In this document the implications of rapid social change and the need for educators to prepare teachers and administrators for future educational innovation are discussed. Suggestions for change in schools of higher education are made in the following areas: (1) Anticipating problems. Educational change will inevitably be faced with criticism, and it is important that problems be anticipated as far as it is possible and preventive or remedial actions planned in advance. Major problems are most likely to be of six types: resistant individuals and groups, resource allocation, role expectations, availability of instructional materials, and provision of field-based experiences. (2) Change Strategy. To be prepared for change, a strategy must be developed. Five points are made on this subject: (a) Identify basic assumptions and objectives, obtaining participation of all those who may be involved in developing and implementing the program. (b) Develop specific objectives to form the basis for program development. (c) Develop implementation procedures, including specific components of the system and group and individual functions. (d) Install the system, providing faculty time, encouragement, and incentive. (e) Provide for feedback regarding operation of the system, evaluate, and revise. (3) Organizational structure. The prime organizational ingredient is support from the highest administrative levels of the college and university and from the dean and/or department head. The change effort should be seen as central to the total teacher education effort. The suggestions in this article are made to help future-centered teacher education to apply sound management techniques to program improvement efforts. (JD)
Recent proposals to improve teacher preparation have emphasized giving attention to the development of specific teaching competencies and to the need for "school-based" programs. "Competency-based" concepts (including the narrower "performanced-based" ideas) require that teacher preparation programs make explicitly known to student the competencies they are to acquire and the means to be used in determining the adequacy of competency development. The student must either be able to demonstrate ability to promote desirable learning or exhibit behaviors known to promote it. "School-based" programs emphasize early and continuous involvement of teacher education students in elementary and secondary school classrooms, with school practitioners intimately involved in the design, control, and operation of school-based teacher education experience.

Most teacher educators now at least give lip service to the need for changing preparation programs in accordance with the above premises. To do otherwise invites both the scorn of "authorities" and the wrath of citizens and legislators demanding "accountability." Proposals and verbal acceptance do not add up to action, however, and as yet little substantive change has occurred in most teacher pre-
eparation programs. Smoke and dust are produced by energetic deans and "innovators," but an objective observer can usually find little real improvement or even significant change at most colleges and universities preparing teachers.

It's time to stop talking, or at best, playing with insignificant pieces of teacher preparation programs. There is now enough experience and evidence available from several years of fitful starts and stops to provide an intelligent base for concrete action to provide better beginning teachers. Most of us in teacher education realize we should do more to improve our programs, but we usually haven't had the opportunity to learn how to get it done. Much theoretical literature is available, but few specific "how to" suggestions can be found.

The suggestions in this article are made in an attempt to gather the collective experiences and reactions of those who recently have been most active in attempts to improve teacher education, with the purpose of giving practical help to others who are serious about preparing better teachers. Provision of a "recipe" is not intended, but some practical suggestions will be made, with the understanding that these should be somewhat modified to suit individual situations and preferences.

RATIONALE AND ASSUMPTIONS

Authorities agree that our society and the world in general will continue to change at an increasing speed.
Alvin Toffler, Harold Shane, and others have pointed out the extreme dangers of failure on the part of schools and other social institutions to adapt to the revolutionary needs resulting from these changes. Surrounded, and somewhat overwhelmed, by such statements and prophecies, educators must still devise systems to help future adults cope with their world. These systems must be built on a rationale and assumptions appropriate to both the present and the future. An appropriate label for them would seem to be "future-centered teacher preparation."

Assumptions related to education and educational institutions which will continue to be valid during this decade and into the next have been proposed by numerous individuals and groups. A summary would include the following:

1. Pressures for changes in American and worldwide social structures will persist and probably increase.
2. The numbers and types of people served by educational systems will continue to expand.
3. The continued rapid growth of knowledge will require extensive adjustments in curriculum content and emphasis.
4. Competition for public funds will become more severe.
5. Education, as a social institution, will develop an increased world perspective.
6. Education will increasingly become a lifelong endeavor.
7. Educators will be even more subject to the scrutiny and demands of an informed and demanding clientele.
8. Student expectations and attitude toward school will become more questioning, with increasing demands to influence school operation.
9. Additional changes in family and community life will put heavier burdens on schools.

Translating general statements about societal changes and implications for education into specific recommendations for the preparation of teachers is our next task. Several assumptions appear appropriate and helpful:

1. Significant learning occurs only when a person perceives the task to be personally rewarding and self-enhancing.
2. Positive, supportive environments best facilitate individual learning and development.
3. The individuality of each student requires adaptation to personal and professional needs, rates and ways of learning, and learning materials and environment.
5. Practical, field-based experience in a variety of settings, must accompany, and be closely related to, classroom learning activities.
6. Competencies to be acquired by students and assessment criteria should be explicit and clearly understood by students and instructional personnel.

7. Modern systems technology should be used in program design and operation, providing continuous feedback, evaluation, and revision of program components.

8. All persons concerned with the education of teachers or affected by the programs should share the responsibility for it.

9. The program should be problem-centered, inter-disciplinary, field-based, flexible, and varied to meet student experience and ability levels.

10. Teaching personnel in the program will work together consistent with principles of teaming and differentiated staffing.

11. Program Components will be integrated through a modern management plan.
PROGRAM DESIGN ELEMENTS

A teacher education program designed to serve the assumptions stated above will be quite different from the standard of today. Variation and flexibility will be paramount—in student goals and how they are achieved and demonstrated; in program components, their content and sequence; in study group arrangements; and in study materials and instructional media. Content will be drawn from three major sources: (1) the disciplines of philosophy, sociology, psychology, history, etc.; (2) research in communications, teaching and teaching behavior, media, group processes and group dynamics, learning, human development, etc.; and (3) empirical sources and experiences. This content will probably be best organized into five content areas: (1) analytical study of teaching, (2) structures and uses of knowledge, (3) concepts of human development and learning, (4) designs for teaching and learning, and (5) demonstration and evaluation of teaching competencies. These content areas may be taught somewhat separately and offered in sequence, but a more desirable arrangement would relate each to the others in as broad a context as possible and organized for individualization to meet each student's needs and desires.

A critical step in determining basic program design elements involves the identification of specific competencies toward which the various programs should be directed. From various competency lists now available and local faculty input, a set of competencies should be developed which is inclusive
enough to satisfy the most important requirements for successful teaching but limited as necessary for implementation within existing constraints.

When desired competencies have been identified, then criteria and conditions for evaluation of their achievement may be developed. These may be as detailed and specific as the individuals involved feel is necessary.

PROGRAM DEVELOPMENT, IMPLEMENTATION, AND EVALUATION

To this point, we have been primarily concerned with the identification of assumptions and principles upon which a future-centered teacher preparation program should be based. This is important, but it is what happens next that can make a difference in teacher effectiveness. A system must be devised and put into operation. The following suggestions about how to get this job done are made on the basis of patterns which have been followed in various experimental and developing programs across the country. They must be adapted according to the realities and desires existing in a local situation.

Anticipating Problems. Problems will be encountered in any endeavor, so problems encountered in developing and operating a new type of teacher preparation program should not be alarming. However, when changes are attempted, those in charge are particularly vulnerable to criticism about the problems which occur. It is therefore, particularly important that problems be anticipated so far as is possible and pre-
ventive or remedial actions planned in advance. Major problems are most likely to be of six types: resistant individuals and groups, resource allocation, phasing, role expectations, availability of instructional materials, and provision of field-based experiences.

Most of the more serious problems of resistance are likely to be related to faculty attitudes, interest, and competence. Competence might seem to be unrelated to resistance to program change, but the most common result of a perceived lack of competence is resistance or at least a lack of enthusiasm. Faculty development, necessary allocation of time (often through some type of load reduction), an appropriate reward system, a non-threatening atmosphere, and strong, competent leadership are the more important requirements for overcoming problems of individual and group resistance. Awareness of group or individual self-interests and entrenched ways of doing things should guide the development of innovative plans and procedures, otherwise they are not likely to get very far.

Resource allocation is both one of the problems to be encountered and a prime opportunity in program development. Too often, change efforts have been attempted in the form of work overload, and this multiplies the other types of problems encountered. Human, monetary, and physical resources must be identified and allocated specifically and adequately to a change program. If this is not possible, then change should
not be attempted. Before deciding that such allocation is not possible, however, some hard questions should be directed at traditional resource allocations.

Phasing of program change efforts is another potential source of both opportunity and problems. Most educators, even those in administrative positions are woefully ignorant of modern management systems techniques. We tend to "fly by the seat of our pants" when some relatively simple ideas about management systems could provide valuable organization, feedback, evaluation, and revision assistance. Some programs need to be phased in gradually, while others are more likely to succeed if a more total program approach is used. Decisions about which approach to take and how to carry through must be carefully made and followed, integrating program components through a modern management plan.

Careful definition of role expectations is another area of operations which business and industry long ago learned is necessary. Some roles in teacher education program development may not be defined as easily or exactly as those in business and industry, but every attempt should be made to provide for clear understanding about roles to be included in the plan of operations. So far as possible, this should be done at the beginning of a project, but it will also need to be a part of the ongoing efforts to improve the operation on the basis of feedback and evaluation. Faculty members, administrators, staff personnel, and student roles should all
be identified, clarified, and clearly understood by all those involved in the program development efforts.

Many teacher education program development efforts have foundered on a lack of appropriate instructional materials. Several years ago, before competency-based and field-based teacher education had gained wide attention, this was an unavoidable problem. It may still be difficult to find appropriate instructional materials, but many materials are now available, and ideas about how to develop others are not hard to find. The important thing is to recognize the importance of instructional materials and provide either for their acquisition or development by local program personnel. Outside sources may be helpful, but adaptations and local development efforts are usually essential.

Provision of adequate and appropriate field-based experiences for students is a particularly difficult problem in areas where large student populations must be accommodated in small towns and cities. This may have severe implications for resource allocation in the form of transportation expenses or the provision of off-campus supervisory staff. Whatever the problems, they must be adequately solved if the necessary school-based experiences are to be available to students.

Change Strategy. A plan to bring about change may take many forms; the important thing is that a change strategy be developed. The following outline includes the more common elements of successful teacher education program
I. Begin by identifying basic assumptions and objectives, utilizing maximum participation of all those who may later be involved in development and implementation of the program.

2. From the basic assumptions and objectives, develop more specific objectives to form the bases for program development and identify student competencies to be included in the program.

3. Develop implementation procedures, including specific components of the system and group and individual functions. This should usually be done both on a total program basis and by each working team.

4. Install the system, providing faculty time, encouragement, and incentive. Many times it is better to begin by changing a small part of the program, using a simple system as possible at first, moving from the traditional program to one involving field-based components, then to a more fully operating CBTE concept. Work within the regular course structure and grading systems so far as possible.

5. Provide for feedback regarding operation of the system, evaluate, and revise. Continue to provide faculty rewards and incentive.

Organizational Structure. A particular organizational structure is not so important to the success of teacher edu-
education program change as is the commitment and resource allocation devoted to it. However, organization can facilitate such efforts and should get adequate attention. The prime organizational ingredient is support from the highest administrative levels of the college and university and from the dean and/or department head. The change effort should be seen as central to the total teacher education effort, not as a peripheral operation carried out by a small minority of the faculty and students. The concept of teaming is usually a good approach, with small groups of faculty and students remaining together for a significant portion, if not all, of the students' teacher education experiences. Each team should have considerable freedom to adapt according to individual needs and preferences of the students and faculty members. Again it should be mentioned that the cybernetic qualities of a systems approach to organization and management should be utilized to the fullest extent possible. Those involved in the change process should volunteer to do so, but they should be amply rewarded and encouraged.

CONCLUSION

Improving teacher education programs is not easy, but it is not impossible, and it deserves more than unproductive complaints, talk, or even proposal-making. Improvements are being made, and enough is now known about program improvement
elements and techniques to provide adequate guidelines for others who are motivated to do more than talk about making teacher education a truly professional enterprise. The suggestions in this article should be helpful to those who wish to profit from what has been learned about "future-centered" teacher education and to apply sound management techniques to program improvement efforts.
REFERENCES


Johnson, Charles E. "Implementing Competency-Based Teacher Education." Athens, Georgia: University of Georgia, 1974.


