Z. Smith Reynolds Library:

Its Role in Wake Forest University's Access 2000 Project

by *Susan Smith*

The arrival of this year's freshman class at Wake Forest University marked the beginning of an ambitious program known as the Plan for the Class of 2000.[1] Its goal is to take higher education to a new level by implementing many initiatives. One of the most important components of the plan is the technology portion. Called Access 2000, the intent is that all students have universal access to computers by the year 2000. To accomplish this, all incoming first year students will receive laptop computers, IBM ThinkPads, starting in the fall of 1996. The laptop will become the primary vehicle used to reach the university goal of creating a learning environment that is not hindered by barriers such as limited computer laboratory resources. The campus computing infrastructure has been improved and expanded so that students will be able to use their ThinkPads to connect to the campus network from classrooms, residence halls, the library, and beyond.

That this program is one of just a few in the country, and the only one of its kind in North Carolina, makes it noteworthy. But perhaps the most interesting part of the Wake Forest story is that its major library, the Z. Smith Reynolds Library, is at the center of the training initiative for Access 2000. At a time when libraries of all types are working to redefine their role in the information technology revolution, the Reynolds Library has positioned itself to be an integral part of Wake Forest's technology plan. It is this role that first piqued my interest, and finally convinced me to join ZSR Library as its first Electronic Resources Librarian. Since a large part of my responsibilities will be involved with this training initiative, I was interested in discovering how it evolved.

The purpose of this article is to share with you what I have learned about Access 2000, its history and goals, and about the Library's part in its assigned responsibility to train faculty, staff, and students to use this new technology.

History

A plan as ambitious as Access 2000 does not materialize overnight. Its foundation began as early as the 1990-91 academic year when an ad hoc committee was formed to help select a new platform for academic and library computing on campus. The committee, the Academic Computing Advisory Committee (ACAC), was made up of representatives from several divisions of the university and included the Director of the Reynolds Library. After completing its original assignment, the committee continued to meet regularly and became a forum for general discussion of academic computing issues on campus. By January 1994, the committee was asked to respond to a series of questions that included whether undergraduates should be asked to buy computers as a condition of enrollment, and what specific programs of faculty-staff and of student training and development should be undertaken. The responses to these questions were given to the Program Planning Committee, which had been meeting for a year concerning the Plan for the Class of 2000. By May 1994, the Program Planning Committee (PPC) was making a tentative recommendation that all students have computers by the year 2000.

The ACAC's advice was sought to determine what was needed to make the Program Planning Committee's recommendation work. The ACAC considered the many issues involved, ranging from hardware issues, to faculty vs. student needs, to additional support staff requirements, to the training needs of the academic community, as well as the importance of providing adequate computer resources for staff. One of the main recommendations that came from the committee was that academic needs

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should drive the implementation of a technology plan.

At this point, Wake Forest University was primarily a Macintosh shop. The majority of the computer labs on campus were Macintosh-equipped, as were most academic departments. In fact, the Babcock Graduate School of Management required its students to have Apple PowerBooks. As part of the assessment process, both Apple Computer and IBM were contacted concerning the development of a partnership with Wake Forest University.

IBM showed much interest and had experience partnering in a similar program at the University of Minnesota at Crookston.[2] IBM's views about the importance of universal access and mobile computing to the college campus can be seen in their White Paper on their "Solutions for Higher Education" web pages.[3] They arranged a site visit to the Crookston campus for several members of the ACAC in February 1995. There the committee members were able to see an example of a whole campus using laptops, with wired classrooms and a variety of online applications.

Between February and April 1995, ACAC members began information sessions with academic departments. There were many questions and much debate, but the plan was finally approved by both faculty and the Student Government. Approval came from the Board of Trustees in April, and the partnership with IBM was formalized in May 1995.

Upon approval of the technology proposal, assignments were made to implement aspects of the plan, including a pilot project. A steering committee, various task forces, and coordinating bodies were appointed to plan for the pilot and beyond. The ad hoc ACAC was replaced in the fall of 1995 by the Committee on Information Technology, a faculty advisory committee with representation from administration, students, and computing, library and Academic Computing Support staff. Its major focus was, and still is, improving the computing climate, and helping the university move forward on its technology initiative. It does this through a focus on the academic aspects of adding so many computers to campus rather than the technical issues.

Central to the success of implementation was the addition of new technology-related staff to the computer center, the academic departments, and the library. For the academic departments, a new position was created: the Academic Computing Specialist. These ten staff members, now twelve, would be faculty liaisons. They would possess at least a B.S. or B.A. degree appropriate to the departments to which they were assigned and would help the faculty of those departments modify their curriculum to incorporate computers. The library was given four new technology-related positions: Electronic Resources Librarian, Internet Technician, Network Technician, and ITC (Information Technology Center) Technician. The process was started to fill these positions. The process was finally completed in the library when I joined the staff as Electronic Resources Librarian in June 1996.

The pilot program took place during the 1995-96 academic year. In preparation, incoming freshmen were invited to participate and faculty were selected. The pilot program consisted of 100 students and 100 faculty.

The summer months were busy in preparation for pilot program readiness. Details that had to be addressed included ordering and scheduling delivery of the ThinkPads, determining what software "load" would be placed on the machines, networking and wiring necessary residence halls and classrooms, and establishing a centralized help desk. Training, one of the most important "details" that had to be handled, is the focus of the remainder of this article.

ZSR Library's Access 2000 Charge: Training

By the time that Access 2000 became a reality, Reynolds Library had already established itself in the area of computer literacy training on campus. As part of the expansion of Reynolds Library, completed in 1991, a Macintosh computer lab was built in the library. It was part of a new department in the Library: the Information Technology Center (ITC). In addition to the microcomputer lab, the ITC has a multimedia viewing lab for video, and a multimedia lab for the production and editing of multimedia. This department established a high-tech computing facility within the library's walls for the first time.

In September 1992, months prior to the first tentative talks concerning universal student computing, the Director of the Library was asked to develop a "computer camp" for incoming freshmen before the start of the Fall 1993 semester. The camp, called Power Up!, spanned three days and covered a variety of computer topics ranging from the Internet to Unix. A detailed description of the project can be found in an article written by the library director, Rhoda Channing.[4] The project's success led to the Provost requesting an equivalent program for faculty during winter break in January 1994 and a repeat of the camp for the incoming freshman class in August 1994. The planning committee for the Power Up! project included librarians, computing staff, and faculty. Instructors were selected from these groups also. Five library staff members were involved in instruction and more were involved in the planning stages.

When the technology proposal was approved by the Board of Trustees in April 1995, one of the committees formed was the Training Task Force. As did the Power Up! Planning committee, the Training Task Force drew its members from different departments of the University. It included at least one representative each from the faculty, Information Systems Support Center (formerly known as the Help Desk computing staff), Academic Computing Specialists (ACS), Public Affairs, the student body, the library, plus the IBM Project Manager and the Assistant VP for Special Projects. Led by the director of the library, the Training Task Force held weekly meetings to plan how best to deliver training to the pilot program and to provide a central "clearinghouse" for training issues so that efforts were not duplicated or fragmented.

Pilot Program

Most of the actual development of training materials became the responsibility of the ITC staff. In late July and early August, "Train the Trainer" classes were held to prepare instructors to teach faculty and students using the IBM ThinkPad and the standard software "load." Instructors for these classes came from the Information Systems Support Center (ISSC), IBM, and the library staff. After training module requirements were established, the ITC staff developed module outlines and scripts for the trainers to follow. This would help ensure that student participants all received the same information.

Twenty-two members of the library staff participated in this training and most had the opportunity to participate in the training of the 100 faculty members and 100 pilot program students, plus 200 other students who chose to buy ThinkPads. The student pilot training sessions took place over a one-and-a-half-day period during orientation week and covered subjects such as "Care and Feeding" of the ThinkPad 360CE, DOS and Windows for Workgroups ba-

sics, networking, Internet, electronic mail, and Microsoft Word, Excel, and PowerPoint. Trainers worked in teams so that while one was teaching a module, the other could help students with the hands-on portions. Faculty training was done in an afternoon session, and then a full day class was offered during fall break.

Some valuable lessons were learned during the initial pilot program training sessions. All of the training took place in the newly Ethernet-wired classrooms. The training was to take place online so that the students could get hands-on experience on the campus network. Part of the class was designed to help the students log on to the network for the first time. It wasn't until 100 simultaneous first-time logons were attempted that it was discovered that the network couldn't handle the load. Also, as expected, it was confirmed that participants possessed a wide variation of previous computer experience, with some students having never used a computer while a few had more experience than some instructors.

In addition to the initial one-and a-half days of training provided, the library offered supplementary training throughout the 1995-96 academic year. Most classes were short, intensive 90-minute to 2-hour sessions. Subjects taught included word processing, spreadsheets, creating HTML, and using online research resources. The classes were offered free of charge to staff and students. Trainers found that student interest was lower than anticipated, and that the most demand came from the university staff. They also found that staff training needs were different from those of students. While a class for students on Microsoft Word could be successful by covering word processing basics, the staff participants would have different and more specific learning goals: for example, how to mail-merge. Also, after finishing teaching staff how to use Windows 3.11, the trainers spent the latter part of the year retraining everyone on Windows 95!

As the results of training efforts were reported back to the Training Task Force, it recognized the difficulty presented when computer literacy levels range from novice to expert. If both extremes end up in the same session, there is the risk of overwhelming the beginner or boring the seasoned user. To help alleviate this problem, Director Channing proposed introducing computer-based tutorials. These would provide an alternative method of training where participants could experience self-paced, in-depth learning. Computer-Based Training (CBT) modules were purchased and put up on a server in the ITC where they can be accessed by anyone on the WFU campus. There are 206 different modules on subjects ranging from Windows 95 training to Windows NT to Lotus Notes. Participants can test themselves as they work through the lessons and monitor their own progress. These should provide a rich supplement to the classroom training programs.

Preparing for The Real Thing

As plans started to be formulated for the first entire class that would receive ThinkPads, the lessons learned through the pilot program were just a starting point. One hundred students were in the pilot program. When the Class of 2000 arrived, 1,000 students would be issued laptops. For most of the 1995-96 academic year, the Training Task Force met on a weekly basis, and the ITC staff met on a daily basis to discuss training issues. For six weeks at the end of the school year, two ITC staffers worked two days per week with staff at Information Systems. They helped test and install the new software loaded onto the updated ThinkPad (see Illustration 1) so they would become familiar with it in order to develop training materials.

Part of the success of the software load would depend on the ease of accessing the programs by the users. To ensure that the library resources were available through seamless means, the automation librarian worked intensively to refine the CD-ROM LAN and create a more attractive user-friendly interface for it as well as for the CBT modules. He also created a detailed, web-based tutorial for using the Online Wake Libraries electronic catalog. Other library staff worked to develop web pages that would provide access to training materials.

The logistics of training 1,000 first year students during orientation week made changes in training method and content necessary. A decision was made to offer distribution of laptops to those students who paid their fall tuition by early July. Those who accepted the offer would receive their ThinkPads at their homes in late July. Included in the shipment would be the *Technology Guide for the Class of 2000* which provides detailed instructions on everything the student would need to know to get acquainted with the computer.[5] This guide was originally produced for the pilot program, and was updated to reflect hardware, software, and policy changes made for this year. Also packaged with the laptop was a CD-ROM produced by the University called "Getting Started With Your IBM ThinkPad." It is a multimedia presentation that shows the different features of the ThinkPad, and tells how to care for it and the software installed. At the end of the CD-ROM are instructions for determining the student's network logon ID number. Students who took advantage of the early distribution offer were told it was not necessary to attend training during orientation week since the guide (nicknamed The Black Book) provided the same information that would be covered during orientation training. Over 450 students chose to receive their laptops early, so plans for orientation training focused on the remaining 500+ students.

Illustration 1

ThinkPad Hardware Configuration

IBM ThinkPad 365XD
16 MB RAM
810 MB HD 100, MHZ Pentium Processor
Ethernet Card
14.4 KBPS Data/Fax Modem
10.4" Dual Scan Color Display
4 Speed CD-ROM
External Floppy Diskette Drive

ThinkPad Standard Software Inventory

Windows 95 Operating System

Communications Tool/Internet Tools
WinPopup
Lotus Notes
Netscape Navigator Gold 2.01
WS FTP
IBM Global Network PPP Dial-Up
Eudora

Microsoft Productivity Software
Excel
PowerPoint
Word

Research Tools
Access to:
First Search
OWL (Online Wake Libraries)
ZSR Library CD-ROM LAN

Other Software
McAfee AntiVirus
Lotus Organizer
Lotus Screen Cam
Access to CBT
Wake Forest Template
Remedy

In early summer, trainers began to meet every Friday morning. This group included staff from the library, ACS, and ISSC. Although ISSC staff would not actually train, they would be providing the majority of support, so were a valuable source of input and insight. Training teams would be made up of three members this year. They would come from the library and ACS staffs, plus each team would include one of the newest positions created as part of the initiative: the Resident Technology Advisor (RTA). RTAs are trained students who live in the first-year students' residence halls and are available to answer questions and assist in solving problems regarding the use of the laptops. It was at this point that I joined the staff and began a quick immersion into all the details that would make up this fall's training.

This year the orientation training would be just three hours instead of one-and-a-half days. This change was made strictly because of the numbers involved. It just was not possible to schedule that length of training for that many students during orientation. Also, this year the students would work offline instead of on the network. Although the value of having hands-on practice while connected to the network was recognized, more potential for problems and class delays existed when several hundred simultaneous logons took place.

When the Friday training meetings began, the ITC staff had developed a tentative training script that covered teaching the skills that had been agreed upon as Access 2000 Orientation Goals and Objectives. The information each student should take away from the orientation included:

- How to Care for the ThinkPad
- Introduction to Windows 95 Operating System
- Introduction to the ThinkPad software load
- Introduction to the campus network and the Internet
- What other training resources are available
- Where to get help and support

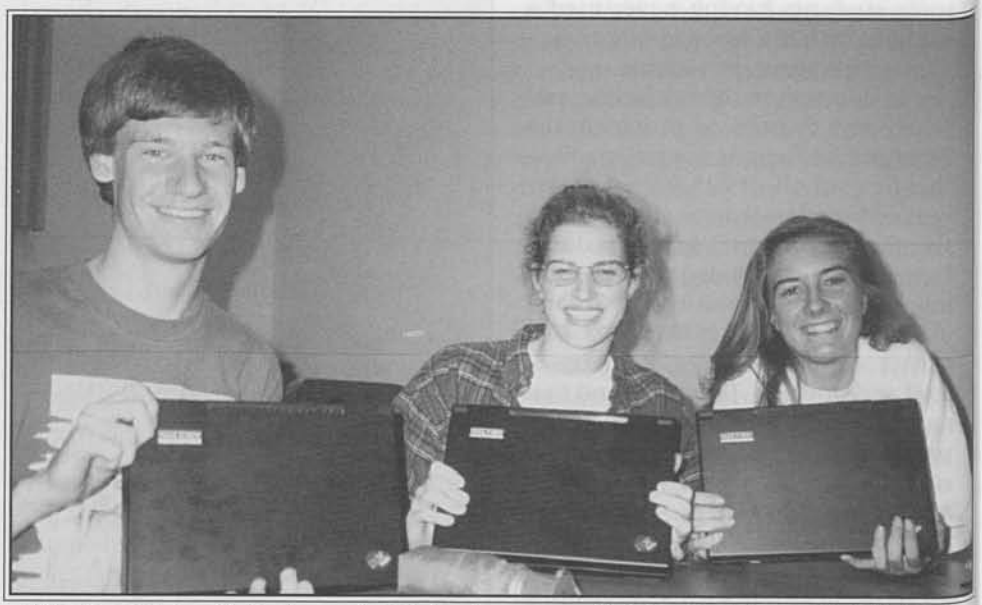
The purpose of the Friday meetings was to fine-tune the script for content and timing as well as to familiarize the trainers with what they would be teaching. By the time the script was finalized in August, it was in its tenth draft. The first several sessions were conducted by ITC staff members, but during the last few sessions, training teams took turns presenting the material to the class.

Developing the orientation training script was only one item on the library's list of preparations to be made. Evaluation instruments had to be developed, not only for orientation, but also for ongoing tracking of training efforts throughout the semester. Class rosters were made after it was determined that there would be approximately 500 students attending the orientation. From the experience of the pilot program, optimum class size was set at 25. Ten electronic classrooms were reserved for the entire day so that each of the ten training teams could hold two classes. A week before the training day, all classrooms were inspected to ensure that the network connections and the projectors were in good operating condition. Then, because equipment failure is the nightmare of every instructor doing electronic presentations, the classrooms were all rechecked the afternoon before orientation. Class handouts were printed and collated. Team members met individually to decide how to divide the training duties and to practice the modules. Lunch was ordered in for all the trainers.

During the same time frame, planning began for offering ongoing training in the fall: course topics and descriptions were developed and class schedules were set. There will be 21 different topics offered, some more than once, during the fall semester. The *Short Course Guide: ThinkPad Training Fall 1996* was published in time to be distributed along with the ThinkPads during orientation week. Students also can find the guide and class schedule online.[6] Once again, the instructors will be library staff members. In addition to the ITC staff, who often provide the core of the training effort, staff will be drawn from many library departments: Reference, Microtext, Technical Services, and Government Documents. In an effort to better anticipate class size, students have been asked to write a $5.00 check to reserve their space. When they attend the class, the check will be returned.

ThinkPad Orientation Day: August 27, 1996

The attention to detail paid off when ThinkPad Orientation Day finally arrived. Early feedback from the training teams indicated that the classes progressed as expected. Most students had followed instructions given to them when they picked up their ThinkPads the previous day: they had gone through the "Getting Started" CD-ROM, and many had already managed to log on to the campus network for the first time. It is expected that when evaluations are tallied, they will confirm that the majority of the students felt the subject matter was important and that the scope covered during class was valuable. They did think that more time was needed to cover all the topics in more depth. This was something that was recognized early-on as being preferable, but not feasible because of the numbers of students involved. The students expressed disappointment in not being able to follow along online, but the training modules were designed to allow as much offline hands-on practice as possible. Due to these limitations, which had been identified at the beginning of the planning process, there was a great deal of emphasis made by the trainers



Wake Forest University freshmen start their college career off right with their new IBM ThinkPads.

about how to get further training and support after the class was over.

It is hoped that the extra tools provided — The *Black Book*, CBT Training, materials available through the campus web site (Illustration 2), the presence of Resident Technology Advisors in each dorm, and continuing training courses offered throughout the semester — will build on the computing foundations introduced during the ThinkPad Orientation.

What's Next?

With the successful completion of ThinkPad Orientation Day, the library's job has just begun. The library will be responsible for ongoing evaluation of training effectiveness as the program progresses. Now that initial training is completed for students, university staff will be surveyed to determine their needs, and classes will be developed for them. The library will participate in the further development of electronic resources to enrich the learning experience at WFU. One of the first projects it is helping to implement a pilot program to test electronic reserves for the first-year seminars that have been introduced as part of the Plan for the Class of 2000. By the time this article is published, plans for training next year's freshman class will be well underway.

It is impossible to predict everything in which the library may become involved, but the possibilities seem limitless. The opportunity to work in cooperation with many different areas of the university and have a part in shaping the way students, faculty, and staff will access information is an exciting prospect.

Illustration 2:

Training Information Available on WFU's Web Site

Technology Guide for the Class of 2000: http://www.wfu.edu/ThinkPad/Technology-Guide/index_2ktoc.html

ThinkPad Orientation: http://www.wfu.edu:80/Library/ITC/training/tramat.htm

CBT Index: http://www.wfu.edu:80/Library/ITC/training/tramat.htm/cbtindex.doc

ThinkPad Training Course Catalog: http://www.wfu.edu:80/Library/ITC/training/catcal.htm

Training Scripts (for trainers): http://www.wfu.edu:80/Library/ITC/training/trainer.htm

OWL Electronic Catalog Tutorial: http://www.wfu.edu/Library/dynweb/mainmen.htm

References

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[4] Rhoda K. Channing, "Power Up! Getting Wired at 'Computer Camp'," *Journal of Academic Librarianship* 20:4 (September 1994): 223-224.

[5] "Technology Guide for the Class of 2000." 1996. http://www.wfu.edu/ThinkPad/Technology-Guide/index_2ktoc.html (cited August 27, 1996).

[6] "Catalog Information." August 1996. http://www.wfu.edu:80/Library/ITC/training/catcal.htm (cited August 27, 1996).