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# The Internet As A Research Tool For University Business Faculty

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## Introduction

How do university business faculty use the Internet? A recent survey showed that one in 11 Americans consider themselves to be Internet users. In contrast, a survey conducted for the present study revealed that three-fifths of university business faculty members use the Internet. That there is a high degree of interest in and usage of the Internet by universities and their faculties is widely understood (e.g., McClure ,1991; Ryland, 1992; Rush, 1995).

The purpose of this paper is to explore the reasons for and types of use of the Internet by university business faculty and to consider how and why these uses to improve productivity and performance of research might be measured. This preliminary paper is exploratory in nature and is meant to evoke discussion on methodologies for studying the diffusion of Internet use as an information technology and to consider its overall impact on university business faculty research, rather than its impact on the individual faculty members who use it.

## Higher Education Context

In a time of "rapid and relentless" evolution of academic networks, little attention has been paid to measurement of results from the use of the network (McClure, 1994). At the same time, higher education is "under siege" (Munitz, 1995). Questions and demands concerning accountability are heard from a wide variety of constituencies.

Ernst, Katz and Sack (1995) delineate "five key trends" affecting higher education administration--each with organizational and technological implications, and each suggesting that information technology is a key component to future progress and solutions to problems. among the trends are calls for productivity increases throughout the academy. Utilizing the Internet and other technologies to achieve productivity increases is logical.

The traditional triad of teaching, research and service is reflected in the mission statements of most universities. Faculty members also view their work in terms of these three activities and have some concept of the importance of each in their overall "job description." Evaluations of faculty members use various measures associated teaching, research and service for tenure and promotion processes.

The *Chronicle of Higher Education* recently reported that "the proliferation of Internet sites is making it harder for investigators instead of easier" (Guernsey, 1995). A recent study financed by the Department of Education indicated that university administrations do not know what benefits are being derived from the Internet use of their faculty and students (Jacobson, 1996).

Lopata and McClure (1996) report that adequate network infrastructure is "essential to attract and retain high quality [university] faculty." Their findings also suggest the absence of generally accepted network evaluation measures and procedures. Bruce (1994) conducted an exploratory study of the use of the Australian link to the Internet, focusing on three research questions: what Internet services do academics use, for what purpose, and resulting in what benefits.

## Survey Methodology and Results

A pilot survey was conducted by personal contact with each of the 38 members of the business college faculty at a small regional public university. Thirty responses were received (79 percent response rate). The subject university has had Internet capability installed for approximately one year. The items included in the questionnaire were patterned on the history of Internet (McLaren, 1996; Engelman, 1996), and the present uses as categorized in Sanford (1995) and Bruce (1994).

Forty percent of the respondents indicated that they are not Internet users. Reasons for nonuse ranged from the "no time to use/learn" type of response to the "no value for me/students" type of response. The intent of this project is to explore some of the primary reasons that faculty use the Internet and some of the types of activity that they find useful.

The amount of time devoted to Internet activity is a concern of many--users and nonusers alike. Based on the pilot study, two-thirds of faculty member Internet users devote an average of five hours or less per week to these activities. The users devoting the most time to Internet use reported 10 to 15 hours per week.

Primary services used include E-mail and a variety of techniques for reaching distant computer sites and files. Table I indicates the uses reported and the priorities assigned to each. This pattern is similar to that found by Bruce (1994) in that E-mail was the most frequently used service identified in both surveys.

Other questions included in our survey relate to the purposes of Internet use. Most important based on the frequency and priority responses was contact with professional colleagues. Survey responses regarding other purposes of Internet use are tabulated in Table I. These responses reflect the same general interests and concepts as those reported by Bruce (1994).

## Future Research

This survey was conducted at one small regional public university. Plans are to utilize similar methodology in studying additional universities which have more experience with Internet use and other universities which are new to Internet use. Based on anecdotal evidence and the studies cited herein, we believe that the patterns of adoption of Internet use for research will be vastly different in the two categories of universities and that the patterns will not obey the models posited in Swanson (1994), Brancheau and Wetherbe (1989) and Malone and Rockart (1991). Factors influencing these differences, if they are found to exist, could include organizational differences between universities and corporations, competitive environments, size of organization, maturity of other information technology applications within the organization, and age and motivation of individuals.

Results of this study should be of interest to business faculty and to administrators of colleges of business and university computing services. The survey results will provide a base assessment of activity on the Internet and assistance in planning both at the network level and at the individual faculty member level. The results will also be useful in addressing accountability issues related to higher education and can be used in conjunction with productivity measures to discern overall benefits to the research function of higher education.

**Table I**
**Internet Services Used, Purposes of Internet Use**

**and Priority of Services Used**
**by Business Faculty**

| | Total Resp. | Priority | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Services** | | | | | | | | | |
| | | | | | | | | | |
| E-mail | 12 | 7 | 2 | 2 | 1 | | | | |
| Lynx | 9 | 2 | 3 | 1 | 1 | 2 | | | |
| Gopher | 7 | 2 | 2 | | 1 | | 2 | | |
| Listservs | 5 | | 2 | 1 | 2 | | | | |
| Netscape | 4 | 1 | 1 | 2 | | | | | |
| FTP | 4 | | | 1 | 1 | 2 | | | |
| Newsgroups | 3 | | 1 | 1 | 1 | | | | |
| Telnet | 2 | | | | | | | 1 | 1 |
| Archie | 1 | 1 | | | | | | | |
| | | | | | | | | | |
| Total | | 14 | 11 | 9 | 8 | 5 | 2 | 1 | 1 |
| | | | | | | | | | |
| | | | | | | | | | |
| **Uses** | | | | | | | | | |
| | | | | | | | | | |
| Contact with Professional Colleagues | 10 | 8 | | 3 | 2 | | | | |
| Class Instructional Materials | 9 | 4 | 2 | | | 4 | 1 | | 1 |
| Research--Preparatory to a Project | 8 | 1 | 4 | | 1 | 2 | | | |
| Research-- To Find Specific Information | 7 | 2 | | 4 | 1 | | | 1 | |
| General Professional Development | 7 | 1 | 1 | 1 | 2 | | 1 | 2 | |
| Research--To Keep Current | 6 | 1 | 5 | 2 | 3 | | | | |
| Professional Publications | 6 | | 1 | 2 | | 2 | 1 | | 2 |
| Professional Meetings | 5 | | 2 | | | | 3 | 1 | |
| | | | | | | | | | |
| Total | | 17 | 15 | 12 | 9 | 8 | 6 | 4 | 3 |

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