ABSTRACT

In 1974, Congress, recognizing the difficulty individuals have in obtaining information on bilingual education, mandated the establishment of a national clearinghouse on bilingual education. This paper was sent to people involved in bilingual education as background material for a series of six conferences on the development of such a clearinghouse. The paper first analyzes the various information needs - in the classroom, in the legislature, in the research laboratory, and in information centers. Five major objectives for the clearinghouse are proposed and discussed: (1) transfer of information and materials; (2) direct assistance in solving problems; (3) coordination of bilingual education information activities; (4) aggregation and analysis of information; and (5) communication with policy, research and development groups concerning gaps in knowledge, technique and materials. The next section presents a synopsis of current information dissemination in bilingual education, including inquiry services, data bases, information retrieval systems, and traditional information sources. The last section is a series of questions and issues for conference participants regarding trends and perceptions, access to information, kinds of assistance, audience factors, and organization and policy issues in bilingual education. (CPM)
INFORMATION NEEDS IN BILINGUAL EDUCATION

A Stimulus For Discussion

October 1976

Sam A. Rosenfeld
Consultant
Dissemination & Resources Group
Information & Communication System
Division
National Institute of Education
I Introduction

II Background

Examples of Information Needs
In the Classroom
In the Office
In the Legislature
In the Research Laboratory
In the Information Centers

III Potential of a Bilingual Education Information Clearinghouse

Storing and making information accessible
Direct interpersonal assistance
Coordination of bilingual education information activities
Aggregating and analyzing information
Communicating gaps and opportunities to policy groups and to the R&D Community

IV A Synopsis of Current Information Dissemination in Bilingual Education

Inquiry services
Data bases
Information retrieval systems
Traditional information sources

V Questions and Issues

Trends and perceptions
Access to information
Kinds of assistance
Audience factors
Organization and policy issues
I. INTRODUCTION

A leading research team on bilingual education recently wrote, "(Since 1967) a large number of bilingual programs have been initiated, considerable sums of money have been invested in research into bilingualism, and numerous conferences on the aims of bilingual education have been held. In spite of all this activity and the vast range of literature on bilingualism, it is not easy for the seeker after information on bilingual education to find out what he wants to know. Even the members of the present team, with more time and greater resources than are usually available, have not found the location of useful information an easy task." There, succinctly, is the information problem for bilingual education. If a group dedicated to intensive use of knowledge on bilingual education finds information hard to find, how can the school principal in Nome, Alaska, or even the legislative aide to the U.S. Senate Subcommittee on Education be expected to cope with the ever-increasing requirements for knowledge?

The Congress, recognizing this need in bilingual education, mandated in the education amendments of 1974 the establishment of a national information clearinghouse on bilingual education with these words:

"...Establish and operate a national clearinghouse of information for bilingual education, which shall collect, analyze, and disseminate information about bilingual education and related programs."

We are left to interpret the intent of Congress. The term "clearinghouse" conjures up a wide variety of images in the minds of
different individuals. To some it may mean a referral center, to others an institution for answering questions, to yet others a center for coordinating existing informational activities, while to some it may connote engaging in public relations. Because there are so many divergent views of what a clearinghouse should be and how it could be made to be most effective, the National Institute of Education and the U.S. Office of Education have decided to encourage the people most concerned to help us design it to satisfy the information needs of the bilingual community. Accordingly, this paper and the accompanying one on the Title VII Network of Resource, Materials Development, and Dissemination and Assessment Centers are being sent out as background material for a series of six conferences whose objective is to address the specific needs of a clearinghouse. (See the attached agenda.) We expect a wide range of desires and priorities to be expressed at the conferences as individuals as diverse as teachers and legislators, administrators and parents, school principals and researchers examine together how a bilingual information clearinghouse might best serve bilingual education.

It may be too much to expect consensus on all the issues that will be raised. However, a synopsis designed to capture the essence of the conferences will be sent out to the participants and to others who could not attend, for their comments.

Arriving at a full-fledged clearinghouse can be viewed as a six phase process.

Phase I - A recently completed preliminary design study sponsored by the U.S. Office of Education to explore technical alternatives for the clearinghouse.
Phase II - The conferences and a synopsis of comments and results.

Phase III - Immediately following Phase II, implementation of some of the near term recommendations.

Phase IV - A more systematic design of the clearinghouse relying on the results of the first three stages.

Phase V - A full implementation of the clearinghouse.

Of course, the clearinghouse will undergo constant review and adaptation after it begins operation. In a sense, that represents a continuing Phase VI for the lifetime of the clearinghouse.

This paper is intended to provide some background and stimulus for Phase II, the conference discussions, and to raise questions whose answers could well determine the nature of the clearinghouse. We look forward to your active participation, and hope to stimulate a deep examination of the bilingual education community's information needs and the ways a clearinghouse might respond to them.
BACKGROUND

Since 1967 we have seen a dramatic surge of interest and activity in bilingual education. Title VII of the Elementary and Secondary Education Act is sponsoring about 400 bilingual educational projects around the country. Court decisions, especially Lau vs. Nichols in 1974, Serna vs. Portales Municipal Schools of New Mexico, and Aspira vs. Board of Education of the City of New York are placing increased pressures on the schools to attend to the needs of children whose English language skills have not been fully developed. State educational agencies are initiating their own programs, often mandated by the state legislatures. Language and ethnic groups are, in some instances, successfully applying leverage on local school districts. In short, it is a time of rapid change and rapid generation of new information as well. But the diffusion of information may lag considerably behind the changes themselves and the knowledge gathered about them.

The education of our 3.6 million school-age children with limited English language skills (LELS) has in fact been undergoing some fundamental shifts in policy. Until quite recently, the problem has been reduced to teaching non-English-speaking children to become fluent in English by merging them into English-speaking classes. As an Office of Economic Opportunity (OEO) report in 1973 put it, "...the vast majority of non-English speaking children were placed into regular public schools programs where they were expected to sink or swim." In some schools with a large number of
children sharing a "vernacular" language, programs of teaching English as a second language (ESL) were instituted. As the bilingual education movement gathered momentum, ESL was seen by many as an inadequate approach for the more fundamental problems facing the children and their families. Cultures were being destroyed or dissipated and in many instances children were breaking with the traditions of their families—encouraged by the assimilationist approach in the schools. Although the consequences of such a breakdown are complex, many in the bilingual community have viewed them as harmful to cultural integrity and child development.

The bilingual education movement has tried to encourage alternative directions in education particularly (1) facilitating a transition from reliance on the home language to becoming fluent in English, and (2) maintaining the language and culture of the children and their families as a source of strength and pride. These new ideas have been introduced relatively rapidly (largely over the last ten years), especially when compared with the glacial changes usually encountered in American education. The energy and velocity of the bilingual education movement has created in its wake a new set of demands for information and knowledge by just about all segments of American education. Educators, administrators, parents, and Federal planners, to name but a few, want to know what works in what settings, especially in the classroom.

Yet, there are already many sources of information—information centers sending out reports on request, State and local offices of bilingual education, newsletters, the Title VII Network, journals, ERIC, professional associations, libraries, and community groups. Aren't we flooded with information? If so, why aren't those most in need of information receiving it? Or are they?
Is the apparently limited use of the current information a result of structural and procedural inadequacies in the flow of information—inadequacies that can be rectified by a well-designed clearinghouse? Or are the limitations inherent in the nature of the education establishment itself? If the former, then we have reason for optimism in dealing with the problems. If the latter, a clearinghouse could arouse unreasonable expectations without satisfying them.

Before we consider the design of an effective information clearinghouse to meet the various needs, it is important to understand how information is used by those who are responsible for improving education for LEIS children and adults. It would be relatively easy to emulate the workings of a traditional library or add another clearinghouse to ERIC but individuals concerned with bilingual education have recognized the limitations of such approaches. As H. L. Mencken said, "For every problem there is a solution which is short, simple, logical, and wrong." The bilingual clearinghouse should not be determined solely by existing information resources and traditional approaches. Rather, we should attempt to find out what information needs exist and then propose a design to satisfy them.

Examples of Information Needs

Because information is so pervasive we sometimes take for granted the role information plays in almost all our activities. To set the stage for an effective discussion of the issues we face in developing a clearinghouse in bilingual education, let us consider some examples
of specific information needs in a variety of settings. The information using patterns suggested below are in no way restricted to bilingual education. Indeed, several studies have shown that individuals throughout education do not usually avail themselves of the extant and useful knowledge.

In the Classroom. About half the children in a second-grade bilingual class in Miami have grown up speaking some language other than English and the other half have never been exposed to any language but English. Among the countries represented by the families of this polyglot classroom are Guatemala, Indonesia, Vietnam, Argentina, Pakistan, Peru, and Cuba. The teacher, unprepared by training and perplexed by the problem of finding materials or understanding cultural differences of this mixture, turns to outside help. The teacher may never have heard of Title VII, may be only dimly aware of the full range of ERIC services, and may be stymied in a search for assistance. Even if the teacher were aware of the resources, it is doubtful he or she could take the time to track down the specific information needed. Instead, over a cup of coffee in the teachers' lounge, a colleague who had taught the second grade the previous year, ignoring the available knowledge, offers a few suggestions and the teacher gratefully accepts them. All the relevant information outside the school remains untouched, and the mistakes and distortions along with useful knowledge are passed on. Such is the experience of thousands of teachers around the country.

In the Legislature. Although Federal and State legislatures are far removed from the teacher and child, their policies on legislation
affect education profoundly. Legislators usually resort to hearings for information. But hearings rarely yield an organized analysis. The fate of most programs depends on the legislators' interpretation of the realities of bilingual education. To act rationally, they need to know the expected costs and the amount of time to assess the outcome of experimental programs. And, perhaps most of all, legislators need to know the reaction of the affected communities to the specifics of bilingual education. On some bilingual issues, data exist but are too disparate to be intelligible. Various communities have expressed themselves on bilingual education in their schools, but no one has collected and presented the comments in a form that legislators readily assimilate and use. Even the few comprehensive evaluations of bilingual education programs have not been merged into a coherent picture of what works and what doesn't. A recent report of the U.S. General Accounting Office entitled "Bilingual Education: An Unmet Need" has documented many of these information gaps.

In the Research Laboratory. Of all the groups involved with bilingual education, researchers make best use of formal information services. The formal communication processes using journal articles, conferences, and reports are relatively accessible to researchers. They also tend to belong to "invisible colleges" where information is passed on by personal contacts and information communication. Yet, as the remarks that opened this paper indicate, even researchers are often stymied in their search for information. Perhaps the rapid growth of bilingual education is
responsible. But as bilingual programs mature and change their character, the problems may actually be exacerbated.

Raw data of evaluations, assessments, surveys, and censuses represent a kind of information perhaps of peculiar value to researchers and analysts. It is difficult or impossible for researchers to obtain the stored data generated on projects other than their own. While others may require only the results of research and analysis, researchers are consumers of the raw data. With the almost pervasive use of computers for data analysis, raw data are usually stored on cards, magnetic discs, or magnetic tapes. For example, evaluations of many projects are de rigueur and the data are frequently stored in computer readable forms, but a researcher will be frustrated in an attempt to test a hypothesis by analyzing the data collected from a number of different projects. The computer readable data are inaccessible - they might as well be missing.

The results of international studies are another source of data difficult to come by. Bilingual education may be relatively new in this country, but the Soviet Union, Canada, Belgium, South Africa, and other countries have been "in the business" for much longer than the United States, and have generated most of the existing research literature. Some foreign studies are well known, e.g., the St. Lambert's immersion experiment in Quebec, or the study of the differences in language development between bilinguals and monolinguals in Afrikaans/English. (Both these studies showed that bilinguals were superior to monolinguals on some critical developmental scales.) But there have been few attempts
to organize the experiences of researchers in other countries for use by American researchers and analysts. Of course one problem has been the need for translation for some of these findings into English for use by American researchers.

In the Information Centers. In the past ten years, a number of new information centers have cropped up to serve the educational community. They have been supported partly by money from ESEA Title III or other Federal and State programs, and stimulated by the success of such centers in other field, as well as by the realization that education was wasting a valuable resource - knowledge. In more recent years bilingual education has capitalized on this useful idea, especially with the Title VII Network of centers, and even before that with centers in Illinois, Texas, California, and other states. These or similar organizations will undoubtedly exist regardless of any national informational program. Because many information centers tend to have a local character, they are potentially useful links between information sources and the local users. But, clearly, there is evidence the bilingual community does not make optimum use of the information centers. Certainly one of the reasons is their recency - the word hasn't gotten around yet. But it is clear that an important reason is the spottiness of the information a center can offer. Unless an information center is exceptionally well funded, it cannot hope to collect and acquire all the information it needs to respond to requests. It will probably be limited in the range and depth of services it can provide. It will certainly not be able to construct and maintain elaborate files from which to draw. In short, a center should have access to all the
"packaged" information that its ultimate clients need. In addition, the center needs detailed information on what other centers specialize in, what kinds of retrieval systems exist and how to use them, and, in general, a fairly complete picture of the information resources of the country as they relate to bilingual education.

The previous examples are merely suggestive of the kinds of problems some of you face almost daily. Rather than try to "crystal ball" what kinds of information you need, we encourage you to reflect on your own experiences and interpret them during the conference.
III POTENTIAL OF A BILINGUAL EDUCATION CLEARINGHOUSE

The bilingual education clearinghouse can offer many services and products - at this stage it may be too early to restrain our imagination on the possibilities. We propose five major objectives of the clearinghouse:

1. transfer of information and materials on bilingual education
2. direct assistance on solving problems, whether in the classroom, the administrative office, or the local community
3. coordination of bilingual education information activities throughout the nation
4. aggregation and analysis of information in bilingual education
5. communication to the research, development and policy groups of gaps in knowledge, techniques and materials.

The clearinghouse, as a national resource, could stimulate all actions that will lead to attaining the five objectives. In some instances, it may mean simply encouraging existing organizations to continue to serve or to improve their services. Or it may mean actually providing services for which a national clearinghouse is best suited. It could also mean setting up innovative experimental services that could eventually be assumed by other organizations.

The following section lists some of the services and outputs that could help satisfy each of the five objectives; in some cases the services may already be satisfactorily provided. It is unlikely that all the services can be offered, especially in the short run. Indeed, one of the purposes of the conferences is to identify the services and output that are most useful. This section does not deal with the process to arrive
at the outputs and services, such concerns being the responsibility of the clearinghouse designer.

1. Transfer of Information and materials

a. Referrals and access to reports, monographs, books, articles, bibliographies, and newsletters, either by (1) some identifier of the individual document, e.g., title or author or (2) in response to a general inquiry e.g. "all articles on early language immersion experiments."

b. Referrals and access to organized information as specialized topics, e.g.

(1) Federal legislation and guidelines
(2) Court cases and decisions
(3) Funding sources for research and training
(4) Data collected on research projects, surveys and census
(5) Curriculum materials
(6) Approved classroom practices and unpublished ideas
(7) Management practices, techniques, and systems
(8) Information sources on bilingual education
(9) Human resources with names, addresses, telephone numbers of people with specific experience or knowledge
(10) Training materials for bilingual education
(11) Contractors and publishers working in bilingual education
(12) Federal and State level programs and projects in bilingual education
(13) Locations and schedules of workshops and conferences
(14) Programs on bilingual education at colleges and universities
(15) Professional job opportunities in bilingual education
(16) Tests and their evaluations
(17) Collections of local newsletters
(18) Vocational education programs and adult education programs

c. Selective dissemination of information (SDI) — individually tailored (by profile) sets of documents or references sent out periodically.

d. Document abstracts.
2. **Direct Interpersonal Assistance on Solving Problems**
   a. Arranging and conducting workshops for teachers, administrators and parents
   b. Assistance in defining problems
   c. Substantive help in assessment or selection of curricula or tests
   d. Methodological assistance in evaluation
   e. Interdisciplinary teams for help in formulating and assessing bilingual education programs
   f. Training assistance in the optimal use of specific curriculum materials
   g. Assistance in organizing conferences
   h. Assistance and training in preparing films, video tapes, etc.
   i. Assistance in evaluating technology
   j. Assistance in using information systems
   k. Data processing consultation and assistance
   l. Translations of documents

3. **Coordination of bilingual education information activities**
   a. Publishing an annual 'state of bilingual education information'
   b. Setting up exchange programs for information personnel
   c. Sharing publication and processing facilities
   d. Developing common information output formats, where desirable
   e. Setting up training of information specialists
f. Sharing marketing strategies

g. Organizing national conference of professionals in bilingual education information

4. Communication to R&D and Policy Groups

a. Publishing questions received by the clearinghouse (and other information services) where the available knowledge is insufficient to provide answers.

b. Collecting from users comments on knowledge gaps and transmitting to R&D community

c. Feeding comments from users on priorities of research, development and policy data.
A great deal of information on bilingual education is available in this country. Yet the complaints of information poverty seem valid perhaps because of the paradoxically non-rational approaches to the use of knowledge in education. And some of the information resources have not extended themselves sufficiently to become well known and easy to use. This is certainly one of the challenges facing the clearinghouse.

This section will illustrate some of the information resources now available. It is not intended to be comprehensive. An information resource is a candidate for inclusion in this list if the responsible organization makes a significant attempt to disseminate or transfer information to people beyond its own staff.

**Inquiry Services.** Many services designed to respond to requests for documents or information have emerged since the passage of the Elementary and Secondary Education Act in 1965. The numbers are still growing rapidly. About half the states, many funded by NIE, have started inquiry services, usually responding to questions with document references and, in some cases, with actual copies of documents. Local city and county inquiry services have been started. Indeed, one of the largest inquiry services in the country, San Mateo Educational Reference Center, began as a service to San Mateo County in California.

All these general services respond to inquiries on bilingual education. Some services are especially oriented to bilingual or bicultural education. For example, the Information System for Native American Media of the National Indian Education Association responds to requests for documents and films on Native American education. The
Title VII Resource Centers respond to requests covering a range of information and on just about all but the most obscure languages. Nine LAU general assistance centers, set up in 1975 under the Civil Rights Act of 1964, offer technical assistance as well as inquiry services to school districts that request aid in overcoming discrimination problems based on language skills of the students.

Data Bases. Inquiry services generally rely on data bases collected either locally or nationally. A data base is a repository of information about information - usually references to documents or abstracts or perhaps people and things. ERIC (Educational Information Resources Center) is the largest and best known data base in education. It contains references to more than 250,000 reports and articles, many on bilingual education. (The precise number depends on the latitude in the definition of bilingual education.) ERIC is composed of 16 collection, classification and analysis centers called "clearinghouses" (for obscure historical reasons). Two of the clearinghouses, Languages and Linguistics at the Center for Applied Linguistics and Rural Education and Small Schools have focussed much of their attention on bilingual education. The fundamental policy governing ERIC is a somewhat laissez-faire attitude toward the use of the material contained in the system. Others are encouraged to set up computer systems to access the information, or to subscribe to the publications - especially Resources in Education, on reports and Current Index to Journals in Education, on journal and magazine articles. The laissez-faire policy has led to many organizations, particularly inquiry
services and libraries, using ERIC in a variety of innovative ways. Indeed, many information intermediaries and retrieval systems see ERIC as their "life blood."

The National Information System on Psychology, which includes Psychological Abstracts, is another data base that contains a number of items of direct or tangential interest to bilingual education. The entries in Psychological Abstracts are somewhat more research oriented than those in ERIC, but do include some references to articles that may be useful to practitioners. Like ERIC, the system is set up for computer access.

Another more informal data base, not in machine readable form, is collected by the Dissemination Center for Bilingual Bicultural Education in Austin, Texas. They publish a periodical called "Cartel," which has been an excellent source of information on curriculum materials.

More recently, Education Products Information Exchange (EPIE) has begun to produce, under contract from NIE, organized descriptions of selected bilingual curriculum materials.

Information Retrieval Systems. Computer intelligible data bases require an information retrieval system to use them effectively. Several national retrieval systems contain both ERIC and Psychological Abstracts (and other data bases of more marginal utility to bilingual education.) Lockheed's Dialog and System Development Corporation's ORBIT are two prominent examples of "conversational" retrieval systems. Lockheed and SDC are private organizations competing for the information market and the
cost of searching either of these systems is steadily coming within reach of more and more educational institutions. A single search, from formulation to print-out, may cost as little as $3-4.

There are many "off-line" or less sophisticated computer retrieval systems that are less expensive to run and are more amenable to local residence and control. ERIC publishes a comprehensive directory of local and national automated retrieval centers (over 200) that search the ERIC data base for their clients.

Traditional Information Sources. A host of informational activities, too numerous and diffuse to count, pervade the bilingual education scene. Dozens of newsletters, conferences, workshops, magazines, and media programs contribute to the current picture of dissemination for bilingual education.
V QUESTIONS AND ISSUES FOR THE CONFERENCE PARTICIPANTS

The previous discussion is all prologue. This paper has touched on some of the information needs of people in bilingual education and what kinds of services an information clearinghouse could provide. Now - questions for you as representatives of the bilingual education community. The nature of this clearinghouse will be determined to a large extent by the reactions and answers from the participants at the conferences. We have seen too many information-scientist-knows-best systems killed by the deadly trio of atrophy, apathy, and irrelevance. We ask you not to deal with the detailed issues of design and technology. To make these conferences successful, it is important for you to draw on your own personal experiences. All participants should reflect on their own backgrounds and those of their close colleagues when considering the requirements for a clearinghouse. And, so the conferences do not become mired in discussions of technique, we are not requesting responses to questions of detailed design and technology.

1. Trends and Perceptions

a. Are there trends that could seriously affect the success of a clearinghouse, e.g., changed attributes of professionals, new organizations, more (or fewer) demands for assessment.

b. What is wrong with the current state of affairs in bilingual education information? Conversely, what is right? What are some successful examples of information dissemination in bilingual education?
2. **Access to Information**

   a. What special collections or organizations of information are useful, e.g. legal, funding sources, project and program information, curriculum information, source of information, studies originating in other countries, human resources, statistical data, computer programs, tests, etc.? Please assign priorities. (See Section III 1.)

   b. Should all information be screened for quality or should the user be the final arbiter? Should some kinds of information be screened and others not? If so, which of each? On what basis?

   c. What recommendation do you have for ensuring that all useful information reaches the clearinghouse?

3. **Kinds of Assistance**

   a. What kinds of consultation are needed, e.g. curriculum selection, instituting new programs, program evaluation, individual problems with students speaking in rarely used languages? Please assign priorities. (See Section III 2.)

   b. Are interdisciplinary "trouble-shooting" teams for program consultation useful? If so, for what purposes and under what conditions?

   c. What kinds of training should the clearinghouse be prepared to offer, e.g., in the use of information resources, developing plans for innovative programs, evaluating and interpreting data, evaluating texts?
d. Can any part of the bilingual community contribute the services of local individuals to assist with informational or technical problems, perhaps trained by the clearinghouse but supported without Federal funding? If so, which parts, and under what conditions?

4. Audience Factors
   a. What is the community of users of bilingual education information? Are all teachers in bilingual schools to be included? And parents of children with limited English language skills? Do industry representatives need information when considering training of LEIS adults?
   b. How can a clearinghouse assist parents for the benefit of their children's education?
   c. Should the clearinghouse try to reach individual professionals directly or should it try to rely on institutional intermediaries, e.g., professional associations, SEA's, LEA's, etc.

5. Organization and Policy Issues
   a. How can the clearinghouse best coordinate with other information programs e.g., Title VII network, Title IV Centers, SEA projects?
   b. What kinds of arrangements with closely related professional associations e.g., National Association of Bilingual Education, National Indian Education Association, can enhance the operations of the clearinghouse? And other professional associations? And academic institutions? And laboratories such as the Northwest Regional Lab, Southwest Educational Development Lab?
c. Is ERIC well known by most educators in bilingual education? Can it be made more useful? If so, how?

d. How can the clearinghouse encourage a cooperative rather than a narrowly competitive reaction among the many institutions now providing information on bilingual education?

e. Will the clientele pay for information and technical assistance? In other words, to what extent can the clearinghouse become self-sufficient and independent of changing budget levels?

f. Should the clearinghouse act as the focal point for all information on bilingual education?

g. How can the interests of the bilingual education community be represented, so that the clearinghouse doesn’t become rigid or insensitive to its needs?

h. How can the clearinghouse encourage more effective use of information among the bilingual education community?

Looking over the responses to the questions, what do you recommend we do right now to satisfy the most urgent needs of the bilingual community.