ABSTRACT
Like others in the field, technology service providers in the Indiana University (IU) School of Education face many demands despite limited resources. In Education Technology Services (ETS), we recognize that our efforts fall into two distinct service approaches: a personal, service-based approach and a broad, information-provision approach. These categories are not necessarily mutually exclusive, and in fact should be used together.

Technology service providers tend to dogmatically adopt a single approach; however, embracing a one-path mentality leads service providers not only to overlook the shortcomings of the preferred method, but also to dismiss the benefits of another proposed method. Our solution is a unified, client-centered approach.

Keywords
Help desk, help desk policy, mission, service, personal service, information, support center.

1. INTRODUCTION
For all sizes of technology support centers and client bases, there are two distinct service approaches: a personal, service-based approach and a broad, information-provision approach. By necessity, larger institutions tend to be more information-provision oriented. They offer published FAQs and cryptic support for users, expecting them to be self-sufficient and follow technology instructions. In contrast, small units of 100 or less often expect very personal service from “the computer guy next door.” Nevertheless, almost all campus support providers grapple daily with the decision to 1) impart technology instructions, thus causing the users to fend for themselves, or 2) to provide some proverbial “hand-holding” services. Herein, we address the pertinent issues of each method and how our organization makes such decisions.

Education Technology Services (ETS) is a technology support center serving approximately 450 faculty, staff and graduate students in the Indiana University School of Education. Our equipment and user population exists in three buildings of the Indiana University Bloomington Campus. ETS independently manages all infrastructure and workstation technologies. Our realm of responsibilities includes computer, telephone, and video systems.

As a well-staffed, mid-sized operation, we are pleased—and bedeviled—by the ability to offer both a personal, one-on-one approach to service as well as a training-oriented approach. We recognize that the two service categories are not mutually exclusive; they may be offered in concert with each other to greater effect. So how do we decide which service technique best applies to a given situation?

2. TWO APPROACHES
2.1 The Service-Based Approach
Definition: For the purposes of this paper, we define a service-based system as a technique whereby calls to the help desk are addressed with individualized, sometimes immediate office visits. In other words, the service-based approach is the proverbial “personal touch” approach.

Pros: With the service-based method, problem situations are less likely to escalate. Using this tactic, we can better assess the users’ skill level through direct interaction and body language. We have fewer communication problems; thus, we address requests specifically and promptly. By tailoring support to individual learning styles, we can bring human warmth to an otherwise cold technological environment.

Cons: The direct service approach is time-consuming and labor-intensive; it also fosters user reliance on support personnel. Over time, these user dependencies develop, solidify, and are difficult to extinguish. This method thereby fails to encourage the user’s development of independent problem solving skills. In addition, the labor intensity and personal nature of this approach creates situations where solutions to problems are inconsistently documented and/or shared.

2.2 The Information-based Approach
Definition: An information-based approach will herein be regarded as a practice of supplying users with written documentation, formal training sessions, and phone-only consultations.

Pros: Documentation provided by the information-based system offers users 24-hour support, timely information, and, at its best,
instant gratification. It is a more efficient use of personnel resources and imparts consistent information. This approach requires support documentation. It offers built in ability to track problems and solutions which, when compiled, exposes common trouble areas. Since the information-provision approach is user guided, users gain problem-solving skills, thereby developing self-sufficiency and confidence in their use of technology—it fosters empowerment.

Cons: It is impossible to document every possible solution to a problem. Furthermore, since it is tricky to teach self-reliance—especially when there is little or no personal contact—the lack of personal reassurance can trigger user feelings of helplessness. Finally—and significantly—maintaining this type of information requires planning, constant evaluation, as well as perpetual maintenance; hence, it can be a formidable task.

3. HOW WE MAKE THE DECISIONS

What criteria do we use?
The primary criterion we use is our organization’s mission statement. It simply reads, “Education Technology Services provides data, voice, and video technology and support to the School of Education’s teaching, research, and service missions.” In its extended form, it goes on to state that we should:

- Respond to the day-to-day operations and problems encountered by faculty and staff
- Install, maintain, repair, and upgrade technologies
- Offer training to personnel who use technology
- Provide support for those who use technology in instruction, services, and research
- Collaborate with university offices to advance the use of technology in the teaching, research, and service missions of Indiana University

In addition to these specific items, all of our advisory branches agree on the basics: classroom support is immediate and paramount, followed by mission-critical systems such as Financial Information Systems and student records. Workstation or phone outages must be immediately addressed. This leaves us with the “gray area” where users are stumped by software, network, and printing issues.

In general, our response protocol works in the following order with each step progressing toward more labor-intensive actions:

1. Try to solve the problem using existing documentation;
2. Try to answer the problem over the phone;
3. When all else fails, make an office visit.

In this way, we reinforce self-sufficiency while still providing the option of one-on-one support. Some criteria we use in the decision process are:

- Can the user perform critical tasks without immediate personal assistance?
  If the user cannot access vital functions like e-mail or word-processing, immediate assistance is necessary. Once this aspect is ascertained, we determine the next appropriate service level:
- Are we able to explain a remedy via phone? If so, can the user follow instructions?
  By policy, if we are able to provide a speedy solution via phone, we do so. Overall, it encourages user self-reliance.
- Is the information already provided by University Information Technology Services (UITS)? Is it applicable and understandable by our clientele?
  Knowing that about 90% of our users’ problems can be answered online, we ask them if they have looked up a solution in our Web pages or in the IU Knowledge base. Nonetheless, we appreciate that not all users understand technological terminology; hence, if some assistance is needed, we provide it via phone. If the phone contact fails, we pay a visit.
- Should the solution be considered a basic skill that would be more efficiently addressed through formal training?
  We compile our information and produce various venues whereby the user can have independent access to documentation and training. Although our initial effort in production is high, the return goes a long way. We offer:
  - An interactive Website
  - Training Sessions (“Techno-sessions”)
  - E-mail tips and tricks
  - Quarterly newsletter that covers real-world uses of technology (“TechKNOWledge”)
  - Informational pin-up posters (“Tech-cetera”)
- Is the user’s problem odd or specific? If so, can we guide the user? On the other hand, do we need to be there to perform tasks as administrator?
  Since ETS manages its own computing, voice and video systems, often the IU Knowledge Base fails to provide a solution. Furthermore, the problem can be rare enough to be undocumented. In that case, a specialist tries to deal with the problem over the phone first and then follows up with a visit if necessary.
- Is this related to the academic or administrative functioning of the School?
  Of course, personal work is not in the purview of our responsibilities.

Eventually, a consistent, policy-based approach to service provision creates client expectations regarding the type of service we perform and how we must balance our resources.
4. WHAT INDEPENDENT FEEDBACK DO WE GET?
Any time policies are made they must be assessed. Furthermore, we want to use our resources as efficiently as possible. Hence, we rely on the feedback of external groups and internal summit meetings to continually refine the policies whereby we apply each method. In making decisions, ETS benefits from several formal feedback mechanisms:

- **Direct communication from customers via the “Service Neighborhoods” project**
  This is a group of departmental office managers and selected staff; its members provide daily technology help to their constituent faculty, staff, and graduate students. These contact people, called Local Support Associates, are involved in our decisions and serve as the backbone of our ETS "Service Neighborhoods."

- **Joint projects with external departments**
  These units, such as Instructional Systems Technology, Academic Instructional Consulting, and the Center for Research in Learning and Technology provide usability studies, software development advice, and consulting services.

- **The ETS advisory committee**
  This committee consists of five faculty members, one staff member, and one graduate student.

- **Policy decisions made by our director**

- **Internal service-process assessment meetings**
  This includes staff meetings, internal training sessions and materials, etc.

- **Coordination with the all-campus University Information Technology Services**
  UITS gives advice about help desk methods, technical processes, and developments of university technology. Our key external feedback system, the Service Neighborhoods project, advises us on the practicability of implementation of our processes. They let us know how much "in the trenches" support they are willing to provide from their offices. They also let us know what types of written and instructional materials would help them. (For more information, see: Goveia, W., Reed, J., and Rhodes, C., Mr. Rogers Meets Technology: Service Neighborhoods in the IU School of Education, SIGUCCS ’99 User Services Conference Proceedings, p.79-82.)

In addition, both the School of Education departmental units and the IU Campus Information Technology Services provide us with external perspective and information we need to develop technology-based solutions. They help us to maintain a global perspective.

Our director maintains a close relationship with the Technical Advisory Committee in order to provide us with internal guidance with regard to School of Education policy as well as budgetary matters. Our internal meetings focus on process analysis, technology changes, needs changes, and staffing resources.

5. WHAT ARE THE RESULTS?
A recent informal survey of job duties within our support unit revealed that the average ETS staff member spends about 40 percent of his or her time in direct contact with the people who use our services. We spend the remaining 60 percent performing indirect tasks: administration, development and other indirect support.

As recently as two years ago, the percentage was skewed heavily toward direct contact. With the evolution of our help desk policies, users’ reliance on direct support has rapidly decreased. As our organization evolves, we expect this trend to continue; nevertheless, we remain committed to direct services.

6. HOW COULD OUR APPROACH APPLY TO CAMPUS COMPUTING SUPPORT OPERATIONS OF OTHER SIZES?
From personal experience, we realize that our particular formula may not be the best mix for every computing support unit. The ETS staff is composed of specialists who have served in technology support units ranging in size from the tiny, 22-faculty organization to the gargantuan, campus-level support facility. Obviously, the varying ratios of needs to resources available mandate unique courses of action. However, with an assessment process, any organization can more effectively utilize personnel resources. In the following paragraphs, we offer two different scenarios.

6.1 Two Examples
In the past decade, the explosion of technology in the workplace has certainly surpassed the expectations of most business and departmental managers. During this time, organizations have experienced the effects in different ways.

6.1.1 The large unit
Trends show that larger units—plagued with ongoing purchasing and maintenance issues— have hired increasingly more personnel while refining policies and job descriptions along the way. The consequence of a burgeoning work unit is increasingly narrow classification of job descriptions and less face-to-face service. Electronic communiqués, documents, and user guides progressively replace one-on-one assistance. In response to growing depersonalization of service provision, managers have created elaborate service protocols, which are designed to make the user feel more comfortable. Obviously, this situation is intrinsic to a large technology center, especially if personnel funds are limited.

6.1.2 The small unit
In contrast, during the past decade, smaller units of 15 to 35 faculty and staff have typically kept the same number of technology personnel while increasing their responsibilities. Unfortunately, compounding the situation is the “Mom and Pop Shop” mentality of the users, who would be disgruntled at any service-provision policy except the spontaneous “personal touch.”
7. SUGGESTIONS

Our methods—not our particular solution—could benefit technology service units of various sizes. In larger units, an alliance with smaller units (similar to our “Service Neighborhoods” setup) might be useful. In the reverse situation, smaller units would certainly profit by gathering a system of advisors and by addressing user preferences, needs and potential skill levels as they relate to personnel resources.

Our experience is consistent with the abundant literature on help desk methodology. Fundamental components include:

- The makeup of the users and practical ways to reach them
- The help desk mission
- The help desk vision
- The desired goals
- Well-defined sense of what is urgent
- Measures of success

In this course of action, some of the following issues may emerge:

- Whether to be proactive or reactive: to put out fires or prevent them?
- How to best insure the efficient and effective use of IT personnel
- How to keep users most productive
- How to keep the technology support unit effective in achieving the objectives of the institutional mission

These are all debatable issues. Nonetheless, ongoing assessment and policy-making is vital to a healthy information technology support group.

8. SUMMARY

A coherent vision of the help desk is vital to the efficient functioning of a technology support unit. While not all units have the same requirements or resources, many issues are universal. Addressing a few fundamental questions will help to determine policy regarding whether to provide personal or informational services to technology users. Furthermore, as an organization grows and changes, technology needs will change as well. A healthy organization builds continual assessment and consequent adjustment into its internal processes and, in doing so, simplifies the decision of which approach to take.

9. REFERENCES


Dunn, Julie, Turn your help desk into a strategic advantage, 1998, © InfoWorld, http://www.infoworld.com/cgi-bin/displayTC.pl?/980525sb5-turn.htm

Goveia, W., Reed, J., and Rhodes, C., Mr. Rogers Meets Technology: Service Neighborhoods in the IU School of Education, SIGUCCS ’99 User Services Conference Proceedings, p.79-82