Performance Measures for the Academic Networked Environment

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As more academic institutions spend larger sums of money to network their campuses and provide network connections to sources outside their campuses, questions concerning the selection and configuration of appropriate network technologies, and the appropriate types and levels of services to provide, are emerging. Increasingly, academic administrators are asking questions about the benefits and impacts of networking.

The purpose of this study is to develop performance measures and indicators of the impacts of networking on the academic institution. The briefing provides an overview of the study's progress to date, identifies and discusses key issues and preliminary findings that affect successful evaluation of networked services and the development of performance measures, and describes an academic networked environment performance measures manual that is currently under development.

Performance measures represent a broad managerial/evaluation concept that encompasses measurement of inputs (indicators of the resources essential to provide a service), outputs (indicators of the services resulting from the use of those resources), and impacts (the effect of these outcomes on other variables or factors). Thus, evaluation is the process of identifying and collecting data about specific services or activities, establishing criteria to assess their success, and determining the degree to which the service or activity accomplishes stated objectives.

In a broader organizational context, measurement and evaluation of networked information services are essential for resource allocation, planning, and improving services. Without measures that can evaluate particular services, decision makers must rely on intuition and anecdotal information as a basis for

assessing the usefulness and value of a particular service. Perhaps most importantly, measurement and evaluation provide feedback for users to make known how well those services meet their needs.

This research project revealed a number of different views and experiences regarding which types of performance measures might be most useful given an institution's particular situation. Thus, the approach taken in the performance measures manual is to identify and describe a core set of measures. Depending on the nature of the network, the administrative concerns regarding that network, and networking/institutional goals and objectives, some of the measures may be more useful for some institutions than others.

The performance measures are organized in the manual by key areas of assessment. Within each area the following measures are currently being developed.

Users: the number and types of users and the frequency with which they use the campus network

Costs: the total and types of financial resources that are expended to operate the academic network

Network Traffic: the amount and types of traffic flowing over the academic network, including router traffic, modem traffic, and Internet traffic

Use: the amount and types of uses made of the network

Services: the applications and services that are made available over the network, including the online public access catalog, distance learning, and user support. Also considered are: user satisfaction with these services, the extent to which they are used, and the costs to provide them.

This project is scheduled for completion in December, 1995. At that time the authors will submit a final report to the funding agency, the U.S. Department of Education, summarizing project activities. The study team also will produce a performance measures manual for public distribution.