MICROCOMPUTER-BASED INFORMATION STORAGE AND RETRIEVAL SYSTEMS

AN EXPLORATORY STUDY ON THE USE OF MICROCOMPUTERS IN UNIVERSITY LIBRARIES

by

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INTRODUCTION

The history of technology demonstrates conclusively that the first generation, or even early generations, of any new device is not as sophisticated as one might wish to have. This is how all information technologies have developed and this is true of the microcomputer movement. Potential users approach these newly emerging technologies in different ways. One way is to wait, presumably, until the technological development of the device achieves an acceptable degree of stability in order to avoid rapid obsolescence of the machine. Another way is to start gradually accommodating this new technology within the present structures and machines in order to avoid the negative consequences that may result from not keeping up with the developments taking place in the field. Yet, a third way is to embark upon introducing these new technologies very soon regardless of what the market will bring about in the future. Of course, people who adopt any of these approaches have their own reasons and justifications for doing so, but in each case certain consequences and implications are likely to follow.

This applies to library and information systems as much as to other organizational structures. It is no wonder, therefore, that librarians and other information specialists have gone in different directions in dealing with microcomputers. The advent of microcomputers and the increasing introduction and use of these machines in information storage and retrieval appears to be creating a sense of reassessment of

many of the practices and policies currently in use in library and information systems. The most frequently used word to describe this microtechnology movement is "revolution", and to many people working in the academic field, this revolution has broad implications for higher education in general and academic libraries specially. As two chancellors and a librarian wrote in their recent article:

> University libraries are at a critical crossroads. Pressures emanate from a number of diverse sources: the financial difficulties of universities, the decay of physical facilities, the economies of book publishing, the inflationary cost increase in periodicals and serials, and the surge in computer technology that is changing the nature of information retrieval and information technology. (1)

Nevertheless, there is a repeatedly expressed feeling in the literature that librarians have not reacted to the current advances in information technology as they should, and a sense of waiting seems to characterize the present reactions. As Mason reports,

> A recent study sponsored by a library vendor addressed the issue of using information technology, particularly microcomputer technology. The study surveyed both librarians and library users, and in all types of libraries, a consistent finding emerged: users are much more eager to have the technology available than the librarians are to implement it. (2)

The new technology appears to be pulling libraries in different directions and increasing the number of available choices. These directions and choices will, in turn, determine how microcomputers will be incorporated in the data processing activities of libraries and other information centers.

The aim of this study was to investigate how medium and large library systems have reacted to the current microcomputer movement, and what factors are underlying this movement. The thesis put forward was that the current trends characterizing the microcomputer movement could