ASSESSING THE IMPACTS OF INTERNET/NREN NETWORKING ON THE ACADEMIC INSTITUTION

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Study Abstract

The purpose of this study, now in progress, is to develop a model of the academic networked environment and a set of measures of the impacts of network technologies on the academic institution. Key components of the academic networked environment will be defined and indicators of the effects of networked information technologies and services on academic institutions will be developed and operationalized. Results of this study will enable members of the academic community to better describe, measure, and justify the development of their networked environment.

The pace of technological innovation and the expansion of networked information resources present academic institutions with a tremendous challenge to enhance their information handling capabilities. Choices between various network architectures and applications are likely to have important consequences for the institution. As a result, and perhaps by necessity, the focus in many institutions has been on the planning and design of campus-wide communication network infrastructures.

While acknowledging the importance of planning and design, the researchers believe that academic administrators must turn their attention toward ascertaining how the information network, and the information resources they implemented, impact their institutions. Few formal investigations have been done to define this notion of the academic networked environment, nor to develop techniques to assess the impact of networked information technology and services on such an environment.

The following research questions are guiding this investigation:

- What information technologies and services comprise networked information, and to what degree are these similar across various academic institutions?
- Who are the "users" of networked information within the academic setting and how might we develop a typology of such users?

- What are the organizational structures used in academic institutions to provide networked information services?
- What are the key factors that appear to affect the overall success of the networked environment in an academic setting?
- What measures can be developed to assess the impacts of the Internet/NREN on the academic environment?

An exploratory, qualitative approach which combines multiple data collection techniques, is being used. Two focus groups and a small group interview have been conducted to date. In addition to these empirical data collection activities, the study team has completed a review of relevant literatures and models and performed a content analysis of academic computing services strategic plans. A model of the academic networked environment is being derived and a series of measures of effectiveness, efficiency, extensiveness, and impacts of networking are being drafted. The model and measures will be tested during site visits to academic institutions which are at the leading edge of networking.

Key concepts which have emerged from this research so far include:

- An adequate network infrastructure is believed to be essential to attract and retain high quality faculty and students.
- There are no generally accepted measures for use in evaluating network facilities and services.
- The network is not seen just as a means of improving existing processes but also as an enabler of new processes.
- Networks are becoming increasingly complex and distributed and therefore more difficult to support and maintain.
- Existing technologies and information services are lagging behind user demand.
- The absence of good measures of teaching, research, and learning prior to networking will make it difficult to assess networking's impacts.
- Elements of the academic networked environment which may be consistent across institutions include: electronic mail, campus-wide information systems, and listservs; constituent groups, including administrators, staff, faculty, students, and the community; and a support structure.

The study began October 1, 1994, and will be completed in December, 1995. It is funded by the U.S. Department of Education. The co-principal investigators for the study are Dr. Cynthia L. Lopata and Dr. Charles R. McClure at the School of Information Studies at Syracuse University. Additional information about the project can be obtained from either cllopata@mailbox.syr.eduor cmcclure@suvm.acs.syr.edu.