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Abstracts of Presentations 11th Annual Summer Institute 1983

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Abstracts of Presentations

Eleventh Annual Summer Institute
“New Technology—How New Is It?”

August 7-13, 1983
Marriott's Rancho Las Palmas
Palm Springs, California



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Welcome

Welcome to Palm Springs and the Eleventh Annual Summer Institute hosted by the Center for Higher Education of Nova University.

The theme of this Summer Institute is "New Technology--How New Is It?" Most of the presentations relate to this theme and this document contains the abstracts for each of the sessions.

It is our hope that you will use these abstracts to determine the content of each presentation and that you will select the sessions of most interest to you. As you take advantage of these presentations by the nation's leading experts, you will gain a deeper understanding of technology and its place in higher education.



Ross E. Moreton
Director

RICHARD L. ALFRED
University of Michigan

Technology and Student Development: Changing Patterns of Student Attendance, Performance, and Educational Outcomes

Student development in the community college - a subject of continuing interest among campus and community constituencies in a period marked by countervailing forces of financial austerity and technological change - will become a critical issue in the decade ahead. Rapid advances in technology combined with economic development and diversification will lead to rapid obsolescence in worker skills. Significant pressures will be experienced by community colleges to: (1) train and retrain growing numbers of workers in technical proficiencies needed for continuous technological change and (2) provide evidence to federal, state, and local agencies of institutional effectiveness in producing qualified workers for professional and paraprofessional careers. Heretofore state and federal agencies have tended to view "qualified" workers as those from a recognized institution of postsecondary education. In the future, however, community college students will eschew the traditional mode of continuous college study in favor of a drop-in/drop-out mode as a means for attaining re-education for technical careers. The question is, will state and federal agencies further the aims of community colleges in a technological society by providing resources for colleges to support non-continuous students. This presentation will outline changing patterns of student attendance, performance, and outcomes associated with technological change, the implications of changing technology for institutional subsidization from public-and private-sector revenue sources, and the steps community colleges can take to support changing patterns of student development in a technological society.

RICHARD L. ALFRED
University of Michigan

**Public Policy and Institutional Governance:
The Emerging Role of Public and Private Sector
Organizations in Community College Finance**

What is the impact of changing state and federal higher education policy on community colleges in different states, and what are the effects of changing policies for institutional finance in a decade of technological change? This question opens up a host of issues related to the mission, role, costs, and financial support of community colleges in the 1980s. The rising cost of college education will become an increasingly visible public policy issue in the 1980s and 1990s. Analysis of state agency budgetary procedures and expenditure trends in two-year colleges reveals three policy issues that will likely develop in the decade ahead: (1) a centralized planning mode based on institutional volume indicator data which strengthens the role played by state agencies in regulating community college expenditures, (2) rising tuition costs to offset the imbalance between revenue and expenditures in institutions experiencing fiscal stress, and (3) regulatory policies established by state agencies to control rising tuition costs. This presentation will examine implications of changing public policy with respect to the traditional role and authority of community college governing boards and financial strategies needed to balance institutional revenue and expenditures. A current study of trends in public policy and community college governance will be reviewed and the impact of these trends on finance strategies specified. Session participants will be encouraged to apply the principles presented to their home institutions as well as in dialogue with others to explore the wide range of differences among institutions.

RICHARD L. ALFRED
University of Michigan

Community College Responsiveness to Changing Technology:
New Models for Academic Organization

The structure of the academic organization in community colleges can serve to facilitate or retard institutional responsiveness to changing technology. Critics of the traditional "line" organization for academic affairs assert that it is top heavy with administrators, slow to identify and respond to the changing market needs, and focused on operational rather than strategic management. Advocates of the traditional organization point to the growing enrollment in community colleges and argue that student numbers are the final determinant of success, implying that structural change may, in fact, be dysfunctional for institutional adaptation to changing technology. Careful examination in community colleges could have a profound effect on the capacity of the college to respond to social, economic, and technological change. Complex staffing models, the academic committee structure, and faculty collective bargaining have elongated the decision process making the procedures followed in reaching a decision more important than the timing, quality, or actual results of the decision. New academic organization models are needed in community colleges to streamline the decision process. This presentation will describe alternative approaches for the organization of academic affairs based on organizational studies in midwestern community colleges. Appropriate criteria for academic organization will be considered, emerging environmental conditions outlined, obstacles to structural change examined, and strategies for change explored. The major issue that will be addressed is the relationship between technological change and academic organization: What is it? What should it be? How can it be achieved and maximized?

RICHARD L. ALFRED
University of Michigan

Community Colleges and Community Organizations:
Partners in Faculty and Organizational Development in the 1980s

The need for effective and efficient methods to train and retrain community college faculty in new teaching fields has always been recognized but its importance is increasing as traditional programs become obsolete and new technologies such as robotics and numerical control technology gain primacy in the occupational marketplace. Campus-based retraining programs for faculty are not sufficient to provide teaching skills in the new technologies. Resistance to retraining efforts is a documented problem among community college faculty and increasing longevity of instructors in a single institution has resulted in a core of faculty who can successfully retard institutional responsiveness to changing technology. This presentation will focus on the delimitation of new models for faculty and organizational development to induce change in the program-service mix in community colleges. Of particular interest will be an industry/education exchange model for faculty and organizational development using industry as a primary force for retraining of faculty. Various assessment methodologies which can be used to evaluate the effectiveness of retraining programs will be examined. The presentation will conclude with a description of innovative and untried cooperative programs with business and industry that community colleges can implement to market career and technical programs, plan and design curricula, evaluate student and program outcomes, and provide private-sector financial support for new and continuing programs.



SARAJEAN ALLEN
Tucson Public Library

SAMUEL H. BEHREND
University of Arizona Health Sciences Center

Video Applications to Education

Workshop participants will be provided with an overview of when and how video is appropriate in adult education. They will learn the basics of producing for the adult learner and when interactive video is useful. The problems of hardware purchase and incompatibility will be discussed. How to find good, commercially available software and finally how to produce your own will be addressed.

After the workshop the participants should be able to:

1. Define Computer Assisted Instruction and interactive video
2. Describe the strengths and weaknesses of interactive video
3. Describe the steps and resources necessary to develop an interactive video program.
4. Describe the components of an interactive video program.
5. Be aware of potential applications of interactive video as an educational tool.
6. Be aware of how to gain access to the growing network of producers of interactive computer programs.
7. Realize the budgetary problems of writing an interactive video program.

LUIZA B. AMODEO AND JEANETTE V. MARTIN
New Mexico State University

The Computer Experience Microvan Program: A Cooperative Endeavor
To Improve University-Public School Relations Through Technology

New Mexico State University is faced with several problems concomitant with its position as a higher education institution in a rural state. These problems include a widely dispersed population of current and potential students, declining enrollments and a need for better public relations with elementary and secondary schools throughout the state, a defensive position due to attacks on education reported through the media, and the impact of computer technology.

The Computer Experience Microvan Program is a unique project designed, developed, and implemented through the cooperative auspices of three agencies: (1) New Mexico State University, (2) the International Space Hall of Fame, and (3) Texas Instruments Corporation. This project brings a professional education staff and microcomputer hardware and software to public (and private) school students, teachers, administrators, and counselors throughout the state of New Mexico. Objectives of the program include: (1) increased computer awareness and literacy and (2) hands-on machine time.

The cooperative efforts of all groups have led to significant improvement in the institution in terms of: (1) reaching a widely dispersed population of potential and current students, (2) increased course offerings at undergraduate and graduate levels, (3) improved public relations with elementary and secondary schools, (4) closer working relationships with state agencies and industrial organizations, and (5) internal, interpersonal, and working relationships with administrators, faculty, and staff of the institution.

THOMAS BEEBE
Nova University

Protect Your Classroom and Home

Dateline: Saturday March 12, 1983. Several thousand dollars worth of microcomputer equipment were stolen from an area high school last night. A police spokesman stated this latest theft appears to be the work of the same people who have burglarized several schools and homes of computer equipment over this past month. Articles such as this are appearing more frequently in newspapers across the country. The theft of high technology computer equipment has been on the rise for the past several years.

This presentation will examine the issue of theft of microcomputer equipment and several potential applications of the microcomputer as a means of detecting such thefts. Monitoring of doors and windows, self-alarming techniques, and automatic dialing of police or fire departments are only several of the different applications that will be examined. The presentation will also demonstrate the use of a microcomputer to control appliances and lights within the home.

THOMAS BEEBE
Nova University

Authoring Effective CAI

The increased use of microcomputers in education has enabled many schools to bring the power of the computer into the classroom. Cost and size, once considered the major detriments to the use of computers in education, have decreased to the point that few schools cannot afford some type of a computer. The final detriment, software, has had little improvement in terms of cost and has in fact continued to rise. Kroenke (1981) observed that the major obstacle most professional educators would encounter was the lack of quality software to be used with the existing hardware.

With the advent of authoring systems the software author need not be a computer programmer and in fact may know little if any about programming a computer. If they are able to follow the few simple directions provided with most authoring programs, they can simply begin to write software for the computer. This presentation will address the issue of poorly written software and provide guidelines for the prospective software author to enable him/her to write effective computer assisted instructional materials.

Section 1: Introduction

The first part of the document discusses the importance of maintaining accurate records. It highlights the need for consistency and the potential consequences of errors. The text emphasizes that proper record-keeping is essential for the integrity of the data and the reliability of the results.

Section 2

This section details the methodology used in the study. It describes the experimental setup, the data collection process, and the statistical analysis performed. The authors provide a clear and concise explanation of the procedures followed to ensure the validity of the findings.

Section 3

The results of the study are presented in this section. The data shows a significant correlation between the variables studied, supporting the hypothesis. The authors discuss the implications of these findings and provide a detailed analysis of the results.

Section 4

This section discusses the conclusions drawn from the study. The authors summarize the key findings and provide recommendations for future research. They also address the limitations of the study and suggest ways to improve the methodology.

Section 5

The final section of the document provides a summary of the entire study. It reiterates the main points and emphasizes the significance of the research. The authors express their gratitude to the funding agencies and the participants who made the study possible.

Section 6

This section contains the references used in the study. It lists the works of other researchers in the field, providing a comprehensive overview of the current state of knowledge. The authors ensure that all sources are properly cited and formatted according to the required standards.

Section 7

The final section of the document is the appendix, which contains additional data and information. This section provides a detailed look at the raw data and the calculations used in the analysis, allowing for a thorough review of the study's findings.

IRVING H. BUCHEN
California State University, San Bernardino

Humanizing Technology and Progressive Upgrading

A frequent and critical question often raised in the planning process is Where will it all lead? In the School of Humanities of California State University in San Bernardino, a conscious decision was made to embark on an activity which was designed progressively to lead to another activity, and in turn to lead to another. What was unusual about the progression is that it started at the grass roots level with secretaries and clerks and ultimately was designed to target effects on faculty and finally on students in the form of curriculum changes. Throughout, the unnamed and unseen enemy or villain from a humanities point of view was technology.

An academic administrator is divided like Gaul into three parts. He or she is a manager responsible for the orderly running of an operation. He is a faculty member concerned with teaching and research. And he has to be in tune with students because his job description requires him to be their advocate. The key is to harmonize all three roles, or as it worked in this particular case, to link staff development to faculty development to curriculum development. This presentation will describe this process.

GUERIN A. FISCHER
Clearbrook Center

High Technology and the Health Related Professions

There is no question that high technology is enhancing the lives of millions of people throughout the world. The field of rehabilitative medicine is one of the specialties that is experiencing giant breakthroughs as a result of advanced technology. For example, a professor at the Illinois Institute of Technology (IIT) has designed a microcomputer system that will give a 35 year old paraplegic the opportunity to walk again. The system bypasses the nerves in the paraplegic's spine that were severed by a .22 caliber slug as it passed through his body. The system picks up nerve signals sent to muscles in the patient's back and interprets them with a microcomputer, which then sends the appropriate signals to stimulate leg muscles. It is estimated that one-third of paraplegics, those whose spinal trauma leaves them sufficient upper body nerve activities, could be helped with the aid of high technology microcomputers. The research and experimentation has potential for helping stroke patients regain the use of their arms and hands. Professionals in the helping relationship field, physical therapists, occupational therapists, rehabilitation counselors, and college instructors will be challenged to learn about the new advances and how to use them on their jobs. The National Science Foundation is providing millions of dollars per year in the support of high technology research. Other examples of high technology as they relate to the health professions will be discussed, including implications for curriculum design and revision.

GUERIN A. FISCHER
Clearbrook Center

High Technology - The Cart Before the Horse

Anyone who is anyone is spouting superlatives about the future of high technology. Right? Some futurists are predicting that the United States will experience a traumatic societal divorce between those who become actively involved with computers, etc., and those who will fear the technology similar to those in past decades who feared the telephone. Dean Brady of Clark College, in a recent advertisement in The Chronicle of Higher Education, announced that every entering student will have a desktop computer as a "roommate." At the same time, President Reagan is advocating the abolition of the Department of Education and recommends a return to the basic elements of education, not to mention permitting school prayer and the enactment of tax credits for private and parochial school students.

President Reagan claims that Federal spending on education soared eightfold in the last twenty years, rising much faster than inflation. But during the same period, scholastic aptitude test scores went "down, down and down." Representative Harold Washington (D.Ill.) said it is "misleading" for Reagan to talk about beefing up education when he has proposed funding cuts each year since he took office. At the same time that Reagan is advocating the elimination of the Education Department, educational scholars such as David Riesman, Professor Emeritus, Harvard University, suggest that faculty members are disillusioned, apathetic, and disinterested. The general Riesman theme continued in a recent article in a major news magazine which focused on teacher ineptitude. Low prestige and few rewards are allegedly causing top students to overlook the teaching profession. Leading scholars insist that reform of the nation's schools must start with the teachers if America is to maintain its technological leadership.

This lecture will discuss the "state of the art of teaching" as it relates to new technological demands.



WARREN H. GROFF
North Central Technical College

Assisting a College's Service Area
In the Transition to the New Technology Society
Through Strategic Planning and Management

The history of the development of human society can be traced from the hunting society through the agricultural society to the industrial society. During recent years we have experienced the onset of a transformation to a new type of society.

The onset of the computer literate, high technology, information society has profound implications for our two-year colleges. Gollattscheck and others express the implications in terms of a community renewal role. They state:

We believe the time has come for a fourth major development in American post-secondary education: the creation of the community renewal college. The deterioration of our communities, the increasing inability of individuals to cope with rapid change, the obsolescence of individuals and social organizations, and the increasing number of citizens with educational needs who are beyond the purview of existing colleges demand a new kind of post-secondary institution. This new college must be committed to the improvement of all aspects of community life. . . .

This presentation will describe a small, two-year college's strategic planning and human resource development model and the way it is assisting the college's service area in the adaptation to the new technology of the information society.

WARREN H. GROFF
North Central Technical College

Intellectual Capital Formation in the Information Society

All institutions of society pass through various stages of development. These stages have been characterized as emergence, growth, maturity, regeneration, and decline. The concept of stages of development can be applied to the research and development through dissemination continuum, technological change, the adoption of computers/data processing by corporations, and worker and supervisor maturation. As our economy becomes more dependent on more complex technology, it becomes increasingly more important to be concerned with the development of human resources and the relationship between post secondary education and the economy.

Numerous issues will be important in the next several decades. No issue, however, is more important than the relationship between post-secondary education and the economy. In the past, post secondary education has seen its relationship to the economy primarily in terms of providing a pre-entry workforce by a group processing delivery system. That emphasis was broadened to include some continuing education, usually through the group processing delivery system. Recently, new forces have appeared. These forces include foreign competition; rapid technological advances; changes in productivity; high costs; human, plant, and entire industry obsolescence; and infrastructure deterioration. These forces have created massive dislocations in our economy and in the economy of each industrialized nation in the Western world. The focus on a pre-entry workforce and continuing education will continue to be important in the future but not sufficient. New expanded relationships will be required between post secondary education and the economy in the computer literate, high technology, information society. In the wars between the states and between the United States and our industrialized nations of the world, the beneficiaries and victors will be those who place a premium on intellectual capital formation.

WARREN H. GROFF
North Central Technical College

Institutional and Statewide Coordination in the Development of
the New Technology Information Society

The onset of the new "high" technology information society has tremendous implications for its institutions for they are "of society." That is to say, institutions are created to fill a role that society has deemed necessary as it relates to its well being. Viewed in this light, elementary and secondary education, postsecondary education, human services, the family, religion, government at all levels, business and industry, housing and transportation must develop mechanisms to monitor change and interpret such occurrences into a plan of action to impact on the quality of life.

All institutions of society, particularly postsecondary education, need mechanisms to interpret macro societal trends into a plan of action. In case of postsecondary education, institutions and systems need to build "futuring" techniques into their planning processes so that the concepts of "The Office of Tomorrow" of "The Paperless Office," "The Automated Factory," and "The Electronic College" can be interpreted into a set of specifications to which human and fiscal resources can be related. Such efforts begin with a clear definition of mission and role, include futuring in the planning process, focus on technological and human resource development, and allow for horizontal and vertical integration in terms of organizational development. In addition, such efforts must be coordinated with a broad range of other institutions of society through intramural planning.

WARREN H. GROFF
North Central Technical College

Strategic Planning and Management for the New Technology
In the "Third Wave" Information Society

In The Third Wave, Alvin Toffler describes periods of society using the analogy of waves as indicators of societal change. The first wave was an agricultural society. The second wave was an industrial society. The third wave, the current one, is a technological society. Toffler elaborates on the turbulence created as one wave rolls in and another recedes through the examination of social, political, and economic forces.

During recent years we have experienced the onset of the transition from the industrial society to the technical, information society. In The Information Society as Post-Industrial Society, Yoneji Masuda states:

Mankind is now entering a period of transformation from an industrial society to an information society. ... Man is now standing at the threshold of a period of innovation in a new societal technology based on the combination of computer and communications technology. This is a completely new type of societal technology, quite unlike any of the past. Its substance is information, which is invisible. This new societal technology will bring about societal transformation which, in a double sense, is unprecedented.

This transformation to the information society is concerned with the shift from physical productivity of material goods to information productivity and can be expected to bring about fundamental changes in human values, in trends of thought, and in the political and economic structures of society. This learning and information society will be characterized as interactions between people and ideas and knowledge. These changes will mandate a new set of responses by society's institutions, particularly postsecondary education.

WARREN H. GROFF
North Central Technical College

The Impact of the Information Society on Personal Ethos
And Workplace Environment

All persons pass through various stages of growth and development beginning with fetus, newborn, infant, toddler, preschool, school age, and adolescent. More recently, stages of adult development received attention by numerous persons. These studies have contributed greatly to our understanding of the individual and how persons function in institutions and society. Many of these studies, however, focus on a rather static definition of environment, personal ethos or workplace, and do consider the competencies required to function effectively in the automated, electronic society.

Numerous articles have been written in recent years about the growing number of functionally incompetent, scientifically illiterate, and the growing illiteracy problem for business when employees lack reading and writing skills necessary for their work. The magnitude of the problem is such that one in five American adults (20 percent) is functionally illiterate in the basic skills using the traditional definition; they are unable to read job notices, fill out applications, make change correctly, shop, locate needed services, or understand even basic concepts pertinent to their lives. Retraining dislocated persons will be a major challenge to education in the next decade.

BARTON R. HERRSCHER
University of Houston

Computer Literacy: What Is It? Do You Have It?

IBM estimates that by 1990, three of four workers will have to "interface" with computers. This projection would seem to justify the current interest in computer literacy and account for the fact that computer literacy is the season's codeword. It seems to be replacing CBE and student retention as a popular topic in community college staff and faculty development programs. And, computer literacy is, not surprisingly, appearing on more and more lists of educational outcomes, just below communications skills and human relations skills in importance.

This session is designed to be "user friendly." Each participant can expect to exit with an increased understanding of high technology and its impact on our lives, a definition of computer literacy, a self-assessment of his/her literacy level, a glossary of computer technology, and a reduced level of computer anxiety.

BARTON R. HERRSCHER
University of Houston

Redefining the "3 R's" for a High Tech Society

The goals of education have remained comparatively static in the United States in our lifetime, at least until recently. The 3 R's have served us and our society well, at least until recently. The 1917 Cardinal Principles of Education looked surprisingly relevant, at least until recently. Then, the silicon chip appeared on the scene, and the 3 R's and the goals of education would be forever changed. This happened just recently.

Focusing on the basics of tomorrow, this session will explore the new 3 R's. "Back to the basics" will no longer fly -- it is now "Forward to the basics." The participant can expect to obtain insights into the goals of education, both historic and futuristic. He/she will return home with ideas and concepts to be utilized in the design of curriculum and instruction, and to impact institutional statements of mission and goals of the community college.

BARTON R. HERRSCHER
University of Houston

MIS: A Primer for Community College Leaders

Good decision-making in human service organizations like community colleges is imperative. Good decision-making requires good information -- adequate, accurate and timely information. To provide such information, a management information system (MIS) is needed. In this high technology, information age and comprehensive MIS is a natural.

A recent informal survey of some of my community college colleagues surprisingly revealed a significant lack of knowledge regarding MIS. In answer to the question "Does your college have a comprehensive MIS?", the most common response was "What's an MIS?" This session is designed to provide the present and future community college leader with an increased understanding of MIS: what it is, the kinds of information usually included in a management information system, the importance of such information, and how college operations can be enhanced via MIS. In short, those attending this session will obtain a working knowledge of MIS sufficient to ask questions about and/or impact the development or enhancement of MIS at their own colleges.

BARTON R. HERRSCHER
University of Houston

The Technology of Curriculum and Instruction Decision-Making

Whereas the term "technology" usually conjures up images of computer hardware or sophisticated operations systems, the classic definition of the term centers on the systematic treatment of an art. This session deals with technology or systematic treatment of the art of curriculum and instruction decision making. Herrscher's "Educational Effectiveness Inventory" (EEI) will be distributed to participants to guide thought and discussion related to curriculum design and instructional options -- educational outcomes, learning activities, testing and grading, and peripheral classroom concerns. The primary focus will be on classroom practice, thus making this session especially relevant for community college teaching faculty.

Participants can expect to gain increased knowledge of systematic instructional and curricular decision-making, and will obtain a copy of the EEI, an instrument which can be used for data collection for practicums or the MARP, and which has potential for improving classroom practice.

EARL HUGHES
Colorado Department of Local Affairs

Integrated Systems in Education: A View into the 1990s

This topic will address types of computers and computer systems from the small, economical stand-alone models to networked micros, minicomputers, networked micro- mini-systems and on to large systems. The first part of the presentation will be informational as history and present characteristics are described. The second part will emphasize the need for informed planning and decision making if computers are to realize their potential benefits in school systems. I will provide four or five examples of schools with immediate objectives and five-year planning goals and suggest computer systems that will enable the goals to be met with reasonable efficiency. The contrasting inefficiency of avoiding computers entirely, or letting computers proliferate without centralized accountability will be covered, also.

EARL HUGHES
Colorado Department of Local Affairs

Managing Computers in Education

This topic is people oriented rather than hardware oriented. It also is planning oriented because the skills, knowledge, and organizational structure necessary to manage a school system computer network should precede the acquisition of the hardware and the software. The presentation will answer the following sequence of questions:

- (1) What are situations leading to organizational and personnel difficulties?
- (2) What questions must be answered in planning for technical innovation in schools?
- (3) What knowledge and skills must be present in the school system if new technology is to be implemented?
- (4) What organizational structure should be considered for managing the computer network?

Questions three and four are dependent on the situations developed in question two. This latter topic should be of interest to all participants. Many of the comments I have heard from school faculty concern dissatisfaction with an administration that doesn't allow computer acquisition or access to some departments but does to others.

J. TERENCE KELLY
Miami-Dade Community College

CAMELOT: An Individualized Information System

The use of microcomputers in higher education is proliferating at an accelerated rate. The predominant use of microcomputers is in an interactive mode providing students with immediate feedback at a terminal. What is not so prominent is the use of the microcomputers for time-delayed responses. Such a system has been designed under the leadership of Miami-Dade Community College with the assistance of faculty and administrators from some twenty-six community colleges in the United States and educational organizations in Canada and the United Kingdom. The system known as CAMELOT is an adaptation of a large mainframe computer instructional management information system known as RSVP which has been in operation at Miami-Dade for the past twelve years. The RSVP system at Miami-Dade has attracted world-wide acclaim, and has been hailed as one of the most efficient and sophisticated computer management instructional systems existing anywhere. The CAMELOT system takes RSVP into a new dimension of sophistication. It operates in a stand-alone micro environment with the configuration of equipment to support this system in the range of \$8-10,000 of initial hardware costs. It allows faculty to individualize their classes and provides the opportunity for many faculty members to share one terminal. The system offers a sound economic base for bringing computer technology to instructional applications and for fulfilling management needs.

The presentation will focus on the conceptual instructional framework of the CAMELOT system, various instructional applications at different levels and will describe in detail how the system works. If appropriate, CAMELOT hardware can be assembled and there will also be a demonstration of the system.

J. TERENCE KELLY
Miami-Dade Community College

The Money Puzzle: The World of Macroeconomics

THE MONEY PUZZLE: THE WORLD OF MACROECONOMICS is perhaps the most unique approach to instructional television heretofore produced. The macroeconomics series was produced under the leadership of Miami-Dade Community College, in cooperation with faculty and administrators from several community colleges around the country. Orange Coast Community College District, Costa Mesa, California; Dallas County Community College District in Dallas, Texas; City College of Chicago, Illinois; and the Florida State Department of Education in Florida were actively involved in the development of the TV programs.

This series takes the complex concepts of macroeconomics and develops them into a situational drama of thirty half-hours of television. The series traces the work and leisure activities of a junior executive in a major corporation as he and his wife struggle with the money problems that all of us face each day. Leading characters in the series include university professors, stockbrokers, bankers, and major corporate leaders. This course attempts to put into real live situation economic principles associated with macroeconomics. The series has been built around one of the leading textbooks in the field for community colleges, Rober Miller's Economics Today: The Macro View. Other print components for this series include a study guide and a faculty manual.

The presentation will describe how and why the format was selected, the academic design process, the use of production techniques, and the funding arrangement necessary to produce a course of this magnitude. Additionally, various segments from the program will be shown during the presentation.

J. TERENCE KELLY
Miami-Dade Community College

Instructional Television: Present, Past and Future

This presentation will focus on the conceptual and philosophical basis of using instructional television, either as a supplement in classroom instruction, independent study or reaching distant learners. Various uses of television will be featured such as the use of television for motivation, the use of television for stimulating emotional reaction, and the use of television to demonstrate visually instructional principles that cannot be accomplished through the use of textbooks or oral presentation. A variety of television segments will be shown to demonstrate the points being made. The future of instructional television in relationship to the new technologies; i.e., satellite distribution systems, cable television, interactive disc systems, data view systems, computer telecommunication centers, etc., will be discussed.

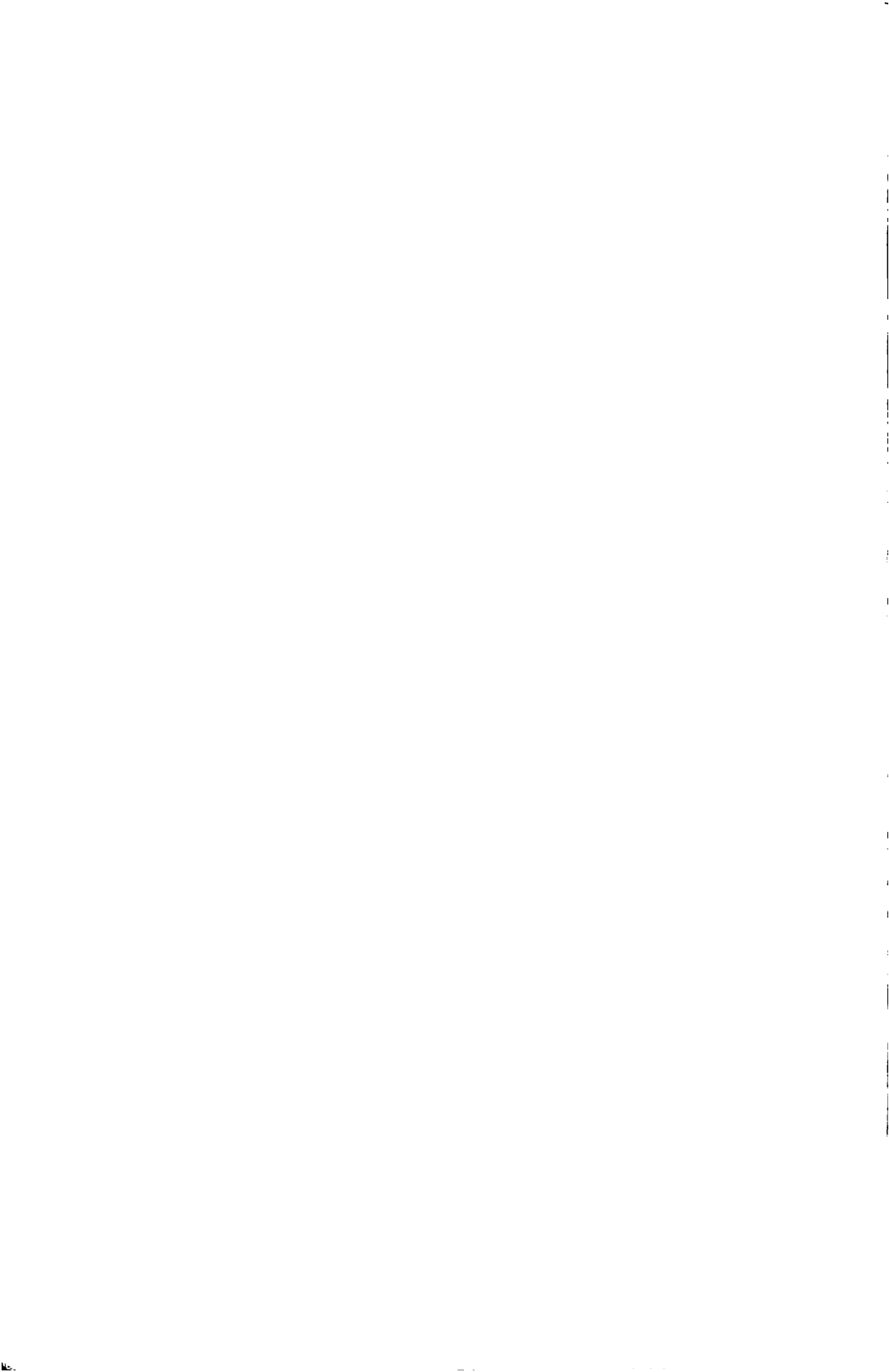
In short, the presentation will center around a review of the past history of instructional television, the current state of the art, and some projections toward the future. Also discussed will be the role of public television on a national level, possible funding sources, and the prospects for the future growth of instructional television.

**J. TERENCE KELLY
Miami-Dade Community College**

Enhancing Academic Advisement Through Technology

This presentation will discuss the use of technology in the effort of providing better advisement and counseling to students as they make their way through an institution of higher education. The principles and concepts associated with computerized advisement systems will be discussed. The presentation will also focus on the delicate balance between the human component essential to academic advisement and the reliance on technology.

The specifics of two major computerized advisement systems developed at Miami-Dade Community College will be presented. The use of the Advisement Graduation Information System, described by many as the most complete and comprehensive advisement system of its kind, and the Academic Alert System which provides at mid-term an individualized, tailored letter to all students regarding their academic progress, will be described. The necessary planning for developing computerized advisement, the system's consideration, economic implications, and evaluations of such computerized use for advisement will also be presented.



RAYMOND C. LEWIN
Peirce Junior College

The Mainframe is Dead?

The news reported this morning (April 7, 1983) that a new computer chip has been developed which will contain one billion characters. It will render obsolete much of what is currently in place with respect to storage of information.

This development illustrates the theme of this presentation -- that, indeed, there is no way that a college with limited resources can begin to understand the state of the art as it pertains to the computer world.

For us at Peirce, this becomes a critical issue since we are a business college whose claim to fame is that it does stay on top of the employment needs of the business community and is able to prepare young people to fit in with the proper education and skill development.

This presentation will cover the planning process used by the institution as it upgraded its instruction and administrative computer capabilities. It will also include the decisions made and the cost involved.

It further will describe the frustrating position that a college can find itself in when it begins to realize that all of its careful planning has produced a situation best described as chaotic.

The energetic heralding of revolutionary developments by the computer industry as well as the very real developments that are marketed have both served to confuse and to confound the planning process so much so that even the most articulate supporters of the computer's instructional and administrative potential have a difficult time knowing what newest development is worthy of articulation.

The presentation will close with some forlorn yet cogent advice.

JOHN LOSAK
Miami-Dade Community College

Suggested Research for the Practitioner in Higher Education
Associated with the Advent of New Technologies

Computer-assisted instruction with all its many variances is here to stay. There have been many studies in the elementary schools, but very few in higher education which have focused on critical issues. The purpose of these comments is to outline for the practitioner possible practicum and MARP topics which relate to this issue. Included will be a conceptual framework, some overview of extant work where available, and research design suggestions. The audience will be afforded the opportunity to raise issues in areas appropriate to seminars vis-a-vis research topics and new technologies.

As one example, the question of whether, or to what extent, immersion in technology can be compatible with personalized instruction will be addressed. We are dealing with ever larger number of students in higher education in the United States, and the question is, can we retain some sense of personalized instruction? Will such techniques as computerized analysis of writing generate more personalized education, or are students coming to be depersonalized in the educational process via technology? How these questions and issues can be clarified through empirical research will be explored.

Another example of needed research, the issue of cost/benefits will be addressed. As one of the major topics in the area, it is of crucial concern that the question of the costs of technology be investigated through appropriate empirical research efforts. It is not enough to assume that huge expenditures of resources poured into technology will improve learning. Rather, the research question to be outlined in this area is - When the same level of resources are expended in, say, reducing class size, which resource expenditure has the more impact on student learning?

JOHN LOSAK
Miami-Dade Community College

To What Extent Can Higher Education Expect to
Increase Student Learning Through New Technology?

Learning is a concept which requires some measures of input, some assumptions regarding cognitive process after receipt of the information, and some measures of output for it to be useful for the practitioner. The purpose of my remarks will be to summarize our current knowledge regarding relationships among technology as an input, cognitive processing of information by the learner as presented through technology, and measurements of the outcomes of these relationships. Examples of this use include (1) Distance learning as it impacts effort, motivation, and learning outcomes: Are there attitudes generated in the learner when the learning environment consists of face-to-face social relationships which have impacts on learning that are different from attitudes developed through the use of distance learning and respective impacts on learning outcomes? (2) Learner satisfaction with the new technologies: There are many studies which have addressed the question of student satisfaction and learning, but when the current technologies become more sophisticated and new technologies are introduced, will these facilitate or impede learning in a manner different from current practice? Part of the answer to the questions will be found as it relates to the issue of student satisfaction with instructional technologies.

SEBASTIAN V. MARTORANA
Pennsylvania State University

Uses of Technology in Institutional Research and Planning

Based on a nationwide survey of members of the Association for Institutional Research (AIR) in the United States and Canada conducted jointly by Drs. S.V. Martorana and Eileen Kuhns (Catholic University), this presentation summarizes practices and trends in use for planning as seen by persons actively engaged in the enterprise. Special attention is given to such topics as (1) goal setting and the concept of goals in tactical and strategic planning, (2) differences in roles in planning played by institutional research and planning offices in public and private, two- and four-year colleges, and (3) variations of practice in institutions of higher learning of different sizes and in different locations. Participation in institutional goal setting is related to two major new trends in post secondary education. The first is the telecommunications revolution, touching upon such developments as electronic mail and use of main frame and microcomputers as well as more conventional means of information gathering and exchange. The second is the development of new major data bases compiled routinely and made available for use in post secondary educational planning and other functions. Such data bases maintained by federal and national agencies, state agencies, and private sources are examined.

SEBASTIAN V. MARTORANA
Pennsylvania State University

Conjunctive Use of New Technology and New Data Bases:
Blessing or Curse?

This presentation builds upon the first presentation described and extends the examination to questions concerning implications for policy makers and general and administrative leadership in postsecondary education when confronted with revolutionary changes in modes of gathering and exchanging information for planning purposes. Having established the fact that the telecommunications revolution is real and far reaching along with the further fact that policy makers as well as researchers in higher education are discovering the availability of new data bases compiled at national, regional, and statewide levels, the question is raised: What are the consequences for new directions in postsecondary education as now evident and as may be envisioned? Attention is given to impact on institutions of different control operating in different frameworks for administrative leadership and policy direction. The question is also reexamined from both institutional and systemwide (public and private) perspectives. Discussion for illustrative purposes draws on some recent reports of nationwide studies which heavily utilize national data bases as contrasted to others which use data compiled more specifically for the purpose of the particular study reported. Factors of cost, logistical facility, and the like, on the one hand, are examined against questions of validity, reliability, and timeliness of data used, on the other. Recommendations for leaders in higher education are voiced.

SEBASTIAN V. MARTORANA
Pennsylvania State University

New Technology and Organizational Reform: Blessing or Curse?

Practitioners in postsecondary education today face a complex mix of pressures to change their modus operandi. On one side of the mix are changes in demographic make-up of clientele served along with changed attitudes expressed by supporting groups. On another side are new resources that can be used in leading and conducting the enterprise. Both sides of this pressure mix are getting intense national attention. Forecasts of future enrollment changes bring predictions of calamity for some types of colleges and a sense of new opportunities for others; discussions of new resources for policy formulation and general exercise of administrative leadership show concerns by some about an overwhelming revolution in management technology threatening to engulf them and promises by others of a new era of super leaders using new concepts of strategic planning and new techniques to support them. This presentation joins the two sides of the pressure mix to question continued use of present organizational structures and patterns for policy foundation in post secondary education. Following review of the current status of organization and administration in postsecondary education and an examination of pressures for change stemming from new technological development as well as changes in demography and public status of higher education, some reasoned speculation about the likely future patterns of organization in post secondary education is offered.

SEBASTIAN V. MARTORANA
Pennsylvania State University

New Technology Challenges Traditional Controls

Current policies and practices in postsecondary education continue use of traditional forms of control which center chiefly on two sources of authority. One is official and governmental, based on the obligation of states to provide for the education of their citizens, and another is unofficial and nongovernmental, based on voluntary participation of educational institutions in structures designed to promote their purposes and to assure conformity to generally accepted standards of operation and quality of services rendered to clientele and supporting constituencies. This presentation examines pressures generated by new technology challenging traditional approaches to controlling, coordinating, and regulating postsecondary education as an enterprise which serves many divergent interests. Attention is given to the impact of new technological development on control of different types of postsecondary institutions ranging from ones which are strongly community-based to others with regional, statewide, national, and even international constituencies.

MANTHA VLAHOS MEHALLIS
Broward Community College

Afraid of Computers?
Everything You've Always Wanted to Know About Computers
but Were Afraid to Ask

This session is aimed at the classroom (teacher) and administrative levels especially for persons who are "interested in becoming comfortable with the use of computers but were always afraid to ask." We will explore the impact of computers on our daily lives (micro-wave ovens, cars, telephones) and how the computer industry revolution is making it possible for those of us who are not computer programmers, to interact with computers without becoming computer specialists. After fears are dispelled (or at least somewhat alleviated), we will focus our attention on how computers can be used by you as tools for managing your classrooms, instruction, and the educational organization.

MANTHA VLAHOS MEHALLIS
Broward Community College

Using Technology for Program Evaluation and Curriculum Design

This session is targeted at classroom teachers and administrators who are involved with program evaluation and curriculum design. We will explore the currently used methods for development and evaluation and discuss the changes being brought about by new technologies. "Hands-on" exercises will be used to demonstrate how we can accomplish old tasks with new tools. The outcomes are intended to provide you with fresh, more efficient approaches to program evaluation and curriculum design with direct application to your environment.

OSCAR G. MINK
Organization and Human Resource
Development Associates

Organizing Your Organizations: And Jethro Said Unto Moses...

Quality of work/life, job satisfaction, and increased need for stress and time management have created a need for a thorough look at the technology of organizations. What is found is that human life is not mechanistic, not dependent upon cause and effect relationships, and not exclusively rational. Instead, it is organic, fluid, dependent upon interpersonal and intergroup relations and intuitive, embracing not only intellect but emotions.

Bureaucracy, with its rigid hierarchy and its one-way flow of authority, is ill-suited to meeting the emerging demands of modern technologies. A new kind of organization is required, one which will emphasize process rather than structure and substitute free human interaction for the impersonal chain of command.

Today's challenge is to shift from a bureaucratic approach to organization to a democratic approach, from a preoccupation with structure to a prime concern with process, from power based on position to influence based on proficiency.

OSCAR G. MINK
Organization and Human Resource
Development Associates

Survey Feedback and Organizational Change

Survey feedback has three fundamental properties: (1) purpose, (2) events occurring across time, and (3) discrepancies from "is" to "should be." The purpose of feedback is to impart potentially useful information to groups or individuals who are eager to gain insight and meaning from the information.

The second property implies that a series of events will take place based on the information gained from the survey. The action flows from the current status through various steps to a final state where information is delivered on how well the action has gone.

The third property states that for feedback to be useful a discrepancy must exist between the current condition (is) and what is desired or intended (should be).

Survey feedback is not an end but is instead a complex method for gaining information for change. It is true that data results can create changes in an organization but without the proper guidance system, the changes falter, fall back, or go in many divergent directions. How survey feedback is used is as important as the data itself.

AL P. MIZELL
Nova University

A Seminar on Software Evaluation

By the end of this brief overview on the selection of the programs for use in microcomputers in education, you should be able to list and describe briefly the major criteria you would examine when reviewing software for potential purchase. You will also be exposed to sources of listings and/or reviews of microcomputer software which are of interest to you. As an activity during the seminar, you will work in a group situation to complete an evaluation form for an example of microcomputer software provided for you.

We will begin in a large group setting with a presentation and discussion of the criteria commonly used to evaluate instructional materials with special emphasis on the special characteristics of computer software. We will consider many of the criteria used by the national evaluating group known as EPIE (Educational Products Information Exchange). Samples of one or two evaluation forms will be distributed for you to examine. The evaluation form and descriptions of evaluative criteria used by MicroSIFT will also be discussed.

The total group, or several small groups, will then view an example of software to evaluate jointly. Examples of directories, periodicals, and other reviewing materials will be demonstrated and made available for your perusal.

The final minutes of the session will be open for individual examination of the reviewing materials and examples of a variety of software.

This session should provide you with an insight into the various factors to look for before you spend money on a piece of software. It should help you better understand what makes some software useful and others less desirable to use. As a result of this short time together, you may become excited about the many possibilities for the microcomputer as you see some of the many things it can help you do.

AL P. MIZELL AND THOMAS BEEBE
Nova University

Telecommunications and Education

The ever increasing growth of the knowledge base as well as the need for professional communications has expanded the role of microcomputers in education. However, few educators are taking advantage of the microcomputer in these two areas. This presentation will examine and focus on three specific steps that will allow educators to use effectively microcomputers for the gathering of information and the subsequent dissemination of that information.

The first step in telecommunications is to obtain a modem or modulator/demodulator, a "smart" or "dumb" terminal and a small software program that will allow communications to occur. The second step is to decide if you need a host computer or an electronic data base. The third step is the development of the ability to handle effectively all phases of communications independent of human control.

Each of these three steps will be examined in detail and demonstrated during the presentation. Several electronic bulletin boards and computerized data base systems will be available for students to see during the presentation. Packets of materials will be given to each participant that will contain telephone numbers of many of the free electronic communications systems throughout the country.



ELIZABETH A. POLINER
Nova University

Nova's Information Retrieval Service:
Meeting Your Research Needs

The purpose of this seminar will be to increase student use and understanding of the Information Retrieval Service (I.R.S.) by providing information about computer searching as it relates to practicum/MARP research and program seminars. The presentation will include explanations of how various concepts may be combined, resulting in the retrieval of more specific bibliographic materials than may be accomplished through a manual search. Processing procedures, on-line services, and databases will be explained. Special emphasis will be placed on the ERIC database.

Search skills and strategies will be discussed. Participants will become familiar with the computer search form, the ERIC thesaurus, the on-line process, microfiche and article order forms, and off-line search results. Sample searches related to topics in higher education will be analyzed, with time allotted for questions and concerns.

RICHARD W. PRATT
University of California, Berkeley

Update on Computers in Higher Education Administration

This session will review administrative uses of computers in higher education, with particular emphasis on management information systems (MIS). It will survey selected applications of computers in administrative decision making and planning, such as linear programming, queuing theory, and other techniques derived from operations research. Examples specifically related to college or university administration will be provided. Next, MIS will be defined and its historical development traced. Two basic modes of MIS--data processing and decision support--will be described. In addition, more recent technological improvements, such as database management, distributed processing, and microcomputers will be discussed. Database management refers to the building and maintenance of databases that are independent of specific computer programs and that make data more readily accessible for ad hoc retrieval and analysis. In distributed processing, computing capability is distributed throughout the organization along geographic or functional lines, usually by linking a network of micro or minicomputers to a mainframe. Microcomputers require attention because of their increasingly widespread use in higher education. It will be argued that, even though micros afford "stand alone" computing capability, they are likely to lead to the development of more prominent MIS. The implications of all of these developments for management in higher education will be discussed, and contemporary examples of MIS in higher education will be provided.

RICHARD W. PRATT
University of California, Berkeley

Organizational Context of Computer Use

This session will survey major issues in the relationship between computers and organizations and will explore the question of what computers can do to as well as for organizations. The organizational context will be seen as comprised of two components--behavioral and structural. The analysis will begin with a definition of organizations as information processing entities and will explore the roles--both functional and dysfunctional--of information and communication in organizations. It will be argued that only one function of information is to inform and that other important organizational functions include justifying group goals and behavior, establishing and maintaining authority and control, influencing the actions of others, and serving as a medium of exchange. These functions affect the content of information, the channels through which it is conveyed, and whether information is, in fact, conveyed or withheld. This will provide the behavioral context for exploring the promises and pitfalls of computer-based information systems. Next, the relationship between computer system architecture and organizational structure will be explored. This discussion will utilize Robert Anthony's view of the organization as a three-tiered pyramidal hierarchy, with the bottom tier being the managerial level, and the top tier being the strategic level. This discussion will also include issues concerning the effect of MIS on organizational relationships, such as the tendency for MIS to lead to greater central authority and control.

RICHARD W. PRATT
University of California, Berkeley

Sources and Types of Error in Management Information Systems:
Problems of MIS - Management

For this session, error is defined as occurring in one of three forms: (1) incorrect data, (2) improperly aggregated data, or (3) untimely delivery of information. The first type of error refers to data that is incorrect with respect to the purposes of the MIS. Thus it may be data that is in factual error or that is not relevant to user needs. The aggregation of data refers to its transformation into information. When data is improperly aggregated, important facts or relationships are concealed, and the information refers to the delivery of information either too late (after a decision has been made) or too early (in which case it may become dated). It will be shown that even in relatively simple data processing systems these errors can occur and persist. The sources of error will be traced to two general causes. In the first cause, the development and implementation of MIS fails to incorporate much of what we know about organizational change, the nature of managerial work, and overrelevant factors. The second source of error is the failure of knowledge, which refers to the absence of an adequate knowledge base for planning an effective system. This occurs particularly in decision support systems, where we lack knowledge of the relationship between data and decisions. In education, for example, we do not have definitive production functions that allow us to relate inputs to outputs in any systematic way. Hence, which data to consider and how to organize it for decision making will be unclear and open to debate.

RICHARD W. PRATT
University of California, Berkeley

Toward a Self-Correcting System of Information Management

This session will begin with the assumption (justified in previous sessions) that MIS and other computer-based management systems are necessarily prone to error and that, to some extent, efforts to suppress the incidence of error are misplaced. It will argue instead that we should recognize the inevitability of error and attempt to design self-correcting systems that can minimize the effects of error. Three components of a self-correcting system will be discussed: (1) redundancy, (2) feedback, and (3) flexibility. Redundancy, in contrast to its usual meaning of "excessive" or "unnecessary," will be shown to be an important mechanism for detecting and/or compensating for error. Feedback transmits knowledge of error back to its source, where corrections can be made and precautions taken against the occurrence of similar errors in the future. Flexibility allows the system to adapt to changing needs. It will be argued that, while it may be easy to build these components into a system design, actually achieving them in an organizational setting is difficult. For example, the need for redundancy must be measured in terms of the organization's tolerance for error. This is a difficult process at best, which becomes more difficult as the cost of redundancy rises. Feedback on error is usually difficult to achieve because organizational reward systems are typically punitive toward the identification and communication of problems. Flexibility is difficult to achieve because of its high cost and also because it involves interaorganizational conflicts over access to and control over computing facilities.

GARY E. RANKIN
South Oklahoma City Junior College

Educational Technology:
The Impact On Curriculum Development and Instructional Design

The purpose of this presentation is to describe the impact of educational technology on curriculum development and instructional design. Objectives of this presentation are to (1) define educational technology, (2) describe the systems approach to education and its application to educational technology, (3) describe the impact high technology will have on curriculum development and instructional design, and (4) describe the process used at South Oklahoma City Junior College to plan for and develop a systematic approach to meeting the demands by high technology.

The focus of the presentation will be in meeting the needs of individuals who will develop, maintain, and use high technology equipment and systems. This focus will impact both curriculum development and educational delivery systems.

GARY E. RANKIN
South Oklahoma City Junior College

**New Technology:
The Research Seminar and the Home Computer**

The purpose of this presentation is to show how the home computer can in a very practical way impact the Nova student. One object of the presentation will be to describe how the home computer can be used as a learning strategy for the Nova student. A third objective will be to show how the home computer can directly affect and complement the Research seminar. To accomplish these objectives an overview will be given describing the requirements of the Research seminar. Topics will be presented on how the home computer can support the writing of proposals and practicums. The final segment of the presentation will discuss statistical analysis required by the Research seminar and describe applications using the home computer.

CARL SHAFER
Daytona Beach Community College

Advanced Recognition Technologies Provide
A New Look at the Registration Process

For the past decade, the goal of all progressive institutions of higher education has been to develop an on-line system of registration. Being "on-line" was considered the ultimate in enrollment processing. Huge expensive computers were the order of the day.

The dawning age of the inexpensive microcomputers and advanced recognition technologies makes it possible for even the smallest institution to implement a computerized enrollment process.

Are you familiar with the acronyms OCR, OMR, OBR, and MICR? How can new advances in automated data entry open new avenues for improved registration systems? What proven business computer technologies are now being adapted to educational systems? These questions and many others will be answered during this session.

For many years customers of financial institutions have successfully used their telephones to access the financial institutions' complete business transactions. See and hear this process demonstrated and learn how this voice response technique could be used to register students.

Many institutions are now using an on-line registration system requiring manual data entry. Data entry through the use of portable optical character recognition devices, which are used extensively in retail establishments, will be explored for educational institutions.

Who knows what the future holds? Several companies are already utilizing direct voice communication with a computer. The door to Advanced Technologies in education is just beginning to open.

CARL SHAFER
Daytona Beach Community College

Student Records from Creation to Retirement

The number of documents that an institution accumulates on each enrolled student is staggering. College Registrars are reluctant to destroy any student records. Applications for admission, high school and college transcripts, resident affidavits, admission letters, test scores and correspondence are but a few of the valuable papers that must be preserved. What does an institution do with this huge accumulation of records?

At some point in time, a decision has to be made as to the disposition of these documents. A lack of storage space usually hastens action in this area.

During this session, the following aspects related to records management will be investigated:

1. The design of a model records management plan.
2. A review of modern equipment for storage of original documents.
3. The implementation of an efficient records retirement system.
4. The historical development of microfilming techniques and equipment.
5. The analysis of the storage and retrieval of microfilmed documents.

High technology has also moved into the records retention field. Computer technology is now an integral part of all efficient storage and retrieval systems.

JAMES L. WATTENBARGER
University of Florida

New Technology and Administration

The development of hardware has provided administrators with the potential for improving administration. The possible use of these technological advances is limited, however, by concepts of college management which are outdated. The session will discuss how this gap can be filled with a productive management style. Special emphasis will be upon evaluation and team management. The data and information needed for executive decision making will be summarized.

JAMES L. WATTENBARGER
University of Florida

Financial Planning in the New Technology

The changes in strategic planning that are related to the new technologies have only been dimly envisioned. An analysis of the tools available in relation to the task reveals that planning is still an essential element in good administrative procedure and even though the tools are improved the basic concepts of planning have not changed. Special emphasis will be given to the financial problems encountered by community colleges nationwide. Adherence to continuing commitments is necessary in financial planning. Technology does not change them.

EARL L. WRIGHT
San Antonio Community College

An Administrative Response to the Impact of High Technology

An adaptive response to the impact of high technology on colleges and universities is geared toward one major state of affairs, that of constant/rapid change. Institutions of higher education will be unable to maintain the vanguard position of providing formal education and training unless very large-scale changes occur throughout the present educational system. Decision makers must find ways to develop and prepare people to function effectively in this age of information and accelerated communication.

Administrators must accept the fact that the world is changing far more profoundly than most people are willing to acknowledge. High technology, and all that it offers, is central to the major changes in this society. The influences of new technologies on higher education are both fundamental and multi-dimensional in scope. Constant changes will require adaptive responses in many sensitive areas. Personnel requirements in colleges must increase to include general computer literacy, attitude adjustment, upgrading of existing skills, developing new skills, and identifying new responsibilities and priorities. Major changes in Management Information Systems and program delivery systems will be required. A shift toward practical curricula rather than theory-centered curricula should occur. A greater emphasis on technicians must be anticipated. Also, educational networks should be developed as external support systems. In order to guide and provide direction for these kinds of institutional developments, administrators must take a proactive position rather than remain reactive.

As an administrator, one of the most important changes to effect is that of moving personnel from the role of specialists to that of generalists who can adapt. Therefore, it becomes critical to assist personnel in adapting to both societal demands and educational system stress. There are several ways to approach these changes; however, two ways to increase the probability of success will be addressed. The first way is to develop a Conceptual Framework for Understanding which stems from both individual and institutional commitment. Secondly, an administrator must develop a Conceptual Framework of Action which includes designated operations drawn from specified goals and objectives. This presentation will also focus on educational system components that are undergoing rapid change. If educational decision makers fail to respond in a timely and rational manner to unavoidable demands, all ability to determine future directions will be lost. New technologies represent, in many cases, answers to current and future problems faced by advanced societies.

EARL L. WRIGHT
San Antonio Community College

High Technology, Futurism and Human Potential

We live in a period that is as significant as any other time during the history of the world. New technologies are leading this generation toward experiences of quantum transformation rather than incremental change. The new information society is a permanent reality with constant demands being imposed on individuals in every walk of life. Institutions of higher education must re direct their energies, focus on primary agenda items for the twenty-first century, and design responsive supra-systems within education that will enable people to adapt to exponential increases in knowledge.

What we experience today in terms of new technologies is obsolete tomorrow. Technological advances in this society have caused an enormous overlap between the present and future. The agenda items for the twenty-first century are:

- 1) The new information/communication phenomena are a permanent reality that will alter the destiny of this society.
- 2) Innovations in the new technologies will increase the rate of change by reducing the information float.
- 3) High technology, futurism, and human potential must be addressed as interdependent linkages that are serving to provide directions in higher education.
- 4) New technologies are not the panacea for all of society's problems and the overall effectiveness of these technologies will be highly dependent on the principle of high tech/high touch.

Currently people are not prepared for the world in which they are going to live. Traditionally five major institutions have influenced human development to a large extent. In varying degrees the family, community, work place, educational system, and media have assumed that important role. In recent times the other four have placed all responsibilities on educational institutions to develop people in a manner that will allow them to cope with the future. Institutions of higher education should not accept full responsibility; however, they should assume the responsibility to coordinate the efforts of the other four as they impact on the educational system. Therefore, ideas of developing human potential, seeking convergence, and networking are absolute necessities to support the agenda for the twenty-first century.





Nova University

CENTER FOR HIGHER EDUCATION

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