This paper considers three aspects of federal legislation and policy that are critical to an understanding of federal dissemination of research and development and exemplary practice information in education. One of the major difficulties is the variety of viewpoints on what constitutes dissemination. These range from one-way flow of information to all possible activities that might result in desired educational improvement. The second aspect is the complexity of dissemination introduced by federal legislation. Fifty-four different individuals and agencies have responsibility for dissemination in education—from the President to state and local agencies. The third factor is the funding of dissemination. In fiscal year 1975, research and development funding represented less than half of one percent of the total investment in education. The funding for dissemination was ten percent of all research and development. There is also a mismatch between agency responsibility and agency funding level. The National Institute of Education (NIE), taking these aspects into account, concentrates on four strategies to assist people and agencies with dissemination functions. (Author/KP)
THE IMPACT OF FEDERAL DISSEMINATION POLICY

by

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THE EDUCATIONAL RESOURCES INFORMATION CENTER AND
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There are three aspects of Federal legislation and policy regarding dissemination of R&D and exemplary practice in education that are critical to an understanding of Federal activities in that area. The three aspects are, first, that there are as many definitions and concepts attached to the word dissemination as there are people involved in it; second, that there is a plethora of Federal legislation, statutes and mandates which govern dissemination in Federally supported education programs; and third, that the funding for dissemination is both grossly inadequate and idiosyncratic. I shall discuss each of these briefly in turn.

One of the major difficulties in fitting together the dissemination puzzle pieces at the Federal and indeed the state levels is the wide variety of viewpoints on just what constitutes dissemination. A recent project funded by NIE, The Interstate Project on Dissemination, carried out by seven states, surveyed a large number of relevant documents to identify the most prevalent meanings of dissemination. They found that definitions varied all the way from a limited one-way flow of information to encompassing all possible activities that might bring about desired educational improvement. There has been a marked change over time in the broadness of definitions. Earlier documents and discussions tended to use more limited meanings; the more comprehensive definitions are slowly replacing the simple information delivery notions. Particularly at the Federal level, agencies have increasingly interpreted their dissemination mandates as concerned with promoting educational change as well as giving information about improved educational practice. This interpretation of dissemination is in fact made explicit in the NIE legislation. The original
NIE legislation stated that NIE was to collect and disseminate the findings of education R&D and to advance the practice of education as an art, science and profession through the application of R&D. The 1976 reauthorization strengthened that mandate by requiring NIE to improve the dissemination of the results of knowledge gained from education R&D and provide assistance to education agencies in the application of such results and knowledge. Clearly, under this dissemination charge to NIE, Congress envisions a broad set of activities that will lead to the improvement of schools. From this charge, we derive our own definition of dissemination as a process for improving education by communicating needs and problems among educators, researchers and policy makers to both stimulate R&D and facilitate the consideration and use of the outcomes of R&D.

The process needs to include a number of steps where each builds on the preceding one. The most important are: provision of information; two-way flow of communication; availability of alternatives and access to them; assistance with mediation, interpretation, and choice; and assistance with adoption, adaptation, implementation, and assessment.

The dissemination activities being discussed today encompass one or more of these steps; it is important to keep in mind that mandates and activities of federal agencies and the expectations of the field -- be that Congress, educators, or researchers -- may often be at cross-pur­pose because different steps in the dissemination process are envisioned by different parties.

The second aspect of policy difficulty in the area of dissemination is the complexity introduced by Federal legislation. Even though -- or perhaps because -- concepts of dissemination in Federal education legislation are usually nebulous, there is no shortage of such legislation.

The same interstate study that I referred to earlier found a total of 208 dissemination requirements in legislation and program regulations at the
federal level. Fiftyfour different individuals and agencies were identified as having responsibility for dissemination in education, ranging all the way from the President of the United States to the State and local agencies. The State education agency was the single organizational entity most frequently designated as the disseminating agent; the local education agency was named with the second greatest frequency. This creates a complex web of roles and responsibilities among levels of government: the user is at the local level, useful alternatives may have been created by researchers supported by the Federal government or by innovative teachers, a state may have mandated a specific change such as competency-based graduation, and dissemination of relevant exemplary practice and information may be in the hands of all of these or yet another agency. A related but separate issue is the fact that while the responsible agent is usually named, the intended user or recipient of information seldom is. The existence of over 200 legislative and regulatory mandates for an activity that is seldom defined or clearly described, given to over 50 responsible agents to carry out, and aimed at no particular audience hardly makes for a rational dissemination system. Thus, Congress and all the rest of us continue to be frustrated in our attempts to assure that teachers, principals, superintendents, and those that make education law at the local and State levels have to hand the best that research and exemplary practice have to say about effective education.

The third perplexing factor is the funding situation for dissemination. First, let us look at the total R&D funding in education. In FY 1975, the country invested 500 million dollars in educational R&D, $450 million coming from the Federal government. This represents less than half a percent of the total investment in education in this country, now about
$120 billion. Compare this, for example, to such other areas as Health or Agriculture where the R&D investment is 3 to 4 percent of the total economic sector activity. That percentage is a much more typical R&D investment; in fact, in high-technology sectors such as aerospace or research-dependent activities such as pharmaceuticals, the R&D investment is closer to 10 percent, or 20 times as large as in education.

With respect to dissemination, specifically, in agriculture more than a third of the R&D expenditure (40 cents on each dollar) is for dissemination activities through the Cooperative Extension Service. In education, on the other hand, the investment in dissemination is 10 percent or less of all R&D. For example, for Fiscal Year 1975, out of the total federal support of R&D of $450 million, only 47 million (less than 11%) went to dissemination activities. HEW is by far the largest funder of education R&D; some 364 million of the 450 came from that department. But the percentage spent on dissemination was even less than the average, 31 million or 8-1/2 percent. The Education Division did no better than HEW overall: out of the total of $340 million spent on R&D, only 29 million (8.6%) went to dissemination. This scant investment, by the way, is in the face of mounting evidence that one of the most serious inhibitors of the use of Federally sponsored R&D is the persistent failure to understand that the R&D cost is a small part of the total cost of bringing innovation into the market place.

Another interesting characteristic of the funding of dissemination at the Federal level is the mismatch between agency responsibility and agency funding level. Thus, when NIE was created, the missions of OE and NIE in dissemination were clarified as follows: OE dissemination activities are to concentrate on its own projects and programs; NIE
is to carry out the broader mission of disseminating research results and good practices no matter how they are funded or developed. Nevertheless, under a very narrow definition we have identified OE dissemination activities amounting to $40-45 million annually, nearly three times the total dissemination budget of 15 million for NIE. OE activities include the National Diffusion Network which concentrates on 65 demonstration projects and 36 state facilitator projects; PIPS (Program Information Packages) which has packaged 6 innovations, paid for their diffusion and is now evaluating that diffusion; the special education centers under BEH and the Research Coordinating Units and other dissemination activities in the Bureau of Occupational and Adult Education; and Title IV State dissemination activities.

Let me sum up. A small agency like NIE finds itself with a major mandate in an undefined but important area governed by a welter of sometimes contradictory laws and regulations. This agency is expected to make an impact on education through the application of R&D knowledge and improved practices -- a difficult job seriously underfunded. How does it respond? First NIE recognizes that it is one of many actors in education in the nation and must build on the assets of existing organizations. There are strengths in many parts of the education system, and they must provide the base for NIE's dissemination programs. Hence State education agencies, institutions of higher education, R&D centers, regional labs, state facilitators, intermediate service agencies must all be part of the effort. We have also another asset, and that is our knowledge from diffusion research and some twenty years of experience with innovation and change in education. We know that the most effective forms of information transfer are through first-hand observations and people-to-people interactions. We know that methods of seeking and using
information vary widely not only among individuals but depending on different roles and functions that people play in the education system. We also know that innovations are changed by the local context and for the local user; thus we strive not for straight-line adoption but for mutual adaptation. That happens most effectively when there is local ownership, both psychological and financial. We also know that one contact through a one-time dissemination effort is not enough to persuade people to make changes; a sustained and conscious effort is necessary to ensure the use of new ideas.

The limited role of the Federal government in education requires that federal initiatives must be developed and carried out in partnership with the education communities. Furthermore we conclude from research and experience that all our programs need to espouse a consumer orientation. Therefore our programs are planned cooperatively and are designed to further the two-way exchange of information that will bring alternative potential solutions to educators and also affect R&D so it is pertinent to the problems faced by schools and the people who try to make them work. We concentrate on four strategies to assist the may people and agencies with dissemination functions do their jobs better:

1. As an R&D agency, we support some projects to help us understand better the R&D system and its links to education, particularly the use of R&D and improving two-way communication.

2. We provide access to knowledge resources, the most prominent example being ERIC.

3. We help build dissemination capacity in education, for example, in state agencies and -- we hope in the near future -- in professional association, and by increasing the participation of women and minorities in R&D.
4. We support programs designed to strengthen linkages between different components of the education and the education R&D systems.

I would be happy to give you further details on our programs in the question period.