An overview of options available for Federal cooperation in the improvement of teacher education considers possible areas in which government support may be effective. These include: (1) recruitment of talented students; (2) financial support for prospective teachers; (3) improvement grants to schools of education; (4) grants supporting cooperation between high schools and schools of education; (5) support and stimulation of partnerships between teacher education and business and the private sector; (6) encouragement of effective reward systems for effective teachers; (7) support for school improvement efforts; (8) grants for teacher research efforts; and (9) increased efforts in dissemination of findings of educational research and development projects. (JD)
Excellence in Teacher Education

OPTIONS FOR A FEDERAL PARTNERSHIP

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EXCELLENCE IN TEACHER EDUCATION

Options for a Federal Partnership

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Federal government serves three broad educational functions: (1) equity/opportunity function, (2) knowledge/intelligence function, and (3) quality function. The purpose of this report is to summarize options for federal action in the pursuit of teacher education excellence. In addition to broad functions, federal programs in teacher education will need to serve specific purposes. This report explores federal options through functions, general roles, and specific teacher education purposes:

(federal functions)

- equity
- knowledge
- quality

(optional federal roles)

- provide general aid
- provide categorical aid
- regulate
- gain/communicate knowledge
- provide service(s)/assistance
- persuade/lead

reform purposes related to teachers & teacher education -- improve the following:

- recruit -- prepare -- maintain
- information to
- develop
- guide reform

The federal government has played teacher education development roles in each of the functional areas with mixed success. Rather than direct intervention, the government's programs --for the most part-- support efforts at the state, local, and institutional levels of education and policy. In the equity area, federal funds have stimulated the recruitment and training of teachers for special populations --urban poor, limited English proficient, and handicapped students. In the knowledge/intelligence area, research and development projects and the collection of information on the condition of teaching are federal activities. The federal government has also provided support for attempts to meet quality improvement concerns in both substantive areas of instruction and pedagogy.

With the exception of the equity effort, there is little evidence of the impact of these interventions. A lack of solid evidence does not suggest failure. However, federal support for general or curricular teacher education efforts has been uneven. The evidence at hand indicates that it is difficult to make systemic changes in teacher education. Currently there are no "general" teacher education programs authorized and funded --the last two (Teacher Corps and Teacher Centers) were folded into the 1981 education block grant.

The report will not concentrate on existing programs for special populations except as they represent models of action available for general teaching or curriculum-specific areas. There will be no final recommendations; however, possible benefits, constraints, and political viability of various options will be presented.
The Federal Government has the primary responsibility to identify the national interest in education. It should also help fund and support efforts to protect and promote that interest. (emphasis included)

...we believe that the Federal Government's role includes several functions of national consequence that States and localities alone are unlikely to be able to meet: protecting constitutional and civil rights for students and school personnel; collecting data, statistics, and information about education generally; supporting curriculum improvement and research on teaching, learning, and the management of schools; supporting teacher training in areas of critical shortage or key national needs; and providing student financial assistance and research and graduate training. (emphasis added)

A Nation at Risk: The Imperative for Educational Reform
The National Commission on Excellence in Education

Excellence in Teacher Education: Options for a Federal Partnership

Education is at its highest point of political saliency since the middle of the 1960's. Two dozen or so reports on the condition of education --ten of broad national scope-- were presented to the nation in 1983. National attention has been primarily focused on secondary schools, mathematics and science education, and the condition of teaching (quality of recruits, working conditions, and supply). However, the full reports and subsequent commentary include every level of education.

Most recently, teacher education has been the center of criticism and concern. Teacher education issues are not new --low academic ability of students, lack of rigor, low status and support within colleges. Public salience of these concerns represents opportunities for policy action at various levels of education governance --institutional, local, state, and federal.

Many of the 1983 reports were launched by a brief public awareness when national news magazines and television called attention to the condition of American high schools in 1979. In 1982 the public began to be particularly concerned with the mathematical, scientific, and technical literacy of high school
and college graduates. Following the release of the National Commission on Excellence in Education report, A Nation at Risk, the President discovered that education represents a rich source of "political capital." Similarly, governors believe that a major attraction for growth-oriented business and industry is an effective system of public schools.

There are four reasons why education has become a critical social issue:

1. THE AMERICAN DREAM. Education is still part of the American dream and is seen as a critical means to upward mobility.

2. SMARTER JOBS. Changes in the workforce will require employees to have more technical or thinking skills if they are to gain employment in jobs which will allow them to maintain or improve their standards of living.

3. COMPETITION. American workers must be more productive and better educated if the nation is to be competitive in international markets -- the future of American economic growth.

4. EDUCATION IS IN TROUBLE. The national reports indicate that American education is not working adequately -- particularly secondary schools and the teaching profession.

We have already seen the first set of reforms sweep the nation's schools. For the most part, the first wave can be described as "cheap" fix reforms -- raising high school graduation or college admissions standards, demanding more homework, increasing student performance testing, testing teachers in subject areas, recognizing outstanding teachers, students, and schools, and the like. More difficult reforms -- master teacher programs, retraining teachers, improvement of curriculum materials, increasing academic time -- are meeting problems of cost and implementation. However, there are hopeful signs of improvement and serious efforts to reform the schools are underway.

Most of the national reports and many of the more enlightened reform efforts do not engage in "teacher bashing." In fact, many of the reports paint a sympathetic view of the teacher in American high schools -- overworked, burdened.
with bureaucracy and conflicting demands, and faced with unmotivated students and little home/parent support. Furthermore, teachers are seen as being the "victims" of poor preparation and few useful professional development resources.

**GUESS WHO IS COMING TO TEACH**

The condition of teaching, the lack of employment for many certified teachers in the 1970's, and poor teacher salaries have combined to make the noble teaching profession unattractive. It has almost become trite to point out that there are no more "captive" populations of bright women and minorities who see teaching as one of their few acceptable careers. National reports point out that teacher education students are drawn from the lowest ranks of high school students. Furthermore, the most academically able teachers are the first to leave the profession. And, the rewards for furthering a teacher's education are almost guaranteed to "promote" talented teachers out of classrooms.

These factors coexist with increased demands for new teachers to teach children of baby boom parents and fill existing shortages in mathematics and science classrooms --exacerbated by increased academic standards. All of the above force the repeated question:

How do we recruit, educate, and maintain teachers with the knowledge and talent needed for new and expanding literacy demands?

*Teacher Education: Opportunity or Scapegoat*

If teachers are given a sympathetic view in the national reports, teacher education is not. Teacher preparation and inservice education programs, and the higher education institutions providing them, are seen as weak, resistant to reform, and, in some cases, as being part of the disincentive for bright college students to enter the teaching profession.
The recent report on teacher education and certification, "The Making of A Teacher" (Feistritzer, 1984), paints a bleak picture of teacher education programs and their students. According to Feistritzer, too many teacher education programs admit anyone in the institution, offer few academic challenges, are avoided by bright students, and --along with state certification systems-- present few "rights of passage." Furthermore, the most academically rigorous colleges and universities seem to be those which have lost the most teacher education students. Many of the research-oriented higher education institutions are not actively engaged in teacher education at all.

It is not the purpose here to go into all of the possible reforms that would improve teacher education --preservice and continuing. In fact, there are many who claim that the condition of teaching and teacher salaries are far more important to the improvement of teacher education than direct reform. That is, bright, talented students will not enter teacher education programs unless the teaching job is made more professionally and economically attractive. Others claim that teacher education will be seen as a symbol of the poor public regard for teaching unless it meets the demands and mystique of more prestigious professions.

This report will point out ways to encourage reform that will turn the current criticisms --attack-- on teacher education into opportunities. Otherwise, teacher education will again be seen as the scapegoat of a beleaguered profession. The report will concentrate on the options available to the federal government as it looks for ways to join state and local partners in the reform of American education.

THE FEDERAL ROLE IN TEACHER EDUCATION

The federal government is not new to teacher education efforts. Teacher education programs --preparation and inservice-- are currently limited to helping teachers of special student populations (handicapped, limited English proficient --
LEP, etc.) or in particular subject areas (vocational education, mathematics, science, foreign language, etc.). The most recent "general" teacher education efforts were folded into the Education Consolidation and Improvement Act Chapter 2 "block grant" in 1981 --Teacher Corps and Teacher Centers. Several federal teacher education programs were allowed to lapse (e.g. Education Professions Development Act and NSF science education). Some suffered the "authorization without appropriation" fate -- continuing education programs in Title I of the Higher Education Act.

GENERAL PROBLEMS. With the exception of federal teacher education in special need areas --poor, handicapped, LEP-- there is little evidence of federal program impact. One of the reasons for the lack of evaluative evidence is the limited duration of past federal teacher education efforts. Major problems with past efforts can be categorized as follows:

- poor timing-- By the time programs were authorized and implemented the purpose of the program shifted (teacher shortage vs. need for inservice training).
- lack of direction or diffusion of purpose-- Either because of a lack of congressional consensus or poor administration, many programs attempted to serve too many purposes for the available funds --pleasing no one and gaining no sustaining constituency.
- poor information-- Teacher education programs are idiosyncratic, resistant to keeping data on students, and suspicious of external evaluations. Therefore, there was often little reliable descriptive or evaluative data on federal teacher education programs. As a result, policy makers are often left with no answer to the question, "what has the program done?"
- delayed effects-- Teacher preparation programs do not have an immediate impact on the desired outcomes of public policy -- they take time, effect is difficult to document, and impact is almost impossible to separate from other factors affecting student performance.
- difficult unpopular tasks-- Many federal teacher education programs were aimed at the most difficult assignments -- helping low income and other students with special needs. Furthermore, national concerns about the general quality of schools may have decreased previous interest in students with particular problems.
quantity over quality—General teacher education efforts by the federal government seem to enjoy support when the public is concerned about a teacher shortage—baby boom students or mathematics and science teacher education. Federal efforts to improve teacher quality have been more difficult to sustain, e.g., mathematics and science education at the National Science Foundation, teacher centers, and general professional development.

**A CHANGE IN CLIMATE: THE FEDERAL ROLE**

The national drive for educational reform coupled with survival concerns by those responsible for teacher education may present a more favorable climate for federal teacher education initiatives and their subsequent implementation and survival. Other factors—nonexistent when previous teacher education programs were attempted—could launch and sustain teacher education programs:

- There is a more focused consensus on the need for improved teaching in basic academic areas.
- Educational research and development efforts have important knowledge resources dealing with effective teaching, schools, and curricula which can be included in teacher education programs.
- The threat of real competition to teacher education monopolies may motivate higher education institutional leaders—beyond schools of education—to take teacher education reform efforts seriously.
- There is a favorable climate for partnerships between schools and colleges and among education institutions and the private sector.
- The federal government is more "outcome oriented," leaving project prescriptions to local and state initiatives—reducing central engineering tendencies.
- National economic interests are deeply concerned about the character of schools and the personnel responsible for the future national workforce.

The federal government has served three general functions over the past several decades. Teacher education programs—if the functions are sustained—must serve one or more of the following:

**The equity function** The federal government works to provide equal education opportunities regardless of personal circumstance, in order to improve the life chances of its citizens.
the knowledge/information function. The federal government is responsible for producing and/or sharing knowledge gained from research, development, evaluation, and data collection.

the quality improvement function. The federal government supports and provides assistance to states, localities, and institutions to enhance their capacities to improve educational practice and realign education resources to meet social and technical changes.

These functions can be served through several means (current or past teacher education examples are provided):

1. **General financial assistance**

   The Education Consolidation and Improvement Act (ECIA), Chapter 2 block grant provides funds to local school districts which may choose whether to engage in a specific program of professional development.

2. **Categorical or "targeted" assistance -- special populations or subject areas**

   Teacher education and professional development funds are included in equity programs for the disadvantaged (ECIA Chapter 1), handicapped (Education of the Handicapped Act), and bilingual education (for LEP students). Other targeted funding is subject-matter based such as vocational education improvement programs and the recently enacted Education for Economic Security Act (EESA) targeted on inservice education for teachers of mathematics, science, computer learning, and foreign languages. EESA also includes a provision for teacher institutes, scholarships for prospective teachers and fellowships and awards for current teachers.

3. **Regulation**

   The federal government recognizes postsecondary education accrediting bodies; however, accreditation for teacher education is not required for receipt of federal funds. Each program authorized and administered by the federal government also has regulations which set priorities, intentions, evaluation and reporting requirements. In addition, general and program-
specific regulations covering competitive discretionary grants set the criteria for selection (including points assigned to priority purposes for proposal reviewers). These regulations can shape the direction of a program. Regulations caused a shift from recruitment and initial training to an emphasis on inservice and professional development for existing teachers in the (no longer authorized) Teacher Corps program.

(4) Research and Development - evaluation, policy study, and statistical services

The federal government supports research and development activities focused on effective teaching, teacher preparation, and inservice training through the National Institute of Education. Federal funding includes support for regional education laboratories, R&D centers, and institutes, and dissemination programs. The National Diffusion Network supports the dissemination of exemplary federal programs, including staff development efforts in programs for special populations. Research, development, and dissemination programs are also supported in the vocational, bilingual, and handicapped education areas. Most federal programs include evaluations and the National Center for Education Statistics collects data on the condition of teacher supply and demand.

(5) Direct service and technical assistance

The federal government provides few direct services; however, there is support for technical assistance—through states, independent contractors, and centers established to serve special purposes. The federal government supports technical assistance and/or materials development efforts for teachers and teacher education in the areas of civil rights, bilingual education, vocational education, desegregation, and aid to the disadvantaged. In addition to their R&D functions, some regional education laboratories provide technical assistance to state and local education agencies within their regions.
(6) **persuade or lead through the power of federal offices and symbolic acts.**

Federal officials have the power of high office to capture and sustain public attention on critical education issues. Presidents have rarely used their "bully pulpits" for education; however, when they choose to do so they can focus the public eye on national education concerns. President Lyndon Johnson made education for the disadvantaged a national issue in the mid-1960's and President Reagan, following the release of the Commission on Excellence report, made educational standards, discipline, and teacher rewards national issues. The President carries a built-in national media audience unmatched in the nation. Although some of the statements and speeches seem simplistic to the student of education issues, the benefit of national leadership can establish a climate for meaningful reform.

Another way in which Congress or federal officials can demonstrate the importance of an issue is through a symbolic act. Presidential awards for outstanding mathematics and science teachers at the National Science Foundation and the Department of Education's program of recognizing exemplary high schools provide two recent examples of leadership through symbolic action.

**Program Must Meet Salient Challenges**

Federal teacher education options can be reviewed along the lines of these functions and roles. However, they must also fit into one of the goals related to improving the teaching workforce. National concerns about the quality of teaching and the types of students likely to enter teacher education programs will force policy initiatives to meet specific challenges. That is, if educators, teacher educators in particular, are to be successful in initiating and -more importantly- sustaining federal teacher education efforts, they must be part of the political dialogue.
Not every idea or program must match the popular concerns of the moment; however, they must be related to the issues policy makers face. Programs which suggest new or expanded federal initiatives must have affirmative answers for one or more of the following questions.

Does the initiative help recruit and select high quality candidates into the teaching profession?

Does the program effectively prepare teachers to teach in the core academic areas of English (including reading and writing), mathematics, the sciences, technology, or communication (including foreign language)? The arts, humanities, and social studies may be included if the initial group is seen as the top priority.

Does the program lead to more effective teaching of "higher order" thinking or "learning to learn" skills needed for future success in education and work? --problem solving, comprehension and interpretation, analysis, composition--

Does the program help educational institutions maintain effective teachers currently in the workforce?

In addition to these general concerns about recruitment, selection, and maintenance of an effective teaching force, there are specific issues about teacher preparation programs. The following perceptions outline the concerns:

1. Teacher education programs lack adequate field or practical experience.

2. Teacher education students do not spend enough time in regular academic subjects (need improved mastery of content).

3. Teacher education programs lack academic rigor in both the substantive and professional course areas.

4. Teacher education programs are not selective. They admit any student already accepted into the parent institution of higher education.

Regardless of the veracity of these claims, they form a general perception expressed in both national reports and general press/media coverage of education. Teacher education reform efforts must be seen to confront these concerns or face an eroding of public support.
When "A Nation at Risk" was released, public opinion polls indicated that taxpayers were ready to spend more on education. In fact they were willing to increase taxes to support improved education. They were not willing to pay more for the educational status quo. Recent polls also indicate more people support increased federal education spending over increased defense spending.

The same factors will affect initial and sustained support for teacher education. No matter how conscientious, it will not be good enough to point out erroneous public perceptions or generalities found in national reports. Teacher educators recognize the misperception that prospective secondary school teachers spend most of their time in "methods courses" instead of arts and science subjects. However, trying to refute teacher education criticism with statistics about the number of course hours spent in education or arts and sciences will be of little use. Similarly, pointing out that few academically advanced students will enter teacher education unless salaries are raised seems to avoid the core criticisms of teacher preparation.

American Federation of Teachers President, Albert Shanker, has been asking his members to become active participants in educational reform. He recognizes that some of the reports and more than a few of the "quick-fix" reform recommendations are misguided. However, he is unwilling to reject a discussion of the criticisms or reforms simply because they are wrong. He wants AFT leaders to use the reports and reform proposals to launch a productive discussion about core problems and implementation issues. Shanker says that he does not believe that merit pay plans will work. However, he is willing to entertain such proposals in order to gain general increases in salaries, better working conditions, improved evaluation programs, and a more positive public perception of teachers' willingness to improve. Teacher educators could use Shanker's strategy.
Past - Current - Proposed Efforts

Federal teacher education efforts and those currently proposed include various types of assistance which can be categorized under several broad purposes: 1. recruitment and selection, 2. teacher preparation, 3. inservice and professional development, 4. information and knowledge resources (for education agencies and institutions responsible for teacher education). The following outline provides an overview of the options available for consideration. It is not the intent to focus on existing programs for special populations. Rather, the options in this report are for excellence in general teacher education or for broad subject areas such as mathematics and science education.

Federal Options

1. Recruitment and Selection

Recruitment options are designed to provide economic incentives for individuals who might not otherwise seek teaching careers -- or enter teacher education programs. Programs often require a "service-for-reward" exchange provision. That is, those who receive assistance must agree to teach for each year of benefit. Although there is little evidence of the long-term success of such efforts, they may provide a pool of more able students for temporary or short-term teaching careers. Option examples--

Scholarships for talented high school graduates or college undergraduate students who will enter teaching, particularly in areas where there are shortages of teachers -- mathematics, science, foreign language, etc. Similar options are proposed for unemployed teachers willing to retrain for shortage areas and for recent mathematics and science graduates who will begin master of arts in teaching or similar programs. Recent examples:

Education for Economic Security Act (EESA PL98-377) program of "Congressional Merit Scholarships" for prospective mathematics and science teachers.
Talented Teachers Scholarship Program -- The Carl D. Perkins
Scholarships in a proposal to amend Title V - Teacher Education - of
the Higher Education Act (HEA).

Note: Both of the above proposals require that scholarship students teach one year
for each year of the scholarship or, in the case of the Perkins program, repay the
amount of the scholarship plus interest.

Loan subsidies in the form of forgiveness or reduced rates are other economic
options to entice prospective teachers. The National Direct Student Loan
Program (HEA Title IV) provides loan forgiveness for each year the loan
recipient teaches in an area of particular need or national priority such as
teaching disadvantaged or handicapped students. One suggested program
would be to forgive part or all of the guaranteed student loans (GSL) of
recent mathematics or science (or other high need area) graduates who agree
to enter teaching careers.

Tax credits or forgiveness. Several members of Congress have introduced
legislation which would provide tax incentives in the form of credits or
deductions for:

-- employers who will provide teachers or resource persons for schools
with specific shortages like mathematics, science, and technology.

-- teachers who will accept assignments in designated shortage areas,
serving a target population or in difficult areas (remote rural or low
income urban centers).

One proposal suggested a forgiveness of the federal income tax for up to four
years for qualified teachers in acute national shortage areas.

Salary supplements for all teachers and specifically for mathematics and
science education teachers have been suggested by some presidential
candidates.
Incentives to attract more academically capable students into teacher education and teaching indirectly affect the goal of excellence in teacher education. The students may improve the public image of teacher education; however, they will only affect the quality of the programs through the demands they place on institutions preparing teachers. Incentives may serve at least a temporary goal of improving the quality of candidates who are willing to go through more rigorous or extensive training.

Some teacher education or teaching career incentive options are already in existence or have been recently enacted. There is little available information on their potential success. The major advantage is that they may provide a pool of talented individuals for teacher education programs. Such programs do not provide immediate relief for shortage areas with the exception of incentives for graduates. The key question is whether policymakers are willing to expend funds for recruiting more talented teachers who may stay in the profession for a short period of time.

The state of the economy --employment and fiscal policy-- may have important implications for the success of recruitment incentives. Students may be willing to have their scholarships shifted to loans if the general salary differential is great enough between a career in teaching and business or industry. In the coming Congress, tax credit proposals will be less viable. There is a general move to reform the tax code in the direction of a modified flat tax with fewer and fewer credits and deductions. Furthermore, congressional tax committees have shifted away from permanent exemptions and credits to limited duration "tax expenditures."

The political climate facing the 99th Congress in 1985 will preclude high cost initiatives or revenue losses. It is unlikely that --any time in the near future-- Congress will support salary tax credits or direct salary subsidies. Scholarship and
loan forgiveness programs will be most likely to gain approval. Key issues for
excellence in teacher education will be whether recruitment efforts are matched
by improved teaching work (climate and practice) and the quality of teacher
education programs.

II. Teacher Preparation Program Improvement

(Reauthorization of Title V of the Higher Education Act will be considered by the
99th Congress. Many of the following options have been suggested for Title V.)

Program Improvement Grants to Institutions of Higher Education - School of
Education. Competitive grants would serve one or more of the following
purposes:

--- strengthen program design including efforts to raise admissions
requirements and screens, improve subject matter competence and
extend practical classroom experience.

--- improve teacher education in the use of new technologies --computers,
video, electronic communication, etc.

--- nurture consortia of higher education institutions to strengthen faculty
offerings and increase exposure to research and other knowledge
resources.

--- develop teacher education materials and technology (e.g., National
Science Foundation provides grants in the precollege mathematics and
science education program for inservice and perservice teacher
education materials development and demonstration).

--- improve teacher education faculty -- acquaint them with recent
research on teaching - school effectiveness, curriculum materials, text
selection, higher order learning skills, and so on.

--- develop and sustain cooperative teacher education programs involving
teacher education, arts, and sciences faculties within colleges and
universities.
Comment

The history of several teacher education and related professional development efforts shows the dangers of many diffused purposes. Two major teacher education initiatives --NSF science education programs and the Education Professions Development Act-- were allowed to lapse because Congress did not believe they represented effective efforts to improve the quality of teaching.

There are current opportunities to improve past efforts. NSF science education has been recently revived due to the crisis in the math and science teaching force. HEA Title V's reauthorization presents an opportunity to initiate a teacher education improvement effort. However, if the programs offer too many options, remain diffused in purpose and identity, and gain only a fragmented constituency, they will again be vulnerable when the "crisis in education" is no longer headline material.

Many of the suggestions and options are valid. However, there needs to be a limited set of easily identifiable purposes, e.g., increased admissions standards and academic rigor, increased exposure to practical settings, subject matter competence, and improved presentation of valid, reliable research information on effective teaching, schooling, and learning. At least descriptive evidence --if not evaluations-- could then demonstrate that the programs were making progress toward clearly understood themes (rather than a laundry list of actions).

School-Higher Education/School of Education Partnership grants have been suggested to improve and/or extend the practical experience part of teacher education. Such programs would also share faculty resources --including the
use of practicing teachers and technological resources. Grants would be applied for jointly and would encourage cooperative planning. When coupled with career development programs or master teacher programs -- see "maintain effective teachers" -- such partnerships increase teacher education candidates' exposure to effective teachers.

-- teaching schools -- One experimental school/college partnership suggestion is to fund "teaching schools" -- exemplary elementary and secondary schools which would provide intensive internship experiences for students in various stages of a teacher education program. These schools would work with one or more higher education institutions.

Education - Business/Private Sector Partnerships could be supported or stimulated with federal support. Such partnerships would be designed to improve teacher education programs in the following ways:

-- students and faculty in teacher education programs would be exposed to private sector resources including new technologies.
-- practicing scientists, engineers, and others would be in a position to inform teacher education programs about the intellectual needs of the technical workforce.
-- faculty and business persons would engage in exchange programs and provide intellectual resources to each institution.
-- new alliances would be formed for the improvement of education.

Comment

Partnerships have several advantages. First, they require that each participant add to the resource pool of the joint effort. Second, they help reduce inaccurate assumptions about institutions and the human resource potential of each participant. Finally, the partnerships formed for specific purposes -- teacher education, resource sharing, program planning -- lead to broader alliances. Teacher
educators need more powerful allies in the teaching and schooling field. Educators need to nurture the broad-based political support of the private sector.

Recent examples of school/business alliances have paid handsome returns in state and local school fiscal policy decisions. The California Business Roundtable helped secure recent state school aid increases. The Alliance in New York City is an important force promoting public education in that city.

Education partnerships are also popular with Congress and the current Administration. They could be of additional benefit to teacher education. Congress might be more willing to invest in teacher education improvement if such efforts are seen as joint endeavors involving schools and the private sector. They may add a legitimizing force to reform proposals and reduce the fear that higher education institutions --being resistant to change-- would simply spend the funds to continue the status quo.

III. Maintain Effective Teachers - Improve Inservice & Staff Development

Inservice Education

Broadly discretionary Inservice Education was damaged by the block grant in 1981, e.g., Teacher Corps and Teacher Centers. However, there are several existing and emerging federal teacher education programs aimed at the in-place teacher. The special population programs for disadvantaged, women, handicapped, and LEP children provide for staff development and inservice training. The National Diffusion Network includes some federally supported dissemination and inservice training. The vocational education act supports inservice workshops and training for classroom teachers.

Recently enacted mathematics and science education legislation, Education for Economic Security Act (PL 98-377), makes inservice education and teacher training the core of the Education Department (ED) program. The legislation (including foreign language and computer learning) makes teacher training and
in-service education programs central to the 70% of state grants for elementary and secondary schools and 30% for institutions of higher education (in partnership with one or more schools). EESA should provide a natural experiment and demonstration of in-service education in curricular areas—provided that funding is sustained.

**Fellowships and Awards**

Teacher fellowships have been included in both the EESA legislation—at the National Science Foundation (NSF)—and in the more general "talented teacher" revisions suggested for Title V of the Higher Education Act. In addition, NSF presidential teacher awards carry some fellowship funds for teachers to use in their schools. The talented teacher fellowships provide support for teachers to travel, study, conduct research, consult, and engage in planning and development efforts. The proposed legislation limits the fellowships to no more than two years and teachers must return to their local schools for two years (for each fellowship year). Mathematics and science teacher fellowships are provided to outstanding teachers who may use funds for improvement of their teaching or schools.

Outstanding teacher awards are one of the symbolic efforts which federal officials may use to enhance the status of teachers while rewarding individual effort. Awards for outstanding mathematics and science teachers have been initiated at the National Science Foundation and the Department of Education recognizes outstanding high schools. There are also the annual local, state, and national "teacher of the year" recognition programs.

**Comment**

Fellowships may play a useful role in helping good teachers become better and keeping teaching an attractive profession. They may also enhance staff development efforts by providing fellows with new knowledge and other staff development resources.
Two major concerns arise with fellowships. First, limited funds preclude all but "outstanding" teachers. This leaves out adequate to good teachers who may be most in need of professional development. Second, (unless carefully focused with "return-to-teaching" mandates) they may encourage outstanding teachers to leave the profession. This is not to say that fellowships cannot be effective; however, like awards and scholarships, they are unlikely have a long-term positive effect in isolation. If their local school climate and working conditions are positive with high professional development norms, fellows can extend their knowledge and skills to others. If not, they may feel isolated and unable to use what they know.

Awards -- as symbolic devices -- do more for the image of the profession but little for inservice and staff development advances. They may have some marginal effect on maintaining outstanding teachers and public perceptions about the teaching force. Although it is difficult to gauge the national impact of teacher award programs, they play an important part in the persuasion and leadership roles of federal officials. Needless-to-say they are an inextricable part of education politics and must be seen as a means for educators to extend the political capital of elected officials -- the President and members of Congress. It is no mistake that mathematics and science teaching awards are called the "Presidential Teaching Awards" and scholarships and fellowships are called "Congressional Teaching Fellowships" in current and proposed legislation.

Other staff development and inservice options:

Effective Schools. Several members of Congress have suggested making the "Chapter 2 Block Grant" more focused on effective school development. This would require matching block grant funds with support for laboratories and technical assistance grants at the National Institute of Education. The purpose of the grants would be to provide Chapter 2 schools with the most recent research evidence on effective schools, teaching, and learning in the higher order areas.
Teacher Resource Centers. The American Federation of Teachers (AFT) and the National Education Association (NEA) are the strongest advocates of teacher centers. The federal teacher center program was folded into the 1981 block grant. The NEA and AFT have recommended their reauthorization in the HEA as critical "teacher led" staff development efforts. The evidence from the previous program indicates that teacher centers were the most classroom-focused inservice or staff development programs of the federal government.

Workshops and Summer Institutes. The NSF science education programs and the ESAA authorization provide for special institutes and workshops in math and science education. Similar authorizations for more general teacher professional development have been suggested for Title V of HEA. These institutes serve two purposes: (1) to provide intensive education in substantive areas of instruction to improve the subject matter knowledge of teachers -- particularly in rapidly changing fields such as science and technology -- and (2) to provide teachers with up-to-date research information on teaching and learning and effective teaching strategies.

Teacher Research Grants. Several earlier legislative proposals provided for small grants for teachers to conduct applied, institutional research in local settings. NIE-funded R&D institutions have also initiated cooperative research programs including teachers as part of the research team -- Institute for Research on Teaching "teacher researchers" and the Far West Laboratory cooperative research program. Such efforts allow teachers to become familiar with research studies and -- at the same time-- provide a richer reality base to research questions.

Teacher Career Plans - Master Teacher Programs

Various career ladder plans have been proposed in the wake of national reports calling for improved professional development, merit pay, differentiated
staffing programs, and so on. The possible effect of a career ladder program is three fold: (1) to provide inservice and staff development opportunities which keep effective teachers in classrooms (many local continuing education policies reward teachers for advanced education by promoting them out of teaching); (2) to allow teachers to assume professional development roles for themselves and their colleagues --curriculum design, test development, inservice education, and research--; (3) to become active partners in preparation programs for interns and beginning (apprentice) teachers, and (4) to develop and implement teacher evaluation programs. The federal government could play several critical roles in the career ladder/master teacher reforms:

- fund model or exemplary programs (disseminate example plans).
- support education resource organizations (labs, centers, state or regional service organizations) to offer technical assistance to local schools districts in the design and implementation of new teacher career ladder programs.
- support evaluation development programs to establish fair and cost-effective teacher and school-site administrator evaluation programs.
- provide --as part of a school/college partnership program-- support for innovative experiences for master or senior professional teachers.
- commission broadly based assessments of state and local master teacher - career development programs to determine if they: (1) keep experienced teachers in the profession, (2) help schools develop effective staff development programs, (3) change the experience of student and beginning teachers, (4) can be shared and adapted in other locations, and (5) have an impact on instructional quality and learning.
The inservice/staff development options share several common goals:

1. Upgrade the knowledge and skills of the existing teaching force.
2. Make teaching careers more attractive and enhance the professional status of the profession.
3. Change the reward system that ties continuing professional education to "promotion" out of the classroom.
4. Provide the most immediate impact on the quality of school instruction.

Federal proposals should be judged against these goals. Inservice and staff development programs have the advantage of close proximity (time and distance) to current school practice. Unlike preparation programs and incentives for talented students to enter teaching, professional development programs are designed to reach the current teaching force.

Two factors should be understood when making judgements about the federal mix of programs for preparation and inservice teacher education. First, a vast number of current teachers will reach retirement age and the offspring of baby boom parents will require schools to hire a large number of new teachers in the next decade. At the same time, demands on the current teaching force are already escalating. States are requiring more coursework in academic subjects. Literacy demands for new technologies and higher order learning skills are advancing. And, employers want employees who are able to learn different skills and work requirements on the job.

Therefore, it is not a choice of which type of teacher education deserves the highest priority. Rather, policymakers and educators will need to construct an appropriate mix of efforts to improve inservice and preparation programs. A program that is designed to improve both existing teacher performance while
assisting interns and beginning teachers may be the most attractive and cost effective.

Partnerships

The school/college, education/business, and school/research resource agency partnerships outlined in previous sections all apply to staff development concerns. The federal government can play an important catalytic role in stimulating new cooperative ventures to enhance in-service and staff development efforts for teachers. School/business partnerships, in addition to providing human staff development resources, offer opportunities for school faculty to experience summer work in technical and academically related fields. School/college partnerships --in addition to the above-- provide opportunities for the cooperative development of in-service programs which provide a balance of subject mastery and informed pedagogy.

Partnerships provide more cost-effective use of knowledge and technical resources. Recent work in cognitive science --the study of thinking and the teaching of thinking skills-- makes it critical for upper elementary and secondary school teachers to be aware of recent research advances in higher order academic skills --reading, writing, problem solving (math and science), and analysis. Both types of partnerships will be needed for teachers and students to become technically literate -- and able to use advanced instructional technologies. Few schools will be able to afford the full range of technology and new partnerships will make access to technology both useful and affordable.

II. Informati-Provide Knowledge Resources

The education knowledge function has the longest precedent among federal education roles. The federal government has been responsible for collection and dissemination of information on the status of American schools and colleges for over 100 years. More recently, research programs in the Office of Education and
National Institute of Education have focused on teaching and learning. The following represent current teacher education (and related) information/knowledge activities of the federal government:

1. National Center for Education Statistics data on the supply, condition, and demands of the national teaching force.

2. The National Institute of Education supports the following R&D activities:
   - National research centers and institutes on teaching, learning, teacher education, effective use of instructional technologies and related educational practices. A national competition for centers will include separate centers for teacher preparation and teaching policy/professional development.
   - Regional laboratories and R&D information exchanges designed to provide R&D services, technical assistance, and research information "broker" services to state and local education agencies. A national competition is currently underway which should result in the establishment of continuance of laboratories covering all states.
   - The National Assessment of Educational Progress which acts as a national barometer of student achievement.

Funding cuts over the past three years have all but eliminated individual grant and contract programs at the Institute. In the past, NIE has supported individual research in the above areas along with dissemination projects in state departments of education, and other resource institutions.

One outstanding project was the effort to "broker or translate" research findings on teaching into useful form for classroom teachers -- a program conducted by the American Federation of Teachers. This program has won several awards and has several unique attributes: researchers
worked closely with teachers in the design and implementation of the project; current and former teachers carried out the project making it more "legitimate" to their classroom colleagues; and a powerful education group increased its respect for and use of educational R&D.

3. The National Science Foundation conducts research and development programs on mathematics and science teaching and learning in both the Science and Engineering Education Directorate and the Biological, Behavioral, and Social Sciences Directorate. In addition, the science education directorate is launching a division of "studies and program assessment" to judge the progress of precollege mathematics and science education reforms, assess the condition of math and science teaching at all levels, and determine teacher training and materials development needs.

Comment

These programs serve important goals; however, they have often been inadequately funded or --in the case of NSF science/math education and NIE grants programs-- have suffered periodic dormant periods. The uneven nature of program support has led to inadequate knowledge and information resources. NCES, for example, is unable to collect or analyze teacher supply/demand data on an up-to-date, state-by-state basis. Teacher education program information is barely existent. There is little solid descriptive data or clearinghouse information on effective programs. Much more needs to be done to broker existing research information. The Teacher Center experience and the expected demands arising from inservice and staff development efforts will vastly increase the demand for knowledge and information on effective teaching, teacher education, and higher order academic learning.
Federal options in teacher education cannot be judged in isolation. They must be seen as part of local, state, and federal efforts to reform American educational practices. Teacher education reformers are able to use the wave of educational reforms to enter the national discussion on educational excellence. If policymakers and educators learn from past efforts, they can use the policy climate as an opportunity to enhance the quality and public perception of teacher education.

Timing the purposes of federal reforms with nationally salient problems is important. Federal programs must have enough focus on national concerns to gain a sustained constituency. To the extent possible, federal teacher education initiatives should avoid the past problems of poor timing, diffused purpose, and confused goals—e.g., mixing quality with quantity needs. Although programs can serve diverse purposes, they must be able to demonstrate progress on national issues: recruiting high quality teachers, improving the preparation of new teachers, maintaining effective teachers (or improving less effective teachers), and informing institutional, local, and state reform efforts.

The political climate will not be easy. The 99th Congress (begins January 1985) will be faced with macro budget and fiscal policy issues. The first session will be dominated—as in 1981—with deficit reduction and tax reform issues. Education programs will be competing for a small share of the federal budget—the nondefense discretionary 18%.

Teacher education initiatives and options will be judged against harsh standards. It is critical that program goals or options be clearly drawn and made to fit with realistic estimates of expected appropriations. Educators and policymakers must work together to establish reasonable timelines for program development, implementation, and operation before premature evaluations or
assessments are made. Staged assessments are recommended which begin with a description of programs and projects, extend to analysis of affected individuals and institutions, and (only then) look for impact or result.

The federal role in the pursuit of teacher education excellence must be seen as a partnership. Policy options must be judged as supplements to initiatives going on throughout the nation. This report has attempted to provide an overview of options and comment on choices. The federal government has the potential to be a productive partner catalyzing partnerships, stimulating action, and providing needed financial assistance and knowledge resources. The government can also inadvertently initiate counterproductive actions: heavy handed regulations, large promises with few resources, and options designed to bypass rather than confront teacher education issues.

Alliances will need to be strengthened and extended in order to gain passage of new initiatives or to sustain and expand existing federal contributions to teacher education. Teacher education is vulnerable to being a scapegoat. It will take a concerted effort by the education community and their allies in general government and the private sector to turn the attack on teacher education into a major opportunity for positive reform.
Sources


