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ABSTRACT

This report presents recommendations made by the Minnesota Higher Education Coordinating Board task force on improvement of teacher education programs and curriculum. Chapter one provides the background necessary to understand the origin of the report. The second chapter presents a forecast of future social, economic and political trends, and their impacts and implications for teacher education. Chapter three describes possible changes in staffing patterns, school organization, and instructional methods, based on beliefs about learners and teachers. Identified needs in teacher education are outlined in the fourth chapter. In the fifth chapter, recommended outcomes of future teacher education are described in the areas of dispositions, skills and knowledge. Chapter six discusses current and recommended procedures in evaluating teacher education program effectiveness. A summary and concluding recommendations are presented in the final chapter. (JD)

MINNESOTA'S VISION FOR TEACHER EDUCATION: STRONGER STANDARDS, NEW PARTNERSHIPS

Report of the Task Force on Teacher Education for Minnesota's Future

October 15, 1986

MINNESOTA BOARD OF TEACHING

MINNESOTA HIGHER EDUCATION COORDINATING BOARD

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STRONGER STANDARDS, NEW PARTNERSHIPS

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PREFACE

The profession of teaching is at a unique moment of opportunity. Blue ribbon commissions from many parts of the nation have recommended sweeping reforms of education and of the education of teachers. Recent research about what promotes learning is available. Additional teachers will be needed as student populations again increase and as the state's maturing teaching force retires. And teachers are eager to assume a stronger, more professional role.

Minnesota's response to the challenge of this opportunity has been to consider what future teachers need to know upon completing their pre-service education in order to do their jobs well. We believe that, beginning from this statement of desired results, educators can redesign various programs and see the effect of each approach. Our report offers a comprehensive set of dispositions, skills, and knowledge as the prefered outcomes of teacher education programs. These are derived from a carefully constructed, research based conceptualization of quality teaching. The report recommends characteristics to be expected of all new teachers, regardless of subject specialty or teaching level.

In developing the report, we acknowledged first that our focus must be on the people who are to be educated. In this state, a belief prevails that individuals and human dignity are most important. At last, the means to personalize and individualize education are within our grasp. Thus, recommendations begin with a clear definition of the state's ideals for learners, derived from recent work of the Minnesota Department of Education.

The report also acknowledges that there are many ways to achieve the preferred outcomes, through extended programs, through alternative programs,

through newly forged partnerships of various kinds, through new applications of research findings, and through greater emphasis on deriving generalizations from practical experience. Changed programs of various kinds are possible and their efficacy should be tested.

Our recommendations have not been arranged as a series of priorities, but rather in a developmental sequence. We suggest that teacher educators step back from their routines, reflect on these recommendations, and determine curriculum appropriate to attainment of the goals identified here.

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CHAPTER I. INTRODUCTION

Educators across the nation are concerned about the quality of elementary and secondary education. They also voice concerns about the quality of teacher preparation because of its relationship to student learning. The Minnesota Legislature, sharing these concerns, acted to create the Task Force on Teacher Education for Minnesota's Future.

The Task Force on Teacher Education for Minnesota's Future focused on what beginning teachers should know and how they should act to promote the greatest learning and understanding in their efforts with students. The task force also described a series of actions needed.

In helping to design future teacher education in this state, the task force has been mindful of Minnesota's heritage as a leader in providing quality education for all of its people. Maintaining a perspective that questions and respects the past, the present, and the future, the task force has endeavored to design changes in teacher education that will bring about greater learning among students. The task force has generated a model of teacher education that is founded on a conceptualization of the teacher's role, emphasizes results developed through new relationships, relies on research and extends beyond the conclusion of current formal teacher preparation programs.

BACKGROUND

Legislative action in Minnesota to improve teacher education was guided by several reports and recommendations from education organizations, task forces, business and community groups, and state agencies prior to and during the 1985

session. For example, in January 1985, the Higher Education Coordinating Board adopted a staff report on state policies for teacher education.[1]

The Board of Teaching and Higher Education Coordinating Board both recommended that a task force be convened to define a teacher education curriculum for the future, an issue not addressed in previous studies by these agencies.[2]

In response to these recommendations, and in recognition of the concern for teacher education issues common to both the Board of Teaching and the Higher Education Coordinating Board, the 1985 Legislature directed the two boards to appoint a task force.[3] The task force was directed to study and recommend changes in teacher education programs to meet contemporary and anticipated teaching conditions. The task force designed program outcomes for beginning teachers and measures for evaluating programs to assure that graduates are effective teachers. The report, with recommendations of each board, is to be submitted to the education committees of the legislature by January 1, 1987.

MEMBERSHIP OF THE TASK FORCE

The authorizing legislation specifies that the task force include representatives of the Commissioner of Education, the Board of Teaching, the Higher Education Coordinating Board, teachers, school boards, school administrators, and teacher education students and faculty.

The executive director of Higher Education Coordinating Board and the executive secretary of the Board of Teaching named 23 members in fall 1985. Membership was balanced to represent urban, suburban, and rural schools, beginning and experienced teachers, elementary and secondary levels of instruction and different subject areas.

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1. Minnesota Higher Education Coordinating Board, Recommendations on State Policies for Teacher Education (January 17, 1985).
2. Board of Teaching, Initiatives for Teacher Education (February 15,1985).
3. Laws of Minnesota for 1985, First Special Session, Section 3.5.

CHARGE TO THE TASK FORCE

The Task Force on Teacher Education for Minnesota's Future was charged by the Board of Teaching and Higher Education Coordinating Board to:

- Identify major trends in Minnesota's economic, social, and political environment that will affect expectations for learning in elementary and secondary schools.
- Identify changes in staffing patterns, school organization and instructional methods that will affect the delivery of instruction and the skill expectations of teachers in Minnesota schools.
- Examine the research on effective teaching to identify the knowledge and skills that distinguish excellence in teaching.
- Recommend the generic knowledge, skills and understandings that should be learned by students seeking to become licensed teachers in Minnesota.
- Recommend outcome measures of program effectiveness that should be used by the Board of Teaching to approve institutions seeking to prepare licensed teachers in Minnesota.
- Transmit its report and recommendations to the Board of Teaching and the Higher Education Coordinating Board by October 1, 1986.

WORK PLAN

The task force convened for seven day-and-a-half sessions and three extended retreats. It worked as a whole group and in small groups. The work consisted of consulting with experts, reading and reviewing research literature and educational reports, and writing material for this report. The task force developed several assumptions to guide its work (See Appendix A). Consensus was reached in all areas of the charge.

OVERVIEW OF THE REPORT

The information in this report is organized into seven chapters.

- Chapter I provides the background necessary to understand the origin of the report.
- Chapter II provides a brief forecast of future trends, their impacts, and implications.
- Chapter III provides beliefs about learners and teachers.

- Chapter IV provides information about identified needs in teacher education.
- Chapter V provides recommended outcomes of future teacher education programs.
- Chapter VI provides recommended measures for evaluating teacher education programs.
- Chapter VII provides recommendations for changing teacher education programs and the primary and secondary responsibilities for implementing the recommendations.

CHAPTER II. A FORECAST OF FUTURE TRENDS; THEIR IMPACTS AND IMPLICATIONS

The future is unpredictable given the rapidity of change occurring throughout the world. Futurists can provide little more than informed guesses about the social, economic, and political realities that lie ahead. If educators are to help shape, rather than react to, the future, they must understand trends and their possible impacts. This chapter explores some of Minnesota's changing social, economic, and political trends and their possible effects on education.

SOCIAL, ECONOMIC AND POLITICAL TRENDS, IMPACTS AND IMPLICATIONS

Social Trends

Changes in the total population, in the family and in individuals cause changes in the society.

Since people will continue to migrate from rural to urban areas of Minnesota, the resources available to rural educators will decrease. As a result, educators might need to establish new structures for delivering quality education to rural elementary and secondary students.

Cultural diversity in the population appears to be increasing while the proportion of teachers from minority groups is decreasing. If these trends continue, educators will 1) need to know more about how people come into new cultures successfully and 2) be expected to reinforce efforts to assure minority student access to post-secondary education. Students in education will need actual experiences within the various situations created by population changes to perform effectively as teachers.

Since the number of children with identified special learning needs continues to increase, educators will be required to redefine teaching and school in order to fill the variety of educational needs. Educators must

possess broad and deep knowledge of human growth and development to meet many learner needs in different learning situations.

Family structure in Minnesota has changed and probably will continue to do so. Because of an increase in the number of families with two working parents and the number of single-parent families, educators might be expected to provide more of the learning experiences formerly provided by the family. The responsibility of education might be expected to expand beyond present formal schooling. Teachers might be involved with students in roles other than formal academic instruction.

Although the divorce rate might not increase, remarriages will increase the number of families with children from previous marriages. Stressful family situations caused by divorce, remarriage, or relocation can create barriers to learning. Teachers will need to understand psychological and cognitive implications of stress and motivation. Teachers should understand how to work with students and families together within flexible schedules that accommodate the family. Educators already need to work more closely with community support agencies to meet families' needs. Assumptions underlying school policy and curriculum that have been based on a traditional picture of the family might be obsolete.

Future changes in individual behavior might reflect cultural and economic pressures. If, for example, secondary students continue to work as well as attend school, their time for study will continue to be reduced. Educators will need to design personalized learning programs that incorporate a student's real-life learning as part of the formal academic experience. If, as reported. elementary and secondary students continue to be more sophisticated, assertive, expressive, self-assured, and likely to challenge authority, traditional passive instructional methods might not be effective because students want to know 'why'

and want active involvement. In addition, the trend for young people to gather more information from electronic media than from reading affects the ways learners acquire, understand, and use information, interact with others, and perceive themselves in the world. Thus, educators will need to use a variety of instructional methods and learning environments to support learning that actively involves students.

Cultural pressures and parental expectations to hurry development cause some young people prematurely to experiment with sex or with chemicals. Stressful experiences resulting from unplanned pregnancies or chemical dependence affect the student's motivation and involvement with learning. Educators might need to provide more information about the emotional and health risks of sexual experimentation and chemical abuse. To prevent the rising trend of teen-age suicides, educators will need to assist students in recognizing their self-worth. Educators will need to understand more about how to respond to mental health issues and emotional behavior.

Economic Trends

Minnesota's economy reflects shifts in the balance of trade, deficits, and growing markets for services and information rather than for agriculture and manufacturing products. The problems in agriculture and mining might add to the growing disparity between median family incomes in the metropolitan areas and in the rest of the state, causing a two-tiered economy. As farmers, miners, and business people are forced to leave rural areas, those localities lose millions of dollars in revenues, as well as jobs and support services. The combination of enrollment losses with unpaid debts and taxes might lead to serious problems for schools and teacher education institutions in those areas.

The influx of people to urban areas might burden urban support services, including education. The earning power of displaced people might be severely reduced because of inadequate training for new jobs. Costs in some metropolitan schools might escalate beyond growth in the student population. Financial disparities might force different sectors of the state to compete for resources in order to support schools at current levels. Increased communication and cooperation among schools, teacher education institutions, and businesses can assist in converting such potential competition to an opportunity to provide needed services.

As industries become more automated and service oriented, the need for different skills in the labor force will increase. Future jobs will require workers to learn new skills frequently, to solve problems, make decisions, and relate well to people. Further, individuals might change careers several times during their lifetimes. Schools and teachers will be expected to provide knowledge and skills necessary to adapt to change. Educators will be expected to assist in solving economic problems. Cutting costs will be expected, as will increased quality of education; this might require reallocation of resources along with new methods of distributing state funds.

Political Trends

International trends influence educational politics at national and state levels. Many countries will continue to experience cultural, political, and economic evolution, creating uncertainty and change.

Awareness of global and national issues will always be available through the media, but educators will be responsible for helping students understand the impact of these issues and events. Schools and teachers will need to integrate

global perspectives and the implications of current events throughout curricula. Teachers will need to understand people and cultures beyond Minnesota and the United States.

While single-interest groups tend to influence politics at all levels, efforts will increase to coalesce interests, thus providing larger bases for political action. There will be continued discussion and re-evaluation of education, government, and the economy with the increasing tendency to test social and educational issues in the legislature and in the courts.

Education in Minnesota will continue to be influenced by single-issue politics, the private sector, educational organizations, and advocacy groups. Consequently, while there might be long-range political and economic support for education in Minnesota, educators will need to define better the results of instruction from prekindergarten through post-secondary. Educators will need to address the increased pressure for quick-fix solutions.

While there might be increased regionalization of services for economic reasons, there will also be increased local control, causing increased tension about the locus of control. Legislatively mandated Planning, Evaluation, and Reporting (P.E.R.) committees for the schools will continue to be involved in significant decisions. The schools, educators, and government agencies will need to develop partnerships in order to meet this challenge.

SUMMARY

Education in Minnesota will continue to be effective when it helps meet the international, national, and state needs in the decades ahead. Educators at all levels must be willing to examine their goals and how actively students are involved in their own learning. Students and teachers alike must recognize that learning is more than preparation for a job or career, more than sitting in a

class, and more than accumulating credits toward graduation. The education of teachers must be restructured to meet the anticipated needs of children and youth.

CHAPTER III. LEARNING AND TEACHING FOR TOMORROW

Future social, economic, and political trends will affect the structure of education, thereby influencing the roles of teachers and settings for learning. Learners and teachers who can meet needs of the future are described in this chapter. The chapter also addresses the task force charge to identify changes in staffing patterns, school organization, and instructional methods that might affect the roles of teachers.

The society of the future must have a citizenry that can:

- Think and reason creatively and deliberately.
- Develop sound judgments based on analysis and synthesis of information.
- Communicate effectively in a variety of ways.
- Understand and contend effectively with rapid and constant change.
- Use and understand electronically transmitted information.
- Find and use relevant information.
- Take a world view of issues and live in a culturally pluralistic society.
- Pursue independent lifelong learning.

Therefore, education must:

- Continue to assist with development of basic skills.
- Emphasize and increase active learning.
- Provide continuous learning suited to individual pace and learning style.
- Encourage creativity, imagination, and risk taking.
- Provide opportunities for indi and cooperative problem solving and decision making.
- Provide education for change, th t life.
- Orient learners to a service resp ity and sense of community.

BELIEFS ABOUT LEARNERS AND TEACHERS

Since the early 1900s, the structure of schools, the role of teachers, and the role of learners have been developed to pass on basic facts and routines in an industrial model of organization. The emphasis was on active teaching and passive learning. Teachers told pupils what to read, what to learn, and what to recall. Such a model has required teachers to follow the directives and practices prescribed by the school hierarchy and the industry that produces educational materials.

Society has begun to value a different kind of learner and a different kind of teacher. The focus is changing to interactive teaching and active learning. Education should aim not only to provide fundamental facts but, more importantly, help learners to use their knowledge to solve problems creatively and effectively in personal, social, and political contexts as well as in the workplace.

Education should not only respond to the changing needs of society but also should anticipate new structures in education. The program outcomes recommended for future teacher education in Chapter V must be used to redesign curriculum and should be based on ideal conceptions of learners and teachers.

Learners

Throughout formal learning experiences, the task force assumes that learners of all ages should be able to:

Demonstrate Respect and Responsibility Toward Self and Others. Learners must value themselves and enjoy life, learning, and each other. Learners need to feel the self-worth and self-confidence necessary to experiment, to question and to risk being individuals. In order to exercise self-control and self-discipline, learners need to understand their emotions. Learners can better

interact with empathy, caring, and consideration toward others when they understand themselves.

Learners must recognize that learning about oneself is as important and as exciting as learning about others and the world. Learners should recogr : that by using their beliefs, feelings, intuitions, opinions, knowledge and wi. om, they can become thinking, reflective persons, and learn to appreciate the power that stems from knowledge.

Learners need to appreciate the ideas and efforts of others, to have positive attitudes and a sense of responsibility to others and their community. By knowing their own background and the backgrounds of others, they can understand and accept differences among people. Learners need to view other cultures and societies from more than one perspective in order to appreciate alternative approaches to and ways of living. They need to understand concepts relating to families, governments, formal and informal communities, nations, states, and world organizations. Learners need to understand and appreciate the social, economic, and political interdependence of cultures and subcultures within their communities and the world.

Appreciate Learning, Thinking, and Communicating. Learners must appreciate active lifelong learning. They should be able to use and channel their natural curiosity, and to view the world as exciting and awaiting discovery. They must view mistakes as necessary to learning and maintain the desire to learn despite difficulties.

Learners should appreciate that their thoughts and actions affect their world. They should understand that they can solve problems and create solutions. They must appreciate that they are at least partly in control of society, and that they have a responsibility to make informed decisions about issues and problems. Learners can be receptive to new ideas, adapt to change,

and assist in shaping and directing their futures when they understand that continuing to learn means continuous change.

Learners must understand oral and written information. All learners must use the tools of communication, critical thinking, problem solving, and interpersonal relations. They must apply available information and knowledge as they participate fully in the lifework and recreation of a complex and changing society.

Learners must use the tools of analysis and problem solving as they explore the many fields of human knowledge. Learners need to appreciate the interrelationships of various subjects and apply knowledge creatively. To the extent possible, learners should develop and express their distinctive intelligences and talents.

Participate Cooperatively and Independently. Learners must be both cooperative and independent. They must learn that there are strengths to be found in group enterprise as well as in individual endeavor. Learners who understand that leading and following are interdependent can adapt to their environment and also create positive change.

Learners must recognize and value their individuality and be able to work and think independently. Learners must be able to ask questions of themselves, of others, and of information. They must develop their own opinions, knowledge, and wisdom based on perceptions, feelings, intuitions, thoughts, information, and research.

Learners should develop human relations skills that provide the awareness and motivation necessary for exercising the rights and responsibilities inherent in participatory democracy, in the world of work, and in their personal lives.

Teachers

Teaching in the future will be even more complex and demanding than today. The task force wants teachers to be able to:

Demonstrate Values. Teachers should believe they make a difference, believe and demonstrate that they do have power, and that decisions they make are significant. Teachers should be active in designing the future society. Teachers should take responsibility for knowing and understanding themselves: their strengths, their needs, their beliefs, and their values. They should demonstrate personal confidence by being creative, taking risks, and adapting as situations demand. Teachers should understand and accept the continuing process of learning and change. Teachers should be sensitive, caring, empathic people who communicate and work well with others and display consistent personal and professional integrity.

Serve as Models of Educated Persons. Teachers should be well educated, possessing basic skills along with breadth and depth of knowledge. They should demonstrate exemplary speaking, writing, and mathematics skills. They should use critical thinking and problem solving skills in their interactions with students. They should demonstrate that they are committed to and enthusiastic about continuous personal and professional learning and growth.

Facilitate Learning. Teachers should be able to appreciate the complexity of the learning process, to be experimenters who inquire, observe, and intelligently evaluate interactions and events in a wide variety of learning environments. They should systematically apply knowledge of human development and communication to evaluate learning and individual differences, and be intelligent consumers of research. Teachers must facilitate both learner autonomy and cooperative learning.

Teachers must focus on the process of learning, not the place of learning, and be able to integrate information, skills, and understanding in ways relevant for learners. Teachers must be able to inspire and motivate learners while being patient and supportive. They should have positive expectations of all learners, should trust and value each learner's active participation.

Participate in the Profession. Teachers must be actively involved in the educational community. Teachers should be educational decision makers in the development and use of materials, curriculum design, and educational and social policy. They must participate in the management of schools and resources. Teachers should be partners with teacher educators in preparing the next generation of teachers. They must accept responsibility for the development, improvement, and assessment of the teaching profession.

POSSIBLE CHANGES IN STAFFING PATTERNS, SCHOOL ORGANIZATION, AND INSTRUCTIONAL METHODS

Many possible changes in staffing patterns, school organization and instructional methods might affect the roles of teachers and the skills needed. Some changes are more probable than others. Many of these possibilities are ideas that have been tried in the past 25 years. Although the ideas have not been universally adopted, many still have promise and merit, especially if used in their ideal forms. If teachers are to work in significantly different environments, their preparation must provide for it. Therefore, the task force speculated about:

Varied Instructional, Management, and Support Roles

- Learning environments might be staffed with persons assuming different levels of responsibility: a) the responsibility of leading, directing, or managing a group of resource persons; b) the responsibility of being a resource person or instructor; c) the responsibility of providing support for resource management. Other roles might include master teacher, career teacher, apprentice teacher, novice, or aide. Different kinds of teacher education institutions would educate for the various roles.

- o Teachers might be differentiated by function as diagnosticians, curriculum and instructional designers, instructors of content, experts-in-residence, counselors, learning facilitators, mentors, and other roles.
- o Interdisciplinary teams of teachers might work cooperatively in varied and flexible roles with large groups of learners.
- o Specialists in areas such as science and mathematics might be more generally employed at elementary school levels.
- o Generalist teachers in areas such as social studies, life sciences, physical sciences, or in special education or with combinations of expertise might supplant specialists.
- o The expertise of the general public might be more widely used in learning environments.
- o Teachers might follow multiple career paths and fulfill varied roles; teaching might not be a lifetime career.
- o Some teachers might share their assignments with other teachers or work as part-time teachers.

School Organization/Settings: Traditional and New

- o The schools might move to patterns where learners are increasingly provided the opportunity to leave their classrooms for special individualized work which provides focused time on a particular task with an adult.
- o The schools might increase the emphasis on mainstreaming, requiring that all teachers are able to deal with a range of student problems.
- o Teachers might become entrepreneurs setting up "private practices," or perhaps gathering to use present school facilities while functioning as entrepreneurs.
- o There might be a range of differentiated or special purpose schools, for example, liberal arts schools and technical schools and professional schools of various kinds at various levels. Schools might focus on a particular discipline or group of disciplines, such as sciences or the arts.
- o Schools might not place students in grades, but provide for continuous progress of each student throughout the formal learning years.
- o Schools might return to basics in secondary education.
- o Schools might increase their scope to provide a variety of kinds of learning approaches throughout a lifetime.

- o Increased emphasis might be placed on the education of children and youth as apprentices to adult role models, that is, the "de-schooling" of society.

- o Educators might increasingly use the community as a learning resource; education might be delivered in various places.

- o Traditional aspects of school such as driver education and athletics might be taken over by business or the community.

Delivery and Management of Instruction

- o There might be an increased emphasis on site-based management.

- o Staffing patterns might change to assist teachers in non-teaching responsibilities.

- o School districts might share the expertise of teachers for programs with few students by using telecommunications.

- o Telecommunications might enable all learners to proceed at least partially in self-paced instruction, perhaps even within their homes.

- o Schools might take advantage of new technology to promote learning to include all the senses, such as kinesthetics, biofeedback, imagery, or taste and smell.

- o Cross-age grouping and peer tutoring might be used more extensively.

- o Schools might be organized to provide for life experience integrated with formal classroom experience.

Scheduling Patterns/Alternatives

- o The school calendar might be revised to provide for a specified number of days in school followed by a fewer number of days for other activities. Teachers would be employed year round and would select particular periods for planning and designing of curriculum and other periods for professional development.

- o School facilities might be used year round and for larger portions of the day and the week, with a number of schedules available to both learners and teachers.

- o A longer school year which provides more availability of learning experiences might be provided.

Outcomes as Driving Force for Curriculum

- o Achievement might be measured by prespecified outcomes such as mastery learning rather than elapsed time or completion of a given amount of material.

The task force anticipates no uniform setting for learning, but rather a variety of structures and approaches including traditional structures that fit the variety of human needs. This partial list of possible changes is intended to stimulate thought about the roles teachers might perform under various staffing patterns, organizational structures, and instructional methods so that a set of teaching abilities can be determined. Teacher preparation programs must prepare persons to function in a variety of educational settings, adapt to change, and use their skills flexibly.

CHAPTER IV. IDENTIFIED NEEDS IN TEACHER EDUCATION

The future needs of society for a thinking, articulate, and involved citizenry are apparent. The possibilities for educating people beyond basic skills are innumerable. Education must provide people with the knowledge and skills to work effectively with the complex issues of their culture and their jobs. Education must carefully consider what changes will allow it to meet this challenge. The task force considered some of the needs and concerns of education in Minnesota, as illuminated by current thinking of researchers and other experts. Five sets of needs are identified.

NEED FOR EXPLICIT CONCEPT OF TEACHING

Whatever dispositions, skills, and knowledge are essential for teachers need to be derived from an explicit conception of a teacher and the role of teaching. A concept of good teaching must address the personal nature of teaching, what teachers know about themselves, their learners, and the world about them (Howey and Zimpher, 1984). The concept should reflect an understanding of learning which incorporates instructional skills, recognition of the concepts of human development, and social interaction.

Zahorik (1986) identified three broad conceptual categories of effective teaching. In the science-research orientation, concepts of teaching are all derived from research. Teachers in this category would 1) do what effective teachers do, 2) follow tested models, and 3) put learning principles into action. The second category, the theory-philosophy orientation, is developed through logic, synthesis of research, and insight. The teacher is able to specify the aspects of good teaching, the relationship of the aspects, and the resulting classroom actions. The third category is the art-craft orientation,

a conception of good teaching that involves assessment, reflection, application, and invention. Teachers need to be able to analyze a teaching-learning situation to determine what should be done and how it should be done. The developmental stage of a teacher will dictate which concept of teaching should be emphasized at various times. Over time, a teacher will increasingly be in the art-craft category. This suggests that teacher educators plan for specific patterns of teaching to evolve from the skill category through a theoretical or philosophical grounding into a variety of reflective experiences in appropriate laboratory and clinical settings. Having knowledge of the science and the art provides teachers with the capacity to know what one ought to do and how to do it.

The curriculum of teacher preparation must be concerned not only with providing specific knowledge and skills, but the opportunity to acquire dispositions as well (Katz and Raths, 1984). Dispositions are seen through the patterns of a teacher's actions in particular teaching contexts. It is important that a teacher makes judgments and responds appropriately in specific contexts and does so consistently. Additionally, the teacher must learn how to explain the reasons for engaging in particular patterns of behavior.

NEED TO INCORPORATE RESEARCH FINDINGS

Teacher educators should incorporate research findings on effective learning and teaching into teacher education curricula, even though this may be at the expense of some current program elements.

Major research programs have contributed to the general knowledge of learning and teaching over the past 25 years. In education, as in all other professions, the knowledge base is not entirely grounded in empirical evidence, rather, it reflects the collective judgments of respected members, scholars in

underlying and related disciplines, persons served by the profession, and scholars building a base for practice (Shulman and Sykes, 1986). Future teachers should be able to use the knowledge base to become better teachers and to contribute to the continual evolution of professional knowledge in education.

A review of the contemporary perspective into the study of teaching and learning provides four dominant lines of inquiry: (1) process-product, (2) academic learning time, (3) student cognition and mediation of teaching behaviors, and (4) classroom ecology (Shulman, 1986).

Process-Product Research

Process-product research has examined relationships between a variety of teacher behaviors and student performance. Results are measured in terms of immediate performance in the classroom as well as cognitive achievement of students. Most process-product research has been in the curriculum areas of reading, mathematics, and science. The most significant findings from this area of research on teaching demonstrate that teachers do make a difference and that variations in teaching behavior are systematically related to variations ir student achievement.

Knowledge of the relationship between certain types of teaching behavior and desired outcomes by students should be used by teacher educators to prepare teachers who can apply effective instructional practices and behaviors identified in research. For teachers to effectively practice these strategies, they need to understand the theoretical as well as the empirical base which underlies the concepts studied in process-product research. Teachers must not only use the most effective teaching strategies, but they should also know why they are important, what results can occur and when to employ particular strategies. This research suggests a rethinking of professional education programs.

Academic Learning Time

A variation on the process-product line of research on teaching is research about academic learning time. The emphasis of this research is on making maximum use of time on the appropriate academic content through direct, active teaching in a task-oriented approach (Berliner, 1979). This research identified the efficacy of different approaches to teaching by examining immediate pupil responses rather than recall which was measured on achievement tests.

Several findings from the studies of academic learning time have come together with process-product research to identify patterns of direct or active instruction which appear to be particularly useful for teaching explicit, well structured bodies of knowledge where the objective is to teach skills or mastery (Rosenshine, 1983). The results of this research appear especially applicable to such areas as decoding in reading, computing in mathematics, the learning of science facts, map skills, and grammatical concepts and rules.

All teachers use such behaviors on a variety of occasions. However, effective teachers use these procedures in a more frequent and systematic way, and teacher education students should be taught how to use direct, active instruction.

Student Cognition and Mediation of Teaching Behavior

A third major area of research on teaching has focused on the thought processes of students in relation to teacher behavior to understand the complexity of teaching effectiveness and learning success. The complex nature of teaching and learning is better explained by understanding how the learner thinks.

Successful participation by students in classroom instruction involves the integration of not only their academic knowledge but of their social or inter-

actional knowledge as well. The fundamental question is "How do students make sense out of what occurs in the classroom?"

Research in the thought processes of students recognizes that learning is not a passive process. Learning is the active role played by the learner in transforming instruction into the learner's own information and knowledge. One example of these research findings is that students learn science best when experiments are provided which allow them to test their own preconceptions and misconceptions. When students actually participate in the experimental process, they gain more knowledge.

In another example, research has focused on what students are thinking and feeling as they deal with seatwork tasks. Students, it has been found, focus primarily on completion rather than comprehension of the task. The common thought or expression from students about such tasks being, "There! I don't understand that, but I got it done." (Anderson, 1984). Teachers can learn to re-focus learners on understanding.

Research in the area of social mediation is concerned with the underlying processes, goals, and perspectives in the complex social setting of the classroom (Mehan, 1979; Shulman, 1986). This research distinguishes what it is that students are really learning from the "hidden curriculum". One example of this research is the findings that identify the significant relationship between teacher expectation and student motivation and performance. It has been found that when teachers unthinkingly communicate lower expectations to different classes of students, there are negative long-lasting effects (Good, 1983).

The mediation research has provided descriptive accounts of what is happening in the minds of learners from the point of instruction within the social climate of the classroom to measured achievement. This knowledge base

reveals the intellectual and social complexities of the learning environment and illustrates the need for teachers to be reflective and experimental, to be able to understand and articulate why they are engaged in particular patterns of behavior (Katz and Raths, 1984).

Classroom Ecology

One quite different intellectual tradition used to study the complex affairs of the classroom has its origins in the disciplines of anthropology, sociology, and linguistics. In this research, the focus is on the communicative interactions between teachers and students rather than focusing primarily on the teacher's behavior. This research provides understanding about the nature of the teaching and learning processes from the perspectives of both teachers and learners and attempts to identify factors that support learning and communication in the classroom.

Results of the best ecological studies provide excellent guidelines for classroom management and organization. Well documented correlates of effective teaching are a teacher's ability to effectively organize classrooms, foster a desirable socio-emotional climate, monitor student behavior, and respond effectively to non- or counter-productive behaviors. For example, there is strong empirical support for employing classroom meetings, promoting role playing, establishing clearly understood expectations and utilizing cooperative strategies in the classroom as aids to more effective interpersonal functioning (Weber, Roff, Crawford, and Robinson, 1983). This area of research, too, illustrates the variety of dispositions, skills, and knowledge effective teachers must employ.

Although certain conditions within some schools limit the application of a broad range of teaching and learning approaches, it is apparent that the

dominant instructional format modeled in preservice teacher preparation is lecture and recitation (Howey, Matthes, and Zimpher, 1985). A typical finding is that professors in education employ limited instructional strategies that do not match what students in education will need in their own teaching (Katz and Raths, 1982).

NEED FOR INTEGRATED AND COHERENT TEACHER EDUCATION PROGRAMS

Teacher education programs need to be better integrated and more coherent. Rarely are teacher education program decisions derived from theory and research: the program context is a camel, the product of a committee instead of a cohesive and coherent program (Ryan, 1980). Programs are characterized by their lack of conceptual and programmatic coherence (Howey, Matthes, and Zimpher, 1985).

There is little doubt that the emphasis today is on the technical aspects of teaching (Howey, 1984). This concern is not new; in fact, it preceded the days of the normal schools. Dewey (1904) stated the problem over 75 years ago:

> ...For immediate skill may be got at the cost of power to go on growing. The teacher who leaves the professional school with power in managing a class of children may appear to have superior advantage the first week, the first month, or even the first year, as compared with some other teacher who has a much more vital command of the psychology, logic and ethics of development. But later "progress" with such may consist only in perfecting and refining skill already possessed. Such persons seem to know how to teach but are not students of teaching. Even though they go on studying books of pedagogy, reading teachers' journals, attending teachers' institutes, etc., yet the root of the matter is not in them, unless they continue to be students of the subject matter and students of mind activity. (p. 9)

Education in the core liberal arts disciplines is essential not only to effective teaching, but to more authentic professional status as well. The arts and other core disciplines must become more central to teacher education, more integrated with professional studies (Kneller, 1980). Certain attitudes and

perspectives are not likely to be achieved at a later time if they are lacking in the beginning (Howey, Matthes, and Zimpher, 1985).

NEED FOR IMPROVED AND EXPANDED FIELD-BASED EXPERIENCES AND FORMAL INDUCTION PERIOD

The task force recognizes that teacher education programs need to improve and expand field-based experiences and to implement a formal period of induction for beginning teachers.

Field-Based Experiences

Although much controversy has surrounded the ways in which future teachers are prepared, the one component of teacher education that traditionally has been considered valuable is field-based experience (Goodman, 1985; Conant, 1983; Joyce, Yarger, Howey, Harbeck, and Kleiwin, 1977). Because of this, one of the major changes in programs of teacher preparation has been an increase in the number of hours and types of field experiences for candidates. While the quantity of these experiences has increased, there is justifiable concern about their quality (Cohen, 1981; Zeichner, 1981; Goodman, 1983, 1985). Too frequently, students are limited to a narrow range of actual teaching experiences of a pedestrian nature (Hoy and Rees, 1977). Teacher education faculty and cooperating school personnel neither define the purpose nor coordinate the planning of field experiences for teacher education candidates (Katz, Raths, Moharty, Kurachi, and Irving, 1981). The problem, in part, is the result of little or no training or pay for supervising teachers. Given the major responsibility of supervising teachers, it should be expected that they would be selected with considerable care, given specialized training, and substantially reimbursed for their efforts. Unfortunately that is not the case.

> Fewer than one-fifth of the department chairs reported level of experience as a teacher, advanced training or previous supervisory experience as the most important factors in the selection of cooperating teachers. Instead, the general reputation of the teacher and a willingness to work with student teachers appear to be the chief criteria for selection...
>
> It may well be that the role lacks appeal for many teachers. A sense of professional responsibility on the one hand and the reciprocal assistance provided by the novitiate in the classroom on the other appear to be the basic incentives for assuming such a role. Certainly the modest honorarium provided in half the institutions to cooperating teachers has limited drawing poser...While the student teaching experience does appear to be the hub for some college-school collaboration, it would appear to contribute little to advancing school practices in the vast majority of cases... (Howey et al., 1978, p. 35).

Research results indicate that regardless of the results of field experience, the cooperating teacher has the most impact on the attitudes and behaviors of student teachers (Zeicher, 1981). Therefore, future field experiences for teacher education students and beginning teachers should be designed to foster reflective criticism within students toward the nature of instruction, curriculum, and the purposes of education. Because this critical aspect of teacher preparation involves schools as well as teacher education institutions, there must be attention to restructuring and redesigning the collaborative relationship to provide more adequate field experiences (Howey, Matthes, and Zimpher, 1985).

Formal Induction Period

Coming into the profession is a developmental process that has not been addressed. Typically, beginning teachers start their first jobs having had usually no more than 10-12 weeks of classroom responsibility. They are expected to assume the full role of experienced teachers. It is during the first year that teachers experience the most difficulty, yet rarely is any form of assistance or evaluation provided (Adams, 1982; Ryan, 1980, 1982; McDonald and

Elias, 1982). Beginning teachers are not equipped to handle regular duties assumed by veteran teachers and there is a lack of distinction of these levels of competence within the school culture (Joyce, Bush, and McKibbin, 1981). The lack of adequate induction into the profession contributes to teacher attr'tion (Schlechty and Vance, 1981).

A formal induction period between graduation and receiving a continuing teaching license should provide beginning teachers with the support and guidance necessary to become fully competent and contributing professionals (Edwards, 1984). There is little or no information to support any particular model of induction, but there is ample evidence to support the development and study of an induction period for beginning teachers (Evertson, Hawley, and Zlotnik, 1985).

Induction programs for beginning teachers, as well as field-based experiences for students in teacher education, would benefit from the cooperative efforts of schools and teacher education programs.

NEED FOR FORMAL PARTNERSHIPS

Teacher education could be improved through partnerships between colleges and universities and local educational agencies.

The most powerful process by which individuals acquire relevant knowledge and practices is by associating with models (Schlechty, 1985). A major constraint in teacher preparation is the lack of involvement by effective practicing teachers in substantive ways throughout the course of study in teacher education (Howey, 1984; Howey, Matthes, and Zimpher, 1985; Jones, 1986). Failing to assure students the opportunity to work with good practitioners may be unwise.

Autonomy still is the main priority of most teacher education programs (Jones and Barnes, 1984; Coker, 1985; Jones, 1986). There has tended to be limited institutional commitment to cooperative ventures, resulting in inadequate field experiences for teacher education students and little or no mutual exchange between teachers and teacher educators that would benefit instruction and research efforts. States that have begun to use cooperative partnerships for the delivery of teacher education report productive and positive experience for teacher education students (Jones, 1986).

Recent curriculum proposals and national reports on teacher education suggest that professional laboratory experiences will be expected to play an increasingly significant role in teacher preparation. The design and implementation of an integrated model for field experience depends on expanding university involvement with teachers and administrators (Emans, 1983). This requires bringing teacher education faculty and school personnel together to develop, implement, and sustain positive cooperative relationships in matters affecting contemporary teacher education (Jones, 1986; Holmes Report, 1986). In particular, the partnerships should be used to (1) design and implement more varied and effective laboratory field experiences for students in teacher education, (2) design and implement formal induction periods for beginning teachers, (3) provide opportunities for teachers to contribute to the development of knowledge, and (4) provide ongoing staff development for teachers.

SUMMARY

The task force identified some of the needs of and concerns regarding teacher education. The list is not exhaustive; rather, it identifies the crucial issues in beginning the task of improving teacher education in Minnesota. Four of the needs speak directly to the content and the form of

programs: 1) that all program elements should be grounded in an explicit concept of teaching, 2) that they should be research-based, 3) that they should be coherent and rigorous, and 4) that they should provide effective field experiences. To best educate effective teachers, schools and teacher educators must share the responsibility.

CHAPTER V. RECOMMENDED PROGRAM OUTCOMES OF FU. TEACHER EDUCATION: DISPOSITIONS, SKILLS, KNOWLEDGE

Historically, teacher education has been described and evaluated by resource criteria such as the number of courses in pedagogy or philosophy of education, and the number of faculty and their degrees. Unfortunately, describing or measuring program resources provides no information about the results or consequences of the program for students, nor does it describe how the program is implemented. Defining, describing, and evaluating the results, or outcomes, of a program make it possible to judge whether the program produces teachers who effectively facilitate learning for students. Defining, describing, and evaluating the methods and procedures used also make judgments possible about the process of delivering teacher education. Current evidence suggests that teacher education should be characterized by program outcomes and process as well as input (Taylor, 1979).

Based on the task force review of the most recent knowledge of effective learning and teaching, this chapter defines and describes a minimum set of standards for the outcomes and the processes of teacher education. The first section provides the dispositions, skills, and knowledge that graduates of teacher education programs should demonstrate. Necessary elements of delivery systems for implementing recommended programs are identified to conclude the chapter.

INTRODUCTION

Teachers should be thoughtful, creative persons who use a set of principles and strategies derived from an informed personal philosophy of education and the multiple demands of learning contexts. The descriptions of future learners and

teachers create a picture of education which focuses on developing learners' minds so that they can use available and changing knowledge in a variety of learning contexts.

These concepts of learners and teachers have been too infrequently realized both within schools and teacher preparation programs. Additionally, teacher education programs seldom use an ideally defined concept of a teacher as the basis for developing coherent, integrated curriculum and structure (Howey, 1986).

Several barriers to developing and implementing programs based on these concepts exist. In part, education has historically endorsed a "learn the facts and do the job" approach. This perspective permeates teaching at all levels (Nolan, 1985).

Too, educators within colleges and schools have used limited interactive instructional strategies (Cross and Beidler, 1986). For the most part, college and classroom learning behavior exemplifies the passive learner phenomenon (Katz and Raths, 1982). These obstacles affect decisions about what prospective teachers should learn and how they should learn.

Expected dispositions of beginning teachers must stem from the concept of an ideal teacher. The identified dispositions determine the range of skills needed by beginning teachers. Finally, the knowledge necessary for building the skills is defined. All are necessary to teaching regardless of grade level or subject area.

DISPOSITIONS

The goals of teacher education programs should include not only the acquisition of skills and knowledge, but also the promotion of certain dispositions. Effective teachers are intentionally disposed to act in particular ways that best facilitate learning and can explain their patterns of behavior (Green,

1964). The frequency of particular actions within specified categories or circumstances determines the particular disposition (Katz and Raths, 1985). The task force recommends that teacher education programs should be redesigned to foster the following dispositions in beginning teachers:

Dispositions Toward Self

Teachers will be disposed to:

1. Understand their strengths, needs, values, and beliefs.
2. Reflect on their own teaching and its effects on learners.
3. Develop a personal philosophy of education.
4. Appreciate the responsibility of serving as a positive model for students.
5. Share decision making with learners and colleagues.
6. Accept change, ambiguity, and uncertainty.

Dispositions Toward the Learner

Teachers will be disposed to:

1. Support positive learner self-concept by fostering learner success.
2. Acknowledge and use the relationship between expectations and performance by learners.
3. Recognize and use learner readiness and motivation.
4. Respect and value individual and cultural differences.
5. Establish empathic, cooperative relationships with and among learners.
6. Assist learners in clarifying beliefs, attitudes, and values.
7. Promote the fullest possible growth and development of all students.

Dispositions Toward Teaching

Teachers will be disposed to:

1. Engage with learners in joint exploration of ideas and structures of knowledge.

2. Use a variety of teaching strategies supported by research.

3. Engage in critical and divergent thinking and problem solving with learners.

4. Demonstrate global perspectives with a sense of responsibility for involvement.

Dispositions Toward the Profession

Teachers will be disposed to:

1. Act as part of a team which is informed and involved in the broader educational environment.

2. Engage in professional responsibilities within the building, the district, professional organizations, and the community.

3. Inform themselves of current professional literature.

SKILLS

Effective teaching is more than the transmission of basic skills; it is the ability to release people to learn how to learn (Green, 1983). Teachers make multiple and continuous decisions in guiding effective, formal learning. Therefore, future teachers must acquire complex and elaborate teaching strategies. Teachers must have the skills to create environments that provoke students to ask questions and seek answers on their own. The specific skills listed are representative and not exhaustive. They are, however, essential to effective teaching. The task force recommends that teacher education programs should be redesigned to assure that beginning teachers possess and can demonstrate the following learning and teaching skills:

Intellectual Skills

Teachers serve as models to students. Therefore, they must:

1. Be articulate, creative and precise in the regular use of speaking, listening, reading, writing, and mathematics.

2. Be disciplined in the use of analytical, critical, and problem solving strategies.

Assessment Skills

Successful learning depends upon teachers' knowledge of the students. Teachers must be able to analyze and interpret both objective and subjective information about students' learning characteristics, attitudes, and backgrounds. Teachers must understand and respond to each student individually and personally. Therefore, teachers must:

1. Be systematic in observing and interpreting learner behavior and dynamics which cause the behavior.
2. Identify levels of readiness in student learning and development.
3. Identify student learning style, strengths, and needs.
4. Identify levels and sources of learner motivation.
5. Identify relevant aspects of learner background and experience.

Planning Skills

A significant part of effective teaching consists of making judgments and decisions about what students have learned, should learn, and are learning (Clark, 1983). Teacher planning contributes to the content and quality of instruction (Smith and Sendelbach, 1979; Clark and Elmore, 1981). Additionally, planning influences the opportunity to learn, the instructional grouping, and overall focus of the learning environment processes (Clark, 1983). Planning shapes the broad outline of what is possible and is used to manage transitions by integrating information from one activity to another. Teachers must:

1. Define the purpose and goals of learning activities based on designed curriculum, learner assessment, and knowledge of learning effectiveness research.
2. Translate goals into integrated curricular objectives, relevant activities, and evaluation procedures based on learner need.
3. Select learning objectives for individual and group learning.
4. Establish learning priorities, develop learning plans and prescriptions for learning based on learner strengths and needs.

5. Select learning materials, activities, and strategies to achieve learning objectives for each learner.

6. Plan the course of activities for immediate, short-term and long-term goals.

7. Plan and design evaluation tools and strategies for assessing learner outcomes.

Instructional Skills

Instruction involves the application of intentional acts aimed at promoting the learning of skills, knowledge, and values (Hyman, 1974). Achieving that goal requires balancing learning objectives, student characteristics, teaching strategies, and curriculum objectives. The teacher is responsible for blending these aspects of teaching through careful judgment and decision making (Clark and Joyce, 1981). The decisions teachers make affect their behavior and the behavior of their students in both the long and short term. Instructional skills allow teachers to make effective decisions. Teachers must:

1. Use multiple learning and teaching strategies.

2. Provide clear, individually appropriate learning expectations.

3. Expect and maintain active, successful learner participation.

4. Expect and support self-directed learning.

5. Listen, reflect, and probe for learner understanding and ask for clarification.

6. Support, critique, and expand learner expression in speaking and writing.

7. Explore academic information as well as personal feelings and relationships through discussion.

8. Foster critical and divergent thinking and problem solving among learners.

9. Guide cooperative learning, independent study, and field study among learners.

10. Use state of the art communication technology and information systems.

Evaluation Skills

Teaching and learning are reciprocal by nature; teaching influences learning and learning affects teaching. Therefore, evaluation must account for this interaction. Some forms of evaluation should be ongoing, and other forms should be periodic. Teachers must:

1. Monitor and evaluate student learning through a variety of methods.
2. Monitor and evaluate their own behavior in relation to changes in achievement.
3. Modify learning objectives, plans, and instructional behavior based on evaluation results.

Social Behavior Management Skills

Environments that are conducive to productive learning and promote active learner participation require the instructional strategies outlined above. Additionally, teachers need specific skills to manage the social behavior of the learners and themselves.

Teachers should:

1. Provide clear and appropriate behavioral expectations and establish corresponding rules and routines.
2. Diagnose and identify causes of antisocial, counter-productive, or nonproductive behaviors in the learning environment.
3. Recognize and respond to opportunities for fostering learner self-discipline.
4. Employ tested behavior modification and behavioral analysis principles for producing desirable behavior.
5. Employ strategies to alter the social-emotional climate of the learning environment in collaborative, individualistic, or cooperative structures.
6. Alter physical and environmental aspects of the learning environment to promote desired social development.

Role Modeling Skills

Through their own behavior, teachers should demonstrate:

1. Courtesy and respect for others.
2. Enthusiasm for learning.
3. Self-discipline and control.
4. Consistency between intention and action.

KNOWLEDGE

Teaching has been described as "...an art informed by science" (Gage, 1985). Thus, the education of teachers should reflect the combination of liberal education and the science of learning and teaching.

Liberal arts education is concerned with comprehensive development of the mind in acquiring knowledge. The aim is to achieve knowledge and understanding of experience in many different ways. Prospective teachers must acquire not only information, but also knowledge of complex conceptual schemes, of the arts, and of different types of reasoning and judgment (Hist, 1972). Liberal arts studies introduce the relationships among basic bodies of knowledge and the range of knowledge as a whole. The aim of liberal education must be kept in mind in the selection of disciplines studied in the liberal arts curriculum. The task force recommends that teacher education programs should be redesigned to include the following bodies of knowledge:

Knowledge About People

Future teachers must understand how social organizations function and influence people and how people influence organizations. They must comprehend the challenges and the opportunities facing people in culturally diverse societies and understand how to work with people in complex social settings. They must have knowledge which allows them to make informed judgments about issues in professional ethics. This body of knowledge should include the social

and behavioral sciences, the natural sciences, the humanities, and philosophic values and belief systems.

Knowledge About Cultures

Future teachers must understand the origins and the development of western and non-western civilizations and cultures. They must understand past and present ideas and debates in the sciences and humanities. They must learn to examine issues, trends, and forecasts that may affect future thinking, behavior, and institutions. This body of knowledge should include not only social, literary and linguistic knowledge, but also the political, religious, historical, scientific, and technological evidence that defines cultures.

Knowledge About Epistemology

Prospective teachers must gain an appreciation of differing viewpoints and theories within disciplines and of associated methods of inquiry. They must learn to evaluate explanations advanced to account for phenomena. From this experience, future teachers must understand how knowledge persistently changes and evolves over time. In liberal education, pursuit of knowledge must be complemented with learning the various "ways of knowing".

Knowledge in A Specific Discipline

Prospective teachers should understand the scope, structure, and relationship of a body of knowledge to the world. Future teachers must develop a sense of personal scholarship through in-depth study in one or more core liberal arts disciplines. They must identify sufficiently with scholars in the area(s) of concentration so that they appreciate and respond to the changing nature of knowledge. Such academic concentration must provide future teachers with knowledge that will apply in future learning and teaching environments.

Knowledge About Human Growth and Development

Future teachers must learn how the acquisition of knowledge relates to development of an individual's learning, thinking, feeling, and believing. Teachers must understand their own levels of development, learning style and motivational habits. They must acquire this knowledge as the basis for diagnostic and prescriptive teaching that will allow them to respond to learners' individual styles, strengths, and needs. They must learn to translate theory into practical learning application and to translate practice into theory. The knowledge should include information about human learning derived from current and emerging developmental theories of the mind, body, and emotions, within and across cultures in the following areas:

- o Affective/social, cognitive, moral, and physical development,
- o Motivational development, and
- o Individual learning styles and modes.

Knowledge About Communication and Language

Future teachers must appreciate and understand the complexities of human communication. This knowledge allows them to determine how various communication strategies and styles cause learning in a variety of contexts. The knowledge provides prospective teachers with the basis for making decisions about their own and their students' communication and language. The knowledge should include theoretical and developmental information about:

- o Nonverbal communication,
- o Oral language and communication (listening and speaking),
- o Written language and communication (reading and writing), and
- o Technological language and communication.

Knowledge of Scientific Inquiry

Future teachers must learn methods of scientific inquiry that will provide them with a variety of problem solving strategies for addressing the difficulties and complexities of students' learning. They must learn to understand and value critical thinking and self-directed learning as intellectual habits of mind. They must learn scientific methodology and use it systematically to identify problems and create effective learning environments. Methods to be learned include:

- o Descriptive procedures, and
- o Experimental procedures.

Knowledge of Literature on Effective Learning and Teaching

Informed by the literature, teachers will learn to articulate and explain their own and their students' learning behavior. They must learn to interpret and apply research findings. Knowledge of the literature on effective learning and teaching should include:

- o Learning,
- o Curriculum and resources,
- o Pedagogy,
- o Technology, and
- o Organizational development.

PROGRAM DELIVERY

To achieve desired outcomes, programs should include regular and systematic experiential activities that relate to the acquisition of dispositions, skills, and knowledge.

From the beginning of the teacher education program, future teachers must engage in regular and systematic observation, reflection, and feedback using a

variety of methods; these might include videotape analysis of their behavior by themselves, their peers, faculty, and cooperating teachers. The observation should be integrated with experiences in human growth and development and communication.

Throughout the teacher education program, future teachers must observe and interpret human behavior in clinical and field settings. They must observe and work with small and large groups of learners in a wide range of real or simulated settings. In field settings, to support student growth, teacher education students and their supporting resources should be clustered within a limited number of cooperating schools.

Throughout the teacher education program, future teachers must have regular and systematic practice and use of communication technology and data-based information systems.

From the beginning, future teachers must routinely integrate scientific methods of analysis and problem solving in all field experiences and practices.

Part of the program delivery system should be a formal, structured induction period following graduation. During this time, employed beginning teachers would be required to demonstrate increased levels of the dispositions, skills and knowledge attained in the preparation program.

SUMMARY

After completing teacher education programs, beginning teachers should have attained the recommended dispositions, skills and knowledge sufficiently well to teach effectively in a variety of learning environments. The task force also recommends a program delivery system to ensure that teacher education students acquire and demonstrate the recommended outcomes as they progress through the

program. The outcomes and the system of program delivery should be used by teacher educators to guide curriculum redesign and implementation.

CHAPTER VI. EVALUATION OF TEACHER EDUCATION PROGRAM EFFECTIVENESS

The effectiveness of teacher education programs can be evaluated by 1) how well students are and demonstrate recommended dispositions, skills, and knowledge, which is seen as outcome data; 2) the methods and procedures of program delivery, identified as process data; and 3) the resources available and used by the program, which is called input data. Current procedures for program evaluation focus on input data, rarely including outcome or process data.

This chapter presents the procedures now used by the Board of Teaching and the measures of program effectiveness recommended by the task force to evaluate the outcomes, the process, and the inputs of the programs.

CURRENT PROCEDURES FOR INSTITUTION AND PROGRAM APPROVAL

Minnesota assigns the responsibility for teacher education and licensing to the Board of Teaching. The Board of Teaching regulates teacher education by approving institutions and programs, using rules adopted by the Board in 1979. These rules require colleges and universities to submit their programs to the Board of Teaching for approval and to recommend candidates for licensure who complete these approved programs. Institutions assume responsibility for determining that each candidate is eligible for licensure. Similar systems are used in most other states.

Institutional approval to offer programs that qualify graduates for Minnesota teaching licenses is the first step in regulating the quality of teacher education. Once approved by the Board of Teaching, institutions must seek separate approvals for individual programs.

Evaluations for institutional approval are conducted every 10 years. Institutions prepare a report that addresses the criteria for approval. Board

of Teaching staff select an evaluation team to conduct an on-campus verification. Evaluation teams have four to 18 members depending on the size and complexity of the institution. Generally, half the evaluators are teachers and administrators and half are college and university faculty.

Evaluators visit the campus for three or four days. They interview faculty, staff, students, graduates, and teachers who supervise student teachers. Evaluators also check student transcripts and other records.

Based on the institutional report and on-campus findings, the evaluation team writes a report organized around the approval criteria. For each item in the approval rule, the team assesses the presence and adequacy of conditions required for approval. Finally, the team recommends approval, conditional approval, or disapproval of the total institution's application to the Board of Teaching.

Evaluation Criteria

Because the evaluation report and final approval decision are organized around specific criteria, these standards are the key to the integrity of the approval system. Board of Teaching rules require evidence that institutions satisfy standards, summarized as follows:

Institutional Commitment

- Teacher education is part of the mission of the institution.
- Sufficient financial, physical, and library resources have been allocated to support teacher education.

Organization

- Teacher education is controlled by a defined department, division, or school of education.
- The teacher education unit has authority to recommend graduates for licensure.

- o A policymaking body within the institution approves teacher licensure programs before they are submitted to the Board of Teaching.

Curriculum

- o General education or liberal arts requirements for teacher education students are equivalent to requirements in other programs.
- o Teacher education students are required to complete instruction in the philosophy and social context of education and human growth and learning.

Faculty

- o Teacher education faculty have relevant academic qualifications.
- o Faculty teaching loads are equivalent to the loads of other faculty members.
- o Part-time faculty do not replace available full-time faculty.

Student Services

- o Selective student admission and retention policies are applied.
- o Academic advising and teacher placement services are available to students.

Student Teaching

- o Students complete student teaching assignments in their licensure field and level.
- o The teacher education faculty supervises the student teaching program.
- o Students, teacher education faculty, and cooperating teachers evaluate student teaching assignments.

Planning and Evaluation

- o A committee which includes practicing teachers, school administrators, citizens, and staff assists in planning and evaluating teacher education programs.
- o Surveys of graduates and other evaluation techniques are used to develop and revise teacher education programs.

All criteria are stated qualitatively. There are no fixed, measurable standards in the rule, thus colleges and universities have some flexibility in the design and administration of their teacher education programs.

Program approval parallels institution approval, but takes place every five years. The institution begins by submitting a description of each program, demonstrating how specific program requirements have been met. Generally, this evidence includes course descriptions matched with the skill and knowledge specifications contained in the program approval rule. Faculty qualifications and teaching assignments also are submitted for review. Although a few requirements are stated in terms of course topics, most areas allow institutions to organize and present the required content as they choose within the requirements of the licensure rules.

The current approach to institution and program approval by the Board of Teaching provides little or no information about 1) the process of how programs deliver teacher education, and 2) the competence of candidates recommended for licensure.

RECOMMENDED MEASURES OF PROGRAM EFFECTIVENESS

The task force recommends that the Board of Teaching evaluate programs in terms of outcomes and process as well as inputs or program resources. The types and sources of data to be used by the Board of Teaching are identified to assure evaluation of the process and the outcomes of the programs.

This section provides recommended standards to the Board of Teaching, followed in each case by recommended measures for evaluation. The final section presents task force suggestions for methods of evaluation.

Recommended Criteria and Evidence

1. **Licensure candidates demonstrate the recommended dispositions, skills, and knowledge to the satisfaction of teacher education faculty and cooperating school personnel.**

   Measured by: - final overall assessment of the candidates' demonstrated performance in a variety of teaching contexts (outcome)

2. **Students are evaluated at entrance, throughout and at completion of the program.**

   Measured by:
   - demonstrated aptitude and attitude for teaching (input and outcome)
   - academic standing (input and outcome)
   - demonstrated communication skills (input and outcome)
   - demonstrated knowledge of liberal arts studies, core and pedagogical studies (outcome)
   - demonstrated practice of scientific inquiry (outcome)
   - demonstrated effective interpersonal and instructional skills (outcome)
   - demonstrated practice of dispositions (outcome)
   - existence of periodic review of teacher candidates during program (process)
   - student portfolio (outcome)

3. **The program has a stated set of outcomes consistent with the dispositions, skills, and knowledge recommended.**

   Measured by:
   - institutional documents such as adopted statements of program philosophy, concept of teaching, outcomes and expectations, brochures, catalogs (process)
   - course syllabi with expectations communicated early and often to the students (input and process)

4. **The program outcomes are based on research.**

   Measured by:
   - opportunities for students to possess and practice knowledge of effective teaching behaviors which enhance student learning (process)
   - opportunities for students to learn scientific methodology (process)
   - opportunities for students to interpret and apply research findings (process)
   - content of syllabi compared to review of research (input)
   - recent findings included in course assessment devices, including but not limited to tests (input)

5. **The liberal arts curriculum is comprehensive, rigorous, and coherent.**

   Measured by:
   - extent of liberal arts in academic preparation (input)
   - rigor of liberal arts in academic preparation (process)
   - depth and breadth of concentration(s) (input)

6. **The teacher education curriculum is comprehensive, rigorous, and coherent.**

   Measured by:
   - integration of theory and practice (input and process)
   - coursework and activities to provide students with the dispositions, skills and knowledge recommended (input)

- curriculum kept current with the growing body of knowledge about teaching (input and process)
- procedures for individualized program design (process)

7. **Liberal arts and teacher education curricula are integrated.**

Measured by:
- required liberal arts courses (input)
- demonstrated cross disciplinary planning (input and process)
- integrated practical experiences in relevant courses (input and process)

8. **The program incorporates a broad scope and sequence of laboratory experiences.**

Measured by:
- broad-based field experiences integrated early and continually with all learning experiences (input)
- written procedures for individualized student placement in field experiences (input)
- written procedures for faculty and teachers for coaching, supervising and evaluating student field experiences (input)
- faculty modeling, coaching, supervision and evaluation (process)
- school personnel modeling, coaching, supervision and evaluation (process)
- student reports and field experience journals (outcome)
- student self-evaluation reports (outcome)
- student simulation and use of technological tools (process)
- peer observation and coaching (process)
- training and evaluation of school personnel (process and input)

9. **Th ogram is developed and operated through formal partnerships.**

Measured by:
- formal written agreements with a limited number of partner schools for student field experiences and student teaching (input and process)
- selected partner schools for field experience rotated periodically (input and process)
- formal arrangements with business and professional people for student field experience (input and process)
- formal written agreements with schools for exchange of teacher education faculty and cooperating school personnel (input and process)
- advisory board to monitor cooperative efforts (process and outcome)

10. **The teacher education faculty and cooperating school personnel demonstrate effective teaching.**

    Measured by:
    - both faculties participate in formal staff development activities which expand and enhance teaching strategies (input and process)
    - faculty demonstrate cooperative or team teaching (process)
    - faculty jointly develop syllabi (input and process)
    - faculty demonstrate varied methods of instruction, including use of technology, cooperating and team teaching (input and process)
    - students demonstrate active participation in course work (process and outcome)
    - faculty provide learning environments beyond the traditional classroom (input and process)
    - students participate in cooperative and independent learning activities (input and process)
    - partner schools demonstrate knowledge and use of recent research on educational effectiveness (input)

11. **Teacher educators evaluate their programs and use results of evaluation to cause change.**

    Measured by:
    - periodic internal program review by liberal arts and teacher education faculty and school personnel (process)
    - participation in external teacher education program effectiveness research (process and outcome)
    - survey and test results (outcome)
    - demonstrated teacher outcomes (outcome)

12. **Teacher education faculty and cooperating school personnel implement and evaluate the formal induction period.**

    Measured by:
    - written induction procedures and agreements between schools and teacher education institutions which guarantee induction program for beginning teachers (input and process)
    - beginning teachers supported by nearest teacher induction program regardless of graduation point (input and process)
    - faculty and school personnel supervise beginning teachers (input and process)
    - written procedures for final post-induction evaluation (input and process)
    - demonstrated performance of candidate after induction period (outcome)

The task force recommends these 12 criteria and multiple kinds of evidence for measuring program effectiveness. The evidence addresses teacher education at five levels: 1) the institution, 2) the program, 3) the cooperating agencies

and personnel, 4) the faculty, and 5) the students. Evidence from each of these sources can be used to gather input, process, and outcome data.

Suggested Procedures and Methods of Evaluation

The task force suggests that the Board of Teaching should evaluate the evidence of program effectiveness using several procedures and, when possible, design scientific evaluation methods. The suggested procedures include: 1) interviews, 2) observation, and 3) review or examination. The procedures should be tested to assure validity and reliability.

1. Interview procedures should be used with:

   - teacher education candidates,
   - beginning teachers,
   - teacher education and liberal arts faculty,
   - cooperating school teachers,
   - administrators (colleges, universities, and schools),
   - elementary and secondary students, and
   - parents.

2. Observation procedures should be used for evaluating:

   - field site experiences (students, school personnel, and faculty),
   - student self-observations (student and faculty),
   - student use of assessment tools (student),
   - conferences between and among faculty, students, and school personnel,
   - college courses and instruction (teacher education faculty),
   - faculty ongoing evaluation of student performance (faculty),
   - student teaching activities (student and school personnel),
   - induction activities (student, school personnel, and faculty),
   - post-induction evaluation (student, school personnel, and faculty), and
   - staff development activities (school personnel, teacher education, and liberal arts faculty).

3. Review or examination of documents should evaluate the following:

   Institution:
   - procedures and policies for admission, retention, and completion,
   - institutional documents including catalogs and brochures,
   - formal partnership document to determine the extent of responsibility for each party,
   - rotational schedules for selected cooperating schools,
   - methods of communication among parties,

- advisory board membership,
- internal program review schedule, procedures, and process,
- participation in external research.

Program:

- procedures and instruments for evaluating student performance in dispositions, skills, and knowledge,
- procedures for student placement in field experiences and selection of supervising teacher(s),
- process and procedures for student self-evaluation,
- total curriculum,
- schedule for student evaluation conferences,
- syllabi, course outlines, and handouts,
- procedures for individual student program design,
- student evaluation reports from faculty and supervising teacher(s),
- faculty evaluation reports from students,
- course schedule and faculty assignments,
- syllabus authorship, activities, and handouts,
- field experience and course integration,
- induction procedures and post-induction evaluation process,
- kinds of field experience for students,
- staff development activities.

Students:

- competence and performance at exit,
- contents and quality of student portfolio,
- standardized test scores,
- individual program design,
- transcripts,
- ongoing evaluation reports,
- self-evaluation data, and
- beginning teacher records.

The task force suggests these evaluation procedures can guide the Board of Teaching in its task of redesigning teacher education program evaluation.

CHAPTER VII. SUMMARY AND CONCLUDING RECOMMENDATIONS

Future social, economic, and political trends demand reconsideration of education at all levels. Teacher education programs must produce highly educated, reflective teachers who can teach well in diverse and flexible learning environments. Schools must redesign structures and procedures to personalize learning through active student participation.

Ways have been sought to respond to the anticipated needs of teacher education programs in Minnesota identified in Chapter IV. These needs are summarized below. There is a need for:

- An explicit and expanded concept of teaching.
- Research findings incorporated into teacher education.
- Integrated and coherent teacher education programs.
- Improved and expanded field-based experiences and a formal induction period.
- Formal partnerships that involve schools in the preparation of teachers.

The trends, beliefs about learners and teachers, and identified needs in teacher education formed the basis of the program outcomes recommended in Chapter V. Measures of program effectiveness were recommended in Chapter VI. The concluding recommendations are presented in this chapter.

A VISION FOR THE FUTURE

Future teacher preparation should demonstrate integrated, complementary, and cooperative relationships between liberal arts and education faculty, and between college-based and school-based faculty. Teachers should be educated in programs where they learn a wide range of knowledge and theory and are encouraged to explore new ideas. These programs will nurture and support

divergent and innovative thinking. They should emphasize the need for asking many questions and seeking many answers in the practice of teaching. They should help future teachers develop a repertoire of teaching and learning strategies to apply in a variety of learning environments.

The business and professional community, governmental agencies, and the natural environment should be used more. Professional teachers will work as partners in differing roles: as resource specialists, career teachers, mentors, administrative liaisons, or adjunct instructors for new teacher education programs. Emerging technologies will be included in all learning environments. Because education in this state has been designed to include all citizens, educators will need to function in many ways and places, matching their expertise with student learning styles and needs.

Future teacher preparation programs should be cooperative, collegial learning environments where students will, from the beginning, identify their strengths and weaknesses with peers and faculty. Students will learn to be thoughtful and deliberative as they assume major responsibility for their own learning. Teacher preparation programs should derive their effectiveness from new and continuing education research.

Moving from current to future teacher education programs will require an objective appraisal of how well current practices meet the proposed program outcomes and a commitment to cooperation by all constituencies in education. Productive partnerships will need to be developed in at least four areas:

1. Teacher education faculty and the liberal arts faculty must work together to create a coherent and rigorous curriculum.

2. Teacher education faculty must work with a limited number of those schools that demonstrate knowledge and use of recent research on educational effectiveness and actively employ effective practices.

3. Teachers and administrators within schools, together with education researchers, should redesign the traditional teacher role and expand learning and teaching environments for students and for teachers.

4. Teachers, administrators, school boards, professional education organizations, teacher education institutions, and state agencies together should redesign funding structures and develop additional support systems for recruitment, preservice, induction, and staff development.

Thus, for each of the following recommendations, the task force presents a rationale and an impact statement and identifies the primary and secondary agencies responsible for implementation.

RECOMMENDATIONS AND RESPONSIBILITIES

Recommendation #1: Adopt and Endorse Outcomes: Dispositions, Skills, and Knowledge

The recommended program outcomes for teacher education defined by this task force should be endorsed by all constituencies responsible for education.

Rationale: Currently, no comprehensive statement of program outcomes is used by teacher education institutions. This statement of recommended program outcomes is based on the research on effectiveness in learning and teaching. The statement of outcomes is the product of a coherent and expanded concept of what teaching should be in the future. It provides a guide for rethinking and redesigning teacher education programs in Minnesota. The report calls on constituencies other than teacher education institutions to participate in this design process; all must first agree on a common agenda.

Impact: The Board of Teaching would establish new standards for the design of teacher education programs by adopting the program outcomes recommended in Chapter V. If the Board of Teaching adopts these recommended program outcomes immediately and uses them as a basis for institution approval within two or three years, institutions would be required to begin a curriculum redesign process immediately.

Responsibilities: The Board of Teaching should take the initiative in adopting the program outcomes as a basis for teacher education institution approval.

The program outcomes and recommendations for program delivery should be endorsed by teacher education institutions and integrated into their programs. The program outcomes need the support of the following groups in order to be successfully implemented: the Higher Education Coordinating Board, professional educational organizations, local educational agencies, the Minnesota Department of Education and the State Board of Education, the business, labor, and professional community, the governor, and the Legislature.

Recommendation #2: Program Evaluation and Teacher Licensure Assessment

New systems of teacher education program evaluation and teacher licensure assessment should be developed to assure program effectiveness based on proficiency of graduates in demonstrating attainment of task force program outcomes.

Rationale: Current program evaluation procedures include little or no outcome and process data or measurement. Measuring teacher education program effectiveness should include outcome and process data as well as input data. Outcome evidence must be used to determine the performance characteristics of beginning teachers.

Impact: New program evaluation procedures would be designed to measure teacher education program outcomes, processes and inputs for granting institution approval. The procedures should be developed within one year and be implemented within two or three years.

Responsibilities: The Board of Teaching should 1) design and implement an assessment system which permits candidates for licensure to demonstrate possession of the dispositions, skills, and knowledge outlined in Chapter V, 2) design and implement an evaluation system to measure teacher education

program effectiveness using the standards identified in Chapter VI, 3) develop and implement licensure which assures that a formal induction period is part of teacher preparation, and 4) design and implement an assessment system which permits demonstration of improved effectiveness near the end of the induction period. The assessment of teachers prior to issuance of a continuing license should be done by specially identified and trained educators who are not already involved in supervising and training the beginning teachers. The Board of Teaching should work with institutions of higher education, professional education organizations, and the Minnesota Department of Education to develop new teacher education program evaluation procedures.

Recommendation #3: New Curricula

The curriculum for teacher education programs should be redesigned to 1) reflect the evolving knowledge base, 2) improve the quality of practical experience, and 3) include liberal arts as demanded by the new program outcomes and commendations.

Rationale: Prospective teachers should have a strong liberal arts education that allows them to know more as teachers and requires them to think broadly and reflectively about their teaching methods. The more insight they have about knowledge and learning, the more resourceful they will be as teachers. Strengthened and integrated liberal study is associated with increases in intellectual self-esteem and knowledge.

The current and evolving research on learning and teaching provides the basis for clarifying and supporting effective teaching practices. This must be a part of comprehensive teacher education.

To further improve teacher education, more and better opportunities for learning how to teach must be available. The curriculum of teacher education must provide for teacher education candidates to study learning and learning environments and to safely practice their developing skills. Becoming an

effective teacher demands the acquisition of dispositions, skills, and knowledge through active participation during one's academic career.

Impact: A strong commitment from liberal arts and teacher education faculties would be needed to design curricula. Curricula should become models of interdisciplinary efforts and research-based practice. There should be evidence of change within two years and implementation within three to five years.

Responsibilities: Teacher education and liberal arts faculties should be responsible for developing and implementing curricula based on the recommended program outcomes. Such development should be done in cooperation with school personnel so that faculties can 1) demonstrate the coherent relationships between liberal arts and education courses, 2) design appropriate interdisciplinary practical applications, 3) design improved cross-cultural experiences here and abroad, and 4) demonstrate that teaching is problem solving, requiring constant scientific examination.

The teacher education faculty should develop and implement laboratory experiences early and often in the student's academic career. These experiences should incorporate a variety of real and simulated situations, school-based experiences, case studies, microcomputer problem solving and protocols or examples in print, audio, and video to be analyzed with a variety of methods.

Teachers and teacher education faculty should develop and require multiple clinical and field experiences across grade levels and content areas. These should involve students in data collection and research related to the effectiveness of instructional methods and materials.

The teacher education faculty should develop and use student teaching supervision procedures that 1) prepare supervising teams of teachers within

cooperating schools and 2) involve joint and stringent guidance from teacher education faculty and the cooperating school teams.

Recommendation #4: Dissemination

Dissemination efforts, to include statewide and regional conferences, should be conducted so that teacher educators and their colleagues can begin program redesign to achieve the recommended program outcomes.

Rationale: Teachers and teacher educators must know about and understand the work of this task force and agree on an agenda for change. This report must be broadly disseminated. To date there have been neither statewide nor regional systematic efforts to develop cooperative relationships among constituencies in education for teacher education programs. A collective effort will be needed to effect changes in teacher education curricula, field experience management, induction programs, and sustained professional development. Making change happen requires the involvement of those who provide education. Conferences would allow people to begin cooperatively redesigning curricula to meet the program outcomes and recommendations. These conferences would begin the procedures for negotiation of structural agreements for delivery of the new curricula.

Impact: Broad dissemination of this report would provide an impetus for extended dialogue. Conferences would provide the initial opportunity for teacher education faculty and cooperating school personnel to begin designing workable partnerships. The conferences would provide an immediate impetus to begin curriculum redesign and establish a common goal. Conferences should occur during 1987.

Responsibilities: The Higher Education Coordinating Board and the Board of Teaching should disseminate this report to constituencies. The Higher Education Coordinating Board, the Board of Teaching, the Department of Education, and

professional educational organizations should jointly initiate the proposed conferences. These agencies should participate, together with institutions of higher education, local educational agencies, and representatives of the business, labor, and professional community.

Recommendation #5: Partnerships

Working partnerships should be developed through formal agreements between and among colleges, universities, schools, and the Minnesota Department of Education to implement these recommendations.

Rationale: Few, if any, formal arrangements exist that obligate the constituencies in education cooperatively to design and deliver teacher education. Minnesota already has invested state and local resources in the creation of educationally effective schools, some of which might become the sites for a variety of field experience.[4]

Business has a vested interest in the quality of education for all students. Some business organizations have begun to help bring about the changes necessary. Corporate organizations are committed to working with educators to shape future education.

Impact: Formal agreements would obligate partners in their cooperative responsibilities for teacher education. There would be defined ownership for specific components. Local educational agency teaching contracts would reflect commitment to participating in teacher education. The school districts and selected schools would participate with the colleges and universities on a rotating basis to create the recommended field experiences. Providing field experiences at many levels for many persons in a single site would enrich the staffing for that site, to the benefit of pupils, staff of the site, teacher

4. The Minnesota Educational Effectiveness Program is a legislatively created program which supports the implementation of research in the schools' organizational and instructional processes.

education students, and college-based faculty. The agreements would be established within one to two years.

Responsibilities: Teacher preparation institutions, school districts and schools, and the Department of Education should develop and implement formal partnerships to establish student field experiences in selected sites. The field experiences should include: 1) systematic inquiry and experimentation with practice, 2) intensive forms of practice in a variety of roles with peers and practicing professionals, and 3) working with a diverse range of learners.

Teacher education faculty, school personnel, professional education organizations, and the Minnesota Department of Education should develop and implement regular, ongoing arrangements to 1) participate in joint research, 2) experiment with and design a variety of staffing arrangements, and 3) share professional knowledge.

Teacher education faculty, school districts and selected schools, and the Department of Education should initiate or continue formal agreements with businesses to create a wide range of learning environments for students and teachers. They should develop partnerships with businesses and professional organizations that fund innovative educational practices.

Recommendation #6: Performance Criteria and Training for Cooperating School Personnel

Performance criteria and training should be developed and implemented to assure a variety of effective roles for cooperating school teachers as they participate in the preparation of prospective teachers.

Rationale: Improvement in teacher education will require changes in roles and in the nature of teaching. Many superior practitioners with an interest in broad educational policy could be recognized and employed both inside and outside the usual classroom environment to support and enhance the effectiveness of beginning and peer teachers. Creating mentorship roles for such teachers

could help prevent costly attrition of beginning teachers and improve teacher competence.

Impact: Several new roles for cooperating school teachers would be defined and described. Roles could include mentoring and supervising teacher candidates, participating as adjunct teacher education faculty, and serving as career teachers. Criteria for teacher participation would be developed. Training would be developed and implemented. Funding would be needed to support training efforts. The criteria and training would be developed and training begun within two years.

Responsibilities: Teacher education faculty, the Minnesota Department of Education, and selected school personnel together with professional educational organizations should jointly develop criteria and training for involving practicing teachers in teacher education.

Recommendation #7: Formal Induction Period

Models for a formal induction period for all beginning teachers should be developed, implemented, and reviewed.

Rationale: Currently, there is no formal induction period and it is unrealistic to expect beginning teachers to learn all. That will be required of them as professionals prior to actual practice. During a formal period of induction, beginning teachers would be required to demonstrate the dispositions, skills, and knowledge attained in the preparation program. By engaging in a structured induction period, these persons could serve as teachers while continuing to develop their expertise under the guidance of trained mentors. The extended induction period would lead to increased levels of competence and responsibility and improve the likelihood that new teachers would remain in teaching.

Impact: Employing school districts, professional education organizations, and teacher education institutions would take new responsibility for beginning teachers after graduation. Direct instruction time for beginning teachers, mentors, and teacher education faculty by employing districts and universities would be reduced. Performance in terms of the recommended outcomes would be required. Substantial funding from teacher education institutions, local educational agencies, and the 1987 Legislature would be needed to support released time for mentors and beginning teachers, college and university supervisors, and related costs. Some programs should be available to June 1988 teacher graduates.

Responsibilities: The Board of Teaching, the Minnesota Department of Education, teacher education faculty, and local school districts together with professional educational organizations should jointly develop, implement and test models for a formal induction period for all beginning teachers.

Recommendation #8: Staff Development

Procedures and programs for staff development should be designed and supported to ensure continued professional growth of all educators.

Rationale: Continuing professional development should be an ongoing commitment for all educators. Formal staff development in teaching effectiveness for teacher education and liberal arts faculty is usually not part of teacher education programs. In order to respond in relevant and creative ways to the demands of a changing society, teachers and administrators need to renew and refine their knowledge. Teacher education faculty and cooperating teachers must use reflective and innovative teaching. Student teachers and beginning teachers become more competent by observing and learning from models of professional learning and growth.

Impact: School personnel would develop coherent and sustained staff development programs. Teacher education and liberal arts faculty would begin staff development programs to improve and expand instructional strategies. Specific funds would be allocated by local educational agencies, institutions of higher education, and the legislature for professional growth at all levels. Professional development centers would be established and serve as centers for research and development for teacher education and cooperating school faculty.

Responsibilities: Faculties should develop and implement sustained professional development programs for themselves to ensure use of a variety of instructional strategies and interdisciplinary team work.

Staff development programs, whether designed by the Minnesota Department of Education, teacher education faculty, local educational agencies, or professional educational organizations should include learning in the areas of 1) understanding and discovery of self, 2) pedagogical growth, 3) cognitive development, 4) professional skill development, and 5) career development. Cooperative design is encouraged.

The Minnesota Department of Education, the Higher Education Coordinating Board, and the Board of Teaching in conjunction with the teacher education and liberal arts faculties, local educational agencies, and professional educational organizations should establish professional development centers that offer opportunities for teachers and teacher educators to improve their own teaching abilities and expand their repertoire of teaching methods.

Recommendation #9: Curricular Studies

Studies across and within institutions of higher education should be conducted to evaluate a variety of curricula and structures for delivering effective teacher education.

Rationale: There is concern across the nation that the four-year undergraduate curriculum for teachers is too crowded. The outcomes recommended in this report require a curriculum that is substantially different from current baccalaureate programs. No research, however, indicates that a program of any specified length or structure results in more effective schools or teachers. Recent national reports suggest that the professional education programs and the arts, sciences, and humanities requirements should be examined for rigor.

Impact: These studies would provide definitive information about the most effective curricula and structure for teacher education. Funding is needed to study the programs. The studies could be completed within five years.

Responsibilities: The Board of Teaching should initiate studies that evaluate a variety of curricula and structures used by colleges and universities for delivering effective teacher education based on the outcomes and recommendations of this report.

Recommendation #10: Resources

Resources should be re-allocated and specifically targeted to efforts for restructuring teacher education. The 1987 Legislature should target funds for mentoring, an induction period, staff development, and curricular studies. Current resources of teacher education institutions should be reallocated to achieve these recommended changes.

Rationale: State and local agencies will need to allocate new resources and reallocate current resources for attainment of the program outcomes and recommendations defined by the task force. Legislative policies and funding efforts will be necessary also. The Board of Teaching, the Higher Education Coordinating Board, and the Minnesota Department of Education are committed to

working with policy makers in initiating, designing, and developing policies and programs that lead to quality education.

Impact: A commitment to the complex and long-range efforts needed to improve teacher education is required. New funding will be requested from the 1987 Legislature. Institutions of higher education will be expected to demonstrate that newly designed teacher education programs are adequately supported.

Responsibilities: Teacher education institutions should provide sufficient amounts of money, time and/or graduate hours for cooperating school personnel involved in teacher education preparation by reallocation of existing or addition of new resources.

Teacher education institutions and local school districts should reallocate existing resources and provide additional monies for continued staff development.

Local school districts and professional educational organizations should design contract alternatives specifically for teachers to participate in teacher preparation activities and extended professional development.

The Board of Teaching should request resources for implementing a formal induction period which includes assessing the teaching skills of beginning teachers.

The business and professional community should be asked to assist in providing resources for implementing aspects of the task force recommendations.

The legislature should provide resources targeted specifically to 1) design new curricula, 2) develop criteria and provide training for cooperating teachers, 3) develop and implement an induction period, 4) provide ongoing staff development, and 5) implement curricular effectiveness studies.

TASKS & RESPONSIBILITIES FOR IMPROVING TEACHER EDUCATION IN MINNESOTA

KEY:

- PRIMARY RESPONSIBILITY
- SECONDARY RESPONSIBILITY

	BOARD OF TEACHING	INSTITUTIONS OF HIGHER EDUCATION	STATE DEPARTMENT OF EDUCATION & BOARD OF EDUCATION	LOCAL EDUCATIONAL AGENCIES	HIGHER EDUCATION COORDINATING BOARD	PROFESSIONAL EDUCATIONAL ORGANIZATIONS	GOVERNOR & LEGISLATURE	BUSINESS, LABOR, & PROFESSIONAL COMMUNITY
RECOMMENDATION #1 ADOPT & ENDORSE OUTCOMES	●	○	○	○	○	○	○	○
RECOMMENDATION #2 PROGRAM EVALUATION & LICENSURE ASSESSMENT	●	○	○			○		
RECOMMENDATION #3 NEW CURRICULA		●		○				
RECOMMENDATION #4 DISSEMINATION	●	○	●	○	●	●		○
RECOMMENDATION #5 PARTNERSHIPS		●	●	●		○		○
RECOMMENDATION #6 CRITERIA & TRAINING FOR SUPERVISORY TEACHERS		●	●	●		○		
RECOMMENDATION #7 INDUCTION	●	●	●	●		○		
RECOMMENDATION #8 STAFF DEVELOPMENT	○	●	●	●	○	●		
RECOMMENDATION #9 CURRICULAR STUDIES	●	○						
RECOMMENDATION #10 RESOURCES	●	●	●	●	○	○	●	○

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APPENDIX A. WORKING ASSUMPTIONS

ASSUMPTIONS ABOUT LEARNING AND EDUCATION

The following assumptions were developed by the task force to guide its work.

Skills and Perspectives Needed by Students

- Communication skills (oral, written, non-verbal, listening, electronic) will be essential for all learners.
- Higher order thinking skills will be needed by all learners.
- Cooperative and interpersonal skills will be necessary for all learners.
- Global perspectives will be essential for all learners.

Teacher Education Profession

- A knowledge base on educational effectiveness exists.
- Improvements in teacher education will facilitate higher achievement for learners.
- The education of teachers is a shared responsibility of entire colleges and universities and school site personnel.
- Teachers must be increasingly involved in all aspects of the educational enterprise.

Social/Political Forces

- Quality education must be available for all students.
- Education must anticipate and adapt to continual and rapid social, political, and economic change.
- Teacher education programs must be equally accessible to all groups.
- Financial and political pressures for accountability will require more extensive assessments of learning, teaching, and educational effectiveness.

Delivery Systems

- o Learning takes place in a variety of settings, only one of which is formal education.
- o Technology complements and enhances educational curricula and instructional delivery systems.
- o Students and parents will have increasing choices among different programs and delivery systems.
- o The state has the responsibility for the cost and concern for the benefits of learning in all state affiliated formal settings.

ASSUMPTIONS ABOUT THE TASK FORCE CHARGE

1. The task force will focus on the anticipated teaching/learning environment of the 1990s and beyond.
2. The primary focus of the task force will be on outcomes of teacher education programs. The relationships among these outcomes and the resources will be a secondary consideration.
3. The task force will provide a clear basis for evaluating teacher education programs.
4. The task force will state desired outcomes which will provide a clear basis to the Board of Teaching and institutions for evaluating teacher education students.
5. The task force will focus on outcomes that are essential for all educators. The task force will not focus on non-essential outcomes or outcomes that could be important for some teachers but not for others.
6. The task force will focus on general teaching skills and knowledge of learning and teaching principles. The task force will not focus on the subject content being taught.
7. The task force will focus on the education of teachers before they receive a continuing teaching license.
8. The task force will base its recommendations on anticipated future trends in the educational environment and on research regarding educational effectiveness.
9. The task force will outline desired outcomes of teacher education programs in the future. It will not evaluate existing programs.

ASSUMPTIONS ABOUT TASK FORCE PROCEDURES

1. The task force will try to reach all decisions by consensus.

2. The task force will begin by examining the environment, learning, and the teaching role of the future because these conditions must shape expectations for teacher education.

3. The task force will address its report and recommendations specifically to teacher education institutions and the Board of Teaching, and generally to the education community.

4. The task force will issue its own report and recommendations. The Board of Teaching and the Higher Education Coordinating Board will each review the report and adopt recommendations which may endorse, extend, or contradict the recommendations of the task force.

APPENDIX B. RESOURCE SPEAKERS FOR TASK FORCE ON TEACHER EDUCATION FOR MINNESOTA'S FUTURE

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Minneapolis, Minnesota

Harlan Cleveland
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of Public Affairs and
Professor of Public Affairs
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University of Minnesota
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The Honorable Wendell Erickson
Chairman
House Education Committee

Eugene Gollin
Professor, Department of Psychology
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Darwin Hendel
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The Honorable James Pehler
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