Introduction

As higher education information technology professionals, we’re tempted to look at our organizations’ IT resources and services from the inside out. In this networked age, our connections to the Internet and more specialized networks such as Internet2 and the National LambdaRail are our umbilicus, the cord that connects us to the world beyond the campus. On our campuses, radiating from this nexus along the network backbone, are the infrastructure elements on which our services are based—the servers, the local area networks, and ultimately the workstations by which our clients connect with us. When we think about security, as we so often do these days, we build our first lines of defense around the “core” systems and data managed by central IT.

Most of us are members of a central IT organization, with a nucleus of executives, directors, and managers participating in a web of internal relationships and leading the teams that manage our IT infrastructure and applications—the teams that ultimately interact with our clients at the periphery of our organization.

But that’s just us.

Unless we’ve brought them inside as, for example, members of our advisory committees, our clients see us very differently. To them, the center of the IT organization is the point at which they contact it. From their workstations, they see a web of connections to services such as e-mail or administrative applications. Through their browser software they connect to a universe of possibilities—information, interaction, entertainment—on “the network.” And when they contact us directly, either electronically or face to face, the person who responds becomes the center of the IT organization for them for the duration of the contact. The lines of information and influence that our clients see within the central IT organization radiate from that central point.

Importance of the Help Desk

On most campuses, the central point of contact for clients with IT problems is a formal client service organization. These organizations go by many names, among them help desk, support center, call center, service desk, and customer hot line. Here we use the term help desk to refer to the entire array of IT client service organizations, following conventional IT usage in higher education and elsewhere.

For our clients, the help desk is the face of central IT, its eyes, ears, and voice on campus, and when it is effective, it is where clients direct their attention when they need support.
It would be difficult to overestimate the help desk’s importance in the higher education context. During ECAR’s 2007 study of undergraduate students’ IT usage and attitudes, student respondents offered hundreds of comments about the help desk. The study report summarizes those comments as follows: “While there were some positive comments about the helpfulness of staff in fixing technical problems, negative comments were far more frequent. These pointed most often to a lack of customer service orientation, but also addressed problems with help desk availability, wait times, and fees. This suggests that the help desk function appears to be relatively high priority for many students, and is an important finding for IT leaders.”

At a more general level, Samuel J. Levy, vice president and CIO at the University of St. Thomas, observes, “At some institutions, I suppose, the help desk is not a high priority in the institution. Either the community does not value it or they don’t need it or the leadership simply says there are more important ways to direct their resources. For me, it is the single most important thing. I can’t imagine anything of greater value that we can bring to the institution.”

The IT Support Challenge

Like public and private sector enterprises everywhere, higher education institutions continue to place increasing reliance on information technology. Whether IT supports administration, instruction, or research, complex webs of hardware and software resources underlie an even more complex web of services. As complexities in these environments increase, service providers often find it challenging to maintain high customer satisfaction levels. Because support resources do not always keep pace with support demands, service providers can find themselves spiraling downward into a reactive operation mode, adapting to new challenges only with great difficulty, and missing opportunities to enhance the variety and quality of the services their constituents require.

The help desk is on the front line of the struggle between support demands driven by rapidly evolving information technologies and the central IT organization’s efforts to mobilize the resources necessary to meet that demand. Often the help desk finds itself in a kind of crossfire, pinned down from the outside by seemingly insatiable client demand and threatened from the inside by changes to central IT systems and services in which the help desk may have had no voice and of which, in the worst case, it may not even have been informed.

Until recently, IT organizations have had few resources for resolving these tensions. They can temporarily offset growing user demands by investing in additional IT staff, staff training, and new technologies to help staff perform more efficiently. Enlightened leadership can facilitate better internal communications between the help desk and the rest of central IT. Help desk managers can establish forums in which clients and service providers work together to agree upon reasonable expectations of—and limits to—help desk services. At some institutions, these agreements are codified internally in the form of operational level agreements and externally in the form of service catalogs and service level agreements.

Outside assistance with help desk management issues has long been available through the conferences and publications of professional associations such as EDUCAUSE and the Association for Computing Machinery’s Special Interest Group on University and College Computing Services. Both organizations encourage practitioners to share their successes and lessons learned with their higher education colleagues. Another resource is HDI (formerly the Help Desk Institute, http://thinkhdi.com), a membership organization whose training events,
consulting activities, and publications assist help desk managers throughout the public and private sectors. In support of its higher education members, HDI has established a Higher Education Forum made up of representatives from 25 U.S. and Canadian colleges and universities.

Recently, numerous structured, formal IT service management models have become available and include sections specific to help desk management. These are dominated by the United Kingdom’s Information Technology Infrastructure Library (ITIL), now codified in the ISO/IEC 20000 documents of the International Organization for Standardization and the International Electrotechnical Commission. These documents provide a framework for integrating an institution’s IT services with its strategic directions; for constructing an agile, proactive, successful IT service infrastructure based on documented best practices; and for ensuring that sustainable, high-quality IT services remain available as the technology landscape evolves. Many organizations—ranging from high-profile IT companies such as IBM, Microsoft, and HP to university business schools to small private consulting firms—have developed instructional and consultative services to help IT service organizations implement ITIL structures and practices.

The blanket term IT service management (ITSM) has emerged in the literature to identify the superset of IT service-related standards and best practices of which ITIL is an important component.4

This ECAR Study

Colleges and universities worldwide are incorporating ITSM elements into their central and distributed IT service organizations, but with the exception of occasional conference papers5 and trade-publication articles, this work is going largely undocumented among their higher education community peers. To help fill the gap, ECAR has undertaken this study to document the current state of the higher education IT help desk, investigate the extent of adoption of certain key ITSM practices, evaluate their costs and benefits, gauge their success, and provide guidance to institutions that may be considering implementing them.

The detailed questions that framed this study include the following:

- What are the respective roles of centralized and decentralized IT support organizations?
- What are the goals and strategies of central IT and the central IT help desk?
- How are help desk services organized and provided?
- How is the help desk funded and staffed?
- What support tools are available to the help desk, and what tools does it make available to its clients?
- What are the drivers of and barriers to improvement of help desk services?
- What is the adoption status of service level agreements and other basic ITSM practices?
- By what means does the help desk measure its performance and what does it do with that information?
- What are the outcomes of the help desk’s efforts to improve its practices and its services?

Study Scope and Objectives

Because relatively few higher education IT organizations are formally implementing ITIL practices, a study focused on those practices per se would have borne little fruit. To include the largest number of institutions in our study and gather the most broadly applicable findings about their help desks, we elected to couch our questions in general terms that would be recognizable to respondents familiar with the ITSM literature but also have meaning for those who weren’t.
Within the ITIL framework, the help desk entity is referred to as the service desk. A service desk differs from the traditional help desk in that it serves as a single point of contact between the client and the IT organization. In the higher education context, this implies a role that goes beyond that of resolving computer users’ technical problems. For example, the service desk’s role also includes communicating with users about the IT organization through newsletters, Web pages, or blogs; cataloging and promoting all central IT services; and accepting and handling (or routing) users’ requests for assistance of all types.

As defined in the ITSM literature, the service desk operates as the interface between clients and central IT through five basic processes:

- incident management, in its traditional reactive role in dealing with clients’ technology problems;
- configuration management, by verifying or recording information about the client’s IT resources;
- change management, by facilitating or troubleshooting IT environment changes;
- release management, by participating in the deployment of new or modified software and hardware; and
- service level management, by representing the central IT organization in matters relating to the service agreements it has made with the campus.

In framing our survey questions, we asked about two of these ITSM processes by name: change management and release management. We also asked specific questions about availability planning and capacity planning. Each of these four processes profoundly impacts help desk clients, yet the central IT organization sometimes conducts some or all without the help desk’s participation. We hypothesized that help desks in more mature IT organizations would be included in these four basic processes, and so we based our ITSM questions around them.

Finally, we asked a series of detailed questions about service level agreements to investigate the service level management process.

We did not use the term incident management in our survey. Instead, because this process is at the core of the traditional help desk’s responsibilities, we asked many detailed questions about the help desk’s processes for dealing with incident-related service requests. We omitted mention of configuration management as well, except to inquire about the help desk’s use of a configuration management database.

Despite our qualitative interview findings that formal ITSM implementations are not standard practice among higher education IT help desks, many of the results we present in the following chapters show that progress is being made. Most respondent institutions have implemented one or more ITIL-derived processes, and planning for others such as service level management is well under way.

Our respondents clearly take pride in the quality of their services and in their ability to meet their many diverse goals. They are aware of at least some of their shortcomings—in research computing, for example. Nevertheless, on the whole, they are concerned about rapidly growing demand for their services and feel somewhat constrained in their responses by the cultural contexts in which they must operate. In a field of shifting boundaries and at a time of constant change, the help desk is expected to be both stable and agile, and because it is the face of IT on campus, the stakes are high. If our findings suggest that the help desk is a somewhat conservative organization, we need only look to these stresses to see why.
Endnotes
4. When we began this study, the current version of ITIL was version 2. During the summer of 2007, version 3 was released, with many substantial changes. In this report all references to ITIL are to version 2.