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Extent that professional business educators associated with the American Assembly of Collegiate Schools of Business use the Internet
by Patricia Rae Scarrah-Alston

Abstract:
This research was initiated to find the extent, if any, that business educators associated with the American Assembly of Collegiate Schools of Business use the Internet to collect data pertinent to their jobs as educators. The population for this research includes professional business educators associated with the American Assembly of Collegiate Schools of Business. The sample size was 100 institutions out of the 853 total population. A response rate of 44 was achieved allowing statistical tests to be performed. Data were obtained through a review of literature and a survey instrument.

The questions asked in the survey instrument requested information on the type of institution, the services available on the Internet, how information was located, the hours of training received, the software used, if there was access to a local area network, what services were used on the local area network and demographic information. Respondents were asked to keep a five-day log of the length of time of each connection to the Internet, the services used, and the purpose of each connection.

The conclusions reached included: 1) both private and public institutions were well represented; 2) respondents use Internet directories most to find the information they are seeking, followed by the use of library references, periodicals, and information received from associates; 3) little or no training is given to educators on the use of the Internet; 4) e-mail was found to be used the same amount of time that all other services combined were used, indicating the value of e-mail; 5) respondents were connecting primarily for professional reasons not personal; 6) educators use varying software packages to perform word processing, data base, spread sheet, and graphics packages in their jobs; 7) educators are connected via local area networks (LANs) at their institutions giving them access to a wide base of local information to include student records used in advising, the campus directory and financial data; 8) women and minorities were highly underrepresented in this study; and 9) the majority of respondents held doctorate degrees.

EXTENT THAT PROFESSIONAL BUSINESS
EDUCATORS ASSOCIATED WITH THE AMERICAN
ASSEMBLY OF COLLEGIATE SCHOOLS OF BUSINESS USE THE INTERNET

by

Patricia Rae Scarrah-Alston

A thesis submitted in partial fulfillment
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APPROVAL

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Patricia Rae Scarrah-Alston

This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the college of Graduate Studies.

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Signature _Patricia Rae Scarrah-Alston_

Date _November 13, 1995_

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To my son, Killian, for giving me the strength and courage to make positive changes in my life.

To my parents, Pat and Warren, for standing behind me (even during those ugly teen years) and encouraging my education and love of information systems.

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TABLE OF CONTENTS

LIST OF TABLES

viii

LIST OF FIGURES

ABSTRACT

This research was initiated to find the extent, if any, that business educators associated with the American Assembly of Collegiate Schools of Business use the Internet to collect data pertinent to their jobs as educators. The population for this research includes professional business educators associated with the American Assembly of Collegiate Schools of Business. The sample size was 100 institutions out of the 853 total population. A response rate of 44 was achieved allowing statistical tests to be performed. Data were obtained through a review of literature and a survey instrument.

The questions asked in the survey instrument requested information on the type of institution, the services available on the Internet, how information was located, the hours of training received, the software used, if there was access to a local area network, what services were used on the local area network and demographic information. Respondents were asked to keep a five-day log of the length of time of each connection to the Internet, the services used, and the purpose of each connection.

The conclusions reached included: 1) both private and public institutions were well represented; 2) respondents use Internet directories most to find the information they are seeking, followed by the use of library references, periodicals, and information received from associates; 3) little or no training is given to educators on the use of the Internet; 4) e-mail was found to be used the same amount of time that all other services combined were used, indicating the value of e-mail; 5) respondents were connecting primarily for professional reasons not personal; 6) educators use varying software packages to perform word processing, data base, spread sheet, and graphics packages in their jobs; 7) educators are connected via local area networks (LANs) at their institutions giving them access to a wide base of local information to include student records used in advising, the campus directory and financial data; 8) women and minorities were highly underrepresented in this study; and 9) the majority of respondents held doctorate degrees.

CHAPTER I

INTRODUCTION

Because a speedy Info Superhighway should boost productivity, create new markets, and be a model for the rest of the world, "the country that can get this set up first will have a significant advantage in the international marketplace."

-Suzanne Trichenor, VP of the industry-backed Council on Competitiveness (Carey, 1994)

Information systems have given us the capability of accessing multitudes of information via the Internet. The amount of information an individual human can process has been found to be relatively constant. Short-term memory lasts just a few minutes or hours. (Brainfacts, 1995) Therefore, they must rely on other systems of information storage, retrieval and communication to keep track of the myriad of facts and information needed to function in today's world. Educators are now able to contact colleagues with the convenience of a computer keyboard, via the Superinformation Highway, bypassing telephone calls, faxes and partial messages left on voice-mail. They not only gain the ability to converse with colleagues more economically than with a telephone call, but can also access information in their field of interest and remain on top of the latest research, newest trends, and research funds available. Educators need to stay current in order to educate students in the latest technology and findings in their subject

area. Textbooks about Information Systems are often outdated before they are published.

The use of the Internet is relatively new to most professors and intimidating to others. Previously, only computer science professors, or the extremely computer literate were even aware that the Internet existed. Now, most public universities and colleges have given their employees access to the Internet and its vast amount of information available both locally and globally. This research is designed to examine the use of the Internet by professional educators and to find out just what services they find valuable.

Problem Statement

The purpose of this study is to determine the extent, if any, that professional business educators, associated with the American Assembly of Collegiate Schools of Business, use the Internet to collect data pertinent to their jobs as educators.

Questions to be Answered

1. What are the major services of the Internet that professors use in their professional activities?

2. How often do professors use the Internet?

3. How do professors locate the information they are seeking on the Internet?

4. How much training, if any, have professors received on the use of the Internet?

5. Are professors using the Internet for both professional and personal reasons?

6. Do professors incorporate the information they retrieve from the Internet into the classroom and/or workplace?

7. With which software applications are professors most acquainted?

8. Do professors have access to local area networks (LAN) in their workplace?

Need for the Study

World usage of the Internet grew by 95% in 1994 (U.S. News & World Report, 1995). Professors can obtain a great amount of information related to their field of study by sitting in front of a personal computer and accessing colleagues across the world or retrieving documents via the Internet for use in research or class enhancement. Textbooks in the Information Systems might be outdated by the time they reach the publisher. This research effort was designed

to measure the extent that professors use the Internet for professional development. It will determine the services that professors use on the Internet and provide insight into the relationship between Internet and training. With the explosion of interest in the "Information Superhighway" this research will measure its impact on the academic and professional community.

Definition of Terms

American Assembly of Collegiate Schools of Business (AACSB): A not-for-profit corporation of educational institutions, corporations and other organizations devoted to the promotion and improvement of higher education in business administration and management. A condition to membership by educational institutions in the corporation is the use of accurate descriptions of programs or degrees offered. (AACSB Catalog, 1994)

Archie: A way of automatically gathering, indexing and sometimes retrieving files on the Internet. (Steve's Internet Hyper-Glossary: http://www.windows95.com/ glossary.html)

Bulletin Board: A computer system that allows users to post messages or programs for other users. Also called electronic bulletin board. (Websters NewWorld Dictionary of Computer Terms, Third Edition, 1988)

Electronic Mail: The electronic transmission of letters, messages, and memos through a communications network. Also known as e-mail. (McGraw-Hill,

Dictionary of Scientific and Technical Terms, Fourth Edition 1989)

File Transfer Protocol (FTP): The most widely-used way of downloading and uploading (getting and putting) files across an Internet connection. The File Transfer Protocol is a standardized way to connect computers so that files can be shared between them easily. (Steve's Internet Hyper-Glossary: http://www.windows95.com/glossary.html)

Gopher: A protocol and programs for a menu driven document delivery system that connects you to resources and sites all over the world. Gopher menu options can point to other gophers, telnet sites, text files, and binary files. (Glossary: http://www.zynet.co.uk:8001/zynet/glossary.html)

Hypertext: A metaphor for presenting information in which text, images, sounds and action become linked together in a complex, nonsequential web of associations that permit the user to browse through related topics, regardless of the presented order of the topics. (Dictionary of Computer Terms. Microsoft Press, 1991)

Information System: Any means for communicating knowledge from one person to another, such as by simple verbal communication, punched-card systems, optical coincidence systems based on coordinate indexing, and completely computerized methods of storing, searching, and retrieving of information. Abbreviated IS. (McGraw-Hill, Dictionary of Scientific and Technical Terms, Fourth Edition 1989)

Internetting: Connections and communications paths between separate data communications networks that allow transfer of messages. (McGraw-Hill, Dictionary of Scientific and Technical Terms, Fourth Edition 1989)

List Serves: An automated mailing list distribution system. Listservs exist for a multitude of professional, educational, and special interest groups. (Steve's Internet Hyper-Glossary: http://www.windows95.com/glossary.html)

Local Area Network (LAN): A communications network connecting various hardware devices together within a building by means of a continuous cable or an in house voice-data telephone system. Also known as LAN. (McGraw-Hill, Dictionary of Scientific and Technical Terms, Fourth Edition 1989)

Lynx: A text-based World Wide Web browser. Using Lynx, you can access almost all information on the World Wide Web. The primary difference between Lynx and Mosaic and Netscape is that there is only text in Lynx.

Management Information System: An information system designed to supply organizational managers with the necessary information needed to plan, organize, staff, direct, and control the operations of the organization. Abbreviated MIS. (Websters NewWorld Dictionary of Computer Terms, Third Edition, 1988)

Mosaic: A graphical browser for the World Wide Web that supports hyper media, invented by the National SuperComputer Association. (Steve's Internet Hyper-Glossary: http://www.windows95.com/glossary.html)

Netnews: Also referred to as Usenet. A gigantic system of public discussion areas

with names like {alt.culture.usenet}.

Netscape: A graphical browser for the World Wide Web that supports hyper media, invented by Netscape Communication and available as freeware. (Steve's Internet Hyper-Glossary: http://www.windows95.com/glossary.html)

Node: Any terminal, station, or communications computer in a computer network. (Websters NewWorld Dictionary of Computer Terms, Third Edition, 1988)

Operating System: Abbreviated OS, sometimes called the executive. The software responsible for controlling the allocation and usage of hardware resources such as memory, central processing unit (CPU) time, disk space, and peripheral devices. (Dictionary of Computer Terms, Microsoft Press, 1991)

Protocol: Set of rules or conventions governing the exchange of information between computer systems. (Websters NewWorld Dictionary of Computer Terms, Third Edition, 1988)

Telnet: A communications network that enables many varieties of user terminals and computers to exchange information. (Websters NewWorld Dictionary of Computer Terms, Third Edition, 1988)

UNIX: A multiuser, multitasking operating system originally developed by Ken Thompson and Dennis Richie at AT&T Bell Laboratories in 1969 for use on microcomputers. (Dictionary of Computer Terms, Microsoft Press, 1991)

UUCP: An acronym for UNIX-to-UNIX Copy. A set of software programs that

facilitate transmission of information between UNIX systems using serial data connections, primarily the public switched telephone network. (Dictionary of Computer Terms, Microsoft Press, 1991)

WAIS: Acronym for Wide Area Information Service. An information retrieval system which was developed by Apple. It allows a client to perform keyword searches simultaneously on multiple on-line databases. (Glossary: http://www.zynet.co.uk:8001/zynet/glossary.html)

World Wide Web: A collection of on-line documents housed on Internet servers around the world. The concept of the Web was created by the European Laboratory for Particle Physics at CERN which is located near Geneva in Switzerland. Web documents are written or "coded" in HTML (Hypertext Markup Language). (Steve's Internet Hyper-Glossary: http://www.windows95.com/ glossary.html)

Summary

Professors have access to a wide variety of information that can be used to enhance their professional development and in-turn enhance the quality of education taught in all subject areas. The information explosion that the Internet holds requires that professional business educators use the Internet to stay abreast of cutting edge developments across the globe.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The Internet is not new. In fact, it originated in 1969 with the Department of Defense linking four computer centers together and has not stopped growing since. (Churbuck, 1991)

Although the idea to connect wide-spread computer systems is not new, the excelled race of technology has never quit. An idea today is put into use for the world by tomorrow. The inception of the Internet consisted of four networked computers and has grown to linking millions of users across the world. The user interface to the Internet can be merely textual or one of text, graphics, color, sound and video. Technology dealing with the amount of information available and the kind of information, be it text or hypertext (text enhanced with graphical information), improves daily. Trying to keep up with the Internet, and all it has to offer, requires a significant amount of time and resources.

History

The Internet began in 1969, with the name ARPANET, ARPA standing for Advanced Research Projects Agency, which was later known as the Defense

Advanced Research Projects Agency (DARPA), which was part of the Department of Defense. ARPANET consisted of four computer sites linked together. The sites included the University of Utah, the University of California at Santa Barbara, the University of California at Los Angeles and Stanford Research Institute (SRI) International. ARPANET was originally designed to demonstrate the feasibility of building a network using computers over a wide area. The largest defense issue was that of communication. In the event of war, the military wanted a reliable tool to communicate issues of command and control, supplies, and civil management. Information in this context is that of life-and-death issues.

Reliability required multiple routes that information could travel to get to one destination. This type of networking allowed information to get to the intended destination even if the original route was out of commission. The military was concerned with a bomb destroying a single route so they wanted a multiple route networked system that could withstand the loss of connections and thus, ensure that communication would prevail.

Protocols for communication needed to be developed to ensure reliability and prepare for disruption. The term protocol refers to how communication between computers will work. Data being sent needs to be represented in a certain way to be interpreted by the intended receiver of the information. Initially, a relatively simple protocol was used called Host-to-Host Protocol. It was limiting in that it restricted the total number of computers that could

communicate with one another. In 1972, a protocol called Transmission Control Protocol/Internet Protocol (TCP/IP) was introduced allowing a protocol suite. A protocol suite describes a collection of protocols that work together. The suite is layered by protocols, each layer being responsible for certain functions. For example, the lowest level of a protocol suite would handle basic work such as receiving pulses of electricity from a communications medium, the next level up would turn the pulses into characters. This leveling continues until the information is received in the intended format from the sender.

The 1970's produced several additional networks. The UUCP network consisted of several UNIX machines, which was an operating system. BITNET (Because It's Time Network) was born in the early 1980's, and CSNET (Computer Science Network) was another network that was created. The NSFNET (National Science Foundation's Network) was developed in the late 1980's and connected five supercomputer centers. Some of these networks were private and some were funded by the government. A consolidation of networks such as ARPANET, UUCP, BITNET, CSNET and the NASA Science Internet, joined the NSFNET and the original networks were dismantled in the early 1990's. This consolidation formed what is known as the Internet today.

In 1991, the National Research and Education Network (NREN) proposed linking the nation's major research and academic institutions and extending these

connections to communities and individuals wanting access to the resources. It was a major enhancement to the Internet. (Valovic, 1991)

When Vice President Gore was a senator, he sponsored a government project to bring the nation's attention to the need to compete globally in information technology. In 1991, President Bush signed into law the federal High Performance Computing Act (the HPCA) which was to build a high-speed network for connecting supercomputers.

In 1992, the term Internet referred to over 5,000 networks in 33 countries and a half-million computers and three million people they connect. The Internet offered services, applications, and archives. Access was also granted for freeware and shareware source code, access to on-line catalogs, remote control of CD readers, inter-company program development and news services. (Dern, 1992)

By 1993, the Internet reached one million directly connected end users and up to four million electronic mail users. Its boundaries included 120 countries and new information was updated daily. Estimates of the actual size of the Internet were and continue to be outdated before the statistics can be published. The effects of the accelerated growth on both technology and the administrative infrastructure was a challenge. (Chapin, 1993)

For example, Editorial Inc., of Rockport Massachusetts, and Software Tool & Die, in Brookline, Massachusetts, have joined together and set up a service called Online BookStore on the Internet. The service offers an electronic delivery

of a text to a personal computer via the Internet. The service can enhance the options available to educators and libraries. (Hilts, 1993)

In 1994, as a follow up to the HPCA came the Information Infrastructure and Technology Act, S 2937, which was introduced by Vice President Gore prior to being selected as Bill Clinton's running mate. This legislation was introduced to provide a data "superhighway," called the National Research and Education Network (NREN). The NREN formed the infrastructure for U.S. scientific and industrial research and had the capability to transfer data at gigabyte-per-second speeds. The bill consisted of funding in the amount of $1.15 billion over five years. It gave federal agencies the responsibility of developing network applications. (Smith/Gibbs, 1994)

Vice President Gore argued for the NREN stating that the network could "revolutionize American education as well, giving teachers new tools and new ways to inspire their students." Vice President Gore believed that to be a leader in foreign competitiveness, the United States could not follow where connectivity was concerned. He believed the United States must move first and led the way for future technologies. (Smith/Gibbs, 1994)

This development brought increased access to the Internet to thousands introducing users to vast amounts of information. Vice President Gore has been no stranger to the Internet throughout his career. With the help of the Clinton administration Vice President Gore led the push to link CEOs, educators and couch

potatoes with the services, entertainment and information that the Internet possesses.

One of the services the Internet offers is e-mail, which is basically an extremely fast post office. E-mail allows users to communicate via computers which can be faster and more efficient than playing phone tag with a colleague on a different schedule in a different time zone. File Transfer Protocol (FTP) is another service offered on the Internet. This function allows users to retrieve programs and large files from remote computers. Telnet allows a user to operate a remote computer from a desktop computer. Archie, Veronica, Jughead and WAIS (Wide Area Information Servers) are searching tools for information available on the Internet. Gopher is a mechanism for tunneling from one address on the Internet to another in a quick manner. The World Wide Web is more advanced than Gopher in that it uses hypertext markup language (HTML) to display highly formatted documents incorporating link references in the text to navigate through the system. Mosaic is a software browsing program used with the World Wide Web that acts as an on screen control panel. With the use of a mouse, the user can point and click their way through the World Wide Web. Netscape is another web browser. Internet Talk Radio is available allowing broadcast sound recordings. Finally, CUSeeMe is an Internet teleconferencing tool. CUSeeMe allows up to eight users to see and hear each other on their computers with the help of photographic peripherals. Along with all the tools

mentioned, the Internet has a vast amount of bulletin boards on various subject areas. The bulletin boards range from interest groups to dating services to specific hobbies to health care for cats. The user need only find the desired address to connect to a variety of information. (Elmer-DeWitt, 1994)

The World Wide Web contains "home pages" which are hypertext documents that can incorporate text, images, sound and action to give users an introduction to a business, educational institution, service available on the Internet, or personal reference, to name a few. The home page is linked to other documents related to the home page, like services a business offers, programs offered by an educational institution or an entry form to order items sold on the Internet. Home pages are helpful in identifying the information contained in the entire document, allowing the users to decide if they want to proceed or if they want to search elsewhere to find the information they are seeking.

Present

The Internet keeps expanding each year. It is reported that it now reaches 4.8 million computers around the world and another network of computers joins every 30 seconds. A network can contain one or several computers. The number of nations connected in early 1995 was 159, of that number 22 joined the previous year. The usage of the Internet grew by 95% in 1994. The United States leads in the number of computers connected to the Internet at 3.2 million.

Other nations following are Britain at 241,191 computers connected, Germany with 207,717 connected, Canada with 186,722, Australia with 161,166, Japan with 96,632 computers connected and France with 93,041 computer connections to the Internet.

The number of organizations that are interconnected worldwide reached 56,000; businesses using the Internet numbered 32,000; businesses using online computers reached 1.3 million, which was a 628% increase in three years; school and university computers connected to the Internet numbered 1.1 million and government computers connected reached 209,345.

The services reported most used on the Internet are FTP, WWW and e-mail. The cost of access to the Internet through England's Net provider, British Telecom is $1,151 per year and the basic cost to use CompuServe is $9.95 per month. These rates are for personal use in Britain and the United States. The cost of an Internet connection for an educator is usually defrayed by the educational institution. The institution can charge individual departments in terms of units that are allotted for each department but usually not in terms of dollars. An Internet connection for a large institution can be very expensive but cost comparisons to time spent on a telephone or unproductive time lost waiting for a document to arrive in the mail should be weighed before a decision to connect or not connect is made. (US News & World Report, 1995)

Businesses are using the Internet to conduct business. A computer manufacturer, Silicon Graphics, distributes software and answers customers questions using the Internet. An Advertising executive at Ogilvy and Mather claims the Internet is a huge market and has made guidelines for marketing on the net. The first rule states "intrusive e-mail is unwelcome," suggesting that there is a proper place to advertise certain products. Global Network Navigator, an Internet publisher includes advertising in its offerings allowing their clients greater exposure to global customers. (Elmer-DeWitt, 1994)

Downsizing in organizations is driving businesses to have a more skilled, computer-literate workforce. Telecommuting is another benefit of the Internet. Employees can work at home relieving the employer of the cost of office space and furniture. The Internet offers expanded communication media that can be used by businesses, educational institutions and individuals. (Smith/Gibbs, 1994)

Future

Estimates of Internet growth by the year 2000 include 1,000,000 connected networks and up to 100,000,000 connected computers. These estimates may be outdated at this printing. Not knowing how to use the Internet in the year 2000, may compare to being illiterate today. Information available now by going to the library, will be accessible by using your personal computer and downloading all or parts of a book or journal. Distance learning will allow

those seeking higher education access to instruction in all curricula, from the school of their choice, from any geographic location. When the NREN begins to offer transfer speeds of a gigabyte per second, the doors will open for commercial vendors to compete with comparable speeds.

Once businesses begin to use the Internet to their advantage, buying, selling, trading, making contacts and exchanging data will become commonplace and businesses will wonder how they ever had the time to conduct business in a personal contact atmosphere. Business will be able to seek customers in a global market where prior to the Internet, the same effort would have involved great marketing costs and quite possibly a representative in the geographical area. (Smith/Gibbs, 1994)

The Internet will allow access to community level government departments. The need to stand in line and wait to renew an automobile registration on your car or get a business permit will be handled much more efficiently through online connections to the Internet. (Smith/Gibbs, 1994)

Will the need for personal contact to conduct business and teach be extinct in the future? Computer aided tutors are able to offer one-on-one instruction eliminating the role of the educator in some cases. If people no longer have to venture out into the public to conduct business, will they become recluses in their homes? The Internet, and the services it provides, can compare to the process that created suburbs in large cities. Suburbs have their own shopping, business

and entertainment services which decrease the need to travel to the heart of the city for such services. (Elmer-DeWitt, 1994)

While change should be expected in the world we live, the Internet can introduce us to a strange new world offering information about travel, people, services, news releases, education, art, employment opportunities, music, library catalogs across nations and legal information to name just a few. It should be viewed as another tool to reduce stress or increase awareness, not as a means to avoid personal contact. The challenge that faces all Internet citizens as the battle over the control of the Internet increases, is to ensure a safe and pleasant place to work, play and raise children without loosing touch with the drive that attracted individuals to begin to use the Internet in the first place. (Elmer-DeWitt, 1994)

Summary

The Internet may have started out as an experiment for government, but has grown exponentially to a tool available to anyone desiring information and having access to a computer, whether it be a personal computer with a modem or a terminal set up in a library or classroom. The government has demonstrated the feasibility of making communication reliable from one user to another. It is not that servers do not break down but the lines of communication are interlinked allowing information to flow around a troubled area to another server that can safely deliver information. World Wide Web has created a more user friendly

atmosphere for the average user. The Internet is not as intimidating as it was at first and with one training session, a user can get acquainted using the Internet and feel comfortable that the system will not blow up while they are online. The Internet can be used for professional or personal reasons by everyone. Do the services reported most used mirror the services used by business educators? How do people learn to use the Internet and how do they locate the information they are seeking? How much time is spent working on the Internet and is the information used for professional development? Finally what type of people use the Internet? The answers to these questions today will change in the future with new developments and technological changes.

CHAPTER III

PROCEDURES

This chapter outlines the procedures that were followed to obtain the needed data from professional educators associated with the American Assembly of Collegiate Schools of Business.

1. Sources of data

2. Construction of Data Instrument

3. Collection and Analysis of Data

Sources of Data

Population

The population chosen for this study included professional business educators associated with the American Assembly of Collegiate Schools of Business (AACSB). Those associated with the AACSB include educational institutions, corporations and other organizations devoted to promoting and improving higher education in business administration and management.

The total membership of the American Assembly of Collegiate Schools of Business numbers 853. The population was chosen to obtain information about business related professionals and their use of the Internet. The sample for this

study was obtained by a quasi-random representative selection of professional

educators from this population.   (AACSB Catalog, 1994)

Sample

The sampling procedure used in selection of subjects was quasi-random,

selecting every eighth name, from the August 1994 catalog of the American

Assembly of Collegiate Schools of Business. The sample was quasi-random in that

business organizations were skipped choosing the next educational institution in

the alphabetical listing. The sample included domestic and international

educational institutions.

The returned samples had to be at least a size of 30 to draw any statistical

inferences from the population. (Gay, 1992) Therefore, 100 questionnaires were

mailed to educational institutions associated with the AACSB, expecting a return

rate over 30 percent.

Limitations of the Study

The scope of this study was limited to responses from educators associated

with the American Assemble of Collegiate Schools of Business (AACSB) and

inferences can be made only to that group. However, because non-AACSB

educators are somewhat similar to this population, the results from this research

do have implications to educators in other four-year colleges and universities.

Construction of the Survey Instrument

After a review of the literature, the researcher identified those issues which were important to the study and developed a questionnaire. A pilot questionnaire, consisting of a convenience sample, was sent out November 8, 1994 to business colleagues of Dr. Shannon Taylor, who teaches management and information systems courses in Montana (MSU-Bozeman, MSU-Billings and the University of Montana), Illinois State University and Central Michigan University. Seven of the eight were returned and tabulated using dBase IV. The questionnaire was modified using the suggestions and comments from the pilot study. The questionnaire identified the services, if any, educators use from the Internet in their professional activities. Other issues included: how often professionals use the Internet, how they locate information on the Internet, how much training, if any, was obtained to educate them about the Internet, and if professionals are using the Internet to gather information for professional or personal reasons. The researcher also looked at the relative time spent on e-mail and the amount of time spent on all other areas of the Internet. The use of the Internet for professional development of educators was also studied. Demographic information was gathered including: gender, age, race, income, education, degree and title to determine differences in Internet users.

Collection and Analysis of Data

Data collection began Spring 1995. The questionnaire was mailed, via U.S. mail, the beginning of April and data were compiled and analyzed in June 1995 using dBase IV. A response rate of 40 or more questionnaires was considered sufficient for reliable statistical analyses. Forty-four questionnaires were returned and no follow-up mailing was conducted.

Appropriate statistical tests using SPSS were performed on the data including a t-test of two means and a chi-square analysis of relative proportions. An independent-sample t-test was used to compare the mean time, in minutes, spent using e-mail to the mean time, in minutes, spent using all other services. A chi-square analysis was performed on the data collected pertaining to the area of the Internet used most. Connections to e-mail were compared to connections to all other areas combined. And finally, a chi-square test was used to gain insight into the purpose, either academic or personal, that business educators were connecting to the Internet.

Summary

Although the Internet has been in existence since 1969, the use of its services is still very new to most professional educators. The researcher sought to

determine if professional educators use the Internet to enhance professional

development, extend research and if they use the Internet for professional and/or

personal gain.

CHAPTER IV

RESULTS

Introduction

The questionnaires were returned by June 1995. dBASE IV was used to compile the data and SPSS was used to analyze the data.

A chi-square analysis was used to determine that respondents connected to e-mail half of the time and connected to all other services collectively, exactly the same proportion ($x^2 = .0.0$ df= 1, p > .05). (See Table 1)

Table 1
Chi-Square Test
Area of Internet used

Category	Cases Observed	Expected	Residual
E-mail	84	84.00	.00
Other Services	84	84.00	.00
Total	168		

Chi-Square	D.F	Significance
.0000	1	1.0000

An independent-sample t-test was used to determine business educators spent approximately the same amount of time using e-mail ($\bar{x}_1 = 56.50$ minutes) as they did on all other services combined ($\bar{x}_2 = 63.84$ minutes) (t = -.50, df = 154, p > .05). (See Table 2)

Table 2
T-Test for Independent Samples
Length (in minutes) of Connect

Mean Difference = -7.3462

T-Test for Equality of Means - 95%

Variances	t-value	df	2-Tail Sig	Standard Error Difference	Ci for Difference
Equal	-.50	154	.617	14.671	(-36.33,21.64)
Unequal	-.50	153.55	.617	14.671	(-36.33,21.636)

Finally a chi-square analysis was used to determine business educators purpose for connecting to the Internet. Clearly, the proportion of connects for professional reasons (including: academic, professional, research and development and administrative) was more than for personal use ($x^2 = 59.5238$, df = 1, p < .0000). (See Table 3)

Table 3
Chi-Square Test
Purpose of Connection

Category	Cases Observed	Expected	Residual
Academic	134	84.00	50.00
Personal	34	84.00	-50.00
Total	168		

Chi-Square	D.F	Significance
59.5238	1	.001

<u>Results</u>

One hundred (100) questionnaires were mailed to a quasi-random sample

of Deans of AACSB institutions. Forty-four (44) questionnaires were returned

indicating an interest for this type of research. All returned questionnaires were

usable for the analyses.

<u>Type of Institution</u>

Twenty (20), or 45%, of the questionnaires were returned from private

schools; twenty-four (24), or 55%, were completed by persons working in public
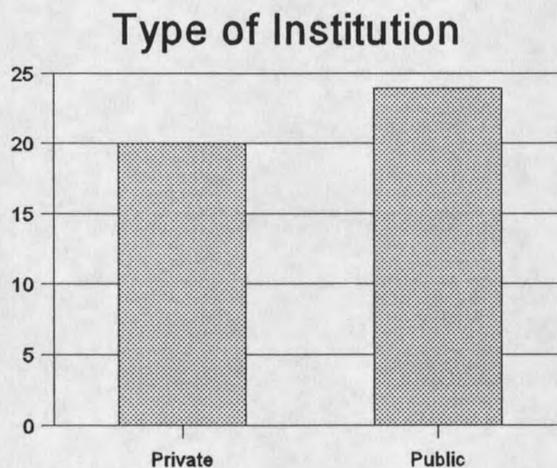
schools (see Figure 1).

Type of Institution

Figure 1

The type of institutions were well represented from the respondents.

<u>Degrees Offered</u>

Thirty-six (36) of the responding institutions offered a Bachelor of Science

in Business, twenty-seven (27) institutions offered a Master of Science degree in

Business and eight (8) institutions offered a Ph.D. in Business. Fourteen (14) of

the responding institutions offered a Bachelor of Science in Management

Information Systems (MIS), seven (7) offered a Master of Science in this area and

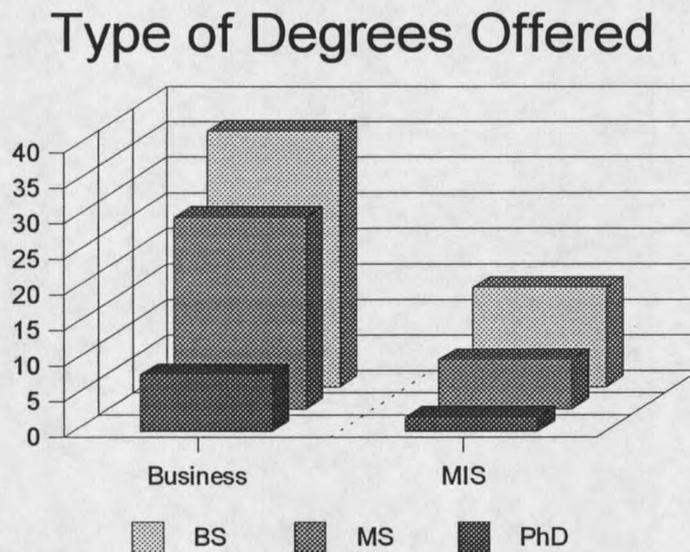two (2) offered a Ph.D. MIS degrees (see Figure 2).

Type of Degrees Offered

Figure 2

This representation of degrees offered indicates that colleges and

universities are acknowledging the value of information systems and are devising

separate curricula in the programs they offer.