The "T3 Support Centre" (Teaching, Technology & Testing) - Not just another help desk

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ABSTRACT

Many faculty members embrace the challenge of responding to rising student demands for more technically advanced course supports by offering their courseware through a variety of media. However, it is often difficult for them to find the time required to become proficient in the use of the software packages, course management systems and web technologies at their disposal. These new realities of teaching point to the need for support systems for faculty members that go beyond the traditional computer services "help desk" with a more comprehensive support service that actually becomes involved in the development and modification of technology-based course materials and computerized test marking and analysis.

Increasing demand for these types of services at Carleton University resulted in the establishment of the T3 (Teaching…Technology…Testing) Support Centre. The service offers faculty members extended-hour phone-in and walk-in support as well as a variety of resources such as Scantron and Item Analysis service for multiple choice exams, the use of scanners and colour printers, as well as a variety of teaching publications and contacts.

This paper details the planning, administration, and services offered of the T3 Service, including advice those attempting to establish a similar service. Usage statistics from the first year of operations will be delineated.

Keywords: Teaching Technology, Help-Desk, Faculty Support, WebCT Support, Information Technology Support, Higher Education, Educational Development Centre

INTRODUCTION

In response to rising student demands for more technically advanced course supports, many universities are not only encouraging, but indeed requiring faculty members to utilize a variety of technologies in order to enhance teaching. As university professors are choosing (or in some cases, grudgingly agreeing) to integrate more types of computer technologies into their daily teaching efforts, they require additional support services to make these new teaching approaches successful. The time required to become proficient in the use of these software packages and web technologies (such as electronic presentation software (i.e. PowerPoint®), web-based resources (i.e. Course Web Pages), and structured course management systems (such as WebCT® and Blackboard®), and to re-work courseware to integrate their use is often a daunting, if not impossible task for professors [1]. Many faculty members, both experienced and new, embrace the challenge of offering their courseware through a variety of media, yet cannot find the time in their chaotic schedules which balance research, teaching, and administrative duties, to devote to the conversion and enhancement of their course materials to incorporate technology [2]. Many experts in the field of educational technology have specified that not only should a university support professors with training programs relating to classroom technology, but that a technology support infrastructure, including assistance with course materials development and production should be made available for real advances to be seen [3].

The tremendous amount of time professors spend on the teaching enterprise (including time spent in the classroom, preparing, and interacting with students) has been frequently addressed by educational researchers and higher education administrators alike. Several authors have reported that the average full-time faculty members works between 50 and 70 hours per week on their combined duties of teaching, research, and service, with up to 90 per cent of this time being dedicated to teaching-related activities [4] [5]. This number of working hours does not generally take into account the need for faculty members to learn new methods of teaching with technology, to add content to electronic course management tools such as WebCT, or to establish and monitor discussion groups and online chats. It is little wonder, therefore, that most faculty members are reticent to even further increase their workload to learn and implement these new teaching technologies.

The new realities of teaching in this online-learning age point to the need for faculty to implement technological solutions to classroom issues. This, then, results in the need for support systems for faculty members which goes beyond the traditional "help desk" that has been made available at most universities that perform tasks such as changing system passwords, and setting up e-mail accounts, to a more comprehensive support service which actually becomes (and remains) involved in the development of course materials and planning.

FACULTY DISSATISFACTION WITH TRADITIONAL HELP DESK-STYLE TECHNICAL SUPPORT

When Lucas [6] delineated the key components of a successful academic computing help desk, she included "accessing help easily" and "training faculty, staff, and students," as well as "training the support team" and "making it easier for clients to

receive support." The critical need for all of these features were addressed by a considerable number of Carleton University faculty members while expressing dissatisfaction with Carleton's computing services' traditional-type help desk as the sole source of computing support for classroom technologies.

Faculty members came to Carleton's Educational Development Centre (EDC) to attend training courses in teaching technology. Some of the courses offered related to the use of WebCT®, Dreamweaver®, and Microsoft PowerPoint® for teaching purposes. Also, the EDC provided a program where faculty members were given assistance in the development and production of course materials using these products. This program is described below. While attending these courses at the EDC, many faculty members indicated that they had several technological needs that were not being adequately addressed by the university's Computing Services help desk, and that they felt there was nowhere on campus that they could get this type of assistance. Their dissatisfaction stemmed from a variety of sources:

1) It was difficult to access the help desk service by telephone because of the tremendous call volumes. Many faculty members found themselves waiting on hold for extended periods, or leaving messages that were never returned.
2) Faculty were not given priority over students or staff when calling, and often waited so long for service that they "gave up". This often meant giving up on the initiative or project, and not integrating the technology into teaching at all.
3) Help desk hours were restrictive, and often by the time the help-desk staff tried to return the calls of the faculty members, the faculty members were no longer in their on-campus office. This issue is exacerbated for faculty members (as compared to staff) who spend most of their hours on campus in other places than their offices—either in the classroom, or in the lab, as well as often working on teaching materials at home.
4) The staff were not well trained (many were part-time students hired at the beginning of the semester—the help desk's busiest time) and were not knowledgeable regarding teaching technology software or other classroom technology issues.
5) The staff had no knowledge of the course materials that had been previously developed for the faculty members' websites, and it was frustrating to have to go through lengthy explanations of the problem.
6) Because a number of different people (many part-time students) staffed the help desk, there was felt to be no continuity of service. If a particular problem was not resolved with one call, the faculty member was unable to contact the same assistant again, and once again had to "start from the beginning" when describing an ongoing problem. This led to extreme frustration.

The Computing Services help desk attempted to resolve some of these complaints by setting up separate, satellite "Administrative Help Desks" for the two largest faculties. Faculty were still not given priority over staff, however, and hours remained those of traditional business. This failed to address the access problems described above. As well, the staff members running the desk were still not trained in teaching technology software, but were still primarily trained to address issues of security, access, and storage, as well as clerical computing issues.

These concerns with computing help desks are not unfamiliar to most university information technology staff. The now-familiar concept of the campus computing help desk gained widespread application in the late 1980s. At that time, Eastern Michigan University's Centre for Instructional Computing was a leader in pioneering the service through a system which included a wider range of services than were available at most universities. This incorporated open periods of time where faculty could drop in and use hardware and software, and a centre that was open for a full 40 hours per week. Peer mentoring and a summer institute were also aspects of this innovative program that saw a traditional university computing help desk transformed to address complex academic computing issues [7]. For most universities, however, services at help desks remained much more restricted, and basically involved a techy-type person answering a telephone and responding to routine e-mail requests.

Similarly, at Carleton University, in Ottawa, Canada, these inadequacies with the standard computer services help desk rendered that service unable to address increasing complex needs for faculty support that arose from the rapid expansion of the integration of technology in the classroom. Therefore, the management of Carleton's Educational Development Centre sought to modify the services of their Student Technology Assistant program to meet those changing needs.

THE STUDENT TECHNOLOGY ASSISTANT PROGRAM

The Student Technology Assistant (STA) program was established four years ago for the purpose of providing faculty members with assistance in incorporating web-based supports into their classes. The program takes advantage of a university-funded work-study program to engage several students (generally around 10) each year in assisting professors to prepare and post web-based and WebCT® based course materials or to complete other teaching-technology type projects. These part-time students are trained in the appropriate technologies (PowerPoint®, WebCT®, Macromedia Dreamweaver®, Macromedia Flash®, etc.), and work approximately 10 hours per week each on a project basis. The primary source of funding for this program is a university-wide work study program which funds students who can demonstrate financial need to a maximum of 10 hours per week to work on campus. Depending on available funding in any given year, the program is staffed through a combination of these work study students, and part-time and full-time Educational Development Centre staff.

During this past year, for example there were eight people involved in the STA program. They included the Manager of Teaching Support Services (TSS), five work-study students, one full-time contract employee, and one part-time contract student. The combined working hours of the group were about 105 hours per week, fifty hours from five work study students, up to 25 hours from one senior STA, 18 hours from a full-time contract employee and approximately 12 hours per week from the Manager of the TSS. Although this is comparable to having three full-time employees, efficiency and productivity is somewhat adversely affected by the start-and-stop nature of the (very) part-time work study students. These staff were the same ones involved in the administration of the T3 Support Service

described below (this was really a new "front end" for the STA Program).

Over the past academic year, the STA team completed approximately 125 course-related projects for faculty members. The majority of these involved course web site creation, WebCT course development, and WebCT Gradebook integration. This productivity reflects similar pattern to previous years, with a steady growth since the inception of the program in 1999 when 54 projects were completed.

The model under which this service ran was that a faculty member would contact and meet with the Manager of Teaching Support Services prior to the initiation of a project, after which, if the project were accepted, it would be assigned to a student technology assistant who would then contact the faculty member and begin work on the project. As this service has matured, a need became apparent for a "quick fix" service, ideally with extended hours (acknowledging that many faculty members prepare courseware at home, in the evenings).

The existing Student Technology Assistant Program presented some unresolved challenges. These were:

1) Faculty were often frustrated by a wait of two or three days before they could re-connect with the part-time (10 hours per week) STA who completed their project.
2) Faculty members' hours of availability to complete this work were often conflicting with the availability of these full-time students.
3) Faculty members did not want to "bother" STAs with minor requests and the project intake systems was not particularly friendly to very small requests for help.
4) The lack of full-time staff associated with the STA program in previous years presented some challenges to continuity of service, with project loose ends often going untied for long periods. This was due to the 10-hour-per-week students' often never crossing paths in the Centre, if their class schedules were conflicting.

T3 (TEACHING…TECHNOLOGY…TESTING) SUPPORT SERVICES

A proposed model to meet the above requirements was determined to be a quick walk-in, e-mail-in or phone-in service to answer simple, often one-time questions relating to educational technology applied to teaching. For example, a professor whose web page was developed by the STA program may now be perfectly capable of maintaining and updating the web page on a daily basis (all projects include training of faculty members to maintain their materials after the initial projects are completed). This professor may, however, hit a point of frustration when trying to perform a new function (for example, creating a 3-D manipulative, or editing a sound file for a presentation). It would be most efficient if this professor could call for help at the time that this challenge presented itself, solve the problem, and get on with course preparation. With the STA program only at their disposal, professors would often need to wait a day or two until the STA who designed their courseware was in and able to make the modification.

Along with extended evening hours to provide service during the times when faculty members were actually working on their course content, the T3 Support Service was also conceived in a way that would offer a one-stop shop for the resolution of all teaching and technology problems (including those that must be addressed by Computing Services Help Desk and Instructional Media Services). This was provided by having the faculty member tell their requirement to the T3 Coordinator, and have them follow up with the appropriate campus unit, reporting back to the faculty member when the issue is totally resolved. This was intended to reduce faculty frustration, which revolved to a large extent around the fact that faculty members remain "moving targets", and after they place a "help" call to any unit, do not remain in their on-campus offices for extended periods of time (unlike administrative staff). This would also alleviate the frustration of their having to remain on hold during busy times of year—T3 staff would remain on hold for them and resolve the problem.

T3 SUPPORT CENTRE – STRUCTURE AND SERVICES OFFERED

The following services were comprised those offered to faculty members through the T3 Centre. They represent an amalgamation of the STA Program and the new help-desk style service, with an eye to addressing the problems with both the current STA Program, and the Computing Services Help Desk as described above. These services were begun unofficially in September, 2003, heralded by the hiring of a full time "T3 Coordinator". An official launch of the service, complete with a wine-and-cheese reception was held in December, 2003, in conjunction with faculty workshops including a session on the use of technology in the classroom. This event and the launch of the T3 Centre was broadly advertised on campus, and well attended. A variety of communication avenues were used to make faculty members aware of the new service.

Role of the T3 Coordinator
The only position created exclusively to work in the T3 Centre was the full-time T3 Coordinator. It was the responsibility of this person to receive all inquiries (through e-mail, telephone, or in person), and either respond immediately to the problem (the ideal circumstance), or assign larger projects to one of the Student Technology Assistants. The Coordinator was responsible for tracking the progress of all requests, and reporting to the Manager, Teaching Support Services, regarding their resolution. Logs of each point of contact with a faculty member were kept, and statistics on the number of calls and walk-ins, and types of assistance given, were reported to the Manager, TSS on a monthly basis. A summary of these results are reported below.

The Coordinator was to be constantly physically present in the Centre, so that faculty members, who were using the centre's complimentary equipment, would have someone to ask questions of if they needed help. A major responsibility of this position was to walk through the "how to" part of problem resolution with faculty members on our equipment in the Centre, offering one-on-one training as required. At times, faculty members would come to the T3 Centre to work on difficult projects *just in case* they needed help, so that it would be on hand for them.

The T3 Coordinator was also the functional supervisor of the STA Program, in that this person was responsible for distributing larger projects to the Student Technology

Assistants, and tracking their progress. This was under the supervision of the Manager, Teaching Support Services.

The primary services offered by the T3 Centre were as follows:

Project Development/Course Design
The following project development/course design activities were performed by the amalgamated services of the T3 Support Centre and the Student Technology Assistant Program.

WebCT® and Course Web Site (Dreamweaver®) Development and Support – T3 Support Services acts as the intake portal for all projects assigned to the Student Technology Assistants. These primarily include initial development and uploading of course materials either on independent web pages or through WebCT® (an increasingly popular option). Once initial material is input, faculty members are trained to maintain their materials, but often require additional assistance for a variety of reasons, such as adding a new component to the course site (quiz, or discussion group), or increasing the complexity of the materials posted (with sound or video files or simulations). Once faculty members bring a course materials support project into the T3 Centre, they will be given permanent support for the site.

Presentation Preparation and other Course Material Services – Several professors require the creation of PowerPoint slides, either from the inception of the course, or the preparation of special or difficult slide formats. A variety of scanning equipment available for projects includes slide scanners as well as the traditional flatbed scanners. A high speed colour laser printer is also available for the production of course materials and slides.

Informal and Formal Training
While the majority of the teaching technology training is facilitated by another branch of the Educational Development Centre, the T3 Support Centre offers one-on-one and small group training for faculty members wishing to learn how to maintain, update, and create course materials.

Faculty Training - All course design projects include a training phase where faculty members are trained to look after their own materials, and to interact with students using WebCT. Spontaneous training sessions also take place as faculty members "drop in" to the Centre to ask for help with variety teaching technology problems. The coordinator or other STAs will sit down at one of the computer workstations and "solve the problem" while showing the faculty member how to do it themselves next time. Of particular importance in this effort was conducting one-on-one training which allowed faculty members to integrate their Scantron exam results into the new WebCT Gradebook—the University's new electronic gradebook. This was a fairly complex procedure, and T3 staff completed the first upload with the faculty member, to show them how to take over the task themselves.

Student Training - Also, on the request of faculty members, in certain circumstances T3 staff will attend classes and conduct training for the entire class on uses of WebCT or sometimes advanced PowerPoint, if the professor needs the students to learn the skills for course-specific projects. This service was kept to a minimum, however, as the mandate of the Educational Development Centre, within which the T3 Centre was situated, was clearly support and training of faculty members and teaching assistants only—not technical training for students.

Immediate, Personalized Assistance for Clients of STA Program and All Other Faculty Members
One of the primary features of the T3 service—in fact, a central impetus for the establishment of the T3 Centre, was to provide immediate, convenient solutions to many of the minor technology-bases problems and annoyances that face faculty members on a regular basis. To this end, the following services were built into the core plan for T3 from its inception:

Walk In/Phone In/E-Mail in service during extended office hours - At the core of the T3 Centre is a drop-in centre concept that offers extended hours allowing faculty to call for assistance during the evening. For the first semester of T3's operation, which began in December, the Centre was open only Monday and Tuesday evenings. It is anticipated that this service will be extended as usage and budget numbers dictate to include all weeknights within the next two years.

Occasional 'House Calls' - Where time and staffing permitted, T3 staff visited faculty members in their offices to assist with technical problems. Often, it was easier for the faculty member to have someone come into their on-campus office, observe and fix the "problem" than to come to the T3 Centre (often a long walk across campus). This service was fairly limited, however, and as the usage numbers below indicate.

Liaison Role with Other University Services - A service that was fundamental to the initial conception of the T3 Centre is that of acting as a liaison between faculty members and other university services with whom they may need to interact. The concept was that faculty members could have one place to call (T3) for all assistance, and if another university service needed to be involved, the T3 Coordinator could make the request for them, follow it up, and let them know when the problem was resolved. For example, if a faculty member needed to change an access password, rather than calling the Computing Services help desk, with the associated frustrations described above, the faculty member would simply call T3, and the T3 staff member would deal with Help Desk staff and call the faculty member back when the password was changed. Similarly, if issues arose dealing with Instructional Media Services around classroom equipment, the same type of liaison service was available. The primary need for this service centres around the fact that, unlike administrative staff, faculty members rarely spend large amounts of time in their on-campus offices, and it is frustrating for them to wait for returned calls. With this service, calls could be returned to our office, and dealt with in a seamless fashion. This was perhaps the most appreciated service of all from the faculty members' perspective, and many verbal compliments were received regarding this.

Scantron Exam Service/Item Analysis Service
A pre-existing service of the Educational Development Centre was the scanning of all multiple-choice exam sheets. This service was enhanced through T3 by returning a detailed item analysis report with each returned exam. The EDC Director offered consultation services to faculty who needed assistance in interpreting the results of the item analysis, or who requested assistance in improving exams based on the results. These consultations were scheduled through the T3 Centre.

Assistance with Uploading Grades to WebCT® Gradebook - A particularly problematic circumstance for faculty occurred when Carleton University changed to a new gradebook program for use in recording and submitting student grades. The

performance of the function of taking the electronic files containing the grades from the Scantron output and integrating them into the overall course gradebook was a very complex one. The existence of the T3 Centre allowed us to walk each faculty member through the process with one set of grades, teaching them how to do it themselves thereafter. Several faculty members required assistance with this more than once, and many came into the centre to use our computers to upload the grades, just in case they needed help. This was exemplary of the concept of the T3 Centre working as originally conceived.

Teaching and Learning Support

As well as the technical support services offered, the T3 Centre acted as a front desk service for all of the Educational Development Centre's general teaching and learning support services—often referred to as *pedagogical* as compared to *technological* services. This is an area that is most fruitful for future service expansion of T3.

Reference Library & Workshop Registration - An extensive teaching and learning reference library, including books and journals is available in the Educational Development Centre, and these references are loaned through the T3 Desk. Brochures, registration services, and information regarding the EDC's entire suite of teaching technology and pedagogical workshops for faculty and teaching assistants was available through the T3 Centre. The Coordinator was able to advise faculty members regarding which courses would best suite their current requirements, as well as to advise those staff in training services regarding the types of courses that would be most useful to faculty members.

Private Consultations – Faculty members approaching the T3 Centre with questions or problems regarding evaluation or other pedagogical issues were scheduled for private consultation with the Director of the Educational Development Centre. Those with complex questions regarding educational technology or online learning issues were scheduled to meet with either the Manager of Teaching Support Services or the Manager of Instructional Innovation. These appointments were scheduled through the T3 Centre.

T3 USAGE DATA FOR FIRST ACADEMIC YEAR

When calculated over its first academic semester of operation, the T3 Centre received an average of 4 telephone requests and 4 walk-in quick-fix requests per day. Approximately 1.5 in-depth in-person consultations were conducted per day, and one "office call/house call" was made per week. In conjunction with the STA program, the T3 Centre facilitated approximately 125 projects relating to course materials (of which, approximately 75% related to WebCT content).

While these numbers may not initially appear to justify a full-time Centre, the aggregate numbers over this first semester of operation, as well as the fact that the one full-time coordinator was working on development projects when not answering requests rendered the service quite efficient from a financial and staffing perspective. Those faculty members who did avail themselves of the service were generous with their praise, indicating that they appreciated the service dedicated to their needs.

CONCLUSIONS

As can be seen from the variety of functions performed by the T3 Support Service Centre, the unit served as an effective triage point for a wide variety of faculty needs, primarily, but not exclusively, relating to educational technology. Faculty members have indicated that they truly appreciate the one-stop-shop aspect of the service. They appreciated that they did not need to determine on their own which university service could solve their teaching technology problem, but that the T3 staff would look after it for them, and notify them upon resolution. This allowed them to dedicate more time to teaching and course enhancement.

Another less concrete function performed by the Centre was one of providing a central point for faculty to congregate—a place they could call their own. The bright, spacious area with two computers available for use at all times, four comfortable armchairs and an ever-full coffee pot was appreciated by many as the only central locale on campus where all faculty members were welcome— regardless of teaching discipline.

The T3 (Teaching…Technology…Testing) Support Services Centre was a positive addition to the services of Carleton University's Educational Development Centre. Usage of the facility is expected to increase as active communication campaigns across campus make more faculty members aware of the existence of the service. New faculty members will be given a detailed introduction to the service during their formal orientation period, and it is expected that more faculty members will become aware of the T3 Centre's benefits through word-of-mouth.

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