

Using the Internet For Your Training Needs

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Introduction

Access to training is a key issue in making efficient use of any product. As companies continue to downsize staff, people need a wide variety of skills to survive. Having the time available to leave the worksite to gain these skills is becoming more difficult. A new trend of computer training through the use of the Internet using methods such as electronic mail, gopher, ftp, etc. is showing favorable results. This concept is often referred to as distance learning. This presentation illustrates current training efforts and gives suggestions of how to apply this to SAS® training at your site.

What is Distance Learning?

Distance Learning is instruction through various mediums where the teacher and student are separated into different locations. The medium could be through snail mail, video tapes, computer based training, computer networks, interactive video networks, satellite broadcasts or a combination of various mediums.

Distance learning has been used for a variety of reasons. It has been beneficial for situations where the trainee can not leave their workstation due to no replacement personal to perform duties while the employee is away. Another cost saving example is when the expert is located at a different site teaching a specialized topic requiring the resources at that site or the students are located in various different sites making travel cost prohibited. Using this method of training can also allow the participants to learn at their own pace, during their available time rather than during a rigid schedule session.

Central Missouri State University Distance Learning Projects

One of Central's first successful distance learning courses using the Internet was conducted through The Safety Science & Technology Department. Dr. Thomas Pierce, Department Chair, taught an extended campus course in Toxicology with the students located at Albuquerque, New Mexico.

The students did have a textbook with regular reading assignments. Each student was assigned an account on the mainframe which also had a special link for a student data area. On that area the instructor stored copies of each lecture. The lectures were developed in WordPerfect® then stored as an ASCII text file (to strip off the font and special character information). The ASCII files were then uploaded to the mainframe from a LAN device using the NSA® software. This could have been

done with any variety of file transfer products.

The University of New Mexico set up accounts for these students on the UNM system. The students were allowed to dial in their computer equipment to the UNM computer using a modem, phone line and communication software. After connection was made between the computer systems, the Internet was accessed to do a remote login on Central's computer. This way the students did not have long distance phone charges. They could view the lectures online or download the files to their computer equipment using the Internet.

The participants would research supplied information and perform a set of exercises. They could do this online with Central's mainframe or do it at the their end then upload the information back to the mainframe through the Internet.

One of the most important resource tools in this example and many other distance learning models is the use of electronic mail. Electronic mail is one method of communication used for classroom interaction and discussion. Another resource tool used for this purpose is the Internet-Chat-Relay for online conference. IRC does require all the participants to have full Internet access.

For this course nicknames were setup for the group for use with electronic mail. The mail system was set up for any reply to go to the whole group so that the classroom interaction was simulated. The Listserv product works great for this type of activity. With Listserv you define a discussion group to be a closed group with the teacher as the list moderator.

Training Projects with Participants from Around the World

Another successful distance learning project using a variety of network resource tools such as electronic mail, remote login, gopher and FTP is a series of Internet training courses. The Navigating the Internet: Let's Go Gopherin' workshop was the third workshop conducted by Richard J. Smith, University of Pittsburgh and Jim Gerland, State University of New York at Buffalo. The first "Navigating the Internet: An Interactive Workshop" was held in August of 1992, attracted 864 persons from over 20 countries, the second had 15,000+ participants from over 50 countries. On Monday October 22, 1993 the third workshop, "Let's Go Gopherin" had 17,099 participants from over 50 countries. The participants who signed up for the course received lessons and exercises through electronic mail. Others who did not sign up, took the course through the use of Usenet and Netnews new readers, bulletin boards or other local redistribution systems on the Internet. It is hard to estimate the number of people who participated through this method.

These workshops have been so successful that the State University of New York at Buffalo, ubvm.cc.buffalo.edu, has made the lessons available through ftp to people for retrieval. Anonymous ftp is

available (login in as anonymous) or access through Listserv using electronic mail. Use the index gopher command to receive a list of available files and the get gopher 93-xxxxx to retrieve a particular file.

How do you step up a successful distance learning project?

The first step in using the Internet for training is to assess the participants skill level and train them how to use the network and electronic mail. Projects for a variety of topics will involve the same key basic necessities. If the participants do not have a clear understanding of the network or how to use electronic mail your project is doomed. Likewise if the instructor's skills are weak in these areas you can expect problems.

If possible, it is best for all participants to be using similar equipment, software, etc. This makes trouble shooting easier. Of course in the real world this may not be possible especially if each participant is supplying their own equipment and software. Sites on the Internet have made software available free of charge for using the network. This makes it possible to retrieve software for the MacIntosh, personal computer or mainframes that functions in a similar manner.

User support is another key issue in distance learning. It is more difficult to assist people when a participant is having connection problems, needs clarification on an item, has questions, etc. then in traditional classroom setting. On site moderators were available in Central's safety project along with online electronic mail support. Electronic discussion groups can also be used to assist in this type of project.

What resource tools do I want to use?

You need to decide what network resource tools you are going to use in your project. Electronic mail should be included in your list for communication with the participants. You may wish to use only electronic mail for sending messages but the addition of other tools could make the training more user friendly.

To determine what tools are necessary to accomplish the task, you need to look at what kind of access the participants have available. Some may only have Bitnet access, others full Internet capabilities. Cost is important. Participants using Internet through private providers may have a cost associated with incoming electronic mail, outgoing electronic mail and connection time. There may be associated long distance phone charges if participants are using dial in capabilities.

Keep in mind that you can accomplish a distance learning project using only electronic mail. Electronic mail can be used to send lectures, exercises, assignments, etc. File transfers from remote sites can be accomplished using electronic mail. Even accessing

Gopher sites can be done using electronic mail through sites that support the software called gophermail. Although these functions can be done with the use of electronic mail, most people find it time consuming and awkward.

If you know something about the participants' skill level with electronic mail and other network tools, it will be easier to determine what methods you wish to incorporate in your training. If you determine that the participants will need additional training that will be time consuming then using only electronic mail may be the best solution.

What about interactive access with remote computers?

If you want more than electronic mail communication for accessing remote computers, you will want to consider dial in capabilities along with the telnet command. The telnet command allows people to do a remote login to another site through the Internet. After connection is made with the remote computer, the remote site considers you a local user. Note that most systems do require you to signon to a valid account with a password, some systems do allow you to access a guest account.

Another option for accessing remote computers is the gopher software. The University of Minnesota (boombox.micro.umn.edu), developer of the software, has the gopher client and server software available if you do not have the gopher client software. If you do not have the client software, you can telnet into some other sites, then use their gopher server to access the other site. Keep in mind that the remote site must also have the gopher server software available.

Gopher software gives you a menu driven access to other computers. You select off of a menu the location, document, or server that you wish to access or search. Telnet requires you to know the computer address (referred to as node) that you wish to access.

Where can I find free network software?

A variety of sites on the network store free software. The MOREnet site (gopher.more.net or services.more.net) allows anonymous ftp. You'll find network software for DOS, Mac, OS2, UNIX, etc. machines. You'll also find training material from the MOREnet spring conference at this site.

Another popular software site is located at Washington University at St. Louis (wuarchive.wustl.edu). The University of Michigan has the MERIT software archives available at gopher.archive.merit.edu.

How do I get started with network training?

A good place to get started with training others to use the

network is the NETTRAIN discussion group. Located at ubvm.bitnet you can join through sending your subscribe command to Listserv@ubvm. Most members of this group perform network training on a regular basis. They can tell you what works and what to avoid.

Jim Milles (list moderator) has made available the document "An Introduction to Using the Internet at Saint Louis University School of Law" by anonymous ftp from sluaxa.slu.edu in directory /pub/millesjg, in the file interlaw.txt. It is written for a VAX/VMS environment but would be of general help to anyone new to the network.

This is a moderated group intended to be a forum or clearinghouse for the exchange of information, advice and resources for the purpose of training others in the use of the Internet and to provide a medium for wide-ranging discussion of practical, theoretical, and philosophical issues regarding training in the use of worldwide Internet.

Various electronic mail discussion groups exist for distance learning. The Distance Education Online Symposium sends out an electronic copy of DEOSNEWS through electronic mail. To subscribe send your command (Subscribe DEOSNEWS firstname lastname) to Listserv@Psvm.psu.edu. To join the online discussion group send your command (subscribe DEOS-L firstname lastname) to Listserv@Psvm.psu.edu.

What is a FAQ?

Another resource of the network to assist in training people is the FAQ files. A FAQ is a list of Frequently Asked Questions. You'll find a variety of FAQ's available on the Internet. Here is a list of some FAQs to assist you with training through the Internet.

Version 3.2 of "Where to Start" for New Internet Users, an annotated listing of Internet guidebooks and other materials. To retrieve through anonymous ftp at sluaxa.slu.edu, cd /pub/millesjg then get newusers.faq
To retrieve through electronic mail send the following command to LISTSERV@ubvm.cc.buffalo.edu
GET NEWUSERS FAQ NETTRAIN F=MAIL

Help-Net FAQ about Bitnet and Internet. To retrieve through anonymous ftp at ftp.temple.edu, cd pub/info/help-net then get faq.file
To retrieve through electronic mail send the following command to LISTSERV@vm.temple.edu
SEND FAQ FILE HELP-NET
Other files are available at the Help-Net archives which may be of interest. Send the following command to the same LISTSERV address to receive a list.
INDEX HELP-NET

How to Access the SAS-L Archives via Gopher. Posted to SAS-L once a month through electronic mail. To retrieve through anonymous ftp at jse.stat.ncsu.edu
cd software/info then issue get commands. To retrieve through electronic mail send commands to archive@jse.stat.ncsu.edu. If you have access to gopher then you can gopher to jse.stat.ncsu.edu and look under the menu for "software Tools and Other Information" and within that choice select "Frequently Asked Questions". You'll notice that not only is the SAS-L FAQ located there but also a variety of FAQs such as the Public Dialup Internet Access List, a gopher FAQ, a ftp FAQ, an Usenet FAQ, etc.

How can I use the Internet for SAS training?

You can use a variety of resources available or develop your own lessons to conduct SAS training. You must decide how much of the work you are going to do and how much the participants will perform. As I mention some of the resources available, keep in mind that you could have the participants use and retrieve the resources or you could do all the work then distribute the information or files through electronic mail.

Several electronic discussion groups are available that can assist you and the participants in SAS training. The SAS-L group discussion covers new product announcements, changes & enhancements, how to questions, problem/solution, etc. SAS Institute has made a variety of resources available through the Internet. Technical support has made support available through the use of the system. Other items such as same code is also available for retrieval. To join the SAS-L group send your command (Subscribe SAS-L firstname lastname) to Listserv@UGA.

The University of North Carolina (jse.stat.ncsu.edu) has made the SAS-L archives available through their gopher. Lessons can be prepared from various question & answer postings from this group. The Journal of Statistics Education Information Service and other various interesting items are also available at this site. The free or shareware software available contains statistics software, graphics software, gopher software and other miscellaneous software.

Resources available from SAS Institute

The Technical Support Division has made several resources available through the network that can be incorporated into your training. The anonymous ftp site is located at ftp.sas.com. There you can access publications or technical support information.

SAS Institute is now archiving user application code at the ftp site. Contact Rick Langston (email SASRDLE@MVS.SAS.COM) for more information.

The Publications Division at SAS Institute now has an online

access facility so that users can electronically download sample code from selected books.

SAS online samples are available through electronic mail by sending your command (Subscribe SASDOC-L firstname lastname) to Listserv@VM.SAS.COM. After subscribing you can get general information about the files and retrieve the code by sending GET commands to the Listserv@VM.SAS.COM.

For example, if I wish to know what files are available I would send the following command to Listserv@VM.SAS.COM
Get Index example sasdoc-l

Summary

It does take some effort to start a training project through the network. Once you have design, implemented and modified the project you will find it is a valuable method of training.

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