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AUTHOR Lavin, Richard J.
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INSTITUTION Merrimack Education Center, Chelmsford, Mass.
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ABSTRACT

Despite the development of the Educational Resources Information Center (ERIC), strategies for bringing the capacities of educational research and development to local educational agencies have been largely ignored. This report suggests the need for "linking" strategies to bridge the gap, and proposes how they might be implemented. Requirements for linking agencies and personnel and for the linker's access to resources are defined, and procedures for building effective linkage are proposed. The recommendations are summarized in two appended tables. (SK)

BUILDING LINKAGE AND SUPPORT CAPABILITIES AT THE LOCAL EDUCATION LEVEL

Dr. Richard J. Lavin
Executive Director
Merrimack Education Center
Chelmsford, Massachusetts

BUILDING LINKAGE AND SUPPORT CAPABILITIES AT THE LOCAL EDUCATION LEVEL

Investments of R&D capital have resulted in large pools of knowledge on innovative practices in education. During the past ten years, we have witnessed a growth and differentiation of specialized institutions to deal with this explosion in knowledge production and utilization. Emerging methodologies and technologies have advanced the procedures for information storage and retrieval. The technology of microfiche has smoothed the way for ERIC[1], one of the world's largest information storage and retrieval systems. The development of the ERIC files has offered one form of linkage that plays an important role in the communication of educational R&D results. Microfiche copies of the entire collection are mailed to subscribing organizations. ERIC has proved to be a timely response to the concern for linking research with practice. Through ERIC, the NIE has undertaken to provide the full educational community access to the comprehensive body of documentary literature about education.

Educational research provides new knowledge to be combined with experience (old knowledge). Largely unplanned for, and still lacking in most instances, are the strategies for bringing

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[1]Educational Resource Information Center, (ERIC), presently comprises over 85,000 documents, abstracted, indexed, and disseminated through microfiche and hard-copy formats.

the capacities of educational R&D to the local educational agencies. Indeed, ERIC users make up only a fraction of the educational community. In a recent survey on innovation by Ronald and Mary Havelock[2], 9% of professional educators indicated that they fully utilized the ERIC system. Additionally, the experiences documented by R&D agencies substantiate the belief that educators do not have adequate information about innovative practices in the educational domain. It appears obvious that viable mechanisms are needed to provide linking strategies . . . a means to coordinate the bulk of research and make it more accessible to users.

Studies of knowledge production and utilization in education have consistently pointed to the need for linking mechanisms and institutions to connect the products of R&D with the practice world.

We see the present need as two-fold: (a) need to improve practices among client school systems; (b) need for better utilization of the human and material resources for improved delivery of R&D products and services. The objective of this presentation is to describe a system for approaching the solution to the problem of information dissemination through a local school system collaborative. The purpose of this

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[2]Mary Havelock and Ronald Havelock, Educational Innovation in the United States, Volume I (CRUSK), Ann Arbor, Michigan, 1973.

project is to design mechanisms to disseminate significant information and explicate this information. Through appropriate linking strategies, we can multiply the benefits of R&D efforts which have resulted in new and innovative educational practices.

BUILDING EFFECTIVE LINKAGES

In order to utilize the available R&D in educational practices, school systems need support from "linking" organizations. Through an information delivery system, linkage personnel are able to provide useable information to teachers and administrators in their local schools . . . information that is linked to their requirements for professional growth through educational experience.

There are three fundamental requirements that a linking organization possesses:

1. The linking agency must be able to help the practitioner assess his needs. Before a practitioner can use information, he must know specifically what the problems are.
2. The linkage personnel must have a knowledge of the resources which are available to solve the educational practitioners's problems. These resources may take the form of consultants, practitioners, developers, or other human resources and also printed resources

in the form of research, successful practices, and training programs for staff development.

3. The linker must have access to these resources so that they can be made available to the practitioner.

The linking organization is the middleman and translator communicating products and processes to users. According to Farr[3];

> It is obvious, however, that educational linking cannot possibly be done by individuals alone but requires the resources and legitimacy of rather comprehensive organizations.

The local linking organization, operating as the R&D arm of local school systems, provides a vital key to advancing school improvements. The linking organization assists in building the store of knowledge about ways to enhance the successful application of products, processes, methods and techniques and the schools develop increased potential to cope with identified problems.

PROCEDURES FOR BUILDING EFFECTIVE LINKAGE

According the Havelock, promlem-solving comes about through the formation of relationships between user systems and resource

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[3]Farr (Knowledge Linkers and the Flow of Educational Information: In An Occassional Paper for ERIC at Stanford. (Stanford University: ERIC Clearinghouse on Educational Media and Technology,) 1969, P. .

systems. Certain problem-solving skills are developed through this process. These problem-solving skills can be outlined as follows:

- Diagnose problems accurately (diagnosis)
- Identify and search out resources addressing those problems (relevant resources)
- Devise and test experimentally appropriate responses (choose solution)
- Gain acceptance and generate self-renewal
- Evaluate effects of the responses for refinement and modification

In order for an information system to be effective it must be based upon the characteristics of the user population and their communication behaviors and information needs. To identify these needs, a structured instrument is administered and yields data related to professional knowledge requirements indicated by teachers and administrators.

The resulting data is transformed into a priority listing for school district in-service programs or for information dissemination. There are special ways to link the special needs of individual educators to the vast array of knowledge available today. We learn the specific needs of teachers through formal assessment techniques. Once the needs are

identified, the linking organization makes every attempt to increase the interface between the R&D system and the operating system.

The linking organization facilitates the relationships of the schools' market structures (non-technological craft) to the producers of R&D. These activities are carried out at the curriculum level as well as at other leverage points such as; (a) teacher in-service; (b) school organizational level, and, (c) major system changes in basic structures of education and various features of the school. This model has been characterized as being two-pronged.

1. Product support
2. Change support

The linkage and support system provides the product and change change support strategies. The linking strategies developed provide professional support linking together teachers, principals, and other administrators and professional educators.

In this way school staffs develop the capacity to identify and generate solutions for problems. The linking agency provides an organizational base and access to resources for professional growth and development.

There are specific elements of information systems for operating a comprehensive linking agency.

Technical assistance and support is examined in detail using a concrete example (slide/tape presentation).

FOUR MAJOR REQUIREMENTS OF A RESPONSIVE SERVICEABLE INFORMATION SYSTEM

- COMPREHENSIVENESS - adequate resources (quality/quantity)
- RELEVANCE - timely and germane (responsive to user needs)
- UTILITY - directly usable; compatible with skills and knowledge of user
- ACCESSIBILITY - locally, in his own work setting
- COST-EFFECTIVE

	INSTITUTIONS	FUNCTIONS			
		RESEARCH	DEVELOPMENT	LINKAGE	UTILIZATION
EXTERNAL RESOURCE SYSTEM	UNIVERSITIES	EXTERNAL RESEARCH AND DEVELOPMENT		EXTERNAL LINKAGE AND SUPPORT	
	NON-PROFITS				
	PROFITS				
	FEDERAL GOVT.				
OPERATING EDUCATION SYSTEM	SEA's	INTERNAL RESEARCH AND DEVELOPMENT		INTERNAL POLICY, LINKAGE AND SUPPORT	
	LEA's			INTERNAL PROBLEM-SOLVING	

THE INSTITUTIONAL AND FUNCTIONAL STRUCTURE OF KNOWLEDGE PRODUCTION AND UTILIZATION IN RESEARCH

ROM: BUILDING CAPACITY FOR RENEWAL AND REFORM, NATIONAL INSTITUTE OF EDUCATION, DEC. 1973

TABLE 2

"R&D NOTIONS"

Educational Marketing Concepts

* Exchange economy
* Consumer Behavior
* Needs Assessment Tools
* Monitoring/Feedback

Knowledge and Product Utilization

* Identification of Development Efforts
* Adapting Products for Application Purposes
* Identification of Successful Practices (products/processes)
* Educational Banks
* Replication/packaging

ORGANIZATIONAL

* Linking Organizations (Labs - Users, etc.)
* Networking/Linking Pins
* Primary Secondary Communication
* Local R&D (Collaboration)
* Societal - Institutional - Instructional Links

TRAINING

* Building Linking Skills (Administrators/institutional)
* Training Trainers Program
* Change Supprot /Product Support
* Change Strategies (classroom, Building, etc.)
* New Delivery Systems