Executive Summary

Service on the Front Line: The IT Help Desk in Higher Education is the final report of a research study initiated by the EDUCAUSE Center for Applied Research (ECAR) in July 2006 to explore higher education information technology (IT) support services. The study investigated many aspects of the central IT help desk through a quantitative survey of 454 EDUCAUSE member institutions in the United States and Canada, conducted in January and February of 2007. We later supplemented the survey through interviews with chief information officers (CIOs), help desk administrators, and others selected from our membership.

In higher education, the central IT organization’s help desk is on the front line in at least two senses. First, in many ways, it is the face of central IT. Help desks at institutions of all sizes receive thousands of assistance requests every year, and those contacts represent most or all of their clients’ experience of the central IT organization. The impression the help desk gives of technical competence, cohesiveness with the rest of central IT, and customer service substantially impacts campus perceptions of central IT.

Second, the help desk represents the IT organization’s first line of response to the client community’s demands. The CIOs, help desk managers, and others who made up our survey respondent pool often expressed a sense that client demands were escalating so rapidly as to impact the quality of help desk services. Even as they face growing external demand, help desk staff find themselves on unstable ground as technology changes rapidly and as their back-office IT colleagues change familiar systems and services and release new ones.

These pressures challenge the help desk to change and adapt; those that can’t may become reactive and enter a destructive downward spiral. IT service organizations in general have begun to address the management challenges this situation poses by a proliferation of process frameworks and best practices that can be lumped under the heading of IT service management (ITSM). Foremost among these, and the framework upon which most are built, is the IT Infrastructure Library (ITIL), a trademarked product of the United Kingdom Office of Government Commerce. While ITIL is familiar to IT support managers in Europe and in the U.S. private sector, it is less familiar in U.S. higher education. It was partly with that knowledge gap in mind that this study was conceived.

Defining the Help Desk
The central IT help desk has traditionally been the place to visit or the telephone number to call when one is stumped by some
aspect of IT or needs information about the institution’s IT environment. Typically, campus IT help desks serve all comers in these ways, so the variety of problems they confront is wide. Most help desks attempt to resolve their clients’ questions on the spot but escalate thornier problems to specialists, usually staff reporting elsewhere in the central IT organization. Some higher education organizations outsource the first tier of help desk support, but we found this to be rare among our higher education respondents.

The help desk goes by many names; we chose to use this term in our study because we felt it would be most recognizable. Institutions also refer to it as a support center, call center, or hot line. Some use the term service desk, but that has taken on new meaning as the ITSM literature grows: the ITSM service desk embraces help desk functions as well as the responsibility for first-line client contact about all central IT services. The mature service desk is proactive as well as reactive in that it “pushes” communications about the IT environment and central IT services to the client community. While we know many campuses are moving their help desks in this direction, not all have done so, and not all would recognize the full implications of the term.

We measured help desk success in several ways:
- the number of goals the help desk pursued and the frequency with which it met them,
- overall service quality and perceived client satisfaction in specific service areas, and
- the help desk’s perceived positive impact on the institution’s various constituencies and mission.

Because of the help desk’s unique position in the IT organization—between central IT systems and their users—we agree with the ITSM doctrine that the help desk must be integrated into central IT organization planning and management activities. While communication is necessary to the help desk/central IT partnership, alone it is not sufficient for the partnership’s success. Help desk management and staff are uniquely aware of the consequences to the client community of central IT decisions, and thus their involvement in central IT decision making is essential. We were gratified to see that so many of our survey respondents said the help desk was adequately included in various central IT planning and management activities.

**Methodology**
ECAR applied a multipart research approach to this study, which involved
- a literature review to identify issues and establish the research questions;
- consultation with a select group of CIOs to identify and validate the research questions;
- a quantitative Web-based survey of IT administrators (mostly CIOs and help desk administrators) at 454 higher education institutions among the EDUCAUSE member base;
- postsurvey qualitative interviews with 36 executives and staff members involved in help desk management at 24 institutions; and
- four case studies examining help desk and service management practices at a total of five higher education institutions.

**Key Findings**
The central IT help desk is a complex enterprise operating within a dynamic environment. For this reason, our study looked at many aspects of the help desk, including
- the central IT organization, its goals, and its culture;
- the help desk’s scope, resources, and services;
- service level agreements between help desk and clients;
practices in place for evaluating and improving help desk services; and
perceived success of the help desk organization.
Throughout our analysis we related our findings to principles and practices represented in the ITSM literature and sought reinforcement—or refutation—of their value in the higher education context. In the following sections we summarize and synthesize our findings.

**The Institutional Context**
Among our respondent institutions, IT services are still highly centralized. At most of them (88.5 percent), there is only one central IT organization. As Figure 1-1 shows, at most of our institutions, central IT provides nearly all IT infrastructure and three-quarters of IT support services.

In all institutional size categories, as measured by FTE enrollments, independent IT organizations exist outside central IT but are much more common in large institutions (90.5 percent) than at small ones (21.9 percent).

For just over two-thirds of central IT organizations, the primary goal is to provide infrastructure and services that further the institution’s strategic goals. At only 4.0 percent of institutions is it central IT’s goal to provide infrastructure and services to create institutional competitive advantage; at such institutions the pace of adoption of new technologies is higher, and budget increases in the past three years have been more common.

Only 10.4 percent of respondents characterized their institutions as early adopters of new technologies. About twice that many felt that description fit their central IT organizations. About 70 percent characterized both their institutions and their IT organizations as mainstream adopters. Late adopters made up the remainder in each category.

**The Help Desk and Its Resources**
As is the case with IT services in general, help desk services are highly centralized within our respondent population. About three-quarters of respondent institutions provide all

![Figure 1-1. Providers of Infrastructure Elements and Support Services (N = 220)](image-url)
help desk services from one or more central IT help desks; about three-quarters of these have only one. Only about a quarter of our respondents’ help desk managers report directly to the CIO; most of the rest report to the head of a central IT service area.

Majorities of our respondents’ help desks support a wide range of infrastructure and identity-related services and common instructional, administrative, and personal productivity applications. Least supported are privately owned hardware, programming languages, research applications, and applications hosted off campus.

In traditional fashion, the help desk is most likely to ply its trade over the telephone or via e-mail. Walk-in interactions and assistance delivered at the client’s location are also very common. Surprisingly, help desks use interactive text communication (chat, instant messaging, and text messaging) infrequently or not at all to provide support—this despite the fact that 84.1 percent of students in The ECAR Study of Undergraduate Students and Information Technology, 2007 said they used instant messaging applications, with half that number using them at least daily.

Although the commercial sector increasingly “offshores” customer service functions, few of our respondent institutions outsource any of their help desk services. Only 2.6 percent outsource 75 percent or more of their services; 13.7 percent outsource between 1 and 75 percent of them, and the remainder (83.7 percent) outsource none.

Larger institutions have a lock on the practice of providing help desk services 24 hours a day, seven days a week; just under 5 percent of respondents’ help desks are this available, and more than half of these are at institutions with more than 15,000 FTE. About two-thirds of respondents’ help desks are available beyond standard campus business hours, while a surprisingly high 30.5 percent are available only during standard business hours. Reassuringly, only 1.3 percent report less availability than that.

Most of our respondents were unenthusiastic at best about help desk funding. Over half (55.7 percent) rated funding as less than or much less than adequate; only 3.2 percent said it was more or much more than adequate. For almost two-thirds of respondents, funding for the help desk is at or below 10 percent of the central IT budget.

Despite user populations in the thousands and tens of thousands, help desks provide their services with remarkably few staff. At small institutions the mean number of full-time equivalent help desk staff is about seven, at medium-size institutions it is about 10, and at large institutions it is just under 18. These figures include student employees.

Institution size, Carnegie class, and institutional control are all associated with the number of FTE students served per FTE help desk staff member. Overall, the mean is 1,264 and the median is 861. Even with their generally larger numbers of help desk staff, larger institutions served more students per staff member than small ones. Each help desk staff member at doctoral and associate’s institutions serves a mean of almost 1,800 students, three times as many as at bachelor’s institutions; the number for master’s institutions is around 1,100. On average, each public institution help desk staffer serves twice as many students as those at private institutions.

More than two-thirds of respondent institutions are using an integrated suite of help desk automation tools. Web-based help documents are common for both help desk staff and users, but the many other tools we asked about were in much less common use. Opinion is fairly evenly divided about the effectiveness of the help desk’s use of self-service tools to reduce help desk demand, though it is significantly more positive among institutions where more such tools are in use.
Adoption of ITSM Practices

We asked about five representative ITSM practices:
- capacity planning,
- availability planning,
- change management,
- release management, and
- service level management as represented by the use of service level agreements (SLAs).

Except for service level management, a majority of respondents use each of the five practices. Only 20.5 percent of respondent institutions use SLAs, and a surprisingly high 38.1 percent of respondents said they had no plans to implement them. When we asked why, the most common reasons given were that the practice is incompatible with institutional culture and that help desk staff have higher priorities than developing SLAs. We also learned that over 90 percent of SLA development projects now under way have neither funding nor completion dates, suggesting that these projects have low priority.

On a more positive note, well over three-quarters of respondents have adopted at least one of the other four basic ITSM practices. While just over a third of the entire respondent pool had adopted all four, among those who had adopted SLAs half again as many (52.7 percent) had done so, supporting our assumption that organizations often adopt ITSM practices in concert. The practice of strategic planning for the help desk is also more common where the four ITSM planning and management practices and SLAs are in use.

Above, we emphasized the importance of active help desk participation in the ITSM activities of the central IT organization. Our findings support this by revealing that the priority central IT places on deployment of easy-to-support systems is significantly higher where respondents agree that the help desk is adequately included in ITSM activities.

As we will see, the quality of help desk services is closely associated with the institution’s perception of the central IT organization. For this reason we were surprised that only 18.4 percent of our respondents had implemented customer relationship databases; while another 42.0 percent had implementations under way or in the planning stages, the remainder, nearly 40 percent, said they had no plans to do so.

Measuring Performance

We did not find widespread use of help desk performance metrics. Overall, those most commonly reported are demand for help desk services and the time it takes to resolve clients’ problems. These metrics are typically reported within the IT organization; fewer than 40 percent of respondent institutions report them to non-IT senior administrators and only 20.1 percent to deans.

Overall, only about 40 percent of respondents agree or strongly agree that their help desks use these metrics effectively to improve user services. However, among those who report their metrics more widely, agreement is more frequent, as it is among those who have adopted more basic ITSM practices.

Our respondents’ assessment of their help desks’ maturity enabled us to uncover a constellation of practices that appear to be associated with maturity level. Most respondents (40.0 percent) characterized their help desk’s maturity as “standardized,” the middle level in our five-point scale. As Table 1-1 shows, those who chose the higher levels of “managed” or “optimized” tend to have adopted more basic ITSM practices. They also agree more strongly that the help desk is adequately involved in basic ITSM activities, have a strategic plan for the help desk, regularly analyze more metrics, and agree more strongly that help desk costs and value are well understood on their campuses.

Evaluating Success

As one measure of success, we asked respondents to evaluate their help desks’ positive impact on various service areas. By a
wide margin, the two areas of greatest positive impact are, in a sense, self-serving: More than 80 percent said the help desk had high positive impact on campus perception of central IT services’ value and of its reputation. While these good public relations indicators suggest the help desk is “doing things right,” other findings from this series of questions raise some doubts that it is “doing the right things.”

Following a theme that began in the earlier section “The Help Desk and Its Resources,” respondents rate the help desk’s positive impact lowest for research support, with only 8.1 percent saying the help desk has high positive impact upon that aspect of the institutional mission. Though considerably higher for two other strategic areas, instructional activities (53.4 percent) and administrative activities (68.2 percent), ratings still significantly lag those for the more tactical public relations areas.

Respondents are upbeat about overall help desk service quality; more than half rate their service quality as very good or excellent. Asked for specifics, they tell us their clients would rate help desk service quality highest in technology areas such as identity management, desktop computing essentials, and communication applications and lowest in three core areas of higher education: instruction, administration, and research.

This finding, in concert with the reputation-oriented positive impact findings reported above, suggests that the help desk’s importance to the institution may be more tactical than strategic. We saw earlier that the goal of most of our respondents’ central IT organizations is to provide infrastructure and services in support of the institution’s strategic goals; the findings introduced here suggest that the help desk’s services, while thought to be of generally high quality, may be too far removed from the institution’s core business processes to be of more than tactical value.

This distinction aside, within the help desk’s sphere of influence we find service quality to be positively associated with central IT’s adoption of—and inclusion of the help desk in—basic ITSM practices, the use of metrics to document help desk performance, and the existence of a strategic plan for the help desk. Finally, as Figure 1-2 shows, service quality varies dramatically with help desk maturity level.

**Conclusion**

As the face of the central IT organization, the campus IT help desk plays an important role in enabling, facilitating, and supporting the use of technologies in pursuit of the institution’s mission. While they may not be crucial to the success of every help desk, the practices and functions outlined in the IT service management literature appear to be consistently associated in our data set with the positive impact the help desk has and with the overall quality of its services. Similarly, respondents who report a higher degree of help desk maturity are more likely not only to have adopted ITSM practices but also to report substantially higher overall service quality than less mature organizations.
Our respondents’ main message is that they feel good about the quality of their services. Their help desk organizations set goals and, more often than not, meet them. Nevertheless, many respondents tell us the help desk feels constrained in its pursuit of improvement. The barriers that most concern them are ever-increasing client expectations and less-than-adequate resource pools. While most help desks have adopted integrated automated toolsets for managing their operations, their client communications and service technologies are behind the times—certainly behind the adoption curve of undergraduate students, their most abundant clients.

This conservatism may be understandable as a reaction to the pressure-cooker atmosphere of the help desk during the first week of classes, but it may also be one of the factors that limit the help desk’s strategic impact. As Web 2.0 applications cause paradigm shifts in information sharing, the help desk that limits itself to traditional, hierarchical customer service modes could find itself eclipsed by a campus IT support wiki. As mobile computing, virtual classrooms, and asynchronous learning liberate higher education from time and space constraints, the help desk that is available only from 8:00 a.m. to 5:00 p.m. could find its relevance evaporating.

Whatever changes the future of IT brings, one thing is certain: The coming generation of help desk leaders will have their work cut out for them.