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Educators must develop a "computer strategy" to cover all potential needs of their district.

The Computer System: Developing a Plan for the School District

by David S. Honeyman and Janice C. Honeyman

Educators have come to accept the computer as a "fact of life" in American society. When confronted with the probability that by the year 2000 half of all jobs in factories and offices in the United States will be affected in some way by changes in office automation and information processing, many school districts are beginning to develop computer programs for their students. While the business community continues using computer technology to streamline operating efficiences and increase effectiveness within its organizations and develops new information management technologies, many educators are only beginning to implement instructional programs related to these new, powerful tools.

Many school systems throughout the United States are struggling with issues concerning the computer technology and computer literacy programs, but most educational leaders are unfamiliar with the constantly changing terminology and technology as they apply computer utilization. While some principals are familiar with given operations and certain uses of the computer, few have a feeling for the totality of the problem as it relates to the successful implementation of computer technology within their schools.

We have many examples in education where technological innovations were introduced into school systems without proper planning and sequencing of their implementation. Educational TV, reading machines, self-directed and programmed learning projects were expensive failures in many schools. The computer, however, is not simply a technological innovation. It is rapidly becoming an instructional discipline—English, math, computer science, etc. As a result, school systems are confronted with the problem of instituting instructional programs which will teach children not only how to use this new technology, but how it works as well.

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Models constructed as guidelines for the development of data processing, and information management facilities in business (Gibson and Nolen, 1975) can be applied to the educational setting in order to help educators visualize the process of establishing a computer "system" for their schools. The term "system" is not meant to imply that one arrangement, large or small, one type of computer, IBM or Apple, will be the best for all situations. Likewise, use of the term system is not meant to imply that 20 microcomputers in various school buildings be networked together. It does mean, however, that a school district must have a plan directed to the total picture of its computer needs for instruction, communication and administration. Educators must avoid limiting themselves to single function applications, such as teaching computer logic, programming languages, or word-processing. There must be a comprehensive plan which covers all aspects of intended computer use in the school. They must develop a "computer strategy" to cover all potential needs of their school district.

Brandt R. Allen, professor of accounting and computer applications at the Colgate Darden Graduate School of Business Administration writing in the unpublished monograph, "Computer Strategy: A Philosophy for Managing Information Processing Resources" (1982) noted the following:

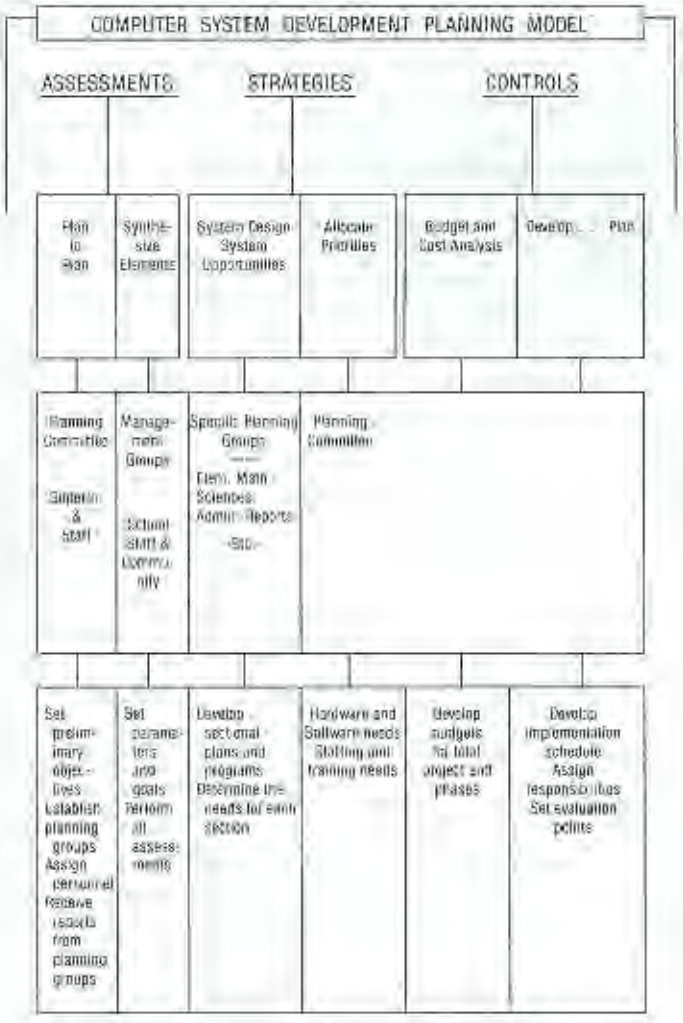
> This is the 13th year of business use of computers, . . . what accounts for sustained success with computers in some firms and failure in others? Only rarely are technical factors or the brilliance or blunders of individuals the explanation; instead, the primary determinant of continued success in the use of computer technology is almost always the quality of one's strategy, policies, practices and techniques for the management of the technology . . . too often businesses (schools) simply do not know what a computer strategy is or why it's necessary.

The planning process for computerization within the school district should follow patterns similar to that of any management control system. Such systems usually include consideration of the following: environmental and institutional assessments; strategic planning and decision making; and defining the control system to be used for project evaluations (Allen, 1982). While the technology and applications exist which will facilitate the development of any and all types of computer systems without a comprehensive plan and set of management practices aligned with that plan, the introduction and *effective* use of computers within the organization may fail (Witherington, 1981). Figure 1 summarizes these stages as they might be applied to a public school setting. Details of the processes involved are discussed below.

Assessments

Planning to plan and the decision to implement: During the initial stages of the planning process it is important that members of the steering committee be identified and given direction by the superintendent. The decision to implement programs utilizing computer technology must be made early in the planning process, and school districts must be willing to pay the price, both in dollars and in effort, to guarantee a successful program. Membership on the steering committee should be kept to a minimum and should include

FIGURE 1.



three to five persons having ultimate responsibility for the decisions to be made during the planning process. It will be their duty to outline the preliminary steps of the planning process. They will establish the management planning groups and the specific planning groups which will have responsibility for performing the environmental and institutional assessments, developing implementation schedules, and designing the numerous applications and data strategies for the program. The steering committee, which sets the time lines for these planning groups, assigns personnel and receives and evaluates those reports which ultimately form the district action plan.

The first step in the planning process involves a thorough analysis of the environmental and institutional needs as they relate to a computer strategy (Allen, 1982). The details of these studies will indicate the types of programs that will be required to successfully operate the computer system, and generally answer the question, "What do we want the system to do?" It is important that representatives from the school system and the community be assigned to management planning groups to perform these assessments. Those individuals which will be affected by change should participate in this aspect of the process.

Environmental Assessments: Many educators currently express the opinion that computer literacy will be a necessary skill for future employment. As seen above, the use of the computer is expanding within the business world, and our young people have a right to expect that their educational programs will prepare them for the future. But what will those needs be? Will office employees and factory workers need to know computer logic, or Fortran or Cobol? Will they need to know about interactive uses of the computer and artificial intelligence, or will it be more important to know how banks produce their monthly statements, and how prices are recorded at the grocery store with the universal product code and optical mark reading equipment? School districts must determine which aspects of the new technology are important for their students as they enter the working world or go on to further education.

These needs will vary from location to location. Industrial and urban settings will offer different opportunities for young people than rural, farm environments. The needs of college bound students will differ from students entering the work force at the completion of their high school education. A comprehensive assessment of such needs should indicate the nature of the instructional program for the district.

> A vocational education center which began a data processing operation several years ago is having trouble placing its graduates. While their students are excellent programmers in Cobol, many new business installations use newer fourth-generation data base languages which no longer require maintenance programmers. This has reduced the number of available jobs in this field. New technologies have created the need for new skills and this center has not kept pace.

As such, these environmental assessments, which must be continuously monitored, indicate the overall needs of the students and help clarify the responsibility of the schools to provide for those needs. The results of these assessments will outline the types of courses needed for the instructional program and the applications which are needed to meet those recommendations. This will form the instructional component of the application strategy.

Institutional Assessments: As an operating entity, the school district itself can benefit from the efficient and effective use of the computer. Once an external assessment indicates those programs needed for the benefit and well-being of the students, one can look at the school system and define its goals and objectives such that the computer can assist in its daily operations. Such an evaluation would include questions of community and parent communication, teacher perceptions of the use of the computer for instructional management programs, and building principal assistance for many of the daily business and record-keeping problems associated with operating a school. Such an assessment would show needed information flows required to maintain daily transactions and detail the types and quantities of data involved. An accurate and detailed picture of data flows in and through the school district provides later planning groups, ie., the specific planning groups, with information which will form the basis for the data strategies and administrative applications to be developed later in the planning process.

> Another large school division realized that the computer could provide accurate and concise data on their attendance figures and decided to contract with a local computer service center to provide such a service. It was assumed that such an arrangement would

greatly simplify the record keeping and reporting required by the state. A bright and industrious data processing manager made assurances that this project was basically simple and guaranteed it success. However, there was no plan or time sequence developed for this project. The following September building principals were *informed* of the new system and told that they would participate. They had not been consulted or informed and there was measurable antagonism toward using the new system. By Christmas of that year, the October attendance report was still incomplete and by March everyone was doing his or her year's attendance figures in order to prepare the year-end report by hand.

Strategies

During this phase of the planning process, details of the various strategies to be used during implementation are developed. This includes analyses of the applications to be used and developed for both instruction and management, the data needs of the organization and the control mechanisms which will be implemented for accountability and as measures of performance. In addition, the technology required to do those applications will be evaluated. Herein lies the key to a successful schoolwide computer system. Since most school districts will have varying needs and expectations for their system, the planning phase must incorporate as many of these variables as possible. A single, unified systemwide strategy must be developed.

A school district of approximately 10,000 students bought 12 microcomputers for its middle schools. Due to a lack of planning and control over this project, individual building principals received equipment from a variety of vendors and simply gave the units to their teachers. What followed was an attempt by the school division to teach teachers how to use these new "toys." However, few teachers were interested in learning how to use them, and since there was no one at the building level interested in developing applications and using them, they were soon relegated to storage and used primarily for games during free time. Had there been a detailed plan for introducing these computers in the schools, the results would have been different.

Applications Strategy: Following the guidelines noted by the environmental and institutional assessments, the school system planners must question applications; for what reasons will the computer be used and how? Here the specific planning groups assigned by the steering committee must investigate the thousands of uses to which the computer can be applied. Decisions must be made concerning which applications will be used for (1) instructional purposes, and (2) operations and management.

1. Instruction: How will we design our K-12 instructional program? Do we need to develop scope and sequence charts for the new computer curriculum in order to avoid duplication and allow teachers to monitor the effectiveness of various aspects of the program? Do we want to teach programming and computer logic? Do we want to play games? Do we want teachers to include computer use in the regular classroom, such that the teacher sets up an "answer sheet" and students feed in data from science experiments, math problems, or questions of English sentence structure, and process the numbers to get a result? Are we concerned with delivering courses covering computer literacy to all students and, if so, how do we define literacy?

These and other equally important questions must be resolved before computers are introduced. Do we teach how the computer works or how to work with the computer? Many leading educators feel that one must teach programming and logic to students in order for them to know how the computer works. This, however, is time consuming and allows only a few students to work with available computer resources at a given time. Other educators say that all students should be taught to use commercial application programs such as word processing and data bases which can be applied to a variety of instructional situations. It is the instructional strategy which defines these needs and outlines a course of action to be taken by the school district.

2. School Operations: Usually the benefits of microcomputers in assisting with the daily operation of the school go unrecognized. Word processing can facilitate the preparation of announcements, newsletters and attendance lists. Accounting packages and spread sheets can assist in the maintenance of general ledger and fund accounts, and the various reports for pupil enrollment, transportation, etc., can be generated, stored and updated. Trends in test scores and other measures of "accountability" can be developed and used for analysis of student performance at the classroom, building and district levels. Again, the school system must decide what it needs and the planning groups must detail those expectations.

Data Strategy: The needs for a data strategy is apparent when one considers the number of reports which must be processed by the school district almost daily. Some of these were mentioned previously, and it is important that the computer system be able to meet these user needs. If the production of designated reports or the generation of certain student records is done easier by hand, obviously the computer will not be utilized. Likewise, if the information generated is not constant and relevant, it will be of little use to those who will receive it. A school district planning to automate its administrative functions must perform a thorough investigation of all possible sources of data being generated within the school district. Such a "data audit" would include detailed descriptions of the data requirements from each of the districts functional areas including attendance, student records, food service, bus scheduling, student and athletic activities, personnel, purchasing, etc. Following the definition of these data descriptors, the flow of information for the district can be mapped and appropriate computer applications designed.

Organizational Strategy: The organizational strategy must answer questions similar to the following: If the computers will be purchased by the school system, who assumes ownership of the equipment? How will the equipment be configured and how will financial support be allocated? Who is responsible for hardware maintenance and expansion (new disk drives, modems, printers, cards, expanded memory, etc.). Who is responsible for renovations to existing facilities? Will the district purchase existing commercial software, or will custom software be developed? If custom software is to e developed, who will do the job, and who will write the software specifications. In addition, questions must be asked concerning room schedules and the location of the computers, how many students will be using them, and what utilization rates should be expected (hours of computer time per day). How will the district train its administrators and teachers? How will the district adapt to the changing role of the teacher? Will differentiated staffing plans revolve around computer technology such that the master teacher becomes the manager

of a technological classroom with 30 to 40 students participating in computer assisted instruction? These and other questions must be answered by the organizational strategy.

District administrators must be made aware of the expenses associated with the development a computer system. The need for intensive planning is obvious when considering the purchase of a $200,000 IBM system 4300 for business operations and financial analysis. However, buying little "Apples" for the schools appears to be a relatively uncomplicated project. They cost about $1,000 each, and most high school principals could afford to purchase several from general funds without going to the central administration of approval. But the purchase of the computer is just the beginning of the expenses associated with its operation. It is quite easy to spend an additional $5,000 to $8,000 on add-ons: packaged software, a printer, a plotter, additional memory, etc. It is not uncommon to hear stories of individuals with limited computer experience who have purchased a basic computer for $2,000 and within six months have spent an additional $5,000 on the system. Proper planning and a detailed organizational strategy are necessary to avoid unanticipated expenses which can destroy a viable, on-going project.

Technological Strategy: Controlling the growth and proliferation of microcomputers in the schools and giving direction to a growing computer system are important considerations in choosing technology. The availability of repair and technical assistance is often a controlling factor in the type of hardware to be purchased or leased. Problems which arise from regular use of the computer must be remedied quickly or users will avoid developing new programs for fear that the "thing" will be down when they need it most.

Extensive research must also be done to match the expressed needs of the school district with available technology. It must be realized from the beginning that there are major incompatibilities among software packages and different computers; there are even many subtle differences in machines within the same computer manufacturer.

> One principal bought a personal computer with a printer and a popular software package to assist him in preparing data and develop graphs concerning student performance in various special projects occurring at his school. He soon discovered that he could analyze the data but could not print it without another special software package. In addition, he found that his printer did not do graphics unless he installed a special "card" in his computer.

In general, standardization of software programs is very low, and, whereas one may think they will do similar tasks, in fact, they do not. Of 10 faculty members at a major graduate business school who currently own personal computers, there are seven different word processing packages being used.

The computer system plan must provide guidance and leadership for the users. Just as schools have an instructional plan which includes processes for the selection of textbooks and instructional materials, the computer system must be developed with the users in mind. The technological strategy must consider present and future uses, expandability, and the computer's capacity to be applied to a variety of situations, i.e., its flexibility. Too often computers are purchased with a limited purpose in mind and once that level is obtained no growth occurs.

Control

The term control means different things to different people. The computer system must be controlled. Applications must be governed, new purchases approved and priorities set. There must be periodic review of the system in order to monitor its growth and development. Results must be measured and evaluations done on a continuing basis. In order to do this, responsibilities must be assigned. Users must be aware of the totality of the program and its sequencing, from elementary to high school. They must know the expectations and ways in which the program will be evaluated. Criteria for on-going evaluation can include measures of efficiency, cost/student, effectiveness, numbers of students educated, and utilization rates hours/week/school, but teachers and administrators must be informed.

User groups should be developed under the leadership of individuals in a position to provide assistance and guidance. Usually this will be the building principal. As instructional leader of the building and its programs, this person must assume the leadership role. It is through this office that requests will be made for additional software and similar equipment. Class schedules will have to be adjusted in order to allow students and teachers access to the computers. Teachers will have to be given time to practice and learn about the uses of the computer, all of which will require the support and approval of the principal.

The computer "system" within the school must be encouraged and supported by every staff member. Four or five teachers in various schools cannot make a system. They can be the principal users and faculty leaders in the use of he computer, but success will be dependent upon total faculty involvement and cooperation. This can only be generated by supportive administrative personnel.

Implementing and operating a computer system can be a challenging experience. The benefits of such a system are difficult to measure, and the costs of bringing the system up and running can be more than many districts can afford at one time. A detailed plan can indicate sequences and phases for implementation of the project over a given period of time by showing at which grades the system should be started, and the costs associated with each step in the process. Proper planning and phased implementation of the project can assure greater levels of success than previously thought possible.

Structuring a computer system simply asks: What do we want to do? What are the needs of students, teachers and administrators which must be met? Who will be doing what? And, what technology do we need to do it? Without a computer strategy and proper controls to govern its operations, structuring, the program within the schools and resolving problems and conflicts can lead to insurmountable obstacles which can destroy the project. Without a comprehensive plan, the only "winners" will be the computer manufacturers and sales people—and the losers will be the students.

Bibliography

1. Allen, B. 1982. An unmanaged computer can stop you dead. **Harvard Business Review,** Nov.-Dec.: pp. 77-87.
2. ————1982. The computer strategy. unpublished monograph, Darden School of Graduate Business. May: 28 pages.
3. Gibson, C. and R. Nolen 1975. Managing the four stages of EDP growth. **Harvard Business Review.** Jan.: pp. 76-88.
4. Honeyman, D.S. 1985. Designing and integrating P.F.S. files. **Electronic Learning,** March.
5. Withington, F.G. and Arthur D. Little, Inc. 1981. Future computer and information system. Unpublished monograph. 24 pages.

Internalization . . . must take place if the innovation is to become part of daily schoolwork.

Training, Computers, and Educators

by Richard A. Diem

In the past three to five years schools in all parts of this country have invested millions of dollars in a technology that holds untold promise in its ability to deliver information in a palatable, easily maniputable, and nonthreatening mode. So great has the persausive and enticing manner of this technology been that school administrators, without much experience in the technology or the ramifications of its purchase, have convinced both school boards and the public at large that the use of computers will dramatically change literacy rates and, at the same time, offer students a utilitarian tool they can use when they leave school.

The final results of these dreams are not yet in and probably won't be until this generation reaches maturity. What we do know is that the computer as an interactive instructional tool for school use may not ever reach its potential. Despite the number of states that now mandate computer literacy as a high school graduation requirement, and those that include courses in computer training as a part of teacher pre-professional training, there are signs that nothing has changed in the majority of American classrooms. In a recent article in the Phi Delta Kappan (December 1984), Alfred Bork pointed out that "Most learning is still taking place through passive learning modes that have been dominant for hundreds of years: books, lectures." Bork rests most of the fault on poorly designed computer software and the lack of interactive training in computer useage. While these issues need immediate and long-range solutions, a third problem, that of classroom application, bears both scrutiny and study if the full potential of current and future technological advances finds its way into elementary and secondary schools.

Application, by its nature, requires one to use learned materials in new an concrete situations (Bloom, 1956). In terms of computer technology, this means that the classroom teacher must learn how to apply the hardware, software, and computer languages to specific classroom situations. A knowledge of the technology, itself, will not suffice for very long. The practical, everyday, instructional applications of computer technology will have a greater effect than surface useage of the computer for one or two hours per week.

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Colleges and universities in an effort to provide catch-up training in computer technology have offered to teachers coursework, in various formats, at both the pre- and inservice levels. Most of the classes have concentrated on hardware familiarizaton, introduction to BASIC, and evaluation of software. While these efforts to serve a useful purpose in orienting the novice user to computers, they do not provide the type of application study, that in the long run, will show teachers how they might actually use computers as part of their repertoire of classroom pedagogy.

Instruction in curriculum design, development and evaluation must accompany technological training. Working together, the practitioner can take the content of computer coursework and interweave it within subject matter. Construction of long-range developmental patterns of instruction with technology as an adjunct pedogogical mode could then ensue, instead of the types of current computer classroom efforts that are based on software availability and willingness to bend curriculum to meet hardware-time requirements.

The training of teacher-designers would begin to alleviate some of the problems of poorly constructed software. By providing practitioners the ability to devise solutions to their own, classroom specific, instructional problems, not only would the uses of computer technology improve, but the teacher's entire methodological repertoire would gain. Immediacy, in terms of feedback and evaluation concerning software, would ensue at a faster and perhaps more productive rate. Classroom-specific software, long thought of as impractical, could begin to be developed under this type training scenario. Not only would courseware of this type provide teachers with direct access to the developmental aspects of instruction, but, if done correctly, also improve quality of instruction.

This type of training would include development-of-needs assessment tools to determine class and individual instructional needs both in content and technological areas. It would also emphasize an understanding of subject matter so that proper instructional decisions, in terms of when to use the computer, could begin to take place. Evaluation, an afterthought in most classrooms, would also have to be improved if any positive measures of instructional performance were to be collected and analyzed.

The kind of academic efforts mentioned above are not pie-in-the-sky dreams. They are based on long-standing successes and failures replete in the history of American education. Internalization, in terms of a practitioner's understanding and useage of technological innovation, must take place if the innovation is to become part of daily schoolwork. If this does not occur, in some manner, in the next two years, the schools will turn away from computer technology much as they did 20 years ago when television, the then current video technology, was consigned as a baby-sitting device to be used on rainy days. A tool as powerful as the computer should not be thought of as simply a tool for mathematics, special education or word processing; instead, it must be looked at as a device that can aid in education's basic goal-increasing understanding and knowledge.

References

Bloom, Benjamin, S., ed. **Taxonomy of Educational Objective: The Classification of Educational Goals, Handbook I. Cognitive Domain.** New York: McKay, 1956.

Bork, Alfred. "Computers in Education Today—and Some Possible Futures," **Phi Delta Kappan,** December 1984, Volume 66, Number 4, pp. 239-243.

The forces that contributed to specialization and diversification are changing.

The Development of Higher Education Administration as a Profession

by Vineta S. Belden, Helen G. Cooper, Samone L. Jolly and James L. Sand

Historical Background

The development of higher education administration as a profession is a concept that evolved in recent history. With the exception of the office of the president, the idea of an individual fulfilling a purely administrative function within an institution of higher education was rare in this country until the end of the 19th century. Even the presidency was not totally administrative until late 1800s; prior to that he was not only *the* administrator, but also the primary teacher. (23)

Near the beginning of the century, various factors affecting higher education began to surface. Those factors, in turn, had an impact on higher education administration. The impact was two-pronged: specialization and diversification. Specialization refers to the increasingly narrow focus of each individual's function within the institution. Diversification implies that there is an increased number of functions undertaken. The dual impact is easily observable; however, the factors that prompted the change are more complex.

Specialization grew to meet the increasing complexity of higher education in general. Diversification, on the other hand, came as a result of institutional changes.

Factors bringing about increased specialization include an ever increasing number of people attending higher education institutions, the expansion of knowledge, and government involvement in higher education.

Relative to the increasing number of students, the most obvious reason is the increased population. As John J. Corson pointed out in **The Governance of Colleges and Universities,** "the population of college-going age . . . grew approximately 50 percent from the years 1939 to 1969 and another 10 percent in the three years after that." (12) Not only did the size of the population grow, but the percentage of people within that population attending institutions of higher education also grew, along with the idea that all young people should have the opportunity for an education beyond high school. Coupled with this contention was the concurrent belief that graduating from a four-year institution would bring increased socioeconomic status. (23)

The expansion of knowledge is demonstrated by the transformation of college and university faculties. The early American colleges had a small faculty, generally recent graduates who stayed for a few years before moving on to a permanent occupation. They taught all subjects, and for the most part, stayed with a single class for four years. (10) As the body of formal knowledge grew, the number of faculty increased and changed from young generalists to ambitious, research-trained holders of the Ph.D., who were determined to make permanent careers of their academic disciplines. For example, by 1891, Harvard had reorganized into 12 divisions, each of which included at least one department. (41)

Karol and Ginsburg (23) concluded that all institutions and corporations are greatly affected by government involvement and regulations on all levels, and that institutions of higher education were not excepted. They point out that the latter are even more affected than most in several areas. The most obvious is funding, ranging from direct state funding to public institutions, to state subsidy programs for independent institutions, to financial aid programs that give indirect benefits to the institutions of their choice. (8) Other areas of government involvement cited are: approval of programs and degrees, chartering of institutions, affirmative action involvement in staff and student affairs, access provision for the handicapped and graduate assistantships. (23)

Alan Pifer in "The Responsibility for Reform in Higher Education." (12) describes our universities as "gigantic service stations principally for government and the larger corporations. He enumerates 13 functions which universities have been called on to perform, few of which are related to academics while others have no logical association with higher education, but have become expected services. These conditions have created a need to establish and administer functions that did not exist in the past. This, coupled with the rapid development of higher education, explains to some extent the problems of today.

The forces that contributed to specialization and diversification are changing. These changes are affecting, and will continue to affect, the development of higher education administration as a profession. First, enrollments, in general, have stabilized or decreased. This is due to both the shrinking of pool of typical college-aged students and the diminishing of the belief that a diploma from a four-year institution is the way up the socioeconomic ladder. An increasing number of people are seeing community or technical colleges as better long-range alternatives that get them into the job market faster with less financial investment.

Declining enrollments have also caused a struggle for survival in smaller institutions and major efforts to temper losses among larger schools. Stiffer competition among institutions has arisen as each tries to maintain previous levels of enrollment. This has strong implications for higher education administration. Institutions which are unable to stem this tide may find themselves with administrative departments exceeding current needs. Whereas specialization had been both a necessity and a luxury during the highwater mark of enrollment, it may now be necessary to

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cut back during recession. As a consequence, an administrator who formerly had a narrow full-time field of responsibility may now be asked to broaden that scope and perform duties once assigned to others. Flexible administrators will adapt; others may be in precarious positions as the institutions attempt to consolidate positions to reduce expenditures.

Although specialization will tend to decrease, diversification, on the other hand, will remain stable or probably increase to meet the new consolidated functions. In addition, some departments undertake functions not previously attempted, in order to maintain department size.

Overall, higher education administration will be less characterized by specialization. But, individual administrators, along with institutions, will continue to diversify in order to preserve the status quo.

Stages of Program Development

The first stage of program development of the graduate educational administration curricula begins with the first quarter of the 20th century. In its early development, the focus of the curriculum was primarily on the practical content, featuring information about educational policies in cases where administrators needed common understanding for implementation purposes or specific problems of practice. (13) As programs grew, concepts were borrowed from other disciplines. The concept of "job" became the critical focus for studying administration—dividing the job into different functions and organizing work to increase efficiency were the key considerations. For example, job orientation using the industrial administration model was copied by educational institutions of higher learning into curriculum content; e.g., Luther Gulick's planning, organizing, staffing, directing, coordinating, reporting and budgeting. Graduate students and professors spent much of their time researching practical problems.

In the second quarter of the 20th century, the focus of study and training shifted from the jobs to people. Human relations emerged from the research findings of informal activities within various organizations. An example, is the "halo effect" from the Hawthorne study on the productivity. These findings stimulated research to find solutions/answers to this phenomena and later led to formal studies concerning human behavior in the work environment.

By the 1940s, democratic administration was highlighted in books and widely expounded in programs as well as practice. The emphasis was on functional tasks and human relationships. Job functions became content within curricula as personnel management, school-community relations, business management, curriculum development, and supervision. Ideas, such as "individual worth and dignity," were stressed. (13)

The "new movement" of the 1950s began to impact on administrator preparation from the major research institutions, especially in the United States, Canada and Australia. The move toward the "science of administration" as a goal to the production of effective theories of administration prompted research to study descriptions, explanations and predictions about administration and organizational behavior. More social science content was incorporated into the administrative program of study, as well as reality-oriented materials used with case and simulation situations. The focus moved away from the administrator as a human-relations expert to one of the administrator needing to be a skilled analyst who used theories of groups, organizations and communities in order to cope with management tasks and challenges. In other words, the "new movement" embraced the concept of "administration qua administration," (13, 22, 29) whereby administration was viewed as similar in all organizations—educational, business, government, etc. During the 1960s, the "what is" theory continued. But, practicing administrators began to challenge this simplex approach to the complex problems they encountered. In turn, professors began to question the appropriateness of this model. The difficult policy issues in society during the late '60s and early '70s moved the emphasis to organizational missions and environments focusing on their uniqueness (13, 22, 29)

In the 1970s, research began to be more diverse. Qualitative and inductive approaches to knowledge development were being seen as appropriate processes in administration. The policy-research centers addressed both the "is" and "what ought to be" of administrative programs. Organizational development continued to be the theme for research studies. The specific question in the late '70s as studied by Daniel Griffiths and others, was "what knowledge is most valid and useful to those studying and practicing educational administration?" (13, 20, 17) As the 1980s emerged so did a pattern of pluralism. Knowledge in administration began to change to the viewpoint that administration content and/or practice was self-limiting in terms of scope and transferability (especially in the educational, societal and cultural contexts). (13, 20, 22, 29)

The impact of the "new movement" continues into the 1980s. This is particularly true of doctoral programs in the United States. Administrative theory courses are frequently offered within most of these preparatory programs. (13)

A new meaning of management is emerging out of the cybernetic systems theory. Adam Smith contends " . . . that formal organizations are (or are like) a giant computer with its input and output, its feedback loops, and its programs. This machine—the organization—is in turn guided by a servo-mechanism—the techno-administrative elite." (7) Education is now moving toward mass education through the use of computerized instruction in the classroom. (14)

Trends

The trends influencing educational administration preparatory programs are basically four: population, internationalization, societal change, and external agencies offering inservice training. The population dynamics continue to influence schools (birth rate growth and decline causing overabundance of programs developed in the '60s, and '70s). Today, this makes the challenge one of preparing fewer administrators more effective. The second trend affecting preservice educational administration is the internationalization of education administration. Organizations, such as the Commonwealth Council for Educational Administration, the European Forum on Educational Administration, the Inter-American Society for Educational Administration and the University Council for Educational Administration, have diffused administrator study and preparation worldwide. Journals (i.e., **Journal of Educational Administration** and **Educational Administration Quarterly)** have also influenced this diffusion. The third trend is the one of unusual societal changes which force leaders in education to update and redesign preparatory programs to meet the resultant needs created. The fourth trend is the increasing number of external agencies creating inservice training. As professional organizations grew and matured, they began to assume greater responsibility for filling the gap between preservice and practice. This is due to the criticism by prac-

titioners of the "utility of training programs in preparing them to deal with the realities of managerial work and potential radical changes brought about by technological advances." (13, 17, 24, 28, 44) Basically, the complaints focus on three features of preservice training:

1. Lack of graduate faculty with public school administrator experience.
2. Lack of application of theory knowledge to actual situations.
3. Lack of theory relevance due to non-usage of practitioners in teaching/course development. (13, 17, 24, 28, 44)

Management Theories Adapted by Higher Education Administrators

Until the 20th century, management functions were primarily performed on a small scale basis. Management was not a major topic of concern. However, the increasing number of managers and complexities in management created by the industrial revolution led to the development of management theory.

Rausch (33) outlines the evolution of management theory from four major foundations: management science, the behavioral sciences, the management cycle, and management by objectives. **Management science,** whose establishment as a separate discipline is credited to Frederick Taylor, concentrates on the efficiency of the way the individual employee performs tasks. The **behavioral sciences,** which developed considerably later than management science, explored the way people behaved in their work environment and the influence their behavior had on the amount and quality of work output. The **management cycle** deals with how to make the manager's work more effective so that the people who report to the manager will achieve improved results. **Management by objectives** is an outgrowth of the management cycle that deals with the supervision of goals. It is a significant refinement of, and in some major ways supersedes, the management cycle, although many managers today view it as an independent concept.

The Theory Z technique developed by William Ouchi, builds on all four foundations and uses them to create a comprehensive framework to provide guidance for administrators in higher education who want to improve the performance of their units. Theory Z management is a model for positive administrative change.

The higher education administrator must thoroughly understand the management concepts discussed in order to apply the appropriate concept to match his or her leadership style. Application of the appropriate management concept to leadership style can be a foundation for achieving effectiveness and excellence in the organization.

By the turn of the 20th century, leadership in American public education had gravitated from the part-time educational evangelists who had created the common-school system, to a new breed of professional managers who made education a lifelong career and who were reshaping the schools according to canons of business efficiency and scientific expertise. The educational administrators of this progressive era had an interest in moral and civic training, a passion for efficiency, and a desire to combine new bureaucratic techniques with traditional ideals of character. (42) Instead of trying to mobilize local citizens to act, the 20th century administrators sought to take schools out of the political arena and to shift decision making upward and inward in hierarchical systems of management.

In the fall of 1910, America was captured by a new idea that came out of the nation's capital. That idea was a new system of industrial management known as "scientific management," developed by Frederick Taylor. As early as February 1911, educators began responding publicly to the demand to apply scientific management to school administration. One of the leading educational administrators in the period between 1915-1934, Ellwood P. Cubberley, dean of the School of Education at Stanford, described the emergence of scientific management and of educational efficiency experts as "one of the most significant movements in all of our education history." Cubberly added that this movement would "change the whole character of school administration." (10)

Higher education experimented with the succeeding management approaches: applying information technology and automation, management by objectives (MBO), modern organization theory and contingency theory. But by the 1960s and 1970s, administrators began to wonder who controlled the university/college system. Administrators did not know how to behave. During the 1970s, existing management techniques and applications appeared inadequate to cope with declining productivity and deterioration of employee morale and motivation. Management practitioners and philosophers continued to search for a better approach to solving today's complex organizational problems.

Currently, the Theory Z style appears to have positive aspects. Its principal objective is developing an organization characteristic with a cohesive culture. The organizational style is a democratic/human relations process. There is an organizational climate of caring, support and mutual trust. The result of this wholistic orientation is greater productivity and increased employee satisfaction. Theory Z, adapted for use in higher education, challenges the traditional static notion of authority and provides a model for positive administrative change for the 1980s (Redinbaugh and Redinbaugh, 1983 0, 30).

Leadership Skills: 1985 and Beyond

In the past, leaders have often simply emerged. They have drifted into positions of leadership or have been drafted for leadership roles. Reliance on emergent leadership is no longer sufficient. More highly organized and deliberate attempts to develop leadership are called for. Leadership development programs are often sponsored by local governments, school districts, business organizations and institutions of higher education.

Prospective leaders are taught what is known about leadership through the use of diagnostic instruments in an attempt to ascertain a participant's management/leadership styles, personality characteristics and psychological attributes, etc. Cunningham (16) describes some of the leadership skills that can serve as valuable aids of leadership/management in the future

1. Focusing on the present and future simultaneously —dealing with change.
2. Appraisal skills—ability to pass judgment on a range of matters.
3. Managing symbols—behavior creates images in constituencies that become basis for appraisals.
4. The leader as teacher—know the mission, goals and objectives and teach them continuously.

The Presidency

The presidency, the highest administrative office on a college or university campus, should represent the ultimate and best indicator of where higher education administration is heading. To better understand the role of president, it is necessary to again reflect on the history of higher education, its growth, historical changes, social developments and the economy.

Using Kansas State University, one of the first land-grant universities in the country, as an example, its choice of presidents mirrors this history. The first three presidents —Denison, Anderson, and Fairchild—were ministers; the next nine—Will, Nichols, Waters, Jardine, Farrell, McCain and Acker, with the exception of Milton Eisenhower—were primarily academics who worked their way up through the ranks of first faculty member, then department head, and eventually dean or other successive administrative or leadership positions. (11, 43)

The levels of administration have remained basically the same: state Legislature and governor at the top; Board of Regents next; president reporting to the Board of Regents; and across the organizational chart, academic and support staff.

On the academic side of the traditional provost or vice president for academic affairs leads deans and department heads below with little change. The difference has occurred in the support staff area—vice presidents for business, student affairs, facilities and numerous levels below to provide accounting, personnel, housing, legal and counseling services. The numbers and levels have multiplied. (7)

The dispersion of power from the president has resulted in the present reassessment of the position. Comments such as "omnipotent to impotent," and "minister to manipulator" are becoming realistic definitions or descriptions. (26, 28, 46) The emphasis on knowledge of business and management practices, fund raising, and communication is consistently promoted, indicating that the president and university leadership is going farther away from the academic background to the professional administrator. (18, 26, 27, 29)

How true is this contention? Kansas State University is again seeking to fill the position of university president. The advertisement and position description is asking for someone who can:

> "...articulate a vision of what the university can be in the coming decades... inspire public confidence... communicate ...an appreciation for the appropriate place of instruction, research, student recruitment and retention, cooperative extension and intercollegiate athletics... present evidence of exemplary leadership ... include accomplishment in human motivation, strategic planning ... possess scholarly academic credentials; an earned doctorate or appropriate terminal degree."

None of these requirements differ a great deal from what was needed or sought for the past 50 years. Especially the "academic credentials." Nowhere does it require studies in administration, degrees in management, or other evidence of educational preparation.

After studying the history and development of higher education administration, through the growth period, both in size, complexity and sophistication, the question needs to be asked again. Is higher education administration becoming a profession—are the leaders of our universities trained in "a vocation requiring knowledge of some departments of learning or science?" (Rand McNally definition of a profession). Is the next generation going to represent people trained as administrators, rather than academics? Public opinion and the literature review of higher education say it is. Practical and current indications say no—at least not on the academic side or at the level of the president. There is a preponderence of professional types on the service side of the organizational chart and they may eventually extend to the level of the Board of Regents, Legislature and the governor.

However, the other side appears to be staying with the status quo. A review of the "Bulletin Board" section of **The Chronicle of Higher Education** supports this contention. The primary requirement for deans and department heads is still a scholarly faculty background and is carried through to the position of president. Except for small, private, special institutions, most schools want to promote the academic image as the prime focus. The day when the department of mechanical engineering hires a non-mechanical engineer graduate of higher education administration for department head, does not seem to be nearing. As Provost Neil L. Rudenstine of Princeton University was quoted in The Chronicle of Higher Education, "I don't think you can be an academic administrator unless you are first an academic ... I think it would be odd to start out trying to be an academic administrator." (40)

It appears that in the future the requirements for president will continue to be that of academician, but with specific traits to meet the challenges of both internal and external forces. The primary concerns will continue to be the dealing with "competition between groups or individuals for power and leadership." This quote is the definition of politics from the Webster dictionary. Therefore, the image of the next generation of presidents is not the professional administrator, but the scholar/politician.

Conclusion

In summary, higher education administration will need to change course in the next decade. Historically, it has paid little attention to the internal and external factors influencing its environment. Traditional methods of academic administration were adequate for almost a century of growth. Today, however, higher education is being challenged by insufficient financing, outdated curricula, ineffective use of resources, and declining enrollments. To overcome these odds it may need to become less specialized, and more diversified at both the individual and curriculum level. This must be reflected in the knowledge available and required by all educators, since these professional skills may be necessary for survival.

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References

1. Andrews, J., "International Perspective on the Preparation of Educational Administrators." In: Farquhar, R.H., Housego, I.E., (eds.). **Canadian and Comparative Educational Administration.** University of British Columbia, Vancouver, British Columbia. 1980.
2. Bacharach, S.B. and S.M. Mitchell. "The Sources of Dissatisfaction in Educational Administration: A Role-Specific Analysis." **Educational Administration Quarterly.** Winter 1983. 19(1) 101-128
3. Bekalis, M.J., "Power and Purpose in American Educa-

tion." **Phi Delta Kappan,** September 1983, 7-18.

4. Balderston, F.E. **Managing Today's University.** San Francisco, Calif.: Jossey-Bass Publishers, 1974.
5. Blackwell, T.E. **College and University Administration.** New York: The Center for Applied Research in Education, Inc., 1966.
6. Bledstein, B.J. **The Culture of Professionalism: The Middle Class and the Development of Higher Education in America.** New York: W.W. Norton & Co., 1976.
7. Brown, A., "How the Administration Grows: A Longitudinal Study of Growth in Administration at Four Universities," **Research in Higher Education,** 14, 1981, 335-387.
8. Brown, R.H., "Bureaucracy as Praxis: Toward a Political Phenomenology of Formal Organizations," **Administrative Science Quarterly,** 1978, 23, 364-382.
9. Brubacher, J.S. and W. Rudy. **Higher Education in Transition.** New York Harper & Row, 1976.
10. Callahn, R.E. **Education And The Cult Of Efficiency.** Chicago, IL: The University of Chicago Press, 1962.
11. Carey, J.C. **Kansas State University: A Quest for Identity.** Lawrence, Kan.: Regents Press of Kansas, 1977.
12. Corsan, J.J. **The Governance of Colleges and Universities.** New York: McGraw Hill, Inc., 1975.
13. Culbertson, J. "Educational Administration: Where We are and Where We are Going." In: Farquhar, R.H., Housego, I.E. (eds.), **Canadian and Comparative Educational Administration.** University of British Columbia, Vancouver, British Columbia, 1980.
14. Culbertson, J.A., "Leadership Horizons in Education," **Educational Administration Quarterly,** Summer 1983, 19(3), 273-296.
15. Culbertson, J., et al. **Social Science Content for Preparing Educational Leaders.** Columbus, Ohio: Merrill, 1972.
16. Cunningham, L.L., "Leaders and Leadership: 1985 and Beyond," **Phi Delta Kappan,** September 1985, 17-20.
17. Educational Research Service, "Inservice Programs for School Administrators and Supervisors," **Educational Research Service,** Arlington, Va. 1974.
18. Ferrari, M.R. **Profiles of American College Presidents.** East Lansing: Michigan State University Press, 1970.
19. Greenfield, T., "Theory about Organization: A New Perspective and its Implications for Schools." In: Hughes, M.G. (ed.), **Administering Education: International Challenge.** London: Athlone Press, 1975.
20. Griffiths, D.E., "Intellectual Turmoil in Educational Administration," **Educational Administration Quarterly,** 15(3), 43-65.
21. Griffiths, D.E., "Evaluations in Research and Theory: A Study of Permanent Resources," **Educational Administration Quarterly,** Summer 1983, 19(3), 201-221.
22. Hess, F., "Evolution in Practice," **Educational Administration Quarterly,** Summer 1983, 19(3), 223-248.
23. Karol, N.H. and Ginsburg, S.G. **Managing the Higher Education Enterprise.** New York: John Wiley & Sons, 1980.
24. Kent, R.A. (ed.). **Higher Education in America.** Boston: Ginn and Co., 1930.
25. Kerr, C. **The Uses of the University.** New York: Harper & Row, 1963.
26. Knight, W.H., "The American College and University President: From Minister to Manipulator," Graduate Paper, Kansas State University.
27. Mayhew, L., "Emerging Concepts of the Presidency," **Journal of Higher Education,** 42(5), 353-367.
28. McClenney, B.N., "The President as Manager," **Community and Junior College Journal,** April 1978, 48(7), 26-33.
29. Miklos, E., "Evolution in Administrator Preparation Programs," **Educational Administration Quarterly,** Summer 1983, 19(3) 153-177.
30. Miller, T.K., Winston, R.B., Jr., and Mendenhall, W.R., (eds.). **Administration and Leadership in Student Affairs.** Muncie, IN: Accelerated Development, Inc., 1983.
31. Orlin, L.L., "The Concept of an Apolitical University," **The Journal of General Education,** Summer 1981, 23(2), 93-101.
32. Owens, R.G. **Organizational Behavior In Education.** Englewood Cliffs, NJ: Prentice-Hall, Inc., 1981.
33. Rausch, E. (ed.). **Management in Institutions of Higher Learning.** Lexington, Mass.: Lexington Books, 1980.
34. Redinbaugh, L.D. and D.F., "Theory Z Management at Colleges and Universities," **Educational Record,** Winter 1983, 26-30.
35. Rudolph, F. **The American College and University: A History.** New York: Random House, 1962.
36. Silver, P. and D. Spuck. **Preparatory Programs for Educational Administrators in the United States.** Columbus, Ohio: University Council for Educational Administration, 1978.
37. Spindler, G., "The Role of the School Administrator," In: **Education and Culture: Anthropological Approaches.** New York: Holt, Rinehart and Winston, 1973.
38. Stauffer, T.M. (ed.). **Quality—Higher Education's Principal Challenge.** Washington, D.C.: American Council of Education, 1981.
39. Stoke, H.W. **The American College President.** New York: Harper & Brothers, 1959.
40. **The Chronicle of Higher Education.** "Launching a Successful Career in Academe: 32 Administrators and Professors Offer Advice," September 4, 1985, 42.
41. **The Chronicle of Higher Education.** "Typical Chief Academic Office," November 27,1985, 1.
42. **The Control of the Campus.** Washington, D.C.: The Carnegie Foundation for the Advancement of Teaching, 1982.
43. Tyak, D. and Hansot, E. **Managers of Virtue.** New York: Basic Books, Inc., 1982.
44. Willard, J.T. **History of Kansas State College of Agriculture and Applied Science.** Manhattan, Kan.: Kansas State College Press, 1940.
45. Willower, D.J., "Evolution in the Professorship: Past, Philosophy, Future," **Educational Administration Quarterly,** Summer 1983, 19(3), 179-200.
46. Wygal, B.R., "The President as Manipulator," **Community and Junior College Journal,** April 1978, 48(7), 6-8.
47. Zuelke, D.C., "Somebody Does It Right: Field Experience for Preservice Administrators," **Phi Delta Kappan,** December 1983, 296.

The knowledge of what principals value in teachers is important to both the teacher and the principal.

Principals' View of the World: Identification of Valued Teacher Characteristics

by Mary Lou Fuller and H.B. Slotnick

There was an aura of joy that delighted the children, and me, the principal.

With the words, an elementary principal described the best teacher who ever taught for her. Her observation is interesting, but it stops too soon: It doesn't describe those teacher characteristics that result in the "aura of joy." Stated more generally it doesn't identify those characteristics the principal valued in the described teacher.

The study examines elementary principals' perceptions of good teachers. It was a study designed to determine what elementary principals value in teachers. This information is important because of the impact principals' values have on a variety of areas within education.

The knowledge of what principals value in teachers is important to both the teacher and the principal. For practicing teachers, this information bears upon professional issues: teacher development, hiring, placement, evaluation, tenure and dismissal. For preservice teachers, the issues bear on admission policies (e.g., What personal characteristics are to be sought?) and curriculum (e.g., What skills should [can] preservice teachers be taught?).

For principals, knowledge of those issues allows development of self-awareness and makes explicit the issues under consideration when working with the people they supervise.

Review of Literature

She treats each child as someone special and tries to make learning a very special experience for every student.

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The quote beginning this paper spoke of a teacher's enthusiasm—this one speaks of warmth and humanization of instruction—both hallmarks of effective teachers.

The research uses labels such as "good," "effective," and "superior," and tends to look at collective behavior patterns. There is very little literature dealing with the *best*: Those teachers whose exceptional abilities set them apart and who truly deserve the Master Teacher designation.

In examining elementary principals Tuckman found that they appear to prize teachers who are warm, accepting, highly organized and creative (1977). These characteristics are also cited in the effective teacher research with this body of literature identifying additional specific behaviors as well. Some of these specifics are personal interest in students, willingness to listen to students (Sears, 1940); warmth, consideration, caring (Cogan, 1958; Tikunoff, Berliner and Rest, 1975; Reid, 1962), and enthusiasm (Maslin, 1963; Rosenshine and Furst, 1973).

Hamachek (1985, p. 315) classified the attributes of effective teachers under the categories of personality and intellectual traits.

Personality Traits. Effective teachers appear to be those who are, shall we say, 'human' in the fullest sense of the word. They have a sense of humor, are fair, empathetic, friendly, enthusiastic and more democratic than autocratic. Warmth, enthusiasm and humanness are important considerations when it comes to figuring out what it is that contributes to the psychology and behavior of effective teachers. However, these qualities are practically useless possessions if they are not accompanied by certain intellectual abilities.

Intellectual Traits. These abilities include understanding the use of teacher expectations (Brophy and Goode, 1973); knowing the subject matter, good communications skills (Barr, 1929); and recognizing and dealing with students' needs. While intellectual traits are essential to being an effective teacher, such individuals are nevertheless student-oriented as opposed to subject-oriented (Brophy, 1980).

Another way of looking at personality traits and intellectual skills is to examine what good teachers *are* and what they *do*. Using this framework, Olivia and Hanson developed Florida's 23 Essential Generic Competencies, a list divided into five general areas: communications skills, basic knowledge, technical skills, administrative skills an interpersonal skills.

In summarizing the research, Hamachek (1985, p. 326) notes the repetition of certain effective teacher characteristics: " . . . current research findings allow us to say that certain patterns of teacher behaviors are more likely to be associated with greater frequency among teachers who are effective or inefffective as the case may be . . . " These patterns include a warm attitude with firm but reasonable expectations, enthusiasm, knowledge of subject area, responding to students as individuals, providing study guidelines, encouraging and challenging, giving appropriate feedback, maintaining positive rapport, and remaining flexible.

The above traits appear to be exemplified by the description of the following teacher:

> He was sympathetic, intelligent, and had a great sense of humor! His quick smile and relaxed mannerisms seemed to put his students at ease. His concern was genuine and students responded to his teaching. He would spend hours developing the curriculum to meet each student's needs.

Given the observations in the literature, then, our general research question can be expanded to the following:

1. How do principals characterize "good" teachers?
2. How do principals characterize the "best" teachers?
3. Do principals perceive best and good teachers as sharing common characteristics?
4. How do principals' perceptions compare with those in the literature?

Materials and Methods

Sample. Respondents in this study were elementary principals attending the 1984 North Dakota Elementary School Administrators meeting. Continuing education courses are offered as part of the annual meeting, and students from two of those classes were invited to participate in this study. Demographic information including age, gender and years of experience as a principal was collected from each respondent.

Instrument. An open-ended instrument was distributed to all participants. This format allowed respondents to identify attributes of importance to them rather than selecting descriptors we provided, descriptors which may or may not reflect how they felt. An open-ended format meant some attributes might be overlooked by respondents, but we accepted this limitation intending that our results would "estimate the lower bound" of attributes important to principals.

In identifying the best teacher, we asked respondents to recall a specific individual, providing demographic information about this person (gender, age, grades taught), and writing a description of them. The description was subjected to a content analysis producing the lists of attributes we sought.

A more "objective" approach was used to identify "good" teachers; the principals listed 10 attributes of good teachers, and reviewed the list in the same manner as the description of the "best" teachers.

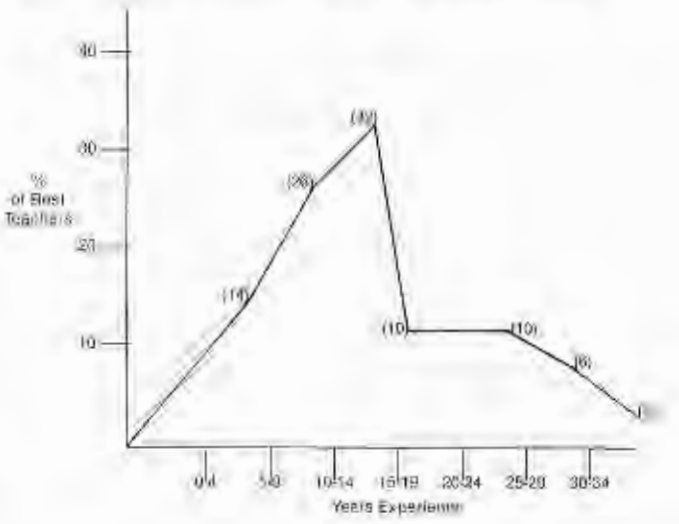
The analytic strategy used in both cases identified all attributes the principals nominated, and then tabulated the number of respondents listing each. Finally a scree test identified attributes mentioned often enough to represent the principals' views of that teacher group (Slotnick, 1982): We used the rule of thumb that any attribute mentioned by half or more was "definitely" characteristic of the teacher group, and any mentioned by one-fourth or more was "probably" representative. Attributes mentioned less often were considered idiosyncratic to either the teacher described or the principal responding.

Results

Sample. Fifty-two of the 60 persons eligible completed questionnaires (87 percent). Thirty-three of these persons were male and 19 female, and 79 percent administered schools with 400 or few students (the median school size was 275 pupils). The median age for the respondents was 43.03 years, and the median years of experience as a principal was 8.71. All had elementary school teaching experience before becoming principals.

Best Teachers. While the age distribution for best teachers indicated approximately equal numbers from age 20-24 to 35-39, the experience distribution was more leptokurtic (see Figure 1): While best teachers were likely to be between 20 and 39 years of age (a 20-year spread), most had 5-14 years of experience. The proportion of men nominated increased from the primary grades to grades 6-8. This probably reflects more men teaching in the higher grades than in the primary grades. (The chi square = 8.8889, df = 2, is significant at p = .0001.)

Figure 1. Ages of Teachers and Years of Experience



Best vs. Good Teachers. Thirteen of the 84 attributes nominated as characteristics of good teachers were listed by 25 percent of principals responding. In the content analysis of attributes of best teachers, 10 of 68 attributes met the X- 25% criterion. Table 1 shows the overlap of attributes of good and best teachers with six of 17 attributes meeting criterion in both groups. Good teachers were characterized by seven additional nominations, best by four. In the former case, the attributes dealt with the teacher generally, while the latter typically described the teacher's one-to-one inter-

Table 1.
Most Nominated Items for "Good" and "Best" Teacher.

Items nominated	"Good" Teacher	"Best" Teacher
Just, fair, honest	X	
Expertise in subject, knowledge	X	
Good discipline	X	
Sense of humor	X	
Positive outlook	X	
Pleasant personality	X	
Good communication skills	X	
Caring, concern, compassion	X	X
Willingness to go the "extra mile"	X	X
Well organized	X	X
Creative, innovative	X	X
Good rapport with staff	X	X
Enjoys students, loves, likes	X	X
Enthusiastic		X
Concern for individual		X
Good rapport with parents		X
Good rapport with students		X

actions with some other person. The common attributes are a collection of both general and those concerning one-to-one interactions.

Discussion

Sample. While the response rate was high (87 percent), the lack of random sampling means that caution must be used in generalizing the findings reported here.

Instrument. No problems were encountered in data collection and analysis; respondents had no difficulties understanding what was expected of them, in responding to both the prose (best teacher) and the listing (good teacher) questions.

Fewer attributes were nominated for best teacher than good teacher, and about 15 percent of the attributes for each group reached the 25 percent criterion. While it is possible the 84-to-68 advantage for good teachers reflects differences in instructions given to respondents, the requirement that items be nominated by 25 percent or more to be considered in further analysis meant that attributes retained were genuinely important without regard to the question's format.

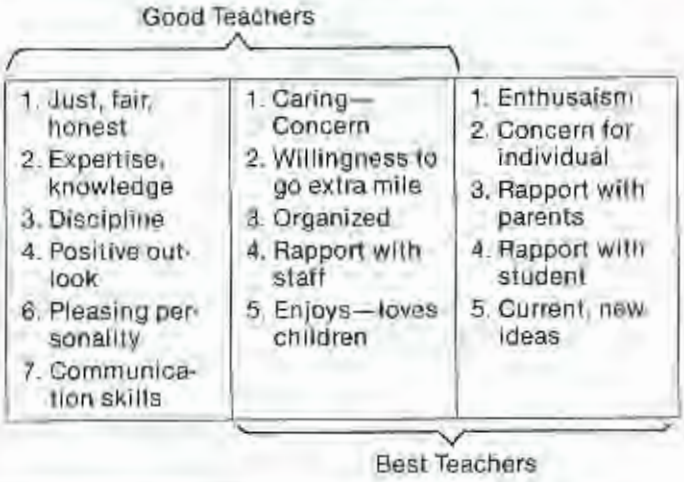
Question 1. How do principals characterize "good" teachers? Attributes (Table 1) of good teachers tended to fall in two general categories: general professional skills (e.g., communications), and personality traits (e.g., sense of humor). Good teachers must have mastered basic professional skills and have certain personality attributes which facilitate working with people (e.g., a sense of humor).

Question 2. How do principals characterize the best teachers? Items attributed solely to the best teachers included enthusiasm, concern for the individual, good rapport with parents, good rapport with students, and new ideas. Apparently, some of the characteristics of the good teacher are prerequisite for the bet teacher qualities: Expertise and knowledge must be mastered before much time and energy can be spent on developing new ideas; a sense of justice, fairness and honesty are prerequisites for an appreciation of the individual; a sense of humor and a positive outlook are important factors in developing enthusiasm; and communication skills and a pleasing personality contribute to establishing good rapport with parents and students. The feature underlying three of the four attributes is the teacher's working with persons as individuals.

Question 3. Do principals perceive best and good teachers as sharing common characteristics? Some attributes are common to both groups: caring and concern; willingness to go the extra mile; organization; creativity; rapport with staff. While some of the good teacher characteristics involve basic professional skills (expertise and knowledge, discipline and community skills) only one item in the common group (organization) might be categorized this way, and none of the best teacher traits deals with basics. Apparently, basic professional skills are mastered before a teacher enjoys the "best" designation.

Question 4. How do principals' perceptions compare with those in the literature? This is important because the literature on effective teachers is authored primarily by persons (such as educational psychologists) who are not elementary principals. This difference in perspective means that while principals take a relatively broad look at their teachers (e.g., Do children seem to learn in the classroom?, How much administrative energy is required to supervise the teacher?, How does the teacher deal with others such as parents and other teachers?), the educational psychologists' view is much more focused on learning and learning outcomes (e.g., Rosenshine and Furst, 1973).

Figure 2
Continuum of Good and Best Teacher Characteristics



Hamachek (1985, p. 326) sees the commonalities in the effective teacher literature as:

1. warm attitude with firm but reasonable expectations,
2. enthusiasm,
3. knowledge of subject area,
4. responding to students as individuals,
5. providing study guidelines,
6. encouraging and challenging,
7. giving appropriate feedback,
8. maintaining positive rapport, and
9. remaining flexible.

First, the research literature identifies having a "warm but firm attitude" which appear in the principals' two attributes of good teachers: Such teachers are just, fair, and honest, and have a pleasing personality. We see warmth as deriving from a pleasing personality, and firmness from being just and fair—demanding the appropriate levels of performance and behavior from everyone.

Second, "reasonable expectations" overlapped the principals' observation that good teachers have expertise and are knowledgeable. Such expertise allows them to "know" the capabilities of their students, and thus to hold reasonable expectations for them. This expertise comes from knowing both the developmental capabilities of children and the nature of the educational demands being made on them. Third, enthusiasm is a characteristic mentioned by both groups, though the principals see it as characteristic only of the best teachers.

Fourth, knowledge of subject matter is identified by both the literature and the principals as a characteristic of good teachers while (fifth) best teachers establish rapport with individual students. This corresponds to "responding to students as individuals" in the literature.

Sixth, in expressing concern for individuals, best teachers encourage and challenge their students. Certainly, encouragement and challenge do not exhaust the ways in which best teachers demonstrate this concern, but then the

literature's view is more narrow than the principals who made the initial observations.

Seventh, giving appropriate feedback, as noted in the literature (an aspect of communication skills) is an attribute of good teachers. Similarly, communication skills could also cover another of the literature's points, providing study guidelines.

The literature also noted that effective teachers maintain positive rapport with their students, an attribute similarly noted for best teachers.

Finally, flexibility is noted in the literature, but not identified as such by the principals. It is possible that flexibility is covered by other attributes (e.g., going the extra mile—as attributed to best teachers; expertise—as when a teacher tries something new).

A question remaining is whether teachers and principals agree on the characteristics of effective teachers. Grant and Carvell (1980) present evidence showing how teachers and principals agree on "evaluation criteria," defined to include desirable behaviors and attributes. Their findings encourage us to believe that the attributes identified here would also be valued by teachers.

This information can be used by principals in a variety of ways. First, it could help in the development of an awareness as to their individual values, and the implementations of those values. Related (and second), inservice programs might help principals identify their personal values, and determine the appropriateness of those values (e.g., by comparing them to the literature, by comparing them to the goals of the school district). Thirdly, because some of the desirable teacher characteristics are teachable, a principal can develop an instructional plan of action that would encourage teachers to develop in those areas. Also, a principal, when employing new personnel, could be cognizant of personal and professional traits characterized by good teachers. Colleges of education would do well to be aware of the values of the future administrators of their preservice teachers and inform their students accordingly.

Given the data and procedures described in this paper, we have drawn the following conclusions.

1. Elementary principals view the attributes of good teachers as including basic professional skills and positive personality traits.
2. Three of four attributes of best teachers concern working with individuals while the fourth describes enthusiasm.
3. They also see attributes common to both "good" and "best" teachers as a mixture of those described in (1) and (2).
4. Elementary principals' perceptions of the attributes of "good" and "best" teachers generally agree with the effective teacher literature.

Perhaps one of the principals described best teachers succinctly when he said:

Her pupils would rather be in school than at home.

Works Cited

Barr, Arvil Sylvester. **Characteristic Differences in Teaching Performance of Good and Poor Teachers of Social Studies.** Bloomington, Ill.: Public School Publishing Co., 1929.

Brophy, Jere. "Recent Research on Teaching." Occasional Paper No. 40—Institute for Research on Teaching. E. Lansing, Mich.: Michigan State University, 1981.

Cogan, Morris L. "The Behavior of Teachers and the Productive Behavior of Their Pupils." **Journal of Experimental Education** 27 (1958): 89-124.

Good, Thomas L., and Jere Brophy. **Looking in Classrooms.** Boston, Mass.: Allyn & Bacon, 1973 (pp. 25-35).

Grant, Stephen, and Robert Carvell. "A Study of Elementary Schools and Teachers: Teacher Evaluation Criteria." **Education** 5 (1980): 223-226.

Hamachek, Donald E. **Psychology in Teaching, Learning, and Growth.** Boston, Mass.: Allyn & Bacon, 1985

Mastin, Victor E. "Teacher Enthusiasm." **Journal of Educational Research** 56 (1963): 385-386.

Reed, Horace B. "Implications for Science Education of Teacher Competence Research." **Science Education** 46 (1962): 473-486.

Roshenshine, Barak, and Norma Furst. "The Use of Direct Observation to Study Teaching." **Second Handbook of Research in Teaching.** Ed. R. Travers. Chicago: Rand McNally, 1973.

Sears, Pauline S. "The Effect of Classroom Conditions on Strengths of Achievement Motive and Workout of Elementary School Children." **Journal of Abnormal Social Psychology** 35 (1940): 498-536.

Tikunoff, William J., David Berliner, and Roy C. Rist. "An Ethnographic Study of the Forty Classrooms of the Beginning Teacher Evaluation Study." In Technical Report No. 75-10-5. San Francisco, Calif.: Far West Regional Laboratory, 1975.

Tuckman, Bruce. "Teacher Behavior is in the Eye of the Beholder: The Perception of the Principals." Paper presented at the Annual Meeting of the American Educational Research Association, New York, N.Y., 1977.

Current professional discussion of curriculum and instruction issues is dominated by a technological curricular orientation.

Movement Away from a Technological Conceptualization of Curriculum

by Sandra J. LeSourd

Current professional discussion of curriculum and instruction issues is dominated by a technological curricular orientation. Instructional planning and implementation are characterized by procedures believed to be effective in bringing about manifest signs of learning. Some implicit assumptions can be identified in the technological conceptualization. One assumption is that learning proceeds best in an ordered progression. Another is that the occurrence of desired learning can be detected. Finally, efficiency is the assumed primary rationale for the methods of design and delivery of instruction.

Technological Conceptualization

Curriculum materials and practices which exemplify the technological conceptualization are common in schools. Entire descriptions of intended teaching and learning consist of a set of precise specifications of instructional routine and sequence. A main component of a technical curricular design is the state of behavioral objectives or performance competencies. Deliberately executed instructional sequences are planned to ensure progress toward objective or competency attainment. Learning is deduced from students' ability to perform the behaviors stated in the objectives. A system of measurement, such as a test, is necessary. In the technological conceptualization, learning is conceived as a progression through discrete, sequential steps. Students' mastery of precisely specified tasks is regarded as the ultimate aim of teaching.

Educators, who subscribe to the technological conceptualization, view the curriculum as a mechanical system controlled by the aim of efficiency. Primary attention is devoted to the link between the means of instruction and the often unquestioned, discrete skills which are cited as the intended ends of instruction. Estimation of the value of the objectives as worthy educational ends is not a priority in technological curricular considerations. The fundamental paradigm is scientific and psychological, not humanistic and philosophical.

Tyler's seminal work in curriculum design provided the foundation for the scientific, technical conceptualization (1950). Tyler recommended a planning procedure which emphasized the relation of means to ends. His simply-stated steps including clarification of purpose, selection and organization of supporting learning experiences, and evaluation to determine if purposes are achieved, provide a basic framework for a technological procedure. Recent work in instructional system design represents amplification and refinement of the means-ends orientation (Gagné and Briggs, 1979). The strategies of instructional system design introduce a high degree of precision using psychological learning theory and concomitant instructional technique as the base for managing learning.

Rationale for Technological Conceptualization

There are plausible pragmatic explanations for the popularity of the technological conceptualization. For example, concurrent development of psychometrics as a science has enabled precise statement and measurement of learning outcomes. Clearly, reliance upon proof that means have effectively led to ends requires valid and reliable measurement tools.

Another contributing explanation may be derived from the conservatism of the recent national sociopolitical climate. There is an apparent public demand for knowledge of teaching results in subjects which are interpreted as basic to functional citizenship (Herchinger, 1981). A systematic curriculum design with explicit specification of exact skills and knowledge to be learned, and proof that the specified learning has occurred, is a convenient response to the public request for accountability in education.

Aside from the professional expertise or societal attitudes of the time, an explanation drawn from deep and lasting sources should also be entertained. Fundamental ideological beliefs are inherent in the assumptions of the technological conceptualization. The rationale for the operational procedures of technical curricular design illustrates endemic precepts of a scientific culture. Western reason and explanation depend upon knowledge of what is real. Real phenomena are expected to be observable or verifiable. In addition, the existence of orderly relationships among real phenomena is assumed. A common relationship, which is sought repeatedly for its explanatory power, is the order of cause to effect.

The conviction that phenomena which are verified can be regarded as real is consistent with the tradition of logical positivism (English, 1983). The domination of this ideological tradition in the culture is commensurate with the prominence of the technological curricular approach. Materials and classroom instruction of the technological curriculum age exemplify attempts to make learning verifiable. Educators assume the phenomenon called learning can be demonstrated by the learner, observed by the teacher, and verified through assessment. The behavioral and skill performance aspects of schooling are emphasized to make verification possible. It is believed that effective measurement instruments provide proof of the existence and degree of learning. Educators' attempts to make learning manifest resemble the cultural aspiration to verify reality.

A second characteristic of the western system of rationality is the assumption that phenomena are ordered and

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that the order can be discovered and described. This cultural precept is represented in means-ends curricular design. Instructional designs, the means, are conceived as causal agents in the production of test results, which are the ends of instruction. Thus, educators affirm their belief in the cause-effect relationship. If reality can be understood by description of events which bring about certain other events, then so can learning. In fact, the direct cause-effect relationship between identifiable variables is a statement of logic which is habitually both in and out of school. It is basic to the methods of scientific investigation which control professional inquiry into the universe of reality.

Teachers' Commitment to the Ideological Rationale

If we accept the proposal of a link between the tenets cited and the operation of a technological curricular conceptualization, we may question whether teachers share a commitment to those tenets. Does the thought that education in practice is a reflection of the convictions of teachers represent a valid presumption? It seems reasonable to expect to detect the tenets of logical positivism in the thinking of teachers who customarily implement means-ends curricular designs. Presumably, good instruction is more likely if curricular rationale and teacher beliefs are similar.

To conduct an informal consideration of the correspondence between curricular precepts and teacher beliefs, I administered an ideological questionnaire of my own design to 15 inservice teachers who were enrolled in a graduate course in curriculum. During class discussion the teachers reported using behavioral objectives, controlled management of skill practice, and frequent measurement of learner progress. They shared a history of implementers of means-ends curricula in various subjects and at various grade levels.

The responses to the questionnaire suggest some ambiguity in the group. All the teachers agreed with a statement that there is a direct link in reality between the occurrence of observable events and some preceding events. Thus, an acceptance of the notion of relationship between events was uniformly supported. However, the uniformity of the group was not maintained in reference to other questionnaire items. Seven of the 15 teachers agreed that order among the elements of reality can be discovered, while five responded that reality is controlled by forces which are beyond human understanding. Eight agreed with the suggestion that events have rational causes is a defensible base for curriculum design. While the teachers in the class indicated support for a belief in order between events, the group was less inclined to agree that the order could be discovered or that it should constitute the rationale for curriculum. They all gave some indication of belief in an ordered universe, but some did not accept the notion as verifiable or as a suitable guide for curriculum practice.

Two of the 15 teachers agreed with a statement that schools should convey only knowledge which is verifiable. Apparently, the majority of the teachers in the class view worthwhile knowledge as including more than the observed elements of reality. This leaves the curriculum open to subject matter which does not satisfy logical positivism's criterion of verification.

Despite their reservations about some tenets expressed in the questionnaire, the teachers claimed to be active practitioners of technological curricular procedures. The questionnaire responses suggest the hypothesis that teachers may carry out operations which are not completely supported by their personal ideological stance.

Movement to Alternate Conceptualization

The technological conceptualization has sustained an impressive period of entrenchment in American education. One explanation for its popularity may derive from the close relationship to the ideological tradition of logical positivism. A dramatic break from the technological conceptualization and proposal of an alternate envisioned approach would require substitution of a new rationale. The contention that the current technological rationalization has roots in the cultural ethos implies that alternate justifications will come from the same source.

One recent presentation of an alternative to the technological emphasis turns attention to an appeal for more comprehensive school learning (Eisner, 1982). Eisner criticizes the technological conceptualization for its strict governance of design and consequent limitation of content. He maintains that the means-ends priority, concentration upon basic literacy and numeracy requisites, and concern for confirmation of progress in discrete skills, have produced a narrow conceptualization of the substance of learning. The result is an inadequate education in the variety of forms of human endeavour which contribute to an intelligent life guided by the pursuit of meaning. Eisner presents an expanded version of curriculum which allows expression of meaning through multiple forms of representation which include the fine arts.

Critical reaction to the technical emphasis invites a philosophic examination of what learning is worthy of attainment (English, 1983). Decisions of this nature will require a search for value priorities. To be consistent with the hypothesized existence of a relationship between the means-ends rationale and the cultural dedication to logical positivism, an alternate conceptualization proposes a need for a new cultural foundation. It will be necessary to determine which cultural precepts will guide an alternate conceptualization of curriculum.

It is unclear whether there is a need for teachers to possess a strong positive conviction toward the tenets of a curricular conceptualization. Perhaps in the technological period, the prescriptive nature of instructional design has precluded teacher identification with the ideological tenets. Teachers may simply implement a means-ends plan regardless of the power of the rationale in their own thinking. Perhaps teachers are practitioners in an exclusive sense. Possibly, the rationalizations which influence the selection and design of learning experiences are irrelevant to the teacher's main task of actually conducting the experiences.

References

Eisner, E.W. (1982). **Cognition and curriculum: A basis for deciding what to teach.** New York, N.Y.: Longman.

English, F. W. (1983). Contemporary curriculum circumstances. In F. W. English (Ed.), **Fundamental curriculum decisions** (pp. 1-17). Alexandria, Va.: Association for Supervision and Curriculum Development.

Gagné, R. M. and L. J. Briggs (1979). **Principles of instructional design**. New York, N.Y.: Holt, Rinehart and Winston.

Hechinger, F. M. (1981). **Educational agenda for the 1980s.** Bloomington, Ind.: Phi Delta Kappa Educational Foundation.

Tyler, R. W. (1950). **Basic principles of curriculum and instruction: Syllabus for Education 360.** Chicago, Ill.: University of Chicago Press.