximum advantage across the system. To ensure future funding increments, the North Carolina system provided evidence of good stewardship, such as documenting savings from collaborative procurement efforts. The annual report also provided the opportunity to raise issues that might impede future progress.

Anticipatory accountability was also behind the creation of the Urban Universities Profile Project (UUPP). The UUPP uses information technology to inform constituencies about how the university is meeting its mission and academic goals.[12] With support from the Pew Charitable Foundation and the American Association for Higher Education (AAHE), six urban universities undertook a three-year project to communicate with their external constituencies. They believed that urban, public, comprehensive universities have more in common with each other than with rural, residential-based colleges. The intent was to generate a mission for the urban institution and develop measurements that showed how internal and external decisions contributed to achieving that mission and subsequent goals and objectives. The institutions created Web-based portfolios for a target audience to show how decisions supported their missions.

What It Means to Higher Education

In broad outlines, the themes of leadership, collaboration, communication, and measurement appear in almost any manual of procedural best practices for successful accountability systems. As a rule, neither performance budgeting nor any other single approach has the power to dramatically increase institutional accountability, suggesting that multiple accountability strategies must be employed. Far from rigid accounting rules or rarified philosophical principles, accountability ultimately is rooted in the flexible and mundane realm of people striving for a common goal.

These case studies, together with the general academic literature and applied research studies on accountability, can be used to build a best practices list. This list should help institutions as they move toward creating their own accountability systems.

Build the Foundation with a Strategic Plan

The first indication that an institution is serious about accountability is the existence of a comprehensive IT strategic plan. The California State University example provides a guide for institutions interested not only in compliance but also in using accountability to garner and protect resources and guarding against potential internal and external opposition. The CSU strategic plan is focused not on technology but on using technology to achieve core university goals. CSU did not define the goals or develop projects to reach those goals until stakeholders had a say in determining the principles and institutional values against which the goals and projects would be measured. A key to the success of the CSU effort is a well-communicated strategic plan, one that was developed with the input of as many faculty, staff, students, and external stakeholders as possible.

Take a Holistic Approach

Research into best practices in accountability illustrates the need to take a holistic approach. In 1998, the Council of the Great City Schools, the National Alliance for Business, and the American Productivity and Quality Center launched a best-practice study on accountability in K-12.[13] The general principles from that study could be applied to almost any public educational entity, including higher education. They found seven major components in world-class accountability systems:

1. Leadership/alignment
    - Has a central mission that drives the development and support of performance measures
    - Maintains stakeholder buy-in and commitment to the accountability system
    - Ensures institute-wide understanding, support, and acceptance of the measurement and accountability approach
2. Climate/context
    - Supports a collaborative environment
    - Promotes the use of teams for problem solving and decision making
3. Operations
    - Establishes a performance measurement system that incorporates quantitative and qualitative measurement organization-wide
4. Human resources

- Integrates student achievement into other activities such as evaluation and professional development

5. Data management/measurement
   - Uses a measurement system to hold organizations accountable
   - Identifies the best measurement instruments and applies them consistently
6. Communications
   - Communicates measurement results to facilitate continuous improvement
   - Listens and incorporates feedback from internal and external stakeholders
7. Standards for teaching and learning
   - Aligns systems for teaching and learning with mandated student achievement requirements

Make the Business Case

John Oberlin suggested that the new economics driving IT investment include: (1) its aggregate value in performance and functionality; (2) demand among students and faculty; and (3) declining price per unit of computing power. The economic life cycle of technology is independent of its functional life cycle. He concluded, "...the potential benefits are truly revolutionary and the demand is insatiable, but the falling prices mislead many to expect cost savings that will never materialize."[14] These economic paradoxes lie at the core of any system of IT fiscal accountability and must become part of its principles.

Part of the accountability game is managing the expectations and perceptions of internal and external stakeholders—to get off "the cost page and onto the value page."[15] An IT infrastructure alone has no inherent value, but the applications it supports do.

One approach is to build an applications "portfolio" with three components. For example, the IT organization can demonstrate operational value by highlighting its role in mission-critical functions like class scheduling, human resources, and financial administration. It can demonstrate tactical value by reengineering business practices, improving student access, or enhancing teaching and learning. Alternatively, IT can demonstrate its strategic value by acting as a transformation agent in enacting major institutional reforms such as enterprise resource planning and e-learning. The challenge is less one of selling technology per se than of marketing the role of the IT organization in the institution.

Investments in IT infrastructure are seldom one-time purchases. Short IT life cycles guarantee replacements on a regular schedule. As such, a substantial portion of IT costs may be thought of as operational expenses and should be "sold" on that basis.

On the other hand, IT infrastructure can also be a capital expense (typically funded through bond revenues) designed to pay for permanent items or large, periodic expenditures. The danger in this form of ad hoc budgeting is that IT is treated as a

perpetual add-on instead of an ongoing part of the way institutions must do business, all of which further complicates the accountability argument.[17] IT is best portrayed as a strategic resource and investment rather than as an expensive cost center.

The business case should also speak the language of business, even in an academic environment. Such standard tools as benchmarking, total cost of ownership analysis, return on investment estimates, and risk management should be part of any IT investment and accountability strategy. Exercising due diligence before decisions are made can be one means for defending them later.

Control the Vocabulary

A new lexicon can help make the case for public accountability. In the CSU example, the language of the strategic plan, and hence the language that surrounds the "Measure of Success" accountability report, is about a technology infrastructure. The word "infrastructure" has positive connotations to legislatures and taxpayers; it implies foundation and permanence. It also helps mitigate against the notion that one can never keep up with changes in and the attendant costs of technology. Moreover, funding for infrastructure is a capital expense, the same as funding for buildings, electrical systems, and sewers.

The IT infrastructure consists of at least three major components: (a) utilities (conduits, cables, wiring, outlets); (b) systems hardware and software for data, voice, video, and multimedia, including computers, servers, peripheral devices, as well as network routers, switches, and hubs; and (c) human resources for IT management, user training, and support services.[16] Failure to communicate all of these elements as part of a total IT infrastructure package makes accountability more difficult to define or to prove.

Baseline is another term with positive overtones. It conveys that an institution is aware of the high costs of technology but is providing only what is required. Deciding what constitutes a baseline set of hardware entitlements, software suites, network connectivity, training programs, and user services is a daunting task, particularly since they are all moving targets. However, once established and periodically updated, they can become a means for managing user expectations and structuring the discussion of resources.

Manage the Process

Paul Lingenfelter, executive director of SHEEO, offered seven characteristics of an effective accountability system for higher education based largely on the statewide testing and outcomes assessment experiences:[18]

1. Emphasize improving performance, not punishing failure.
2. Establish a few clear, significant, and measurable goals. As a general rule, the more goals, the less progress.
3. Monitor progress publicly on both quantitative and qualitative goals.

4. Employ both intrinsic and extrinsic incentives. In the final analysis, performance depends on people, not procedures.

5. Employ every tool available, and involve everybody who can help. Successful accountability systems demand many simultaneous approaches and a broad range of leaders from inside and outside the institution.

6. Build capacity. Neither rewards nor penalties are substitutes for good training and adequate support.

7. Invest in results. Quality is not cheap. Investment and accountability go hand in hand. As the adage goes, you can have it good, you can have it fast, and you can have it cheap, but you can only have two of the three.

Balance Accountability Systems

A college or university can show that it has been accountable for information technology dollars in a variety of ways.

Compliance. The institution can and should document that it has complied with legal regulations, such as state competitive procurement rules; that faculty, students, and staff with disabilities have appropriate access to the same information technology tools and services as others; and that copyright regulations are being enforced. However, legal accountability alone is insufficient. Breaking the law is a sure indication that an organization is doing the wrong things. On the other hand, staying within the law does not mean an organization is doing the right things, for the right reasons, in the best way possible.

Professional standards. The TLT and UUPP projects show the importance of applying professional standards in the accountability process and of being explicit about improved learning outcomes. Professional or discretionary accountability is the norm in higher education, as accreditation and discipline-specific standards demonstrate. Yet, given the high cost and visibility of information technology projects, wise administrators should also move toward negotiated frameworks to obtain funding and to prove value in institutional and academic, not technical, terms.

Proactive communication. The CSU and UNC examples illustrate how proactive negotiation and communication can provide an effective form of accountability. Rather than viewing accountability as a threat, the institutions approached it as a way to create new opportunities.

Key Questions to Ask

The accountability environment has both internal and external dimensions. For institutions wrestling with accountability, the following questions may be helpful in performing an “accountability audit”:[19]

- What business are you in (technology or learning)? What are your core products and services? Who are your key stakeholders? What social needs do you serve?
- What are your internal strengths and weaknesses, and what opportunities and threats stem from external trends in the legal, economic, social, political, or technological environments? Are internal strengths being leveraged to counter external threats or seize potential opportunities in the accountability environment?
- Are IT hardware, software, network, and user training/support programs well integrated with the academic culture and the administrative systems of the college or university?
- What are the formal and informal standards by which the IT organization is judged? Which ones are fixed, and which ones are negotiable? In what areas is the IT organization free to exercise substantial discretion, flexibility, and autonomy? Would it be better to proactively define a form of accountability, or is it better to accept the risk that one will be defined on your behalf?
- Is an IT "accountability infrastructure" in place (fiscal and other control mechanisms, resource investments, data sources, and evaluation reports)? Are there defined measures that are appropriate? If not, is there a risk that others might use inappropriate measures? Does the accountability system provide for the blending of qualitative and quantitative data?
- Can regular and systematic evidence be provided to show that the outputs, outcomes, and impacts of IT investments are being used to improve levels of efficiency, effectiveness, and accountability?
- Does the IT organization actively participate in professional associations and subscribe to their standards of best practices?

The bottom line is that successful accountability systems are multidimensional and fluid. To the extent that higher education can draw on its prestige to win the day, it should do so. However, it must also be prepared to adopt a negotiating stance when possible or submit to bureaucratic rules when necessary. Through it all, the best defense is indeed a good offense, and a willingness to embrace accountability is perhaps the best means for tempering its effects and even benefiting from it.

If IT administrators do the job correctly—they measure and demonstrate the benefits of technology for faculty, students, and staff in terms of improved learning and teaching, improved services to students, and improved institutional management—IT can become like any other infrastructure investment. In that sense, no one will question why it is needed or its value. The accountability debate can be won before it ever begins.

Where to Learn More

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