

Students as Service Champions: A Success Story

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ABSTRACT

University helpdesk staff have a daunting job description: work all hours of the day and night, support an impossibly diverse population using an array of software and services, and keep up with an ever-changing university environment, all without getting burned out on service altogether. While many campuses have assumed that FTEs are the only answer, Northwestern University has had tremendous success with an all-student staff for over 30 years. We'll share how we've used a team of students and student managers to:

- provide comprehensive first level support for all major software packages and services, and fulfill the role of second-level support,
- log over 90-95% of customer contacts, allowing for collection of detailed metrics,
- work seamlessly with full-time staff in other areas of IT; handle tricky service issues and day-to-day helpdesk operations after full timers have gone home for the day...

...all while maintaining a customer service satisfaction rating of over 90%!

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1. INTRODUCTION

Students have been recognized as a welcome customer support resource in Northwestern University Information Technology (NUIT) for upwards of 30 years. While the scope of student usage has changed over that time, students have been primarily employed as student consultants in the labs, in the residence halls (Resnet) program, and as frontline and second-level support at the helpdesk, or NUIT Support Center. In this paper we focus on use of students at the NUIT Support Center.

2. WELCOME TO THE NUIT SUPPORT CENTER

The NUIT Support Center provides support for NUIT distributed software and services. Phone, email, and limited walk-in support are available weekdays until 8 p.m., and for limited weekend hours as well. More walk-in support appointments are accommodated during high traffic periods, such as virus outbreaks. While there is some distributed support for certain schools and programs on campus, the Support Center provides support for all University students, staff and faculty.

Student consultants ("cons") provide installation and configuration support for the major software packages distributed by NUIT, including mail clients (Eudora, Mac Mail, Outlook, Outlook Express), Meeting Maker, VPN, and Symantec Antivirus. Assistance is also provided for Internet connections via modem, Ethernet, and wireless. Frontline support is also provided for enterprise systems such as the registration and course management systems; calls that cannot be immediately handled are then referred to the appropriate full-time IT staff. The highest percentage of calls, however, aside from general inquiries ("Requests for Info"), relates to email accounts and passwords. Cons are provided with the clearance to grant passwords; IP restrictions limit this activity to the confines of the helpdesk.

Within the last two years, the consultants' responsibilities have also been increased to include functions previously handled by a team of FTEs. The hotline previously staffed by FTEs from the departmental support area (DSS) was disbanded, and all front-line support was diverted to the students at the Support Center. This not only freed up valuable FTEs to do cost-recovery work for DSS, but also enabled customers to get some free phone assistance from the Support Center without being referred to a specialist at \$40/hour.

This past academic year NUIT transitioned its second level support team from FTEs to two experienced student consultants. The consultants are pulled from the existing pool of helpdesk

students, and work 6-10 hours per week at a starting wage of \$13/hour (with a maximum of \$15/hour). While doing second level work they are expected to meet established SLAs, log ticket activity, and are evaluated twice yearly by the Support Center Manager. Aside from saving money and staff resources, the new arrangement had the additional benefit of being able to offer call-back support after 5 p.m., due to the inherent flexibility of student schedules. This allowed the change to be marketed as an *increase* of service, as opposed to a perceived cutback of any kind.

3. STUDENTS VS. FTEs

While NUIT has elected to employ students at its service centers, there is recognition that there are downsides to this arrangement. As the overall use of staff resources is evaluated and reevaluated, NUIT has taken the opportunity to examine its use of students. The pros and cons that we have identified are:

3.1 Pros

- Consultants are typically only on phones a few hours per day, reducing the burnout factor that plagues FTE helpdesk staff.
- Students are, by comparison, relatively “cheap labor”. Hiring hourly student employees can be much more cost-effective, especially for project work; a student who can do small programming projects is much cheaper than another FTE with a full salary and benefits.
- Students have an intimate knowledge of how the University works, and are familiar with complex internal applications like the registration system. Their uniquely *student* perspective can be invaluable when providing support, or as IT is evaluating new services.
- College students have lots of extracurricular activities vying for their time, but their relatively flexible schedules mean they’re available beyond the hours of 9-5.
- Although the helpdesk currently has many students from tech majors, many student employees are simply computer savvy without having a formal tech background. As customer service reps, they are invaluable for their ability to explain complex troubleshooting steps over the phone to novice users without too much jargon or perceived condescension.

3.2 Cons

- Student employers face a high rate of built-in turnover; unless you manage to find your star consultants as freshmen, you have fewer than 4 years with them before you know they’ll leave. This inability to retain quality employees is one of the most frustrating things about using students.
- Even the most rewarding student job is still going to be just that: a student job, a good step or two below a “career”, so you as an employer are often low on their priority list. This can make motivation difficult during tough periods (i.e. virus outbreaks!), and the rate of innovation is slower because the employees aren’t constantly thinking about how to do their jobs better.

- For many students, particularly the freshmen, the helpdesk might be their first serious job. While this means you can take the opportunity to “mold” them to your liking, it also might mean they’re inexperienced, which can lead to issues with attendance or inappropriate behavior on the job.
- Campuses generally clear out during academic breaks, so it can be tough to keep the helpdesk fully staffed during these times; NUIT has had to, on occasion, supplement the helpdesk with one or two savvy FTEs. [During summer, the Support Center keeps an all-student crew, but raises the hourly rate to \$10.10/hour.]
- Even with a competent crew of consultants, there are liability issues that one has to consider when using students as troubleshooters. For this reason students are prohibited from doing high level fixes such as Windows Registry edits or operating system installations/repairs. Enterprise security concerns also prohibit students from performing functions such as email account creation and administration.

4. NUIT SUPPORT CENTER STRUCTURE

The Support Center is managed by one FTE, who oversees day-to-day helpdesk operations and manages all 20-30-student consultants (“cons”). Six student managers (“Conleaders”) assist the Support Center Manager.

4.2 Cons

20-25 student consultants working an average of 10-12 phone hours per week staff the NUIT Support Center. The consultants (“cons”) are divided into smaller groups, each supervised by one of six student managers (“Conleaders”). While on shift, cons answer phones, take walk-ins, and answer email sent to NUIT’s nine support addresses.

4.2 Conleaders

Six student managers assist the Manager in the Support Center, and have the same authority with customers and consultants as the FTE Manager. All Conleaders start out as Support Center cons, and have the potential to be promoted after a minimum of one academic year of service. Once made Conleaders, the students report to the Manager and themselves manage a small group of cons, over the course of the year coaching them, assisting in their performance evaluations, and handling disciplinary issues as they arise. Part of Conleaders’ 12-15 hour/week time commitment consists of “office hours,” during which they can be available to the cons for questions or problems.

Since they are no longer on phone duty, Conleaders supplement their time with helpdesk-related project work: one Conleader each on hardware maintenance (workstation Ghosting and server administration), web development, scheduling and knowledge base, general administration, and two Conleaders on training. A Conleader returning for a second or third year typically changes his/her project, rotating through many of the positions. The administrative position is reserved for a returning Conleader, as that position serves as the Manager’s “right hand,” and needs to be familiar with Support Center operation, as well as with the work done by the other Conleaders.

The Conleader position is an excellent way to reward good consultants, but the Conleaders are also of tremendous benefit to the helpdesk as a whole. First, unlike FTEs they are available beyond the hours of 9-5, and can be on duty after the Manager goes home for the day. They are typically more vested in the overall success of the Support Center, and are therefore interested in helping the Manager make improvements in operation and policy. Conleaders, as students, can also be extremely effective in getting “buy-in” from students when it comes to (unpopular) policies.

Conleaders are selected each spring (see Section 5, Hiring), and the new team (including Manager) attends a training/teambuilding retreat; the weekend away fosters a sense of ownership in the student managers, and has proven invaluable for internal strategic planning.

5. HIRING

The Support Center doesn't have too many problems gathering candidates for consultant positions; a few strategically placed ads in the school paper and a posting on the Work Study board usually net more than enough interviewees. The challenge has been more in *selecting* suitable people with the right balance of skills, and getting them right when we need them.

Timing of hiring periods has proven crucial; in the past, a percentage of students graduated in June, and their replacements were hired and trained each September. This created a “scramble” to get good folks in chairs quickly, and at times we ended up with students that didn't quite work out. Now, a portion of the replacements for graduating students is hired in Spring quarter, with the remainder, hopefully freshmen, starting in Fall. This leaves the hiring team (the Admin Conleader and the Manager) more time to find the most quality candidates.

The other dilemma revolves around hiring criteria: we know the two most important factors are customer service skills and technical knowledge, but which is most important? Do you favor the “people” skills, arguing that technical skills can be taught? In one particularly desperate year we went that route, with less than positive results. The consultants were exceedingly polite, but struggled with the vast array of technical issues, and problem resolution rates suffered. Since then, the focus has returned to technical know-how, also screening for candidates with good communication skills.

Given the renewed focus on technical knowledge, it was time to revamp the interviewing process. Instead of merely fielding hypothetical technical questions, the interviewee takes an incoming call; the Admin Conleader is on the other end of the line, and proceeds to simulate a real call, which the interviewee is also directed to document as if she were filling out a trouble ticket. This enables the interviewing team to really see how a candidate reacts when presented with a tricky technical problem or a high-maintenance customer. The results of these interviews have been much more satisfactory, and the learning curve for the consultants has been dramatically reduced.

Conleaders are selected in February; current consultants are encouraged to apply, as long as they will be available the entire academic year. Interviews are panel-style, with all Conleaders and the Manager participating. Decisions are made by the end of

February, and Spring quarter is dedicated to transitioning projects from one Conleader to another, and for teambuilding events such as the retreat.

6. TRAINING

Two Conleaders conduct training, but it is the responsibility of all the Conleaders and the Manager to make sure trainings are timely and effective. There are two main training sessions at the start of each Fall quarter, and weekly sessions thereafter which go into greater detail on a variety of technical or policy subjects. Training is mandatory for all consultants, and as a result consultants are allowed to bill for training time.

The two Fall training sessions are perhaps the most critical of the year: Returning Con Training and New Hire Training. Consultants are not permitted to start working the phones until they have attended their respective training.

Returning Con Training is conducted shortly after the students' return to campus, and is a 4-hour refresher for returning consultants that also introduces any new services that were rolled out over the summer.

New Hire Training (NHT) is conducted after New Student Week (which includes the Work Study Fair) and the initial hiring push, and is designed to give new cons enough information to hit the ground running. This can still be a tremendous amount of information to absorb, so NHT is conducted over a weekend, four hours each day. The first day provides an overview of working at the Support Center, including policies, how to work the phone and ticketing systems, and overall NUIT structure. The second day is reserved for basic technical training (i.e. Eudora configuration, Mac network troubleshooting, Symantec AntiVirus installation), and concludes with some time “shadowing” experienced consultants on the phones.

It is simply not possible to cover all the supported services with the necessary depth, so the training Conleaders conduct weekly trainings on Tuesday evenings (from 7:00 to about 8-8:30 p.m.) Topics include technical areas like e-mail account problems, VPN troubleshooting, and virus removal, or non-technical subjects such as customer service (i.e. appropriate phone greetings and phrases), or the popular “party line” training (i.e. how to explain things like password policy or retirement of a service to angry users). Weekly training sessions are hands-on whenever possible, and use campus labs if available. During a recent virus outbreak, laptop appointments for infected machines were scheduled during training periods, and consultants were given an opportunity to witness first-hand how to remove all components of the virus. PowerPoint presentations are used to supplement the interactive components, and guest speakers from other IT areas are sometimes invited to speak on topics such as network security.

7. ON THE JOB

7.1 Scheduling

A designated Conleader handles scheduling; s/he collates the students' schedules, creates a base weekly schedule, and makes changes as necessary. The entire schedule is a dynamic application written in ColdFusion. Students fill out a “planner,” a blank template where students can fill in what classes and

activities they have, when they would prefer to work, and are allowed a certain number of “Xs” to mark when they would prefer not to work. The Scheduler uses the ColdFusion scheduling tool to collate a coherent master schedule from these planners, and the schedule is posted a week in advance. Once posted, the schedule is completely dynamic—students who want to “trade” a shift can do so from the scheduling page, and send an email to the con listserv, asking their cohorts to “please take this shift!” A con wishing to take the shift can then go to the schedule and “take” the shift; it is now theirs, and they are responsible for showing up.

Tardiness and missing shifts is the biggest personnel issue the Support Center has (see Section 7.3). Cons are strongly encouraged to call any con who is more than ten minutes late to a shift; shifts that are completely missed (i.e. more than 30 minutes late) are turned red on the online schedule (a deterrent in its own right), and the con cannot bill for that hour.

7.2 Tools

Resources available to consultants on shift include the following:

- All customer contacts are required to be recorded in the Remedy trouble ticket. Cons also use Remedy to refer tickets to other areas of IT, as well as the internal second level group. Ticket submissions are compared on a weekly basis with the number of calls received via the ACD, which generates a percentage of tickets entered. Instituting the weekly tally, with the top five submitters being posted on the helpdesk wall, increased submission rates from <10% to over 90%. A \$15 gift certificate is awarded to the overall best submitter each (academic) quarter.
- “Conweb” is the internal Web site maintained primarily by the designated Conweb Conleader. It is comprised of links to support documentation, “news” items (i.e. service interruptions, policy changes), and ConFAQ, a searchable database for cons with NU-specific FAQs. New entries can be submitted by any consultant but are ultimately approved by the Conweb Conleader.
- Support Center cons are required to answer incoming email requests for help. A Web-based ColdFusion application with an Access database was created by students to handle the nine different mail queues.
- Communication between consultants is handled via listservs, one for all cons, one for Conleaders and the Manager.
- Although staffed by students, there is recognition on the part of IT that the Support Center is *the* central helpdesk. Therefore, the cons are empowered to make contacts as necessary with other areas of IT as the need arises (i.e. request an update from a server admin during an outage, or speak to the Security Coordinator about a delinquent user on the network). These support links are critical to providing callers with good service, so these relationships have been carefully cultivated over time.

7.3 Performance reviews & discipline

Given the importance of the work that the consultants do in the campus community, feedback is tremendously important. For this reason, the Conleaders and the Manager have the chance to sit

down with consultants three times a year. The first is midway through fall quarter, at which time the Conleaders go over the performance review form with their cons and explain the criteria on which they’ll be evaluated, as well as a rough (i.e. not official) assessment of how they’re doing so far.

The first formal review with possible merit increase is during Winter quarter (i.e. January). The Conleaders take a first pass at reviewing the cons—filling out the review form and providing comments for each area. The Conleaders and Manager then meet to “normalize” the overall scores, and establish raises. The cons schedule a 15-minute period with each Conleader/Manager, and receive a copy of their review form and talk to the managers. The second review is in May; the same process is followed, but merit increases do not take effect until Fall quarter.

In terms of day-to-day disciplinary issues, by far the #1 issue (and the #1 reason for terminating a student employee) is attendance and tardiness. Cons are only allowed to be 10 minutes late to a shift if they are coming from class, and are not to be late at all for the first shift of the day.

Disciplinary issues are handled in a fairly consistent manner; a first infraction brings a verbal warning, followed by a written warning, then Probation (typically until the end of an academic quarter), and then, if the problem persists, termination of employment. The con’s Conleader often handles verbal and written warnings; the Conleader and the Manager handle probation and termination incidents jointly.

It is worth noting what *hasn’t* been a problem. There have been no security incidents involving sensitive information such as passwords. There have also been no problems with faculty or staff taking issue with having to deal with a student, nor have there been egregious behavioral/professionalism issues.

7.4 Retaining students

Customer service is no easy job, so how do we attract—and retain—quality student employees year after year? A partial list, gathered from our own perceptions, and from the mouths of the consultants themselves:

- We hire both Work Study and temporary employees; we can also keep students even after their Work Study funds are depleted. The Support Center remains one of the higher paying Work Study jobs @ \$7.85/hr, although we are starting to fall behind compared to other student temp jobs. As Work Study jobs go, the Support Center is perceived as one of the most interesting Work Study jobs, as opposed to jobs that are slower, or more administrative.
- Not only is the pay reasonable, but cons can earn merit raises twice a year, up to \$0.75 max (\$1.50 for student managers)
- Possible promotion to Conleader after one year. Not only does this mean more money (starting wage of \$10.10/hour), but it’s also a golden ticket off the *phones*.
- Awards for Con of the quarter (\$25 gift certificate), and top ticket submitter of the quarter (\$15 gift certificate).
- Opportunities for more challenging, hands-on work, such as walk-in laptop appointments or software testing.

- Free food! Food is a great motivator when scheduling those unwanted 8 a.m. shifts, so bagels and/or donuts make frequent appearances. [Note: NUIT policy allows for food to be reimbursed for established “events”, but much food on shift is an out-of-pocket expense for the Manager.]

8. Future directions

The serious virus outbreaks of the last year have tested the strength of our support groups, particularly the Support Center, Resnet program, and the Network Operations area (primarily FTEs). While all areas went above and beyond in their dedication to cleaning infected machines and getting our users back on line, there is room for streamlining of procedures and increased cooperation with other areas of IT.

The Support Center is part of NUIT’s Technology Support Services, the branch of IT that evaluates, tests, and deploys new services to the University community. As more and more services are released with increased rapidity, FTE resources wear thin. To complement the waning supply of FTE testers, Support Center students are being used to test new services and provide testing reports to project managers. Many students like to get a sneak peek at new technologies, and they have a vested interest in the quality of the service, as they’ll soon be supporting it on the

phones! They can therefore be relied upon to provide thorough reports.

Having met the challenge to find excellent, tech-savvy employees, the next step in the Support Center’s evolution is to focus on fine-tuning our customer service. In the upcoming academic year the Support Center management team will be looking to implement call monitoring techniques to ensure the quality of our phone service.

Another project under development is to enhance our existing tools (like Conweb) to create more of a knowledge base for consultants. Combining the information that has been gathered in the FAQ and in the Remedy trouble ticket could mean a much more robust troubleshooting tool, as well as something which could one day be released for general customer use. The Manager and the Scheduling/Knowledge Base Conleader will lead the project.

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