

Student Technology Consultants: They're Not Lab Monitors Anymore

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ABSTRACT

Since the advent of public access computing labs, Colleges and Universities have been employing students as “lab monitors”. As access to and knowledge about technology and its’ viable use in teaching, learning and research, Hamilton realized a need to provide a higher level of service and support to our users in our public labs. By adapting the Student Technology Consultant (STC) model from William Paterson University, Hamilton’s STC program provides the Campus with four core public support initiatives; General Lab Support, Multimedia Support, Technology Enhanced Classroom Support & Maintenance and Event & Presentation Support.

Before the start of the each academic year, all STCs are required to attend an intense weeklong training program, which includes basic job responsibilities, hardware & software maintenance, operating system differences, customer service, lectern training and standard software packages, including the use of multimedia applications for a variety of purposes. The main focus is on the creation of a “digital portfolio” using tools available to them in our Multimedia Presentation Center. This portfolio exhibits their competency in shooting digital video, editing and compression, scanning and manipulating graphics, and integrating media into various web formats, thus enabling them to provide the Hamilton Community with a higher level of public lab support than ever before.

Categories and Subject Descriptors

K.6.1 [Management of Computing and Information Systems]: Project and People Management— *staffing, training*.
K.4.3 [Computers and Society]: Organizational Impacts— *Computer-supported collaborative work*.

General Terms: Management, Reliability, Human Factors.

Keywords: Public Lab, Multimedia, Support, Training, Student Workers, Technology Enhanced Classrooms, Presentations.

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1. INTRODUCTION & BACKGROUND

Founded in 1793 as the Hamilton-Oneida Academy and chartered in 1812, Hamilton College is the third oldest college established in New York State. While founded by Samuel Kirkland, missionary to the Oneida Indians, our namesake, Alexander Hamilton, was the first secretary of the U.S. Treasury and a member of the first Board of Trustees of the Hamilton-Oneida Academy.

Hamilton continues its rich tradition as one of the premiere, highly selective, top-ranked, private liberal arts colleges in Central New York. It is a residential campus with a current enrollment of approximately 1750 students (49% male, 51% female) and 179 full time faculty of whom 95% hold the most advanced degrees in their field. Student to faculty ratio is 9.4 to 1. Through small classes, the College’s curriculum emphasizes writing, oral communication and critical thinking to a creative and diverse student body. Hamilton’s vibrant intellectual community demands creativity, self-reliance and character.

2. CORE AREAS OF SUPPORT

2.1 General Lab Support

Hamilton has 7 public computing labs with approximately 125 fully accessible workstations, not including the labs that are maintained by individual academic departments for specialized purposes or the various “Centers” across campus. The public labs are a mixture of Macintosh OS X and Windows XP systems and offer a variety of working environments from open spaces with a lot of natural light and visibility to smaller, quieter and more private spaces. All the systems are complete with the Campus standard and academic software and are publicly accessible.

2.2 Multimedia Support

Hamilton’s Multimedia Presentation Center (MPC) opened in the Fall Semester 2002 as a collaborative project between Information Technology Services and Burke Library. In the year before its inception, faculty working with instructional technologists and reference librarians expressed the need for a facility where they and their students could meet with information and technology professionals to access and manipulate information in all formats – text, graphics, video, etc. Curricular changes, implemented for the 2002-2003 academic year, in the form of an interdisciplinary sophomore seminar program with a strong oral presentation component, and assignments involving multi-media helped structure the development of the MPC.

Table 1. Distribution of public access computing facilities.

Classroom	Capacity	Operating System
Burke 001	12	OS X
Burke 005	21	OS X
Burke MPC	23	OS X & Windows XP
Information Commons	21	Windows XP
Beinecke	6	Windows XP
KJ 220	26	Windows XP
KJ 225	8	Windows XP
Writing Center	12	OS X
Levitt Center	5	OS X & Windows XP

The MPC is prominently located on the first floor of the Burke Library and is equipped with state of the art multimedia equipment and student support whenever the public labs are open. Instead of creating a separate and highly controlled space for the multimedia workstations, we chose to integrate them with other computing resources, allowing all faculty, students and members of the Hamilton community full access to the MPC hardware and software. At the heart of a public lab, the creative activities of the MPC invite others to observe and try new ways of presenting information.

For Fall 2003 we further expanded our MPC facilities to include the 12 machines in Burke 001. The addition of these machines created a unique teaching space that has been used by faculty teaching digital video courses. The hardware and software in Burke 001 is identical to what is available in the MPC.

2.3 Technology Enhanced Classrooms

Prior to the MPC creation, and keeping in line with the goals of upcoming curriculum change, the College was rapidly transforming its general purpose classrooms into dual platform Technology Enhanced (TE) classrooms, including data projection, DVD/VCR playback capabilities, internet & network access and state of the art surround sound. Collaborative efforts between ITS and Audio Visual services managed to “enhance” 38 teaching spaces in a relatively short period of time.

Hamilton’s classrooms are in high demand even when classes are not scheduled in them. Since academic buildings are open well into the evening it is not uncommon to find students using the rooms at all hours of the day. Activities range from group to individual study, class presentations and even social use, making our goal of keeping the technology working 100% of the time even more challenging.

Starting in the Fall 2004 Phase I of the College’s new multi-million dollar Science facility will bring online five additional TE classrooms. Unlike previous rooms these spaces will be single platform (Macintosh). This decision was based on Science faculty feedback and departmental platform preference. When the second phase of the project is complete there will be a total of 20 TE classrooms in the Science Center, bring our total TE spaces to 58 in less than 1 year.

All of our TE classrooms are equipped with a Campus telephone with emergency technical support procedures published nearby. Faculty and students can use this phone to call any on campus extension, but it is primarily meant to be used if they are having trouble with the computer or audio equipment in the classrooms. By calling the emergency technical support line they will reach a trained student or professional staff member in the MPC who will either troubleshoot the problem over the phone or make an on-site visit if necessary.

2.4 Event & Presentations

With Hamilton’s diverse community comes a variety of guest lecturers, presentations and events. Some are department sponsored, while others are part of a course. Where one may take place in the College Chapel another may be underway in a TE classroom. Even though the topics and locations vary, one thing is consistent among all if them; the need to have excellent, reliable technical support.

At Hamilton, Audio Visual Services is not part of ITS. However, we work together to provide the best technical support possible to our Campus’ presentation needs. We strive to educate the Campus on how to schedule and receive event support as well as provide setup and technical support throughout an event. While ITS does not stay during an entire event we make sure that the computer is functioning and that their presentation starts. If problems do arise, support staff can be easily reached by calling the MPC.

3. SUPPORT STAFF

The public computing areas are fully supported by trained student staff and by members of the Instructional Technology Support Services Team.

3.1 Student Staff

Before the MPC and the creation of TE classrooms, ITS employed students to staff the public labs and serve as a “Lab Monitor”. The Student Assistant’s (SA’s) duties were limited to helping with simple computing questions, from word processing to e-mail and making sure the printers were full of paper. They did not need extensive training, but were expected to be able to troubleshoot the more common problems users would encounter in a public lab setting.

As Hamilton moved forward in transforming the general classrooms to TE classrooms and creating the MPC, it was obvious that we were going to need to transform how we use our student staff. We already had a talented group of about 30 students whose technical and service skills could be used to support and maintain the TE classrooms and with the appropriate training, support users at a basic level in the MPC while still providing core lab support.

After restructuring our student staff model we came up with a position called Student Technology Consultant. (STC). Instead of serving as a lab monitor the STCs provide technical and general support in two locations for the seven public access labs, approximately 125 machines, including our Multimedia Presentation Center the TE Classrooms and their clients. They serve the initial support for hardware and software questions and are knowledgeable about Macintosh and Windows operating systems and their common applications in our public computing environment. They help maintain printer functionality as well as perform general lab upkeep and maintenance. They also

troubleshoot lecterns problems via an emergency support phone line and provide setup assistance for Campus events and presentations.

STCs are hired and supervised by the Lab & Classroom User Services Manager who is part of the Instructional Technology Support Services team.

3.2 Professional Staff

The full time staff that provides support for the MPC is a combination of members of the Instructional Technology Support Services (ITSS) team and the Library. Each has an active role in supporting the MPC and other public spaces though weekly MPC shifts.

ITSS is comprised of a diverse group of professionals and provide a wide range of support services for the use of technology in teaching and learning, with particular emphasis on the needs of the faculty and support in public labs. Our Library counterpart is the Campus library photographer and Photoshop expert. Her expertise and helps provide advanced support with graphics, digitization of still images and video projects in the MPC.

4. RESOURCE MANAGEMENT

4.1 Hardware and Infrastructure

Resources in the MPC, Hamilton's public labs and our 38 TE classrooms are selected in collaboration with Desktop Integration Services, Network Services and Instructional Technology Support Services teams. This ensures that the infrastructure, hardware, software and recommendations on the use of technology are designed to be compatible with resources campus wide and flexible enough in nature to accommodate future updates and change. Hardware and software resources are continually reviewed and upgraded to ensure the MPC is meeting the current demands and the future needs of multimedia. An example of this is our 1.8 terabyte video storage array, which was only possible due to an earlier decision to install a fully switched gigabit Ethernet infrastructure in the MPC. When it was made available in the Fall 2003, the array provided highly accessible storage for approximately 300 students and faculty that use video as part of a course.

4.2 System Maintenance & Reporting

4.2.1 Public Labs

The STC's have an active role in making sure that the machines in the labs and TE classrooms are functioning properly. They check each lab computer on a daily basis to ensure it is connected to the internet, network and printers. They also clean up the desktop and the tabletop area around the computer. They will troubleshoot problem machines and re-image on a per need basis and for scheduled image upgrades. After doing each check they fill out an on-line form indicating which machine they checked, any problems encountered and how they resolved them.

4.2.2 TE Classrooms

Each of the lecterns in the TE classroom is checked at least 2 times a week, sometimes 3 depending on the frequency of use. Lectern

checks involve checking the internet & network connection for the Macintosh & Windows machine, making sure the data projector projects the image from both systems, that the audio works for both and the mouse and keyboard responds on both systems. If problems are encountered they fix them and then fill out a web form which indicates the room has been checked and what its' status is. When submitted the web form e-mails the User Services Manager and Technology Services Manager and unresolved problems are escalated to professional staff.

4.2.3 STC Shift Reports

Since the STCs work in an independent environment and their activities are not monitored at all times they are required to fill out an online shift report at the end of their shift. The shift reports contain headcount information as well as the kinds of questions they were asked and what, if any, problems occurred during their shift. When submitted the form publishes their notes to an STC resource website so that students coming in to work later that day can see what's been going on that day. The form also e-mail the User Services Manager and the Technology Services Manager so unresolved problems can be addressed.

5. TRAINING

Without proper training the STCs would never be able to provide the level of support that they do to Campus. Since they are expected to know so much, we engage them in an intense week long training session the week before fall classes begin. All STCs, new and returning, are required to attend the training program. The program includes, but is not limited to basic job responsibilities, hardware & software maintenance, operating system differences, customer service, lectern training and standard software packages, including the use of multimedia applications.

The main focus is on the creation of a "digital portfolio" using tools available to them in the Multimedia Presentation Center. This portfolio exhibits their competency in shooting digital video, editing and compression, scanning and manipulating graphics, and integrating media into various web formats.

The training schedule comes together during the summer months with the aid of Training Services, the Library and the ITSS team. Realizing that it would be impossible to cover everything that the STCs need to know we structure the sessions so that they are well enough informed to start the year. To supplement fall training we offer workshops and on-on-one sessions throughout the year. If they desire they can also use Element-k web-based training.

6. ACKNOWLEDGMENTS

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