DOCUMENT RESUME

ED 271 097 IR 012 174

AUTHOR Dellow, Donald A.; And Others
TITLE Challenges That Accompany the Implementation of Microcomputing in the Administrative Process.
PUB DATE Apr 86
NOTE 6p.; Paper presented at the Annual Conference of the Association for Educational Data Systems (New Orleans, LA, April 20-25, 1986).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Case Studies; Change Strategies; *Computer Literacy; *Computer Oriented Programs; *Educational Administration; Innovation; Management Information Systems; *Microcomputers; *Program Implementation; Technological Advancement; Two Year Colleges
IDENTIFIERS Chipola Junior College FL

ABSTRACT

This case study of the acquisition and utilization of microcomputers for administrative purposes at Chipola Junior College, Florida focuses on the reactions of faculty and staff. After a brief review of the college's prior microcomputing activities from 1981 to 1985, the report is divided into four major sections: (1) how administrators involved in microcomputer technology affected management information systems/data processing (MIS/DP) operations at the college; (2) how microcomputers could best support the administrative process; (3) whether to provide staff with computer inservice or information management skills training; and (4) the bottom line: a better management information system. Additional topics addressed include the need for cooperation between the MIS/DP department and microcomputer enthusiasts, optimum utilization of microcomputers by midlevel management, and the role of the secretarial/clerical worker in the process of downloading from a mainframe. It is pointed out that knowledge of computers and software packages does not insure that personnel understand the broader perspective of information as a "commodity" that needs to be managed carefully throughout the organization; and suggestions are made for changes in procedures that are routine for MIS/DP departments and necessary for administrative microcomputing support staffs. (JB)

CHALLENGES THAT ACCOMPANY THE IMPLEMENTATION OF MICROCOMPUTING IN THE ADMINISTRATIVE PROCESS

Donald A. Dellow Vice President of Instructional and Student Affairs
Carlotta F. Appleman, Director of Administrative Affairs
Chipola Junior College
Marianna, Florida

Dale O'Daniel, Vice President for Administrative Affairs
Daytona Beach Community College
Daytona Beach, Florida

A paper presented at and published in the Proceedings for the Association for Educational Data Systmems Annual Convention, New Orleans, Louisiana

April, 1986

CHALLENGES THAT ACCOMPANY THE IMPLEMENTATION OF MICROCOMPUTING IN THE ADMINISTRATIVE PROCESS

Donald A. Dellow, Vice President of Instructional and Student Affairs
Carlotta F. Appleman, Director of Administrative Affairs
Chipola Junior College, Marianna, Florida

Dale O'Daniel, Vice President for Administrative Affairs
Daytona Beach Community College, Daytona Beach, Florida

Microcomputer enthusiasts have learned that they need the knowledge, skills and support of the MIS/DP department in providing a management information perspective throughout the organization.

The literature is replete with references to the many ways that microcomputers can streamline and improve the administrative functions of a college. In the mid 1980's the actual impact of the administrative use of microcomputing has only just begun. There has been a time lag between the awareness of the usefulness of microcomputers and the actual implementation of the technology into the administrative process. As with any innovation, those who implement early find some unexpected lessons.

The authors of this paper believe that their use of microcomputers administratively over the past four years has raised some issues that need to be addressed by administrators who are considering the utilization of microcomputers.

A brief overview of the history of microcomputing at Chipola Junior College will provide a perspective for the rest of the article. First, there was an administrative change at the college in 1981 which provided a totally supportive environment for the utilization of microcomputers for administrative work. The deans of the college readily acquired microcomputers and began to use them extensively. Their use and encouragement of other individuals quickly led to the spread of microcomputers throughout all business and secretarial offices on the campus. This spreading of microcomputing for administrative purposes resulted in an extensive twenty hour hands-on in-service program for all career service employees in 1984.

By 1985 the utilization of microcomputers for administrative purposes on campus could be considered "mature."

HOW ADMINISTRATORS INVOLVED IN MICROCOMPUTER TECHNOLOGY AFFECTED MIS/DP OPERATIONS AT CHIPOLA JUNIOR COLLEGE

Prior to 1982 the MIS/DP staff was totally mainframe oriented, having just completed several years installing online databases. The staff considered micros unsophisticated, uninteresting and slow. During 1982 when the deans acquired microcomputers and began using them extensively, they projected the feeling that learning to use spreadsheets or creating small databases gave them enough knowledge to consider replacing mainframes and the MIS/DP staff. Knowing differently but lacking the varied experience necessary to make sound judgement decisions about these "small" computers, the MIS/DP staff chose to learn about this new technology, not fight it. They learned about microcomputer hardware concepts, maintenance requirements and various software capabilities. The MIS/DP staff continually reviewed the developing technology to determine whether it could possibly help their workloads.

This knowledge helped organize a purchase and maintenance plan for all microcomputers. It also helped to organize software security and

the purchase of supplies for student labs on campus. The administrators, faculty and staff were interested only in acquiring micros as fast as possible. They did not consider compatibility, maintenance, future replacement or cost.

In the spring of 1985, a committee was formed that had representation from all divisions of the faculty, the learning resource center and MIS/DP. This committee's purpose was to give advice on the purchase of microcomputers, establish policies on the maintenance of all microcomputers and recommend procedures for the instructional labs. As a result, the learning resource center now handles the documentation for all hardware maintenance and purchases and maintains the supplies, copyright forms and the software used in the instructional labs. The electronics department handles the preventative and corrective maintenance for all microcomputers on campus.

By working with the microcomputer enthusiasts, the MIS/DP department understood that the training and problem solving ability needed to use complex microcomputer software was extensive. Not every microcomputer user trained to use wordprocessing or other software could actually handle the creation of an intricate database or sophisticated spreadsheet. The MIS/DP department is now occupying a key role in working with the administration and staff to determine the most appropriate and effective uses of microcomputers.

As an example, file transfers are now being done between the mainframe and the microcomputer. The most difficult part has not been in the transferring data between equipment, but using this transferred data both efficiently and effectively with the available software and limited knowledge of the end-users.

The future role of the MIS/DP department is not clearly defined. The concept of having microcomputer users and mainframe users working together in a harmonious fashion is still developing. The development of a good working relationship between MIS/DP and all administrators is crucial. All administrators from the very top down need to be supportive of this type of function. A lack of communication prevents cooperation. The role of MIS/DP will most likely undergo change over the next few years. We predict that the MIS/DP department will have a more comprehensive role for the coordination of all computing on campus in the future.

HOW WILL MICROCOMPUTERS BEST SUPPORT THE ADMINISTRATIVE PROCESS?

In the early stages of the implementation of microcomputers the deans made an assumption that seemed logical. That is, deans and other high-level management personnel can and should utilize microcomputers extensively in their daily work. The image of deans sitting at microcomputers utilizing complex software packages to solve their problems was a natural one. The deans welcomed that assumption and had a microcomputer on their desks very quickly. They were making great strides and progressing smoothly in finding all kinds of ways to utilize the microcomputer for better problem solving.

It was at this point that an unexpected reaction occurred. The president of the institution let it be known that he was not particularly pleased that high priced deans were sitting at their desks keypunching information into a microcomputer. To say the least, this was an upsetting and shocking revelation that convinced the deans that they needed to educate the president. However, after much discussion and thought on this subject the deans changed their assumptions about the utilization of microcomputers. The president was absolutely right in his belief that his deans, and particularly his academic dean, should not be spending large amounts of time sitting at microcomputer terminals.

The president's reaction paralleled what was occurring in industry. The great flurry of literature describing how mid-level managers were going to be using microcomputers had already begun to give way to the idea that middle management would utilize microcomputers to push the data collection and integration to lower levels in the institution. In fact, a number of individuals have described how computers will free the manager to spend more time circulating with his or her supervisees or clientele. The resulting model suggests that the utilization of microcomputers by

secretaries, clerical workers, or administrative assistants, in support of administrators is the most efficient use of the new technology.

We have found at Chipola Junior College that this model does seem to be most appropriate. The secretaries of administrators need to have the microcomputers in their offices, not on the dean's desks! Working with secretaries to have them learn problem solving skills on microcomputers, albeit time consuming, is the most efficient use of the new technology in administration. This arrangement is readily accepted by the secretaries, keeps faculty and staff from gloating about how much money administrators spend for their own uses and keeps CEO's and board members happy about not paying high priced administrators to be data entry operators.

COMPUTER IN-SERVICE OR INFORMATION MANAGEMENT SKILLS TRAINING?

In utilizing microcomputers throughout the campus, a number of interesting problems emerged. The in-service training that had been provided was a basic computer in-service or a "how-to-do-it" type of training.

Almost immediately a number of problems emerged with respect to personnel "driving beyond their headlights." Many functions of spreadsheets, such as imbedded formulae, created problems when data was entered incorrectly. There was no apparent problem when proofing hard copy, but subsequent changes did not automatically recalculate and errors were introduced. Numerous problems like this have emerged due to the complex nature of the integrated software packages that are needed to complete real-time work projects. Consequently, there is a need for in-service with secretarial/clerical and administrative staff that goes beyond the basic how-to of microcomputer hardware and software operation. It is apparent that we need to be thinking about teaching information management skills to those who will be using microcomputers. Knowledge of computers and software packages does not insure that personnel understand the broader perspective of information as a "commodity" that needs to be managed carefully throughout the organization. The following are just a few of the changes in procedure that are routine for MIS/DP departments and necessary for administrative microcomputing support staffs:

-There need to be systematic rules, institution-wide, on the dating of files that are created in database and spreadsheet programs.

-There need to be systematic rules for retaining revised data bases and files and the naming of those files.

-There needs to be developed a systematic error checking process when complex spreadsheets are utilized. Secretaries and clerical workers need to understand the importance of checking each formula location to determine the integrity of the formula. Hardwired or directly key-punched data can cause major errors in any re-calculations.

-Proofing has always been a major problem and wordprocessing of complex projects throughout the organization seems to compound the problem. Some systematic rule for text-editing and proofing would seem to improve this situation.

-Supervisors in an office need to make hard decisions about which activities in an office should be microcomputerized. There is a temptation for microcomputer enthusiasts to try to make all office tasks fit the micro. Although this is a welcomed perspective, it can result in a considerable waste of time, energy and money when tasks are put on the microcomputer that could be done more efficiently by hand or by more conventional office equipment.

-As more sophistication with micros develops in an organization, the desire to download from a mainframe emerges. The role of the secretarial/clerical worker in this process needs to be reviewed. The new technology will require additional knowledge and skills on the part of those who will be involved in this process.

THE BOTTOM LINE: A BETTER MANAGEMENT INFORMATION SYSTEM

There has been a considerable amount of support for the use of microcomputers in the administrative process at Chipola Junior College. From the president on down there

has been the belief that the new technology could improve the efficiency of most administrative departments. Even with this perspective and an open minded data processing/management information services director, the innovation has created the need for a greater understanding of the concept of information as a "commodity" by more people in the organization. Those using microcomputers will have to develop a broader perspective on the use of information.

The authors of this article represent both the DP/MIS and microcomputer enthusiast sides in this management revolution. The microcomputer enthusiasts, who championed the use of microcomputers, have learned that they need the knowledge, skills and support of the DP/MIS department in providing a management information perspective throughout the organization. In turn, the DP/MIS personnel have found a new respect for the role of microcomputers and their operators in the overall use of institutional information. The bottom line is a better management information system for the college. It is difficult to see how these ends can be achieved without some give-and-take by both groups. The authors urge institutions to avoid schisms that will prevent a meeting of the minds and the development of an institution-wide perspective.