Researchers neither are now, nor can they become the sole arbiters of educational change. In order for National Institute of Education (NIE) to effect change, there must be a true dialogue. In other words, the research users, parents, students, teachers, and school officials must have a chance to give NIE their ideas. While the author believes that NIE planners are committed to utilization in some sense, he is concerned that there is no coherent plan for actualizing this commitment. Although no master plan is submitted, some principles that such a plan should incorporate are proposed. (Author/JP)
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Ronald G. Havelock.
A Utilization Strategy for the National Institute of Education

by

Ronald G. Havelock
University of Michigan

At the risk of some over-simplification I want to begin this presentation with a brief summary of my views on progress. To start with I think there is such a thing as progress although we have been through a period of concern with pollution and population scares and technology backlash where this thought hasn't seemed so evident to many. Anyway I want to resurrect the idea of progress here and I want to reassert some old liberal ideas that progress comes about by planning and by problem solving in a collaborative and democratic way. I believe that progress also comes about through defining specific objectives within a broad value consensus of improving life, liberty, and alternatives for happiness for the people as a whole.

This National Institute may be a way to get us moving again down the progressive path. I hope it is, at any rate, but I come here to ask the NIE planners to consider the process of change in its full social and human dimensions. The key word for me is linkage. We have heard of the need for research well articulated every year at these meetings, more research, better research, more money for research; the NIE promises all these things. In recent years some of us have also called for something we called "development" as a special form of applied activity which transforms research knowledge into useful educational products. The NIE will also make promises in this area, but there is a third step which I call "utilization." We used to call...
this "dissemination" as if to say that all that remained to be done after research and development was simply to send it out; just drop the goodies in the mailbox and educators everywhere would receive them happily, open the parcels, immediately adopt or swallow the contents and progress would be assured. I think we know better and we always have. The fact is that researchers are not and cannot be the sole arbiters of educational change. At worst it is an endless battle with two out of three skirmishes being lost to the reactionaries or the know-nothings. At best, I propose, it is a dialogue between the experts on the one hand and the users, the practitioners and the general public, on the other.

This notion of a dialogue between the research community and the community of practice is central to my presentation here today as, indeed, I believe it is central to our understanding of progress and how it comes about. NIE will come into existence as the super-resource builder of education, the focal point of research and development and the initiator of major progressive thrusts under the control of rigorous evaluation. It will communicate all these goodies to the school systems, the schools, the teachers, and perhaps even the students and the parents. But merely to communicate or even to mandate these changes will not be enough. There must be a true dialogue; in other words the users, parents, students, teachers, and school officials must have a chance to tell NIE a few things, too. It is their Institute and it should be responsive to their needs; the NIE should not be subservient of course, not totally accountable for every dime in a strictly here-and-now way, but responsive, broadly and deeply aware of the needs of the people, present and future, and able to articulate some of the problem solving paths which will lead to improved educational practice in the short run and in the long run.
I think that those who have been responsible for NIE planning to date are fully committed to utilization in some sense. They want to make sure that what is done will have impact and will generate measurable improvements in educational practice. I am less sure that there is a coherent plan for actualizing these ambitions. There ought to be a well-conceived plan for linking NIE activities to educational practice systems so that these 2-way problem solving dialogues that I talk of can begin. This is my first point, that there should be a utilization plan, which should apply to most NIE activities.

I am in no position to tell you in detail what this utilization master plan should look like but I would like to propose a few principles which such a plan should incorporate. To help me explain my approach, I have put together the one-page handout you have before you.

These four figures give you a tiny capsule of the work we have done at Michigan over the last six years to analyze the utilization process. Figure 1 in the upper left hand corner represents the linkage model in its broadest terms and suggests that linkage is a model of problem solving which might be an alternative to the Clark-and-Guba formulation of the 1960's. Let me read you what it says there in fine print: societal problem solving comes about through the formation of relationships between user systems and resource systems, represented by the circles on the right and on the left respectively, and I should add that these circles could represent individual persons, or groups, or organizations or social units of any size. These user-resource links contain four essential sub-processes, namely (1) the transfer of new knowledge, skills, or products from resource systems to user systems ("diffusion"), (2) the utilization of new inputs by user systems, (3) the transmission of user needs to resource systems, and (4)
the generation and development of new knowledge, skills, and products by resource systems. This fourth process labelled "solution building" in the figure is what most AERA members are usually concerned about and it is what NIE will mostly be concerned about, I believe. But the figure is a warning to us not to forget the other processes if you want to change education for the better. The arrow at the bottom labelled "need expression" says that the Research and Development that is done must be relevant and responsive to the real educational needs of our society. The "diffusion" arrow at the top says that the useful results of R&D must be effectively communicated to users, and the squiggly arrow inside the right hand circle says that communication is not enough; the user needs help on implementation and integration of innovations within his system. A plan for NIE must be a plan for all these steps, a plan which looks at each step in detail and makes sure that one step follows from another.

Now to figures 2, 3, and 4. Think of these as different elaborations or overlays on figure 1. For instance, figure 2 tries to show some of the dynamics of linkage in more detail. It illustrates our belief that problem solving is not the exclusive function of any one person or group in the society. Rather, everyone is their own problem solver to a large extent and at the same time everybody is partially dependent on outside resources to help solve problems. But matching the right resource person with the right user at the right time is no easy task. Essentially, openness and willingness to enter dialogue are required of both resource and user. That is what the figure is trying to say. The caption reads as follows:

Effective resource-user linkage requires that:

1. The Resource system must understand and appreciate the user's problem-solving process.
Figure 3 takes a look at some of the social system dynamics that also have to be entered into the linkage equation when we are thinking about national problem solving. You may see that what I have done here is overlay a kind of Clark-Cuba linkage model of boxes representing the R&D process on a more complex figure of overlapping circles, dots and arrows which represent the social networks through which information normally and naturally passes. There is a very impressive empirical research tradition concerned with the diffusion of innovations. Everett Rogers in his latest book cites over 1,000 such studies; what is even more impressive is the consistency of their findings. They show that innovations of all sorts diffuse through similar patterns, that full diffusion depends heavily on informal leaders of opinion, person-to-person contacts, social group memberships, and identification with common norms and values. Do these findings apply to education? Most certainly yes; in fact, a good number of those empirical studies have been done in educational settings. Do such findings apply to the R&D process? Most certainly yes again, and this is what the diagram is trying to show. Research and Development are not merely processes; they are also social systems or networks. Hence the transitions from research to development to diffusion represent critical social interface problems. Each interface can only be bridged through two-way problem solving dialogues such as are suggested in figures 1 and 2. Moreover, such transitions will depend on well-informed, visible and articulate opinion leaders as well as on strong multi-disciplinary professional groups within which researchers developers, and key users can find a common identity. The caption of
Figure 3 summarizes these points; it says: "RD&D takes place in a social context requiring many types of feedback. The social fabric is a crazy quilt of formal and informal associations. Most of the threads are informal and not amenable to direct control from a central authority."

This brings us to figure 4 and to the question, how can a central authority function to maximize linkage. Figure 4 is the same as figure 3 except that it spells out some of the explicit subsystems that apply to education. The caption reads as follows: "Effective national change depends on a continuous chain of communication and two way influence from the research community to all users. Government can reinforce this chain and can forge additional links when necessary. The role of government should be to monitor the "natural" knowledge flow system and develop means to support, facilitate, and coordinate linkage activities so that the total system can function more effectively."

What, then, is the role of the National Institute of Education? Clearly it is not to fulfill all the governmental functions suggested in figure 4 and surely it is not to replace the complex chain of subsystems which stretch across the bottom of the figure. There appears to be some obvious responsibility to continue and expand the support of RD&D subsystems as presented on the left of this figure, continuing along the lines of the Cooperative Research Act and the ESEA and no doubt there will be more innovative organizational arrangements, laboratories and centers of one sort or another created along the way. But the NIE will want to play a role on the right hand side of the diagram too if it wants to have impact and that is why the utilization plan is so essential. First of all, NIE should have a powerful capability to monitor what is happening on the right hand side, especially what is happening in the way of innovation and communication.
of innovation on the regional and local levels. It should also be in a position to experiment with new specialized subsystems for linkage anywhere along the chain as long as these are true field experiments, not simply tinkering with the social structure. Thirdly, and perhaps most controversially, the NIE should be closely monitoring the efforts of the U.S. Office of Education to build more effective linkage and to improve local educational practice. I speak, of course, of the various efforts of ESEA Title I and III and now especially of the proposed extension system and the renewal centers. NIE must insist on taking a hard look at these ventures and to evaluate them comparatively in a way that we have not done heretofore. The NIE cannot treat these major thrusts as somebody else's business; they need to be looked at and compared with other routes to the diffusion and utilization of educational changes.

This brings me to another point that should be accounted for in the NIE utilization plan; there must be an active study and experimentation with a variety of alternative dissemination and utilization strategies. This includes commercial and non-commercial channels, centralized and decentralized systems, the employment of various technologies for information processing, broadcasting, and narrow-casting, and the employment of multi-media, personalized and non-personalized print and non-print linkage strategies. The NIE should never be committed to any one dissemination or utilization strategy until they know it works and works better than alternatives. For the most part, that knowledge of what works better than what does not exist today; it must be discovered.

This also suggests another feature of a NIE utilization strategy. It should be flexible and responsive to evaluative feedback from its own data collection efforts and from users at all levels. One type of such
user feedback may come in the form of resistance to changes advocated by NIE. NIE should not rely exclusively on coercive "guidelines" and directives to get its messages across. Rather it should try to find why people are resisting. This is what I mean in figure 2 on your handout by simulating the user's situation. If NIE is able to do this it can not only develop better, more relevant innovations; it can also gain user acceptance of those innovations voluntarily. Thus, I believe there are very rational reasons for employing the principle of voluntarism throughout the utilization plan. We are, first of all, a free society so there is a strong value basis for non-coercive change strategies, but I think that if there are strong networks of communication linking resource persons and users, non-coercive strategies may actually work better. At least I think this is the challenge for U.S. education. We must allow users to choose but at the same time we must provide users with new solutions that are worth choosing over old. I think this is in line with the free market strategy of national educational change that Mr. Gideonse was advocating in his last days in OE. Perhaps he will comment on this when his time comes.

A last point I want to make about this plan for utilization concerns the kind of output or outcome variables that are considered. The plan should be aimed at fulfilling the long term as well as the short term educational needs of the society as a whole as well as the discrete needs of specific subgroups which may or may not be long term. I think there is justifiable political pressure on our institutions for dramatic results in the shortest possible time, but if the ecology movement teaches us anything, it is that short term benefits should not be purchased at the expense of much larger long term costs. This means that every major decision regarding national dissemination
and utilization of a particular innovation must be preceded by a thorough analysis of its short and long term benefits and costs, both real and potential, social, attitudinal, behavioral, ethical. In effect, we need the equivalent of an environmental impact statement preceding any big push to utilize an educational innovation. I don't want us to put unnecessary roadblocks in the way of change, but we should be responsible to the future, and we should force ourselves to start exploring educational objectives in a more fundamental way.

So much for the utilization plan itself. I want to say a few words on two other topics: first the need for a research program on utilization and second the need for effective linkage between the Institute and the National Center for Educational Communication. First, there, on the need for a research program. The original Levien report suggested that the NIE should have one major R&D thrust concerned with the processes of dissemination, utilization and implementation of educational R&D. I want to strongly reinforce that recommendation. From what I have said about a utilization plan for NIE in my earlier remarks, it must have occurred to many of you that we simply lack knowledge in many of these areas. The figures in the handout are themselves mostly speculations and they point to glaring gaps in our knowledge of the change process. Therefore, there should be a serious and adequately financed program of research on dissemination, utilization, and implementation of educational R&D. This program should be separate from the utilization plan for NIE outlined above and should include basic and applied research as well as product development and training components. It should not be simply an evaluation service for other NIE programs. Substantive elements of this program might include the following:
1. An extensive series of case studies on the implementation of educational change and the utilization of educational R&D on the local level. Such a series should be developed in a framework that allows comparisons across cases on various dimensions.

2. A series of studies which trace the development of educational innovations through time and through various subsystems from initial recognition of need through research and development to diffusion and utilization.

Other studies are needed to study critical organizational roles, barriers and facilitators in the utilization of innovations, and there should most certainly be studies tracing the secondary and long term consequences of innovation. Other priority topics could be mentioned but the task of developing such priorities should be assigned to a committee of recognized scholars in the field, organized specifically for this purpose.

Finally, then, I come to the question of the relationship between NIE and NLEC. It would have been conceivable that the entire utilization task of NIE could have been assigned to the NCEC which has taken the initiative in this area in the past and which now has the responsibility of building a national extension system. I think, however, that there is much wisdom in dividing responsibility. The NIE should remain free to explore alternative utilization strategies provided that it does so experimentally. However, I believe that there should be effective linkage. By linkage I mean real 2-way dialogue and influence as suggested in figure 2 of the handout sheet. I don't think that there should be control by one over the other but the dialogue itself should be mandatory. Furthermore, I believe that
fully tested utilization strategies should be transferred from NIE to NCEC, to private sector, to universities or to local jurisdictions depending on analysis of optimum organizational locus. NIE should not be seen as a permanent locus for routine dissemination and utilization activities, and perhaps that is a good point for me to end on. I would hope for NIE to represent a rebirth for educational reform but I want it to be a place for continuing rebirth. Give it responsibility for continuing implementation of changes, and I think you will see it grow old and crusty and inflexible much too fast. Then we would have to create another NIE next year or the year after, or the next time a new administration comes to Washington.