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**ABSTRACT**

Seven major areas of reform that are bringing significant changes in teaching and teacher education are documented and discussed: (1) improving the academic quality of students entering teacher education programs; (2) upgrading the standards for the accreditation of teacher education institutions; (3) raising teacher certification standards; (4) establishing performance evaluation of instructional personnel; (5) improving the content and structure of teacher education programs; (6) improving the quality of research on teacher education; and (7) improving the working conditions of teachers. The threat to the teaching profession posed by movements to admit into the profession individuals who have not had any formal teacher preparation is also discussed. (JD)

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# **Teaching and Teacher Education: Implementing Reform**

by  
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## Introduction

In 1910 Abraham Flexner issued his now famous study of medical education (Flexner 1910). From the standpoint of its impact on public policy, the *Flexner Report* is regarded as one of the most important reports ever written, since it dramatically changed the nature of medical education in the United States. Thus the *Flexner Report* served as a catalyst for the most significant reform in the history of medical education, although the seeds of reform preceded the report itself.

Teaching and teacher education may now be in a similar stage of significant reform. Although seeds of this reform also were initiated a number of years ago, the major catalyst was the wave of national reports that severely criticized teaching and teacher education and recommended numerous proposals for change (Sikula and Roth 1984). At this transition stage, we are moving beyond the proposals and calls for reform. Changes, some of them radical, are actually taking place in such significant ways that this could be viewed as a renaissance of the teaching profession.

The reform of a profession tends to occur in three major stages. The first is the recognition or consciousness-raising stage in which problems are identified. The recent proliferation of reports calling for reforms in teaching and teacher education is this first stage, similar to the *Flexner Report* on medical education in 1910. In both situations sporadic reform had begun before the reports were published,

but the reports generated sufficient public awareness to initiate national action.

The second stage is one of response to the identified problems with proposals for action. Typically, in this stage some of the proposals for action could best be described as "quick-fixes," which appear to provide solutions to the problems but do not get to the roots of the problems. Nevertheless, during this second stage we see the genesis of long-term changes that are likely to have significant effects on the profession.

In the third stage the long-term, well-conceived proposals are implemented, resulting in a true revitalization of the profession. This third stage takes much longer than the first two but has the greatest impact. We are now in this third stage in the reform of teaching and teacher education. Numerous proposals for reforming teaching and teacher education are now being implemented. These reforms are extensive, and in some cases radical. They cover a broad spectrum of components related to the teaching profession.

There also are certain threats to the reform movement, which if not thwarted could undermine efforts to make teaching a true profession. These include initiatives in some states to provide an alternative route into teaching that does not require teacher preparation, the issuance of emergency teaching certificates, the misassignment of teachers out of their fields, and the impending teacher shortage with its prospects of emergency certification. The extent of these threats and their effect on the reform of the profession will be discussed later in this fastback.

In this fastback I shall document and discuss seven major reforms that are bringing significant changes in teaching and teacher education.

1. *Quality of those entering teaching.* Although this has been a major concern in the past, there is evidence to indicate that the academic quality of those entering is improving, and there are concerted efforts to continue this improvement.

2. *Accreditation of teacher preparation programs.* There have been proposals for change in this area before, but now there are major efforts to upgrade the standards for the accreditation of teacher education programs.

3. *Teacher certification standards.* Some changes have been simply quick-fixes, but new comprehensive standards for certifying educational personnel are now in place.

4. *Performance evaluation of instructional personnel.* More rigorous entrance requirements can improve the quality of those entering teaching, but a better measure of one's ability is performance. There now are in place in several states performance evaluation systems to determine who will remain in the profession.

5. *Teacher education reform.* Over the years there has been considerable tinkering with the content and structure of teacher education programs, without much consensus among the leaders in the field. Now influential groups are specifying what the essential characteristics of teacher education programs should be, and such programs are beginning to be implemented throughout the country.

6. *Research on teaching and teacher education.* One of the severest criticisms of teaching and teacher education in the past has been that it lacked a body of knowledge based on empirical research. A significant body of such knowledge has been accumulating and is beginning to have an impact on the practice of teaching.

7. *Conditions of practice.* Better salaries and career incentives are necessary to attract and to retain excellent teachers. Across the country many efforts are under way to improve conditions of practice for teachers.

The seven areas of reform described above are real changes that have been initiated, with each having a potentially profound impact on the profession. Together they encompass the third phase in the reform of teaching and teacher education and signify the beginning of a renaissance in the profession.



## Improving the Quality of Those Who Enter the Profession

Admission criteria for entrance into teacher preparation programs vary considerably. Such criteria include college cumulative grade point average, recommendations, interviews, experience with children, high school grade point average, and high school class rank. Scores on the Scholastic Aptitude Test (SAT) and the American College Test (ACT), which are widely used in freshman admissions, are less commonly used for admission to teacher education programs. One study with responses from 205 institutions indicated that 82% of them do not use an SAT or ACT cutoff score for entrance into their teacher preparation programs (Feistritz 1984). Nevertheless, both the popular and professional media have given considerable attention to SAT and ACT scores of teacher education candidates, so some comment is in order.

The academic quality of those entering teacher preparation programs and subsequently becoming teachers has become a sensitive issue (see fastback 239 *Recruiting Superior Teachers: The Interview Process*). In 1982 the national average combined verbal and mathematics SAT score was 893 out of a possible 1600, while the average score for high school seniors who indicated education as their intended major was 813, a difference of 80 points. This score also was below the

average score of those students entering college whose intended majors were in the arts, biological sciences, business/commerce/communications, physical sciences, and social sciences. But SAT scores of these future education majors were above those whose intended majors were home economics, ethnic studies, or those who planned to attend trade and vocational schools after high school. However, more recent data show that from 1982 to 1985 the difference between the SAT scores of all students and those intending to major in education narrowed from 80 points to 70 points. Interestingly, this rise in SAT scores has occurred in the South and West, which are experiencing the greatest demands for new teachers (Feistritzer 1985).

A somewhat different view of the SAT point game comes from a 1985 study of selected institutions reporting use of SAT scores in which the average combined SAT score for those actually *admitted* into the teacher education program was 844, which while 49 points below the 1983 national average combined SAT score, was 32 points above the 1983 average combined SAT for high school seniors who said they *intended* to major in education. (Because of the limited sample in this study, it does not necessarily reflect the general condition.) Interestingly, the same study also showed that in those institutions with over 10,000 students the average SAT score for those admitted to the teacher education program was 866 (Feistritzer 1984). Another study reported that the scores of students admitted into teacher education are 60 points higher than the average SAT score for high school students declaring education as a prospective major ("Education Students" 1983). It appears, then, that although the SAT scores of high school seniors who *declared* education as a major are below average, the picture changes if we look at the scores of those actually *admitted* into teacher education programs. This discussion of SAT and ACT averages should not conclude without mentioning that the population of students who take either of these aptitude tests probably represents the top half of the total population of 18-year-olds.

Data on grade point and high school class rank provide some indication of the academic quality of teacher education students. A survey of 722 institutions in 1983-84 indicated that admission to most teacher preparation programs requires a 2.5 on a 4.0 scale (AACTE

1985). This compares favorably with other programs on university campuses, which have no higher standards for admission and retention. Another survey of 543 institutions found the average college grade point average required for admission was 2.29 on a 4.0 scale (Feistritzer 1984). The average of students actually admitted to teacher education programs, usually after two years of arts and science preparation, is 2.8. The class rank of students admitted to teacher education is in the upper quartile (76.2) of the high school class ("Education Students" 1983).

One recent effort to screen applicants for teacher education programs is the use of entry examinations. Examinations most commonly used are the pre-professional skills test developed by the Educational Testing Service and institutionally developed tests. These examinations focus on basic skills. A 1983 survey indicated that 60% of those responding required passage of some type of test for admission into their teacher preparation programs. A standardized basic skills test was required by 19% of the respondents; an additional 8% developed their own basic skills test (Feistritzer 1984). A comprehensive survey conducted by the National Association of State Directors of Teacher Education and Certification (NASDTEC) showed a substantial increase in the use of examinations for entry into teacher education programs (Rotn and Mastain 1984).

There is ample data to show that more comprehensive screening procedures are being used for admission to teacher education programs. Of those institutions responding to a recent AACTE survey, 99% indicated they have procedures for admission into some or all parts of their teacher education programs, which are in addition to the regular requirements for entry into the institution. Using these procedures, the institutions rejected 21% of the applicants in 1983-84, and private universities rejected almost 30% of their applicants. In addition, more than one-third of the institutions reported that their requirements for admission to student teaching and for recommendation for certification were more stringent (AACTE 1985).

Another effort to upgrade the quality of those entering teaching is the establishment of honors programs designed to attract academically talented students into teaching. A 1984 AACTE survey indicated

that 13% of those institutions responding reported having a teacher education honors program. Such programs, which also offer scholarships and loans, have helped to increase the number of academically talented students in teacher education and subsequently to enter teaching (AACTE 1985b).

An example of one honors program is the SunCoast Area Teacher Training (SCATT) Program at the University of South Florida, which in 1985 received a Showcase for Excellence award from the Association of State Colleges and Universities. To be admitted to the SCATT program, students must have a composite score of 1000 on the SAT or a score of 21 on the ACT and a cumulative grade point average of 3.5 in courses taken prior to entry into the program in their junior year. Students must also be interviewed by faculty and be recommended by at least two of the university faculty. In the five years the program has been in operation, the number of students enrolled has more than doubled.

This chapter has provided an overview of the changes taking place to upgrade the quality of teachers by controlling who enters teacher preparation programs. Let us turn now to the teacher education programs themselves.

## National Accreditation of Teacher Education Programs

**O**ne indicator of the strength of a profession is the quality and rigor of its accrediting standards and procedures. Each state has the legal function of approving the teacher education programs in institutions operating within its boundaries. This provides one quality check. A stronger indicator of excellence is evaluation by an external national accrediting agency. National accreditation is not subject to the political vicissitudes within a state since it uses a neutral but highly professional body of practitioners to evaluate programs. It is also a mechanism by which the profession can govern itself and not be beholden to the pet theories of some state legislator or the special interests of some pressure group. Although national accreditation has no legal authority, it is an influential force in maintaining high standards of preparation necessary for a strong profession.

The official, but non-governmental, agency for accrediting U.S. teacher education programs is the National Council for Accreditation of Teacher Education (NCATE). Accreditation of teacher education programs by NCATE is voluntary. In fact, institutions must pay a fee in order to be reviewed and to be considered for accreditation by NCATE.

Although NCATE has long been regarded as a major force in maintaining high professional standards in teacher education, it is not without its critics. In a study titled *NCATE: Does it Matter?* (Wheeler 1980), the following criticisms were made: 1) NCATE standards are vague, key terms are undefined, and the data collected to demonstrate standards are insufficient, 2) standards are applied inconsistently; and 3) NCATE's influence on program quality is limited. In response to these and other criticisms of the NCATE accreditation process, a major reform has taken place in NCATE to strengthen this process, which has the potential for improving the total field of teacher preparation in institutions across the country.

In 1983 NCATE initiated a review and revision of its standards and procedures for national accreditation. In June 1985 the NCATE Council adopted new standards and procedures, which are described in *NCATE Redesign* (NCATE 1985). The new standards and procedures are radically different and call for quality standards that are significantly greater than previously required. In fact, some institutions, if they are to adhere to these standards, would have to revamp totally their teacher preparatory programs. Institutions seeking NCATE accreditation will have to meet these new standards beginning in October 1987.

The following paragraphs will review these new standards and procedures and point out some of the significant differences between the new and old standards or procedures in order to illustrate the scope of the reform.

The old NCATE procedure required four preconditions to be met by institutions before they could apply for accreditation. The new procedure has 11 preconditions to be met and approved by NCATE in order to establish eligibility to apply for accreditation. Some of the more salient new preconditions are: 1) The unit must keep abreast of emerging evaluation techniques. 2) The unit must regularly evaluate its programs and graduates. 3) The unit must assess students' basic skills using standardized tests prior to admission. 4) The unit must assess the competence of its graduates at exit. 5) In states not recognized by NCATE, the unit must submit curriculum portfolios.

NCATE "recognition" of state program approval systems is an especially important new policy direction. In effect, NCATE has now elected to sanction the quality of the state program approval systems. Several years ago the Teacher Education Council of State Colleges and Universities (TECSCU) recommended that state program approval systems be evaluated by some external agency. However, no such action was taken because the states had the legal authority for program approval, and there was a lack of initiative by any group or organization to take on this politically volatile function. The fact that the new NCATE procedures provide for recognition of state approval systems indicates a major step in the reform of the profession.

The old NCATE procedures allowed an institution to receive accreditation in some program areas and not others. Under the new procedures, the focus will be on the total unit, not on individual program areas. In other words, the new process is all or nothing for both basic and advanced programs. The institution must demonstrate a capability to deliver all its programs in order to receive accreditation.

The members of NCATE visiting teams will be highly skilled in evaluation techniques, such as interpretation of data, use of questionnaires, interviewing, and making "respected judgments about professional education units" (NCATE 1985). Team members under the new process will be selected more carefully, better trained, and more sophisticated in their evaluation procedures, which should result in more consistent and accurate evaluations.

Currently initial NCATE accreditation is effective for a period of seven years. Under the new procedures, after initial accreditation the institution submits annual reports, which are monitored to ascertain the unit's continuing viability. Three years after an on-site review, the NCATE Council reviews an institution's data bank compiled from the annual reports for evidence that standards have been maintained to justify continuing accreditation. After such a review, one of three decisions is made:

1. Full accreditation (the report may contain statements pointing out areas that need strengthening but accreditation is given without any accompanying conditions).

2. Accreditation with stipulations (specific shortcomings are described and a timeline is given to rectify them).
3. Denial or revocation of accreditation.

The standards for the new NCATE system vary in some significant ways from the old system. The "Knowledge Base" standard requires evidence that the curriculum designs and instructional models used in the teacher education program reflect the best current research in these areas. This standard also calls for a greater collaborative effort within the institution. The "Relationship to the World of Practice" standard calls for greater specificity in clinical and field experiences, with stronger links to local schools, including cooperative research. The "Students" standard is also more specific (for example, 2.5 GPA for admission) and calls for evaluation of students at exit from the program. The "Faculty" standard emphasizes scholarly activities and research, and there are added criteria for faculty evaluation.

The new NCATE standards represent fundamental changes in the philosophy of accreditation, with major implications for the improvement of the profession. The new standards are more comprehensive, more specific, and more rigorous. The impact of the new standards will be felt in the next few years as institutions begin to examine their programs and submit them for approval.

Already there are indications that NCATE is becoming more rigorous under its current standards, thus setting expectations for the new standards. In 1984-85 NCATE failed to approve one or more programs at 24% of the institutions applying for accreditation, more than double the denial rate of 1983-84, which was 11%. The 1982-83 denial rate was only 6.7%. As one writer commented, with the new standards "in the back of their minds," the council is being "hard-nosed in applying the current standards" (Currence 1985a).



## Teacher Certification and State Program Approval

**T**here has always been a certain amount of tinkering with certification requirements in the various states. What is different now is that the changes are extensive and broad-based, affecting almost all aspects of the certification process. Furthermore, there have been major changes in the program approval process used by states to evaluate the teacher education programs within their boundaries.

In 1984 the U.S. Department of Education published *The Nation Responds: Recent Efforts to Improve Education*, which describes the certification reform actions of 47 states. Since that time the other three states also have initiated major reforms. Coley (1985) provides information on the specific changes occurring in certification. Twenty states recently have made policy changes affecting admission into teacher education programs, such as requiring a basic skills test or a specified minimum grade point average or both. Twenty-eight states made policy changes affecting the teacher education curriculum. Of these, 12 now require more professional studies, 12 require more student teaching, 11 have made their program more rigorous, and 10 now require more general education. Thirteen additional states have made other types of curriculum changes. Most of the states stated that the above changes have improved the quality of teacher candidates.

Another reform in state certification requirements is evaluation at the completion of the teacher education program. At least 15 states have introduced new policies in this area. Five added a requirement for the evaluation of teaching performance or specific competency, four added a testing requirement, four added a minimum GPA requirement, and one added a requirement involving both a test and GPA (Coley 1985).

Unquestionably, the area receiving the greatest attention in teacher preparation and certification is mandated testing. For example, in Florida institutions must have at least 80% of their teacher education students pass the Florida Certification Examination or else they will lose their program approval status. The most recent data (Sandefur 1985) indicate that 17 states now require a test for admission into teacher education and eight more are planning such a requirement. Twenty-five states now require examinations for certification and an additional seven are planning such a requirement. Sandefur reports that state competency assessment of teachers has grown from three states to 30 since 1977, and an additional 12 states reported planning such assessments in 1983. The areas covered by tests fall into four general categories: basic skills, professional studies, academic content areas, and on-the-job assessment. Twenty-five states now require a test in basic skills with an additional 10 states planning to do so. Twenty states require a test of professional knowledge with an additional three planning to do so. Nineteen states require assessment of academic knowledge with three others discussing the use of these assessments in the near future (Sandefur 1985). Testing as part of on-the-job assessment will be discussed in the next section on performance evaluations.

Another recent development is the testing of teachers already practicing in the schools. Arkansas was the first state to mandate testing for already certified teachers in 1983. Governor William Clinton pushed the mandatory testing measure through the legislature in order to assure the public that new taxes specifically designated to fund higher teacher salaries would not end up in the hands of a "small but not insignificant number" of incompetents ("90 Percent of Arkansas Teachers" 1985). The tests were taken in the spring of 1985, and 90%

of the state's 28,276 teachers passed. In March 1986, 200,000 Texas teachers were tested. The results were not available as this fastback was going to press, but it is estimated that as many as 10,000 or 5% will fail the test.

This widespread testing of teachers is a hotly debated topic. Some regard it as a "quick fix" solution for improving the quality of the teaching force. However, both the National Education Association and the American Federation of Teachers support testing teachers prior to entry into the profession, although they are opposed to testing currently practicing teachers.

At least 15 states have increased their professional education requirements for certification in such areas as demonstration of teaching competency, observation of teaching, and testing. Some of these states have added an initial certification step for new teachers, increased inservice requirements for continuing certification, and established special certification programs for holders of bachelor's degrees who have not taken teacher education courses. Coley concluded that "the states which had introduced new policies perceived them as strengthening teacher education programs, making students more serious, focusing attention on weaknesses in teacher education, and screening out students who lack sufficient knowledge of basic skills and subject matter" (Coley 1985).

Another recent development in teacher certification is the use of internships for candidates for state licenses. As distinguished from traditional student teaching experience, the internship is a postbaccalaureate experience with full responsibilities for classroom teaching. Generally the intern is a full-time employee of the school district and receives technical support and periodic observation from the training institution as well as the school district. During the internship, the individual undergoes regular performance evaluations.

The National Association of State Directors of Teacher Education and Certification (NASDTEC) collected data in 1983 on the use of internships. At that time the following states had initiated internships for beginning teachers: Florida, Georgia, Kentucky, Nebraska, North Carolina, Oklahoma, South Carolina, and Texas (Roth and Mastain 1984). With internships the state frequently will issue a one-year cer-

tificate. On successful completion of the internship, the teacher is awarded a regular certificate valid for at least three years.

Still another state mechanism for strengthening teaching is mandating continuing professional development. This is another factor that is changing the nature of the profession. Recent data indicate a trend toward increasing professional development requirements for certificate renewal. In a 1984 study asking the 50 state agencies whether they were increasing or decreasing continuing education requirements for teachers, 29 states indicated they required continuing education as a condition for license renewal. Eighteen of the 29 are planning to increase continuing education requirements, two were not planning to increase, and the remaining nine did not answer. The study concluded, "There is a very strong movement toward increasing continuing education requirements where they now exist (18 states) and to *add* continuing education requirements where none now exist (9 states)" (Roth and Mastain 1984).

## Performance Evaluation of Teachers

A recent development, one of the many components of the reform movement, is the performance evaluation of teachers. This is usually conducted during an internship or during the first one or two years for beginning teachers. Performance evaluations may be state mandated for beginning teachers for purposes of certification.

In the past, candidates for state certification only had to meet subject matter requirements for their teaching area and a designated sequence of education courses. The role of the states in approving programs at their teacher education institutions was to certify that the required courses were offered. Now, with the introduction of performance evaluations, the assessment of teachers calls for more direct indicators of competence. And the assessment is frequently conducted by evaluators outside the teacher education institutions.

The use of performance evaluation has already begun to have an impact on the quality of teacher preparation programs. The long-term effects of this effort will be felt as the reform movement continues to unfold. It represents a radical change in the manner in which those entering the profession are evaluated for certification. When combined with other testing measures, it provides a comprehensive assessment of those entering the profession.

Three sources provide data to document the growth of performance evaluation with internships and beginning teachers. The first,

by J. T. Sandefur, covers on-the-job performance (Sandefur 1985). The second is a report on state teacher policies by the Education Commission of the States (ECS 1983). The third is the *Manual on Certification and Preparation of Educational Personnel in the United States* prepared by NASDTEC (Roth and Mastain 1984). The ECS report provides a narrative description of activities in the states; the NASDTEC document has a specific category for internship or residency requirements and support systems for beginning teachers. The following synthesis of these three sources provides a reasonably accurate description of the current status of performance evaluation as one aspect of the reform movement.

Fourteen states have a performance assessment, which is generally conducted during an internship. In addition, nine other states are currently planning some type of performance assessment. These data may not be exact but are sufficient to indicate a trend throughout the country.

Several states have developed a specific instrument for the observation and assessment of teachers. These include Florida, Georgia, Kentucky, and South Carolina.

## Reform in Teacher Education

**I**n the various calls for reform, teacher education has received severe criticism. Some reform proposals call for a major overhaul of the entire teacher preparation system; some even suggest that schools of education be done away with and that teacher preparation be turned over to local schools (Sikula and Roth 1984). How have our teacher education institutions responded to the criticisms? What changes are being made, and what is the nature of these changes? Will they result in improved quality?

In previous sections a number of initiatives affecting the quality of the teacher preparation program were discussed. Criteria for admission into teacher preparation programs have become more rigorous. Candidates must pass a basic skills test. Tests of pedagogy and subject matter have been mandated by some states. There has been across-the-board revamping of teacher certification regulations that affect the content of teacher preparation programs. Significant reform of national accreditation has been adopted, which will require radical changes in teacher preparation programs to meet the new standards. And state agencies have strengthened program approval procedures and standards in order to improve teacher preparation programs within their states. Much is happening in response to calls for reform.

Another effort under way, which could be a major influence on change in teacher education, is the work of an organization called the Holmes Group. This is a consortium of 28 deans of education from prestigious institutions who have unofficially banded together to review the standards and nature of teacher preparation programs. They are planning to invite 120 carefully selected institutions to join them. The group is chaired by Judith Lanier, dean of the School of Education at Michigan State University. This group has made recommendations that would significantly alter current teacher preparation programs. Following is a summary of the group's major recommendations from its draft report as reported in the *Chronicle of Higher Education* (12 June 1985, p. 16).

The university works with selected school districts to create exemplary school sites for student and faculty learning about teaching excellence. In these "professional development schools," working conditions allow for the very best in teaching practice. . . .

The university fosters an inter-disciplinary climate in teacher education. . . . There is a valuing of collaboration among faculty with different disciplinary expertise. . . .

The university expects an ethos of inquiry to permeate its teacher education programs. . . .

The university assures equitable rights and responsibilities. . . to teacher education within a college [which are] comparable to those of other *professional* schools. . . .

University faculty members [are evaluated] by peers at least every two years. . . .

The university faculty includes a clinical faculty of practicing school teachers. . . .

The university faculty is made up of strong teacher-scholars designated as "fellows in teacher education" by a national review committee of leading educators. . . .

Students . . . are academically talented and committed to teaching. . . .

At three points — prior to status as an intern, novice, and career teachers — students must pass components of a Professional Teacher Examination. . . .

Students . . . evidence appropriate ethical commitments . . . prior to successful completion of their internship. During the induction year,



students are required to successfully complete a teaching internship and continue working toward a master's degree in education. . . .

The curriculum requires a master's degree in education and a well-supervised teaching internship over a substantial period of time. . . .

The curriculum required for attainment of career professional status requires advanced study. . . . Successful completion of such advanced study would carry recognition as a Professional Career Teacher and could lead to a second advanced degree, such as an educational-specialist degree or the doctorate in education.

It is clear that if the above recommendations were implemented, it would provide a high quality professional preparation. The Holmes Group has been criticized as elitist since it is made up of only 28 deans from large institutions. There also has been dissent within the group by those who object to the notion that there is only one route to teacher preparation. It is significant, however, that these proposals are not coming from an external body but from those who are in positions to provide leadership and change within their own institutions. Should this occur, there could be a spinoff to other institutions. The Holmes Group has the potential for influencing the direction of the entire teaching profession.

There is other evidence of widespread change in teacher preparation institutions. A report by the American Council on Education, *Campus Trends, 1984*, found that close to 90% of postsecondary institutions are currently conducting or have already completed reviews of their total curricula with the intent of developing new general education course requirements and of giving greater emphasis to students' competency and skills. Of these institutions with teacher training programs, 52% report they require secondary education students to have a major or minor in a discipline; 89% report that there are minimum requirements for entry into their teacher education programs; and 76% indicate that the program has tighter standards than a few years ago (El-Khawas 1984).

A study by AAC&E provides additional information and some specific data on the type of changes. For example, 36% of the institutions indicated their requirements for entry into student teaching in 1983-84 were more stringent than for the previous years. Further-

more, 33% of the institutions reported that the 1983-84 requirements for certification were more stringent than those used in 1982-83 (AACTE 1985a).

Another movement to improve the preparation of teachers is the "extended program" approach, involving an additional fifth year. Data are limited on the success of this approach, but 23 institutions have indicated some type of extended program (AACTE 1985a). Should this trend continue or should the Holmes Group proposals prevail, the preparation program for teachers would be significantly different from what it is now and look more like a professional school.

Another interesting approach to improve the credibility of teacher preparation programs is what is called the educational "warranty" or "quality assurance" approach. Taking a leaf from the consumer movement, the idea is to guarantee the quality of individuals who graduate from the teacher preparation program. Should they be found to have deficiencies in their beginning years of teaching (in some cases up to three years), these teachers would be provided the services of a clinical professor from the institution. One plan provides that a teacher training team design an individualized plan to improve the performance and competence of any teacher found deficient. Institutions reporting having such "warranty" programs include Oregon State University, University of Arkansas at Pinebluff, University of Virginia, Eastern Washington University, Doan College, and Purdue University.

There have been a number of studies investigating whether teacher education programs graduate students who are better prepared than those who have not had teacher education. These studies have shown on a variety of measures that those who have teacher education are better prepared to teach (see, for example: Greenberg 1983; Haberman 1984; Hawk, Coble, and Swanson 1984; Fisher and Feldmann 1985; and Olsen 1985).

From what has been reported in this chapter, it is clear that substantial changes are occurring in teacher preparation programs themselves. Many programs already look very different from the way they were designed 10 years ago; and if the trend continues, programs will continue to change in the near future.

## Research as a Basis for Reform

**C**ritical to the health of any profession is the development of a body of knowledge through research and the use of that knowledge in the preparation of practitioners. Teacher education has been strongly criticized for the lack of a research base in its preparation programs. One prominent researcher indicated that there is zero correlation between the research and what goes on in teacher education programs ("While Teacher Preparation Programs Proliferate" January 1984). However, according to other researchers, in the last five to ten years there has been a tremendous growth in the knowledge about effective teaching and a fresh set of conceptions about teaching on which to base teacher education (Olson 1985). As B.O. Smith has stated, "A significant breakthrough in the study of teaching was the identification of generic performances that correlated positively with student outcomes." There is also a body of knowledge on teaching performance in particular subjects such as reading, arithmetic, grammar, natural science, and foreign language. Furthermore, there is extensive research literature on the theoretical components of teaching and learning (Smith 1985).

The development and utilization of research on teaching and teacher education has received substantial support from the National Institute of Education (NIE). In 1983 NIE funded 10 teacher education projects to consider using research to make improvements in the con-

tent or process of undergraduate programs. Although the results were mixed, it was an important step, nevertheless. In 1985 NIE again sponsored a series of projects on using research in teacher education. Such support of research reflects the continuing national interest for improving the preparation of teachers.

One of the most exhaustive surveys of research on generic teaching behavior was conducted at the University of South Florida as part of the Florida Coalition for the Development of a Performance Measurement System. This effort, using measures of student outcomes, identified 31 concepts of effective teaching, which were then classified into six broad domains of instruction: planning, management of student conduct, instructional organization and development, presentation of subject matter, communication, and testing. These 31 concepts have 134 indicators of teaching behavior, each of which is defined with examples of one or more instances of teacher performance.

The six domains have become the basis of the Florida Performance Measurement System, a group of instruments used to observe teachers during the first year of teaching. They have also been used to observe teachers who aspire to be master teachers under Florida's new master teacher program. There has never been a research-based activity of this scope in the profession before.

Additional studies have been conducted to determine the relationship between the teachers who demonstrate these particular behaviors and the performance of students in their classrooms. The results of these exploratory studies suggest a statistically significant relationship between teaching performance of interns (student teachers) and pupil achievement as measured by the Florida Performance Measurement System summative observation instrument (Florida Department of Education 1984). B.O. Smith suggests that perhaps we have learned something from our past experiences with school reform that will prove useful in the current efforts at reform: "We appear to be on the right track when we focus on the reconstruction of teacher education and the greater use and expansion of its knowledge base" (Smith 1985).

The essential point here is that we are now beginning to see research formally integrated into state evaluation systems as well as teacher education programs. Research, which establishes the knowledge base, may eventually have more impact on improving the profession than any other component of the reform movement. This will likely be a long-term change effort growing over time. There are major problems and hurdles to overcome, but we have made a beginning.

## Improving Conditions of Practice

**T**he current reform movement provides an opportunity to improve the conditions of practice for teachers. We now are entering a phase where such improvements, although sometimes very small, are beginning to be realized in areas of teacher incentives and career opportunities, more specifically, improved teacher salaries and the provision of career ladders.

A variety of incentives has been devised to attract and retain teachers in the profession. A survey by the National Center for Education Statistics (NCES) revealed that almost 20% of school districts reported offering some form of special incentives to teachers in 1983-84. Most incentives (13%) were aimed at retaining experienced teachers in the district. Second (8%) was for recruiting teachers in shortage areas. Other types of incentives used were allowing teachers to enter or advance to a different step on the salary schedule, offering loan-forgiveness programs, cash bonuses, retraining, released time, and leaves of absence with continued advancement on the salary schedule (Gerald 1985).

The basic incentive, of course, is improved teacher salaries. The 1984 Gallup Poll revealed that teachers cited low salaries as the prime reason they left the profession. According to NCES, teachers experienced steady salary gains in the Sixties and in the early Seventies. However, by the mid-Seventies salaries declined in "constant

dollars" but since 1982 have been making a comeback. According to this study, the average annual salary of teachers in 1983-84 was \$22,019. More recent data from a Rand study indicate that the average annual salary for teachers in 1984-85 was \$23,582 ("Teachers: Fighting for Respect" 1985). Another study indicated that over the last two academic years (1983-1985), teachers' salaries rose 13.7% and that the median household income of teachers is now the same as that of all college graduates (Feistritz 1985). However, average salaries vary widely from state to state, from a low of \$15,971 to a high of \$39,751 in 1984-85 (NEA 1985).

Across the country 27 state legislatures have passed legislation to boost teacher salaries ("Teachers: Fighting for Respect" 1985). In New Jersey a bill was passed in 1985 that sets \$18,500 as the minimum salary for beginning teachers. Nevada raised teacher salaries by 11% and granted a 5% bonus on 1984 salary in order to retain teachers. In Texas legislators created a tax intended to raise about 1.4 billion dollars for public education, including salaries, through state and local funds over the next three years. It appears that there are a variety of incentives to attract and retain teachers, with specific emphasis in recent years on raising teacher salaries across the board.

Another type of incentive for teachers is the enhancement of career opportunities through master teacher programs or career ladders. Recent data indicate that 25 states have developed career ladder or master teacher programs with pay incentives for succeeding steps on the ladder. In Maine career ladders are expected to cover about 3,500 teachers in 20 school systems in 1985-86. In 1984-85, about 3,000 Florida teachers qualified for a \$9,000 bonus over three years. In Utah teachers have entered the second year of a career ladder plan, which is essentially a merit pay system based on evaluation procedures ("Teachers: Fighting for Respect" 1985). In the 1983-84 school year, only 1% of local school districts reported they were operating a merit pay plan, affecting only 2% of all public school teachers (Gerald 1985). It appears that state initiatives are much stronger than local initiatives in the development of merit pay, career ladder, or master teacher programs.

## Threats to Reform

**W**hile the reform of teaching and teacher education is proceeding on many fronts, at the same time there are developments that threaten not only the reform movement but the very nature of the profession. These developments relate to admitting into the profession individuals who have not had any formal teacher preparation.

A growing body of data indicate there is an imminent shortage of teachers in the United States. According to a Rand study by Linda Darling-Hammond (1984), the shortages we are currently experiencing in specialized areas will expand to a more general shortage of qualified teachers over the next few years. Based on current enrollment trends and on statistics for those entering and retiring from the teaching profession, it is predicted that the supply of new teacher graduates may satisfy only 80% of the demand by 1988.

The *Projections of Education Statistics to 1992-93* (Gerald 1985) provides estimates of the supply of new teacher graduates compared to total demand for additional teachers in elementary and secondary schools. It reports that in 1982 the supply as a percent of demand was exactly 100%. Alternative projections for future years provide insights into the nature of the impending shortage. After 1986 the supply as a percent of demand will continue to decrease steadily through 1992, which is as far as the projections extend. In 1989 it is projected that the supply will be only 80% of the demand; by 1992



the supply will be only 65.6% of the demand. The above statistics using intermediate alternative projections, reflect a serious situation in the teacher marketplace (Gerald 1985).

Historically, the response to shortages in the teaching force has been to open the gates to individuals with lower qualifications. First certification standards are lowered; then individuals are admitted into teaching without even meeting these lower certification standards. The Task Force on Teaching as a Profession, a project of the Carnegie Forum on Education and the Economy, is addressing this concern in an effort to prevent a decline in the quality of education as a result of the impending teacher shortage (Currence 1985b).

Another serious concern is raised in a study on those who are entering teaching (Pigge 1985). This study shows that the most academically qualified graduates do not intend to go into teaching. Also according to Pigge, future manpower projections have not taken into account that many of the more academically talented in the projected pool of new teachers will likely choose not to teach. And in a period of high teacher demand, teachers who are less academically talented and less qualified generally will be able to find jobs.

Recent actions also present a threat to the supply of minority teachers in our schools. These actions include the move toward a minimum competency testing in high school, the use of standardized tests for admission to and exit from teacher education programs and for initial teacher certification, and the lack of adequate on-the-job support for minority teachers. All of these threaten the prospects for a viable presence of minority teachers in America's schools (Witty 1982).

An example of this threat to the future supply of minority teachers is the teacher competency test used in Texas. In October 1985 the U.S. Justice Department indicated that a Texas requirement that students pass a basic skills test in order to enter state approved teacher training programs was legal. Attorneys challenging the ruling state that the state's use of the preprofessional skills test serves to "decimate the potential minority teaching pool" at a time when there is already an "inadequate number of minority role models in the Texas classrooms" (Rodman 1985).

One means of dealing with teacher shortages in the past has been to issue emergency certificates to those who do not meet qualifications. The use of emergency certificates is a major threat to maintaining professional standards. A survey of state agencies in 1983 showed that the number of emergency certificates issued in 1982-83 ranged from two in Delaware to 4,996 in California, with New Jersey issuing 1,077 and Pennsylvania 1,711 (AACTE Task Force 1984).

Another study conducted by NASDTEC determined the percentage of the total number of credentials issued that were either emergency, substandard, or limited. Following are the results from a sampling of states: Ohio 16%, California 13%, Florida 12%, Colorado 10%, and New Jersey 10% (Roth and Mastain 1984).

A more recent report by the Council for Basic Education, in cooperation with the American Federation of Teachers, indicated that "thousands upon thousands of children" are currently being instructed by teachers assigned to teach outside their competency area. AFT President Albert Shanker estimated that some 200,000 teachers fall into that category (CBE 1985). A study by the National Center for Education Statistics revealed that "uncertified" teachers as a percentage of all elementary or secondary teachers ranged from 2.4% for all general elementary teachers to 7.8% for "other" secondary teachers to 12% for bilingual education teachers (Gerald 1985).

One of the more controversial actions to expand the supply of new teachers is the alternative route program. This program allows individuals with baccalaureate degrees in any academic area taught in the high schools to begin teaching in the public schools of the state without formal teacher preparation. The amount of subsequent professional training provided these individuals varies from state to state but is significantly less than a full teacher preparation program. Although these alternative route programs are primarily a state activity, several institutions are involved in this program, according to a recent survey by AACTE. Forty-three percent of the respondents indicated they were developing new alternative routes, although some of these fall within existing certification requirements. Of those developing new routes, 26% promoted the use of alternative state certification requirements; 7% provided routes which did not meet

traditional state teacher certification requirements; and 5% did not require student teaching (AACTE 1985b). Another AACTE study on state teacher education policies indicates that 15 states have alternative route programs and such programs are pending in an additional 11 states (AACTE 1985a). Because states do not report data in the same form, it is sometimes difficult to distinguish an alternative route from an emergency credential program.

An alternative route program that has received much attention is the one in New Jersey. The state education agency requires a candidate to: 1) hold a valid bachelor's degree; 2) pass a subject examination; 3) have an offer of employment from a school district; and 4) undergo a 30-day or 200-hour "immersion" at regional teacher centers and participate in a continuing seminar at the center for a year. Following a series of classroom evaluations, the individual will be granted full certification, or have the probationary period extended another year, or be denied certification. Of 1,200 new teachers hired in New Jersey in the fall of 1985, 121 entered through the alternative route program.

Pennsylvania has another type of alternative route program. Twenty of the 88 teaching preparing institutions in Pennsylvania are designated as sites for a Teacher Intern Program. Through the program, candidates with a bachelor's degree and a letter from the state education agency may be hired as full-time teachers, with the stipulation that they enroll in the Teacher Intern Program at one of 20 sites. The candidate's training must be completed within three years to achieve permanent certification.

The actions described in this chapter pose serious threats to achieving quality in teaching and teacher education. As NEA President Mary Futrell has stated, "The hiring of untrained teachers makes a sham of efforts to improve the teaching profession" ("Futrell Lashes Out" 1985). The assumption underlying alternative route programs and emergency certification is that one does not need professional training to be a successful teacher. This assumption must be challenged if we are to maintain standards and ensure quality in teaching and teacher education.

## Conclusion

**C**omprehensive reform is affecting all areas of teaching and teacher education. The requirements for entering teacher preparation programs are becoming more rigorous and honors programs are being implemented. The national accrediting body, NCATE, has adopted new and more stringent standards and procedures for accrediting teacher education institutions. State systems have contributed to reform by strengthening program approval and certification standards. Performance evaluations of candidates in their beginning year of teaching adds another dimension of quality to the teaching profession.

In teacher education we are seeing widespread efforts to change and improve. These efforts include increasing requirements for both professional education and liberal arts courses as well as for student teaching. Testing at entrance to and exit from the teacher education program and the use of internships have improved the quality of prospective teachers. Data are accumulating that indicate that completing a teacher preparation program indeed does make a difference. With further strengthening of these programs, the difference will become even greater.

Teacher preparation programs are beginning to make better use of research. The body of knowledge about teaching and learning has increased significantly, which is important in itself. The next step, integrating this research into programs and practice, has begun; and we are beginning to see results.

The conditions of practice in teaching are beginning to improve, most notably in the areas of salary and career options. Improved salaries could be the most important single factor in attracting quality candidates to teaching and keeping them.

At the same time, there are threats to the profession and to the reform movement emanating from the impending shortage of teachers. The use of emergency or substandard certificates and alternate routes to certification can thwart the recent efforts to strengthen the preparation of teachers. These threats must be dealt with directly and overcome if the reform movement is to have a positive impact on the profession.

There is evidence that much of what is happening is beginning to pay off. In a survey of the nation's largest urban districts, two-thirds of the superintendents report that homework assignments and time allocated to academic skills have increased significantly. Eighty-one percent reported increases in graduation requirements since 1980 (Chion-Kenney 1985).

The SAT scores in 1985 jumped nine points, the sharpest single-year gain since 1963 and the fourth consecutive year in which either the verbal or the mathematics score has improved. This followed a 17-year decline in SAT scores (Olson 1985b). Another positive sign is that the National Parent Teacher Association report, an increase of 70,000 members over the past year, after a 20-year membership decline. And from the U.S. Department of Education comes this welcome news: "What is most encouraging about current developments is that citizens, educators, and leaders of business and government are acting on the understanding that education is a seamless garment, and are proposing and supporting comprehensive solutions" (U.S. Department of Education 1984).

Linda Darling-Hammond, in her Rand report, *The Coming Crisis in Teaching* (1984), made five recommendations for reform in the teaching profession:

1. Establish professionally competitive salaries;
2. Provide recruitment incentives for academically talented students;

3. Improve teacher education by making it more rigorous and require internships;
4. Improve working conditions;
5. Allow experienced teachers to assume responsibilities for supervising new teachers and developing programs, and to move up a more differentiated career ladder.

These recommendations are now being implemented, albeit in varying degrees, through the concerted efforts of states, school districts, teacher education institutions, and other professional organizations. As former U.S. Secretary of Education Terrel Bell has stated, "There is a renaissance in education" (Harris 1986).

Has reform in teaching and teacher education occurred? Most certainly. Has there been a renaissance in the teaching profession? Perhaps; the evidence is not all in. Nevertheless, the changes that have occurred already have been important; but they will fall short of the true renaissance if not continued. What does seem certain is that by the 1990s we will see a teaching and teacher education profession with very different characteristics. Even Abraham Flexner would be impressed.

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