

Herding Cats: Training Students in Customer Service, Assisting Faculty and Facilitating Training for Various Technical Levels

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ABSTRACT

Our challenge in the lab group at the University of Richmond is to collectively train approximately 85 students to work in five academic computing labs housed in five different buildings across campus. This program is designed to train student lab assistants at a variety of knowledge and skill levels, using a range of content transfer strategies (online, written, traditional instruction).

Categories and Subject Descriptors

K.6.1 [Management of Computing and Information Systems]: Project and People Management – *Staffing and Training*

General Terms

Management, Performance, Human Factors

Keywords

Training, Program Design, Students, Computer Labs

1. INTRODUCTION

The Academic Technology computer lab group at the University of Richmond has five major lab groups to manage. Each of these five labs has a unique focus. Two of the labs are owned by individual departments, Psychology and Modern Foreign Languages and Literature, who have an agreement with Information Services for management and maintenance of the labs. These departmental labs provide equipment and software unique to their curriculum. The Jepson Hall computer labs support special functions to departments, but also are the general public computing labs which handle quite a bit of student traffic. The Boatwright Library houses a 24-hour classroom used by the librarians for specialized training and supports the Geographic

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Information Systems (GIS) software, related databases and the library server resources used on campus. In addition, the library houses two high-end multimedia labs, the Technology Learning

Centers (TLC/TKC), designed for training and the production of special academic projects such as conference poster printing, 3-D modeling and web development. The TLC also maintains an extensive training library of books, DVDs, CD-ROMs and a NetG online training subscription. While each lab has some common hardware and public hours, each provides services to curriculum driven software and clientele. Macintosh and Windows platforms are available across all labs along with other specialized hardware such as digital writing tablets, film recorders, a variety of scanners, and large format color printers.

From the pool of student applications, a wide variety of skill sets are gathered. Some of the students are expected to return early for training. Other students go through an orientation once on campus. Most are expected to train continuously through the year. Retention has not been an issue on this campus; so many students come back to their positions with prior knowledge of the environment. In order to build the students' information fluency, support their self-directed learning, and be efficient in the lab environment, the professional staff in the lab group has developed a plan for training the students who work in these academic computing labs. To achieve our goals, the lab group has eliminated duplication of effort by providing training developed around a formalized training model applied to the pre-defined common skill sets. It is expected that a centralized training effort will provide a model which will in turn establish an academic computing lab identity and branding.

PREVIOUS TRAINING EFFORTS

In the past, much of the lab assistant training was combined with user services in a "boot camp" for all IS student employees. After boot camp these students would then be dispersed into their respective jobs in the residential halls, the library, the help desk and the labs. The collaboration efforts were not very successful for the lab group because the goals and operations of the IS units are very different. For example, the Help Desk students need to know ticket tracking and work with individual's data, treating each machine as individual. Computer Lab students traditionally have machines set up with common images and strive to give each user a consistent computer experience. Due to personnel changes and other outside factors, training for the lab assistants has not

been consistent across all labs. Some labs are able to get their students together for group training while others are never able to meet as group at all. Basic trouble shooting and technical training have always been part of the job requirement and each lab handles its own specific technical training unique to that environment. The proposed centralized training does not relieve staff of this duty, but helps by taking away the repetition across all labs.

2. PROGRAM DEVELOPMENT

The lab group first defined the levels of knowledge and skills required to be a lab assistant. In developing this program plan, completely converting the training to web based materials was considered, but quickly realized not to be appropriate for all content. Course management software such as Blackboard is effective for while, but wanes as the semester progresses. Exclusive use of web-based materials becomes impersonal and inflexible. It became apparent that a mix of delivery methods would be the most effective and have the most flexibility.

Secondly, the lab assistants need access to information at all hours. Current lab employees have asked for “on demand” access as a way of answering questions about software and hardware while at work in the computer labs. The computer labs are open evenings and weekends when most staff members are unavailable to help a lab assistant. Another part of the problem is that lab assistants also need to know how to appropriately refer a problem to the right resources on campus. The lab group staff is attempting to accommodate these needs with web-based tools and a “Virtual Lab Assistant”. The “Virtual Lab Assistant” will be on the other end of a chat feature such as the one offered by InstantService, Inc. Higher-level lab assistants who are available night and weekend shifts would staff this service. This strategy is three-fold, the Virtual Lab Assistant will assist the lab assistant with any problems, higher level problems will be referred appropriately and thirdly, the referrals become a form of marketing for the specialized functions of the different computer labs and divisions of Information Services.

As illustrated in the following table, there are several positions held by student workers in the labs and a Technology Fellows program at the University of Richmond. The Technology Fellows Program is de-centralized and supported by individual departments. In the Psychology Department, the Technology Fellows are expected to work with faculty to combine technology specific to Psychology to enhance learning through experimental and statistical analysis software packages. The higher skilled student positions, the instructional designers, are the crème de la crème students, expected to learn high level applications and assist in project work. These students need to review general lab operational guidelines at the beginning of each academic year just as new hires and regular lab assistants. These students normally work in the TLC where more complex software applications are utilized. For the purpose of this paper, training for these positions is briefly discussed. At this point in time the program is designed to address basic lab assistant training. The focus is on lowest common denominator skills inherent to all positions. It is these common skills on which the training modules are developed. Another solution for training on demand is a Student Trainer

position which will be implemented this fall. The Student Trainer will go through a “train the trainer” program and bring skills to the individual labs (e.g., uploading web pages). The student trainer would be expected to train the lab assistants and be a point of contact for specialty services. In addition, the student trainer would be expected to hold question and answer sessions during off hours. All of these positions can benefit from same basic training developed for the most inexperienced. As the program develops, it has the potential to become an a la carte curriculum. Professional staff will be able to tailor their training programs based on menu items available to all lab workers.

Table 1. Student Assistant Job Descriptions

Student Job Title	Type of Lab	Description
Student Tech Fellows	Department specific: Psychology, Modern Languages and Literatures	Decentralized program supported by the individual departments
Computer Lab Assistant	Public use computer lab	Low level skill required
Computer Lab Manager	Public use computer lab	Handles scheduling, shift coverage, and initial reprimands
Student Trainer	Public use computer lab: trainer for lab assistants	Used to train computer lab assistants
Instructional Design Consultant	Specialty computer lab: training & multimedia production	High skill level student workers that are train faculty, staff, and students in a multimedia lab - still require basic level training despite higher level skills
Instructional Design Manager	Specialty computer lab: training & multimedia production	Managers have same high-level skills as consultants. Managers need to track which students have completed training competencies.

3. DEFINING THE “NEED TO KNOW”

One of the major efforts in designing this program lies in finding and agreeing on basic skill levels and identifying the point of divergence for each unique lab and its needs. After casually collecting data through observation, situation documentation and trouble log books, it is possible to determine the most frequent issues lab assistants will face. Even though the labs are very specialized, there are common elements. All lab assistants are expected to perform lower level services (changing toner cartridges and filling printers with paper). Through brainstorming sessions, learning objectives were established, keeping in mind

that there is room to grow in all areas and all content will not be grasped in the first phase of this program. The items for training are somewhat obvious to experienced lab personnel: Troubleshooting hardware and software, operating Audio Visual equipment and projectors, customer service, and developing work ethic. After the common elements are established, objectives are developed and the method of delivery is decided. Attention to learning objectives will be considered in the three domains of learning: cognitive, affective and psychomotor. Consideration of the learning domains strengthens the purpose of the training. Emphasis on creating behavioral, student-centered learner objectives that are task based makes the experience meaningful to the learner.

4. THE VIRTUAL LAB ASSISTANT

It quickly became apparent that the most difficult task is to get all the students in one place at one time. Often, the common free time for the lab assistants is 11:30 pm, a time when the computer specialists have left campus for the day. The expectations of this training program are that we will overcome scheduling issues, deliver consistent information and provide references via the web. Screen recording software such as Camtasia or Viewlet Pro will be produced to cover simple questions and how-to information. Development of task-based training will establish consistency and redundancy across the lab. The lab group can also benefit from standardized training of the lab assistants and from peer-led instruction. Fortunately, resources are available to the lab group in the ways of expertise in hardware and software. Advanced knowledge and experience with Macintosh and Windows operating systems lie within the lab group, as well as experience with multimedia products and web page development. As a group, the lab members can be the subject matter experts, trainers, and technicians. The computer lab assistants will be creating many of the training modules, allowing professional lab staff the flexibility to manage the program for the best outcomes.

5. PLANNING THE DELIVERY

Table 2 is an example of how the training is planned. Each goal is broken down into smaller objectives. The training plans are written based on the objectives and the best fit with the medium. The development of clear objectives gives one the ability to assess whether the objective has been met.

6. ASSESSMENT

Assessment of each individual's competency is measured with tools such as course management quizzes (e.g., Blackboard) and observations which are recorded in a database. Database reports provide statistics about which student has completed which modules. Promotions are tied to completing these modules. As the program develops, more formal assessment of the processes will

be conducted. Online surveys, focus groups and interviews will be used to improve practices and training methods.

Table 2. Planning Training Delivery

LEARNING OBJECTIVE	METHOD OF DELIVERY
Hardware	
The lab assistants will be able to replace and reshel toner cartridges 100% of the time.	Streaming movie on internet
The lab assistant will be able to determine cables are connected and when to restart the computer 100% of the time	Static web page
Software	
The lab assistants in the Mac labs will be able to Zap PRAM and rebuild the desktop 100% of the time.	Screen Recording through product such as Camtasia
The lab assistants will be able to find which labs have which software packages.	Dynamic html pages (database driven)
Customer Service Skills	
The lab assistants will be able to follow an answer tree to know what to do when they don't know the answers	Traditional classroom training with Answer Tree – web format or paper for support
The lab assistants will understand trouble shooting protocol within each lab	Traditional classroom training with Answer Tree – web format or paper for support

7. SUMMARY

The lab group at the University of Richmond has a competent group of student lab assistants. To get this program off the ground, it was decided to address the common tasks inherent to all levels of student lab assistants. Assigning training methods through creative venues was done to accommodate our 24-hour, 7 day a week student body. As with any good program plan, assessment and continued growth will make this training program consistent across the labs and give the lab group an identity and reliable student work force.