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ABSTRACT

The rapid growth of educational research and development in America has widened the gap between average classroom practice and "best available" validated practices resulting from research and development at educational laboratories, universities, and school-based practice improvement projects. The extension agent system was chosen to change the educational dissemination system from a passive to an active one. Programs already in existence were studied and personnel functions were extracted to develop models. Job/role descriptions were compiled and divided into selection criteria and teachable knowledge/skills. Finally 28 modules to train project directors, resource personnel and field personnel were developed and tested. This trainers' book consists of lesson plans for each of the modules. A summary description is followed by a list of required materials and aids. Detailed information is given on points to be covered and how to conduct the learning session. Background papers are included with most modules. This document is meant to be used in conjunction with the Final Report (LI004361) and the Trainees' Book (LI004363). (Author/DH)

# DEVELOPMENT OF TRAINING RESOURCES FOR EDUCATIONAL EXTENSION SERVICES PERSONNEL

2. TRAINERS' BOOK

April 30, 1973

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NOTE

The training materials in this book are explained by, and meant to be used in conjunction with, Volume 1, the Final Report of the Stanford University - System Development Corporation project. Most of the materials are still, technically speaking, in a development phase. They should be used in the context of evaluative data presented in Volume 1. Furthermore, they should be used adaptively, with the expectation that better rather than poorer training will result if allowances are made for advantages and disadvantages of a local training setting.

SESSION NO. 1

OVERVIEW

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To outline the training activities and clarify relationships among sessions and among "tracks" for different personnel roles.

To elicit training priorities and topics of particular concern to trainees.

To make ancillary arrangements -- e.g., for travel between training sites, for expense reimbursements, etc.

Upon completion of this module, trainees should:

1. Understand the training schedule and its requirements.

2. Feel that their priorities and concerns have been taken into account.

3. Understand and approve the ancillary arrangements.

B. Participants

Trainers: Training director, members of training staff who have announcements to make

Trainees: All

C. Summary of Module Activities

The training director presents an overview o. activities. Members of the training staff make announcements as necessary. Group discussion that follows deals with, among other topics, the trainees' priorities and concerns.

D. Duration

One hour

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

1. Trainers' Book (read or skim carefully for overview of trainers' responsibilities)

2. Materials and instructions governing ancillary arrangements (e.g., trainee expense reimbursement, if relevant)

3. Training session schedule

B. Trainee Preparatory Reading

1. Trainees' Book (read or skim carefully for overview of trainees' responsibilities)

2. Materials and instructions governing ancillary arrangements

3. Training session schedule

C. Aids and Equipment

None

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Welcoming Remarks; Overview of Training Activities | Presentation | 15 |
| Step 2 | Necessary Announcements by Other Members of Training Staff | Presentation | 10 |
| Step 3 | Review of Ancillary Arrangements | Presentation | 5 |
| Step 4 | Discussion of Trainees' Priorities and Concerns | Group Discussion | 30 |

IV. SPECIAL CONSIDERATIONS

The "hidden agenda" of this session is to get the training activities off on a participatory footing. It is often true that the trainees who most need individual attention are the least likely to speak up or come to the trainers' attention until they have become discouraged or alienated.

V. CONDUCT OF THE SESSION

Although most other modules are structured, it is well for trainers to approach this module spontaneously. They should, however, watch the clock and not let their presentations continue into the group discussion time.

At the beginning of <u>Step 4</u>, trainers should open the discussion with questions like:

> As you look over the schedule, do you see most of the topics you hoped to cover? What topics seem to be missing?
>
> Do you see any topics listed in the schedule that you don't understand -- that is, you're not sure what's being covered in those sessions?
>
> Would you like to suggest that the group undertake some activities in addition to, or instead of, ~~the~~ activities in the schedule?

Trainees' remarks and suggestions should be recorded and analyzed at the earliest opportunity (e.g., the lunch hour). The training staff should give careful consideration to content changes or schedule changes that several trainees concur in suggesting.

SLSSION NO. 2

# SELF-ASSESSMENT OF KNOWLEDGE AND SKILLS

## I. SUMMARY DESCRIPTION OF MODULE

### A. Objective

To provide a baseline for evaluation of trainees' progress through the training materials.

To provide trainers with a superficial but timely indication of areas in which trainees report much versus little knowledge and skill.

After sampling the range of training topics in this self-assessment, trainees should be able to:

1. Formulate their needs for specific information and experiences in the sessions that follow.

2. Note, and discuss with training staff, discrepancies between topics they expected to cover and topics assigned to them in the assessment.

### B. Participants

Trainers: Training director or assistant

Trainees: All

### C. Summary of Module Activities

There is a different five-page self-assessment form for project managers, retrieval specialists, and field agents. However, each form is divided into two parts, the first on knowledge/understanding and the second on skills.

After the self-assessment is completed, and before it is turned in, trainees and training staff discuss trainees' reactions to points covered (and not covered) in the form for each personnel role.

### D. Duration

One hour

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

None

### B. Trainee Preparatory Reading

None

### C. Aids and Equipment

Self-assessment form in Trainees' Book

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Explanation of Self Assessment and its Rationale | Presentation | 5 |
| Step 2 | Completion of Self-assessment Form by Trainees | Individual Written Work | 20 |
| Step 3 | Discussion of the Self-assessment and Other Topics It Suggests | Group Discussion | 35 |

## IV. SPECIAL CONSIDERATIONS

None

## V. CONDUCT OF THE SESSION

Step 1 Explain that the trainers and the trainees themselves will benefit from the assessment. Clarify the use of the assessment -- that is, not to "grade" the trainees. State that the assessment form will be used again in the final session of the training sequence.

Step 2 Distribute forms for completion by trainees. Remark that, on the average, forms take less than 15 minutes to complete. Suggest that trainees finishing first take a coffee break or write notes for the group discussion to follow.

Step 3 When all trainees have completed their self-assessments, but before the forms are turned in, initiate a discussion of the assessment itself and any new topics it suggests for continuing the discussion of the previous session.

SESSION NO. 3

"POST-SPUTNIK" TRENDS IN AMERICAN EDUCATION
AND THE EMERGENCE OF EDUCATIONAL DISSEMINATION SYSTEMS

# I. SUMMARY DESCRIPTION OF MODULE

## A. Objective

To provide historical context for the development of "active" dissemination systems in education.

To show the pressure for "active" dissemination generated by educational research & development programs since the late 1950's.

Upon completion of this module, trainees should:

1. Understand the spurs to federally supported research & development (in all fields of research) after World War II, and resulting "knowledge explosions."

2. Understand the roles of scientific information systems in shaping the growth of the educational dissemination system -- often to its detriment.

3. Understand the several phases by which the educational dissemination system moved from a "passive" to an "active" posture.

## B. Participants

Trainers: One instructor

Trainees: All

## C. Summary of Module Activities

This is the first of several "expository" modules for which trainees are expected to prepare by reading a background paper. The session itself is chiefly a discussion of topics raised in the paper.

## D. Duration

One hour

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Price, Derek. Little Science, Big Science New York: Columbia Univ. Press, 1963.

2. Educational Research and Development in the United States. National Center for Educational Research and Development, U.S. Office of Education, DHEW, 1970.

3. Paisley, William. "Improving a Field-Based (ERIC-Like) Information System." Journal of the American Society for Information Science, November-December 1971, 399-408.

4. Background paper attached to this module in Trainers' Book and Trainees' Book.

### B. Trainee Preparatory Reading

1. Background paper attached to this module.

### C. Aids and Equipment

Presentation alludes to tables and figures in the background paper.

In addition, it would be desirable to acquire copies of the references cited above and place them on a table for trainee browsing.

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Review of Points Raised in Background Paper | Presentation | 20 |
| Step 2 | Additional Points that Training Staff Wishes to Raise | Presentation | 10 |
| Step 3 | Discussion of Topic | Group Discussion | 10 |

## IV. SPECIAL CONSIDERATIONS

None

## V. CONDUCT OF THE SESSION

Step 1 Review of Points Raised in Background Paper (20 minutes)

The trainer can summarize the background paper by mentioning, and briefly elaborating, the theme of each section. In addition, each table and figure can be reviewed to be sure that trainees understand the differences or trends that are being depicted.

Step 2 Additional Points that the Training Staff Wishes to Raise (10 minutes)

The background paper will fail to cover some points that the training staff would like to include in the discussion phase of this session (e.g., in a particular state, the development of in-service extension training for teachers and administrators through the state university, and its role in introducing new practices into the schools).

Step 3 Discussion of Topic (30 minutes)

The discussion will gain its own momentum after a few minutes, but it can be stimulated with questions like:

What is your general reaction to points raised in the background paper?

Do you feel that the author of the background paper omitted some significant points, or exaggerated the importance of other points?

Do you interpret the post-war expansion of research and development, or the "knowledge explosion," differently from the author of the background paper?

Are there any false premises or mistaken assumptions in efforts that have been made thus far to improve educational dissemination?

# "POST-SPUTNIK" TRENDS IN AMERICAN EDUCATION AND THE EMERGENCE OF EDUCATIONAL DISSEMINATION SYSTEMS

(Background Paper for Module 3)

Educational dissemination systems have come into existence in response to pressure "upstream" in the flow of educational research and development knowledge -- that is, pressure emanating from researchers/developers and their sponsors. To understand the growth of educational dissemination systems, we must first understand, in some fashion, the growth of educational research and development itself.

If we were to look at the growth of educational R&D as an isolated phenomenon, we might be puzzled that, at one moment in history, the federal government suddenly began to double its investment in educational R&D each year for several years. Or, if we were not now past that period of exponential growth, we might conclude that such increases are simply "modern times," that a technologically based society regulates itself through vast expenditures in research and development (which is partly true anyway).

We can see now that the sudden growth in educational R&D was more of an historical episode than a projection of the future. Funding of educational R&D is now leveling off, but at the high post-growth level of support rather than the low pre-growth level.

Educational R&D is the offspring of more rigorous sciences such as psychology, sociology, and statistics. Its sudden growth began at a moment in history when:

(1) the post- . emergence of "Big Science" had clarified the relationship between the federal government as a new sponsor of research and scientists as unaccustomed beneficiaries of large-scale support;

(2) the source fields on which educational R&D depen , psychology in particular, had developed theories and methods that promised to be productive when focused on educational problems;

(3) external pressure was applied for rapid, major improvement in the quality of American education.

Let's examine the convergence of these trends. The post-wa emergence of "Big Science" was a striking occurrence in the history o. mankind. It signaled a different approach to control of the environment, to production, to the provision of services, to social planning, etc. Industries that had been labor-intensive became knowledge-intensive. New knowledge industries were born. And, most indicative of all, the pre-war model of small-scale "solo science" gave way to large-scale organized science with teams of researchers, specialization, and division of labor.

"Big Science" was a by-product of the Second World War. It is the post-war extension into all fields of science of the organizational principles of the Manhattan Project and other ordnance-related projects. It could be argued that "Big Science" was born in Nazi Germany, since Hitler mobilized the scientists of that country somewhat earlier than their counterparts were mobilized in the United Kingdom and the United States.

In recent decades, according to the historian of science Derek de Solla Price, various forms and products of science have been doubling every 10 to 20 years. Thus it can be shown that the number of practicing scientists doubles every 15 years or so, and that some of their products (such as technical reports) double faster than this rate while other products (such as substantial or "classic" journal articles) double slower than this rate.

The traditional first step in research is to acquaint oneself thoroughly with the work of one's predecessors, then to choose a promising topic from their legacy of unsolved problems. From the 17th century (when science became a recognized activity of certain men through the founding of associations such as the Royal Society of London) to the early 20th century, there was an orderliness in this process that derived from the relatively small number of scientists and the relatively show pace of their work.

With the advent of "Big Science," however, twin new pressures overstressed the existing dissemination systems of science. First, there was the immediacy of one's "predecessors." If the number of practicing scientists doubles every 15 years or so, it follows that, at any moment, most scientists who ever lived are now alive. Working with hypothetical data, a doubling period of 15 years would produce a world population of scientists in 1930, 1945, 1960, and 1975 of 2 million, 4 million, 8 million, and 16 million. Since all the scientists who had lived before a given period (e.g., 1930) would not exceed the doubling value of that period (the doubling value of a period is the limit for cumulated previous doublings), we see in the post-war period a great immediacy in research. One's predecessors are one's contemporaries, and their work is not to be read in leather-bound journals from the past.

Second, the team approach, a hallmark of "Big Science," produces documents at a prodigious rate. Individually, the documents at not as valuable as the documents of "Little Science," but there are vastly more of them and they conceal their differences in quality.

Between them, these two factors produced what is now referred to as the "knowledge explosion." Existing dissemination systems sagged under the unprecedented volume of documents, and new systems had to be invented to avoid disastrous amounts of duplicative and erroneous research

To understand the timing of educational R&D's growth, we must note that "Big Science" did not come to all fields of science at the same time. The war-time managers of science, chiefly James Conant and Vannevar Bush, were especially concerned for the support of post-war physics. The National Science Foundation, whose legislation they lobbied through Congress and past one veto by President Truman, provided large-scale support first for physics, then for chemistry (after chemists organized to complain, in the "Westheimer Report," that they were disadvantaged), then for geology and other hard sciences.

The advent of "Big Science" in the life sciences came with a series of bills introduced by Senator Lister Hill in the 1950's. Lister Hill's patronage of biomedicine is the major single reason for the growth of the NIH research empire.

After the physical sciences and the life sciences had each, in their turn, made the transition into "Big Science," the time was ripe for the social sciences and, finally, educational R&D. Some support for the social sciences had come from the Department of Defense throughout the war-time and post-war years. These funds were greatly augmented when NSF and NIMH appeared on the scene.

In the late 1950's the stage was set for large-scale support for educational R&D in the sense that conditions #1 and #2 (see page 3-5) had been fulfilled. What was lacking was a trigger or catalyst that would cause Congress to draft the new legislation, pass it, and appropriate funds for it.

The trigger was Sputnik I. Indicating, as it then seemed to, a superiority in Soviet science and hence presumably in Soviet education, Sputnik I spurred Congress to pass, in 1958, the National Defense Education Act. It was not the first educational R&D legislation passed by Congress. It had been preceded by the Cooperative Research Act of 1954. "Coop Research," however, was a vestige of "Little Science," an invitation to solo researchers to continue doing whatever they had been doing before, but under small-scale federal sponsorship, while "NDEA" was a mission-oriented, focused act that placed specific priority on certain kinds of research that the government wanted from "Big Science" teams of researchers.

A series of federal authorizations for educational R&D, contained in legislation such as the Vocational Education Act of 1963, the Elementary and Secondary Education Act of 1965, the Higher Education Act of 1965, and the Educational Professions Development Act of 1967 (to name only a few acts), created a situation in which researchers were force-fed funds that they converted to paper in unprecedented volume. Tables 1 and 2 (pages 3-10 and 3-11) show how rapidly the budgets of educational laboratories and R&D centers increased from 1966 through 1969, doubling on the average each two years. Figure 1 (page 3-12) shows how the total "research and training" outlay of the U.S. Office of Education grew from almost nothing in 1956 to more than $100 million in 1969, most of it channeled through the Cooperative Research Act as amended by the Elementary and Secondary Education Act of 1965.

As other federal agencies had discovered since the Second World War, the U.S. Office of Education discovered that each million dollars awarded competitively to researchers buys a vast amount of paper, some of it in the form of technical reports directly related to grants and contracts but perhaps an equal amount in the form of papers, articles, books, and other proofs of busyness.

TABLE 1. BUREAU OF RESEARCH SUPPORT FOR REGIONAL EDUCATIONAL LABORATORIES*

| | 1966 | 1967 | 1968 | 1969 |
|---|---|---|---|---|
| Appalachia Educational Laboratory Charleston, W. Va. | $ 319,880 | $ 1,200,000 | $ 993,795 | $ 895,478 |
| Center for Urban Education—New York, N.Y. | 918,900 | 2,539,000 | 2,675,000 | 2,633,794 |
| Central Atlantic Regional Educational Laboratory—Washington, D.C. | | 570,257 | 780,000 | 390,000 |
| Central Midwestern Regional Educational Laboratory—St. Ann, Mo. | 695,082 | 805,640 | 1,350,000 | 1,700,000 |
| Cooperative Educational Research Laboratory, Inc.—Northfield, Ill. | 188,580 | 410,000 | 600,000 | 270,000 |
| Eastern Regional Institute for Education Syracuse, N.Y. | 199,613 | 633,715 | 943,385 | 998,700 |
| Education Development Center, Inc. Newton, Mass. | 168,270 | 267,000 | 1,041,162 | 959,655 |
| Far West Laboratory for Educational Research and Development—Berkeley, Calif. | 375,000 | 730,249 | 1,250,000 | 1,685,170 |
| Michigan-Ohio Regional Educational Laboratory—Detroit, Mich. | 184,240 | 299,600 | 800,000 | 384,500 |
| Mid-Continent Regional Educational Laboratory Kansas City, Mo. | 600,000 | 900,000 | 730,000 | 937,713 |
| Northwest Regional Educational Laboratory Portland, Oreg. | 420,810 | 1,333,000 | 1,543,500 | 1,690,000 |
| Regional Educational Laboratory for the Carolinas and Virginia—Durham, N.C. | 190,209 | 349,472 | 693,744 | 820,000 |
| Research for Better Schools, Inc. Philadelphia, Pa. | 406,447 | 1,603,377 | 2,089,240 | 2,700,000 |
| Rocky Mountain Educational Laboratory Denver, Colo. | 285,700 | 646,156 | 514,039 | 346,000 |
| South Central Region Educational Laboratory Little Rock, Ark. | 180,705 | 451,000 | 870,000 | 320,000 |
| Southeastern Educational Laboratory Atlanta, Ga. | 362,100 | 739,000 | 670,000 | 670,000 |
| Southwest Educational Development Laboratory Austin, Tex. | 216,349 | 1,399,939 | 1,400,000 | 1,700,000 |
| Southwestern Cooperative Educational Laboratory Albuquerque, N.Mex. | 294,200 | 696,900 | 751,867 | 862,244 |
| Southwest Regional Laboratory for Educational Research and Development—Inglewood, Calif. | 830,225 | 1,570,000 | 2,235,000 | 2,486,726 |
| Upper Midwest Regional Educational Laboratory Minneapolis, Minn. | 530,000 | 525,000 | 678,000 | 800,000 |
| Total | 7,366,310 | 17,669,305 | 22,438,732 | 23,250,047 |

*Actual obligations to laboratories for fiscal years, ending June 30.

Source: <u>Educational Research and Development in the United States</u>. Washington: National Center for Educational Research & Development 1970.

TABLE 2. **COOPERATIVE RESEARCH SUPPORT FOR RESEARCH AND DEVELOPMENT CENTERS, POLICY CENTERS, AND THE NATIONAL LABORATORY ON EARLY CHILDHOOD EDUCATION***

| | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 |
|---|---|---|---|---|---|---|
| Center for Research & Development for Cognitive Learning–Wisconsin | ...... | $499,600 | $808,081 | $1,034,000 | $1,687,849† | $1,200,000 |
| Center for the Advanced Study of Educational Administration–Oregon | $508,769 | 533,586 | 663,186 | 675,558 | 590,000 | 493,812 |
| Center for Research & Development in Higher Education–Berkeley | ...... | ...... | 315,657 | 849,307 | 1,459,000† | 938,128 |
| Research & Development Center in Teacher Education–Texas | ...... | ...... | 459,175 | 762,730 | 1,190,419† | 820,000 |
| Learning Research & Development Center–Pittsburgh | 490,000 | 753,531 | 641,794 | 1,308,702 | 1,465,482 | 1,454,332 |
| Research & Development Center in Education Stimulation–Georgia | ...... | ...... | 401,118 | 731,552 | 1,237,326† | 758,000 |
| Stanford Center for Research and Development in Teaching–Stanford | ...... | ...... | 349,625 | 796,701 | 1,597,000† | 995,432 |
| Center for the Study of the Evaluation of Instructional Program–UCLA | ...... | ...... | 408,981 | 533,973 | 867,882† | 809,415 |
| Center for the Study of the Social Organization of Schools and the Learning Process–Johns Hopkins | ...... | ...... | ...... | 172,717 | 741,618† | 613,880 |
| National Laboratory on Early Childhood Education | ...... | ...... | ...... | 1,448,630 | 1,561,500 | 1,700,000 |
| Educational Policy Research Center (SRI) | ...... | ...... | ...... | 110,000 | 499,154 | 500,000 |
| Educational Policy Research Center (SURC) | ...... | ...... | ...... | 110,000 | 499,951 | 500,000 |

*Actual obligations to Centers for indicated fiscal years, ending June 30.

†Contracts for these centers were extended by from 1 to 7 months beyond the normal 12

Source: <u>Educational Research and Development in the United States</u>. Washington: National Center for Educational Research & Development, 1970.

APPROPRIATIONS FOR "RESEARCH AND TRAINING"
U.S. OFFICE OF EDUCATION, 1957–1969

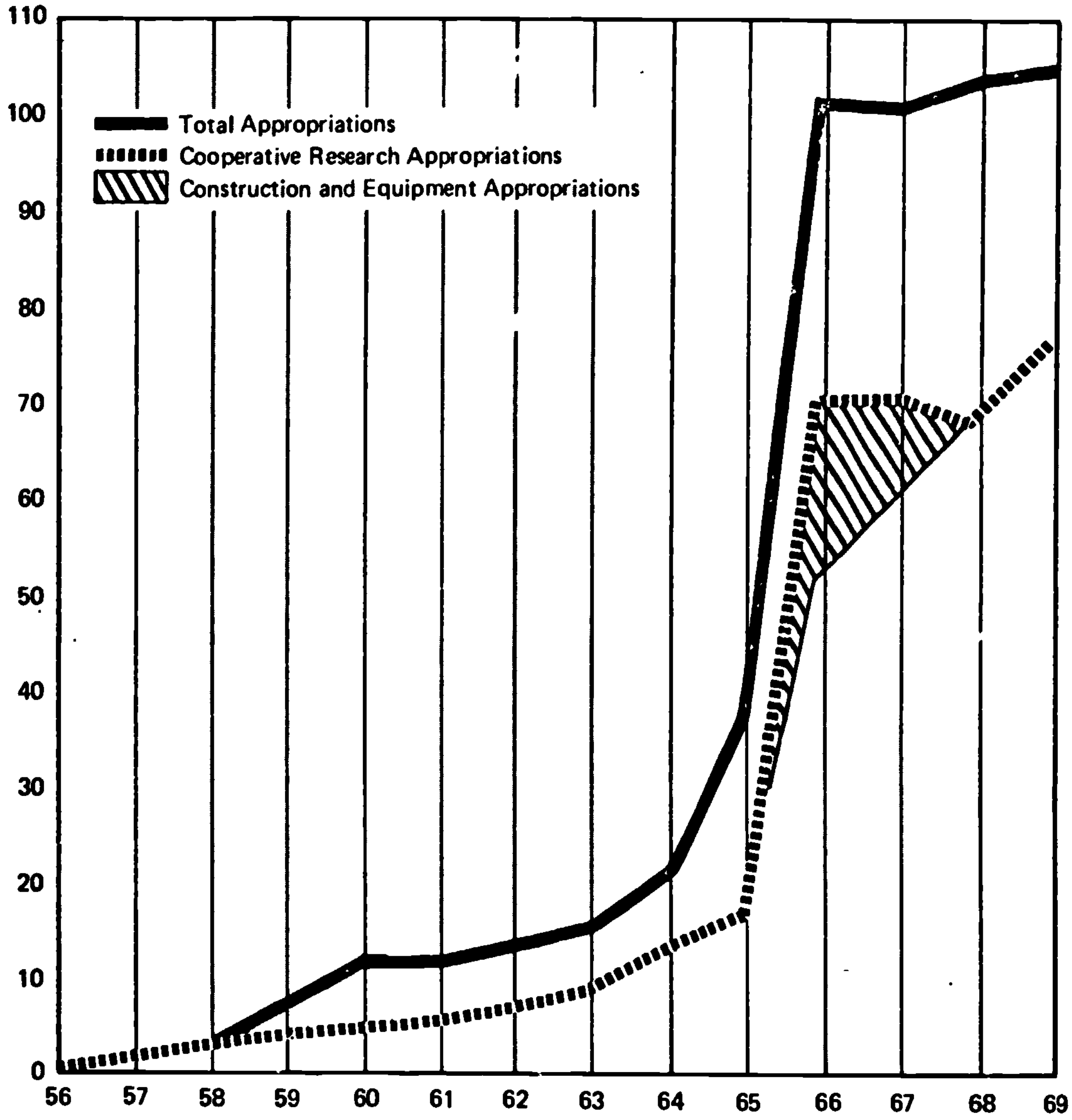



FIGURE 1.

Source: Educational Research and Development in the United States. Washington: National Center for Educational Research & Development, 1970.

The earlier forced-feeding of physics, chemistry, biomedicine and other fields created information problems that federal agencies dealt with in various ways, ranging from the establishment of new federal information systems to the subsidy of private information systems. Spurred on by early symptoms of an information crisis, NSF established an Office of Science Information Service to support research and development on documentation, bibliographic processing, computer information retrieval, etc. OSIS invested heavily in the information systems of the American Institute of Physics and the American Chemical Society, hoping that these professional associations could expand their bibliographic services fast enough to stay abreast of documentation on its 10-15 year doubling cycle.

Biomedicine was fortunate enough to have one of the three national libraries (the Library of Congress, the National Library of Medicine, and the National Library of Agriculture) as its base for new information systems. NIH invested only to a limited extent in external information systems and instead developed MEDLARS as an access system for the National Library of Medicine.

With initially vast sums at their disposal, the Department of Defense and the National Aeronautics and Space Administration chose to establish wholly new information systems for themselves and their contractors. Despite some retrenchment, the Department of Defense still operates the country's largest network of specialized information centers.

It was in the context of these varied "solutions" to the information crisis that the U.S. Office of Education had to decide, in the mid-1960's, how to cope with educational R&D information.

USOE's first solution, the network of Educational Resources Information Centers (ERIC), was conceived in the early 1960's by non-governmental researchers under NDEA funding. If ERIC came into existence looking like a physics or chemistry information system, the answer lay in the limited number of information system models then available. Principles that are now well understood, such as necessary differences in information systems for researchers and for "practitioners" and differences in vocabulary control between "hard" and "soft" sciences, were hammered out in the late 1960's at the expense of information systems that were failing in their missions and had to be reconceptualized.

The 10-year-old concept of ERIC as a network of decentralized processing centers or "clearinghouses" and a central coordinating office was never invalid insofar as the important functions of acquisition, processing, and archiving were concerned. However, it was thought at first that users (educators, researchers, and policymakers) would relate directly to ERIC, searching out relevant documents through its bibliographic tools and ordering microfiche or "hardcopy" from the ERIC Document Reproduction Service. While some users (especially researchers) went through these steps, other users ignored ERIC quite simply because access to it lay above the "ceiling" of effort that they felt educational information justified. Even with the promise of more accurate and complete information, ERIC could not compete with the popular press of education, the interpersonal grapevine, and the common alternative of not knowing at all.

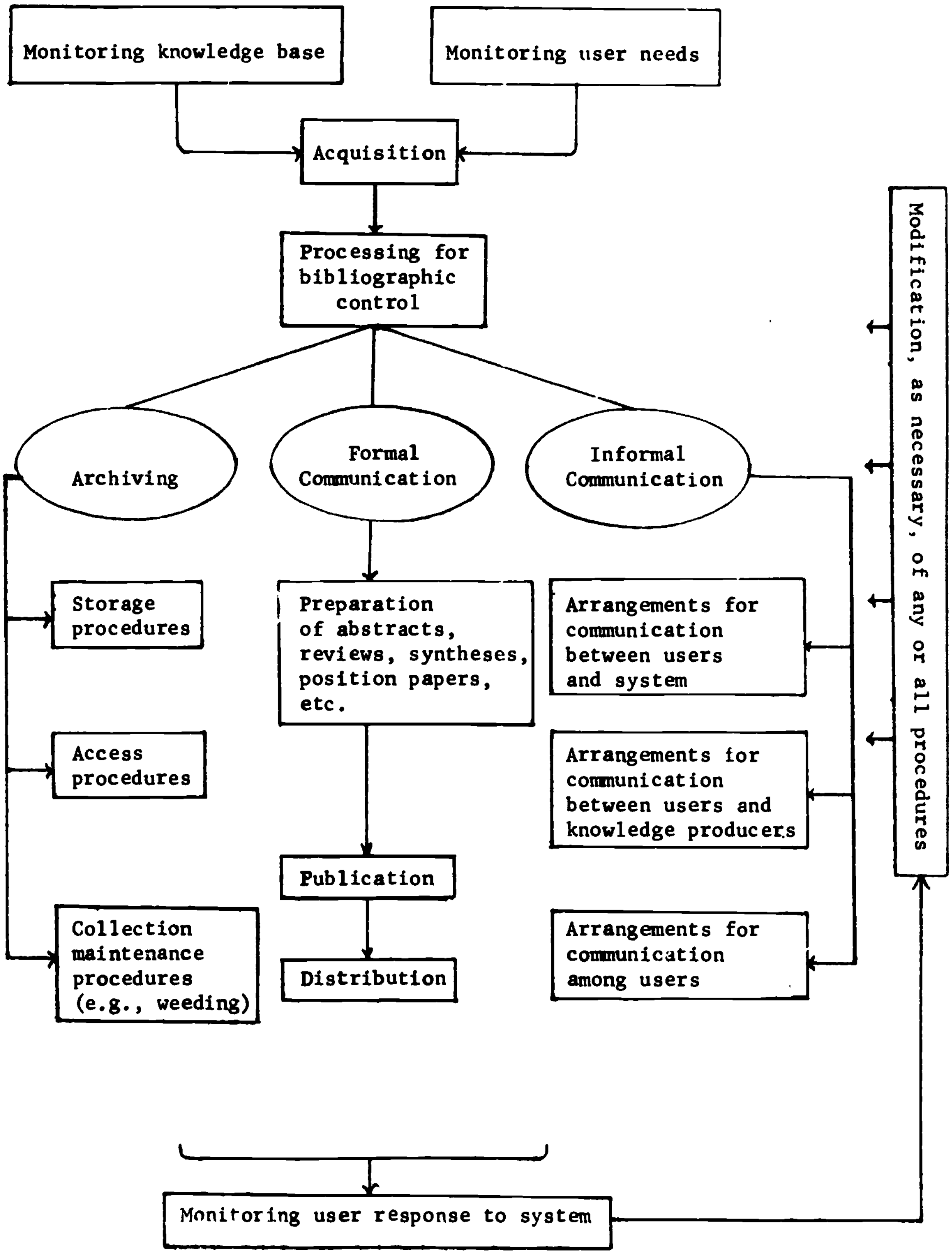
Expressed in the terminology of Figure 2 (page 3-16), early ERIC stressed archiving and subordinated the parallel functions of formal and informal communication. Although clearinghouses were encouraged to produce reviews and state-of-the-art papers, there was no procedure for distributing these products widely. To 99 out of 100 educators, they didn't exist.

A far more successful strategy for formal communication was initiated at the close of the 1960's. A continuing series of reports was published under the heading Putting Research into Educational Practice (PREP). PREP reports were commissioned on topics of highest current interest among educators. Writing and editing were relatively polished according to prevailing standards in educational R&D. PREP reports were directed primarily to state departments of education, with the suggestion that the states republish freely, under their own banners if desired.

Data from field studies showed that PREP reports were reaching much wider audiences than other ERIC products. Certainly far more educators read PREP than conducted ERIC searches.

PREP reports were only the vanguard of a series of user-oriented publications. Booklets on model programs (e.g., reading, compensatory education), an audiovisual "educational products minikit," and catalogs like ALERT (Alternatives for Learning through Educational Research and Technology) were created under ERIC and other auspices to apprise educators of the most promising programatic outcomes of educational R&D. "Repackaging the educational knowledge base" moved from the status of concept to successful practice in just a few years.

Figure 2. Simplified flow-chart of information system functions.



Yet to be solved, however, was the problem of bringing the full resources of the ERIC system to educators who were incapable or unwilling to conduct searches themselves. What could be done, for example, for the teacher who seeks research-based alternatives for teaching science concepts, or dealing with classroom behavior problems? What could be done for the guidance counselor who has been asked to recommend drug education films or career education materials?

Since it is not possible to pre-assemble and publish all kinds of wanted information in PREP-like formats, a system was needed that would establish contact between users and the ERIC knowledge base itself. An effective answer has been found recently in the extension model that is such a familiar part of Department of Agriculture service in this country. "Extension agents" can serve as intermediaries between users and the ERIC knowledge base, translating requests into the controlled language of the ERIC Thesaurus, conducting searches of ERIC resources, obtaining documents that are relevant to requests, conveying these documents to users, and in some cases translating from researchers' language to practitioners' language.

With the addition of an extension system, educational dissemination encompasses the three sets of functions shown in Figure 2. According to the sophistication of the user and the nature of his information needs, it becomes possible to approach ERIC via the traditional access procedures of an archive, via formal communications like PREP, or via informal communication with extension agents.

The important lesson to be gleaned from the ten-year history of federal effort in educational dissemination is not that some systems are ineffective, as early ERIC was, but that systems can evolve toward effective combinations of functions and channels for particular users. Systems that were established in the mid-1960's by professional associations and other organizations to rival ERIC have largely disappeared because of their inability to evolve beyond the archival phase.

The National Institute of Education is deliberating whether to operate an entire dissemination system, including cadres of extension agents, or operate only the archival and publication systems in support of extension agents deployed by state departments of education, school districts, and others. The emerging NIE policy will be of some consequence to states and school districts that cannot afford to field their own extension personnel, but other states and districts will proceed with the full multi-function/multi-channel service because they see the advantages of practicing education in an information-rich context. If the federal government adopts a retrenchment policy, it will be a state or consortium of states that develops and tests the next evolutionary phase of educational dissemination, whether it turns out to be multimedia packages using cartridge/cassette technology, local comprehensive one-stop resource centers, two-way cable video between schools and researchers' laboratories, or one of the many imminent developments we lack the imagination to predict.

SESSION NO. 4

# PRESENT STRUCTURE AND FUTURE PLANS FOR EDUCATIONAL DISSEMINATION SYSTEMS

## I. SUMMARY DESCRIPTION OF MODULE

### A. Objective

To provide trainees with up-to-date knowledge of educational dissemination planning at various levels.

To suggest probable developments at the federal and state levels.

Upon completion of this module, trainees should:

1. Relate the past decade of educational dissemination systems growth to present inflections of that growth.

2. Understand the rationale of the recent federal-state partnership in this area, and be aware of alternative models or arrangements that have been proposed but not supported during this period.

3. Understand both the potential and the limitations of single-state and multi-state systems operating without significant federal assistance.

4. Understand the probable rationale of future federal planning in this area.

### B. Participants

Trainers: Representatives of federal, state dissemination agencies.

Trainees: All

### C. Summary of Module Activities

The federal representative begins the session by sketching the present and future federal educational dissemination activity as it appears to him. One or more state representatives respond to the points he raises and make additional comments based on their experiences and perspectives. General discussion follows.

### D. Duration

One hour

## II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

None

B. Trainee Preparatory Reading

At the discretion of federal, state representatives

C. Aids and Equipment

None

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Immediate Past Developments in Educational Dissemination Systems | Presentation | 10 |
| Step 2 | Present and Emerging Models of Educational Dissemination | Presentation | 5 |
| Step 3 | The Federal Role in Educational Dissemination: Recent History, Alternative Futures | Presentation | 10 |
| Step 4 | Funding Patterns: From Subsidy to Subscription | Presentation | 5 |
| Step 5 | Discussion of Presentation as It Pertains to Local Setting(s) | Group Discussion | 30 |

## IV. SPECIAL CONSIDERATIONS

Except in favored circumstances, the financing of educational dissemination projects will be a touchy issue for years to come. This session raises questions ranging from job security to the value placed upon dissemination work by educators and policymakers.

It is important to staff this session with representatives of all agencies that have financial responsibility or monitoring authority over the project(s) from which trainees are drawn. If the training director has his choice in the matter, it would be well to invite participants who can view current developments (whatever they may be at the time this module is presented) in the perspective of more than a decade of constantly growing support for educational dissemination efforts -- in other words, participants who can conduct an "upbeat" session.

V. CONDUCT OF THE SESSION

The division of topics among two or more participants in this session will depend on the special interests or responsibilities of each participant. Representatives of federal and state agencies may also feel an obligation to discuss topics not listed here. Therefore the schedule of activities is illustrative rather than prescriptive.

Step 1 At this point, the chronology of events in educational dissemination should be continued from Session 3. Topics not covered in Session 3 will include "pioneer" (e.g., RISE) and "pilot" (e.g., Oregon, South Carolina, Utah) dissemination projects, as well as successor projects like those in Kansas, Rhode Island, etc. The first ten minutes of this session could fruitfully be spent on a current survey of active projects around the country.

Step 2 If Step 1 is handled on a "who-where" basis, it is the purpose of Step 2 to identify the common models that underlie projects in different parts of the country. Most projects can be associated with one of three models: (1) centralized information service accepting queries in person, by telephone, and by mail; (2) centralized information service with decentralized full-time or part-time field agents; (3) centralized information service with heavy reliance on bulletins, fact sheets, newsletters, and other small-scale publishing.

p 3 The immediate past, the present, and the immediate future of federal involvement in educational dissemination should be sketched by an NIE representative.

Step 4 Some information services outside of SEA's seem to be capable of moving from a subsidy to a subscription basis. That is, an increasing fraction of their operating costs is derived from user fees (usually institutional, sometimes individual) rather than sponsor subsidies. The potential of this strategy should be explored as an alternative to federal sponsorship.

Step 5 In the discussion time, trainees should be encouraged to talk about their reactions to dissemination policy shifts at the federal and state levels. They should also speculate about support potential of any kind that may be indigenous to the setting(s) in which they work.

SESSION NO. 5

FIELD VISIT TO AN EDUCATIONAL INFORMATION CENTER

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide trainees with an operational framework for the training activities

Upon completion of this module, trainees should be able to:

1. Identify the major steps in the sequence of acquisition and processing activities

2. Identify the major steps in the sequence of reference and retrieval activities

3. Describe the Center's approach to current awareness services

4. Describe the equipment used in an information Center

5. Identify the types of collections housed in or accessed by the Center and used in answering information requests

B. Participants

Trainers: A tour leader

Trainees: All

C. Summary of Module Activities

The tour leader begins the tour with welcoming remarks and an overview of the sequence of activities to be covered by the tour. The tour leader then conducts the trainees through the Center, tracing the acquisition, processing, retrieval, and reference sequence. Trainees are subsequently introduced to special services provided and to the types of equipment used by the Center. At the end of the tour, the trainees have an opportunity to ask questions.

D. Duration

Two hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

1. Sherman, C. Neil, et al., The Educational Information Center: An Introduction. Los Angeles, California: Tinnon-Brown, Inc., 1969.

2. Weisman, Herman M., Information Systems, Services, and Centers New York: John Wiley and Sons, Inc., 1972.

B. Trainee Preparatory Reading

None

C. Aids and Equipment

"Guide to Information Center Activities" in trainee packets

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introductory Remarks and Tour Overview | Presentation | 15 |
| Step 2 | Tour of the Center | Presentation | 90 |
| | a. Acquisitions and processing (30) | | |
| | b. Reference and retrieval (45) | | |
| | c. Other Center activities (15) | | |
| Step 3 | Question and Answer Session | Question and Answer | 15 |

IV. SPECIAL CONSIDERATIONS

To provide trainees with the best sense of context and continuity, the session should be held in an educational information center. The center should be capable of illustrating the major features outlined for the session, and should be situated in reasonable proximity (15-20 minutes) to the main training location. If a center is not available for the tour, it will be necessary to substitute an audiovisual presentation following the same outline as the tour, as in Session 6.

If possible, the tour leader should be associated with the center to be toured. This will facilitate preparation for the tour and the answering of questions raised by the tour. If necessary, an outside trainer can conduct the tour, using remarks prepared by center personnel. In this case, it would be especially useful for a member of the Center staff to be available for the question and answer period.

V. CONDUCT OF THE SESSION

Step 1 Introductory Remarks and Tour Overview (15 minutes)

The person conducting the tour of the Center should prepare introductory remarks following the outline given below. Care should be taken to be sure that the remarks do not exceed the time limit.

I. Introduction

A. Welcome

B. Name of the Center

C. Name of the tour leader; his association with/ position in the Center.

II. Background of the Center - This section should provide a context for the Center and give a general picture of its staff and clientele.

A. Sponsoring Agency of the Center

B. Length of Operation

C. Scope of Service

1. Geographic Area

2. Organizations Served

3. Client Emphasis (if any)

D. Identification of Center Staff

1. Size of Staff

2. Types of Positions

III. Tour Overview - This section should give a brief run-through of the sequence of things to be seen on the tour and point out the major steps that should be noted in the Center's activities. Special note should be taken of unusual systems, techniques, and equipment used by this Center.

A. Acquisitions and Processing

B. Reference and Retrieval

C. Other Center Activities

At the conclusion of the remarks, the trainer should make the following points:

- The tour is intended to provide an overview of a center in the context of an actual center. It is not intended to give an exhaustive rundown on all aspects of Center operations.
- Most of the Center's functions will be covered in greater detail in later sessions.
- The "Guide to Information Center Activities" is an outline of the activities that will be covered in the tour.
- Since time is limited, questions will not be answered during the tour. However, trainees should note on the Guide at the appropriate step questions to be handled in the question and answer session following the tour.

Step 2 Tour of the Center (90 minutes)

The tour leader uses prepared remarks, following the outline given below. This outline corresponds to the trainee "Guide to Information Center Activities" and presents a recommended sequence of steps for a tour of the Information Center.

For most steps, questions that should be addressed are indicated in the outline. In a few cases, it is sufficient to note the step in the sequence of activities without further explanation. An asterisk (*) preceding a step indicates that suggestions for illustrating the step are provided.

It should be noted that time permits remarks averaging only a minute or two for each activity.

a. Sequence of steps for acquisitions and processing functions (30 minutes)

(1) Determination of needs

- How are needs determined for acquisitions beyond the core collection?

- Who may request an addition to the collection?

- What criteria determine the appropriateness of new materials?

(2) Checking existing holdings to avoid accidental duplication

*(3) Consultation with sources and/or resource lists for acquisitions

- What are some of the channels or outlets for acquiring new materials?

- What bibliographic tools or buying guides are used?

Illustration: Tools used in locating and ordering new materials, e.g., Cumulative Book Index, Manheim's Sources in Educational Research, publishers lists

*(4) Initiation of paper work for acquisitions

- What is the mechanism for ordering new materials? Is it done by the Center directly, or through the purchasing office of the sponsoring agency?

- What paper work is involved in ordering new materials?

Illustration: Show form(s) used in ordering materials

(5) Check incoming material against requested material

- How much time is normally allowed for the receipt of materials ordered?

- What is checked (e.g., completeness, damage)?

(6) Action to recover missing items

*(7) Cataloging/indexing new acquisitions

- How are various materials cataloged and/or indexed, i.e., what systems are used for what types of items?

Illustration: Show one or two examples of items that have just been cataloged; have cataloger explain

*(8) Physical processing of new acquisitions

- What physical processing do new materials undergo before being shelved (e.g., property marks, pockets)?

Illustration: Show examples of items that have been processed

*(9) Arrangement of Center collections

- What are the major collections housed in the Center?
- How are they physically arranged?
- What is the rationale for their arrangement?

Illustration: Show the major Center collections. Point out any unusual equipment or file arrangements

*(10) Record keeping and filing

- What is the final disposition of acquisition form(s)?
- How are they filed?

Illustration: Show a completed form and the acquisitions files

*(11) Maintenance of retrieval tools such as card catalogs, book catalogs, and indexes

- Review the main types of cataloging and indexing used by the Center
- What steps are taken to be sure that the catalogs and indexes remain up to date?

Illustration: Show the various catalogs and indexes

*(12) Maintenance of a resource file on innovative programs and local resource people, agencies, and organizations

- Where does the input come from for the resource file?
- How often is the file updated?
- What kinds of people, programs, organizations are on file?
- How is the file arranged?

Illustration: Show a sample entry in the file. Show how the file is organized

b. Sequence of steps for reference and retrieval activities (45 minutes)

[This sequence might best be illustrated by following a representative, preselected information request through all the steps.]

(1) Receipt of information requests

- What are the ways in which requests are received (e.g., walkin, telephone, letter, field agent)?

*(2) Initial processing of information requests

- How are requests defined (i.e., negotiation of the question)?
- Is there any negotiation of requests that are received through an intermediary or by letter?
- How are requests logged in?
- How are requests assigned for action?

Illustration: Show inquiry form started for the sample request.

(3) Various types and levels of requests

- What kinds of requests are most frequently received by the Center?

- What are the simplest requests to fill?

- What are the most difficult or complex requests to fill?

- How are decisions made on the type of search for a specific request?

*(4) Searching of inhouse fugitive and local collections

- How is the search conducted?

Illustration: Show items retrieved for the sample request

(5) Searching the program/people resource files

- What approach is taken in searching the files?

- What criteria are used to determine the appropriateness of the resource?

*(6) Searching of major resources

- What are the major resources used by the Center

- How is a manual search planned and carried out?

- How is computer searching different from manual searching?

- Does the Center use an on-line system or a batch system?

- How, briefly, is a search performed on the Center's system?

Illustration: If the Center uses an cn-line system, show a search being performed on the system. Show results of both manual and computer searches.

*(7) Screening search results

- What is meant by screening?

- Who does the screening?

- What are the kinds of things to look for in screening?
- How extensive is screening?

Illustration: Show a computer printout for the sample request and explain how it was screened

*(8) Packaging of search results

- How are the materials organized for presentation to the client?
- Are any materials adapted (e.g., abstracted, reviewed) for use by the client?
- What are some of the factors that help determine appropriate packaging?

Illustration: Show the package assembled for the sample request

(9) Communication of search results

- How are search results communicated to the client (e.g., delivered in person, mailed with letter or memo)?
- What areas are covered in the communication (e.g., suggestions for use, limitations of package, suggestions for further research)?
- At what level is referral to a resource program or person communicated (e.g., name, address, and phone number only? Arrange for meeting?)?

*(10) Client feedback

- How is client feedback elicited?

Illustration: If the Center uses a form for client feedback, show form

*(11) Record keeping

- Review forms used for search activities

- How are records of searches organized?

  Illustration: Show files of search records and point out organization

(12) Quality control

- Who is responsible for quality control on a day-to-day basis?
- At what stages are quality checks made?
- Does quality control consist of the review of all work, or spot checks?
- Does the Center regularly review and evaluate itself and its techniques (e.g., in staff meetings)?

c. Other Center activities and equipment (15 minutes)

*(1) Special services

- What special services does the Center provide (e.g., SDI, bibliographies, newsletters)?
- Who is responsible for these services?
- Who receives these services

  Illustration: Show or distribute examples of the service products

(2) Information analysis products and special documents

- What are these products and documents?
- What are the areas for which these products and documents are prepared?
- How is the need for an I-A product or special document in a particular field determined?
- Who prepares the products?
- What is involved in the preparation?

*(3) Equipment

- What are the major pieces of microform equipment used by the Center (e.g., fiche reproducers, fiche readers, microfilm cameras)?

- Does the Center have any audiovisual equipment that it uses for presentation or lends to clients (e.g., cassette records, overhead projectors)?

- What computer-related equipment does the Center use?

Illustration: Show equipment

<u>Step 3</u> Question and Answer Session (15 minutes)

The tour leader should ask trainees to consult their "Guide" for questions they have noted concerning activities or features of the Center.

SESSION NO. 6

# CONTRASTING SERVICE OPERATIONS

## I. SUMMARY DESCRIPTION OF MODULE

### A. Objective

To illustrate some of the variations in operational models and broaden the trainees' concepts of possible modes of operation

Upon completion of this module, trainees should be able to:

1. Describe alternative techniques and procedures in acquisitions and reference activities
2. Describe variations in Center services
3. Identify differences in Center collections in content and organization
4. Compare and contrast the political and organizational aspects of the Centers explored in this module and the preceding one

### B. Participants

Trainers: An information center Director or Retrieval Supervisor and a staff trainer

Trainees: All

### C. Summary of Module Activities

The trainer who is coordinating this module first provides a brief introduction to the module and its objectives and then introduces the Center Director, who will give the presentation. After some background remarks, the Director talks for 70 minutes on his Center's activities and features, following the same sequence as the tour in Session No. 5. The session concludes with a question and answer period.

### D. Duration

Two hours

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Sherman, C. Neil, et al., The Educational Information Center: An Introduction. Los Angeles, Calif.: Tinnon-Brown, Inc., 1969.

2. Weisman, Herman M. Information Systems, Services, and Centers. New York: John Wiley and Sons, Inc. 1972.

B. Trainee Preparatory Reading

None

C. Aids and Equipment

The trainer will require equipment for the visual illustrations, if any, of his presentation. For example, he may wish to use an overhead projector to display a sample search request form or resource file entry. He may also want to use slides to show personnel and equipment involved in Center activities.

"Guide to Information Center Activities" in trainee packets.

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to Module and Center Director | Presentation | 5 |
| Step 2 | Background of the Center | Presentation | 15 |
| Step 3 | Center Activities and Features | Presentation | 70 |
| | a. Acquisitions and processing (20) | | |
| | b. Reference and retrieval (30) | | |
| | c. Other Center activities (20) | | |
| Step 4 | Question and Answer Session | Question and Answer | 30 |

IV. SPECIAL CONSIDERATIONS

It is intended that this module be presented by a representative (director or supervisor) of an educational information center that differs (e.g., in staffing, size, services, or procedures) from the Center toured in the preceding session. It is extremely desirable that the presentation be supplemented by visual aids, so that the trainees will, in effect, see the contrasting Center as if on a tour. If it is not possible for a center representative to be present, a prepackaged audiovisual presentation may be substituted. If this is done, the trainer should familiarize himself with the Center and be prepared to supplement the presentation if it fails to cover any of the major points in the outline.

## V. CONDUCT OF THE SESSION

Step 1 Introduction to Module and Center Director (5 minutes)

The trainer responsible for coordinating this session begins as follows:

We have seen some of the operations and procedures of one educational information center. In some ways, most educational information centers are very similar to it -- in the major functions, in the general sequence of activities, in the major resources, and so on. But there are also many individual differences between centers -- for example, in scope, organizational structure, collections, or services. To illustrate the kind of variation that can be found, we're going to look at another center, [Name of Center]. [Name and position of Center representative] will present the Center. The presentation will follow the same sequence as the tour, so you should use your "Guide to Information Center Activities" again to take notes or record questions. There should be a copy of it for this session in your packets. As before, we will handle questions in the last part of the session.

Step 2 Background of the Center (15 minutes)

The trainer turns the session over to the representative of the Center. At this point, if slides are to be used, the lights in the room may be lowered. Enough light should remain so that the trainees can use the "Guide".

The Center representative begins by giving the context of the Center and a general picture of its staff and clientele. The following points should be covered:

- Sponsoring agency of the Center; how the Center fits into the organizational structure of the sponsoring agency.
- Length of operation
- Scope of service

  - Geographic area
  - Organizations served
  - Client emphasis (if any)
- Center staff

  - Size of staff
  - Types of positions

Step 3 Center Activities and Features (10 minutes)

The Center representative discusses his Center using the remarks he has prepared following the outline given below. This outline corresponds, in general, to the trainees' "Guide to Information Center Activities". However, some of the steps that were included in the tour in order to present a complete sequence of activities have been eliminated from the outline, since they are unlikely to differ significantly from center to center.

For most steps, the kinds of questions that should be addressed are indicated in the outline. An asterisk preceding a step indicates that suggestions for illustrating the step are provided.

It should be noted that time permits remarks averaging only a minute or two for each activity.

a. Sequence of steps for acquisitions and processing functions (20 minutes)

   (1) Determination of needs

   - How are needs determined for acquisitions beyond the core collection?
   - Who may request an addition to the collection?
   - What criteria determine the appropriateness of new material?

(2) Consultation with sources and/or resource lists for acquisitions

- What are some of the channels or outlets for acquiring new materials?

- What bibliographic tools or buying guides are used?

*(3) Initiation of paper work for acquisitions

- What is the mechanism for ordering new materials? Is it done by the Center directly, or through the purchasing office of the sponsoring agency?

- What paper work is involved in ordering new material?

Illustration: Show form(s) used in ordering materials

*(4) Cataloging/indexing of new acquisitions

- How are various materials cataloged and/or indexed, i.e., what systems are used for what types of items?

Illustration: Show one or two examples of items and explain how they have been cataloged

*(5) Physical processing of new acquisitions

- What physical processing do new materials undergo before being shelved (e.g., property marks, pockets)?

Illustration: Show examples of items that have been processed

(6) Arrangement of Center collections

- What are the major collections housed in the Center?

- How are they physically arranged?

- What is the rationale for their arrangement?

*(7) Record keeping and filing

- What is the final disposition of the acquisition form(s)?

- How are they filed?

Illustration: Show a completed form

(8) Maintenance of retrieval tools such as card catalogs, book catalogs, and indexes

- Review the main types of cataloging and indexing used by the Center.

- What steps are taken to be sure that the catalogs and indexes remain up to date?

*(9) Maintenance of a resource file on innovative programs and local resource people, agencies, and organizations

- Where does the input come from for the resource file?

- How often is the file updated?

- What kinds of people, programs, and organizations are on file?

- How is the file arranged?

Illustration: Show a sample entry in the file.

b. Sequence of steps for reference and retrieval activities (30 minutes)

(1) Receipt of information requests

- What are the ways in which requests are received (e.g., walkin, telephone, letter, field agent)?

*(2) Initial processing of information requests

- How are requests negotiated?

- How are requests logged in?

- How are requests assigned for action?

- How does the Center monitor the status or a request?

Illustration: Show sample request form

*(3) Searching of inhouse fugitive and local collections

- How is the search conducted?

Illustration: Show examples of items that might answer a particular request

(4) Searching the program/people resource files

- What approach is taken in searching the files?
- What criteria are used to determine the appropriateness of the resource?

(5) Searching major resources

- What are the major resources used by the Center?
- How is a manual search planned and carried out?
- Does the Center use an on-line system or a batch system?
- How, briefly, is a search performed on the Center's system?

(6) Screening search results

- Who does the screening?
- How extensive is the screening?

*(7) Packaging search results

- How are the materials organized for presentation to the client?
- Are any materials adapted (e.g., abstracted, reviewed) for use by the client?
- What are some of the factors that help determine the appropriate packaging?

Illustration: Show a sample package and explain

(8) Communication of search res lts

- How are search results communicated to the client (e.g., delivered in person, mailed with letter or memo)?

- What are the areas covered in the communication (e.g., suggestions for use, limitations of package, suggestions for further research)?

- At what level is referral to a resource program or person communicated (e.g., name, address, and phone number only? arrange for meeting?)

*(9) Client feedback

- How is client feedback elicited?

Illustration: If the Center uses a form or questionnaire for client feedback, show form

(10) Record keeping

- Review forms that are used for search activities

- How are records of searches organized?

- How are they used in future searches?

(11) Quality control

- Who is responsible for quality control on a day-to-day basis?

- At what stages are quality checks made?

- Does quality control consist of the review of all requests or spot checks?

- Does the Center regularly review and evaluate itself and its techniques (e.g., in staff meetings)?

c. Other Center activities and equipment (20 minutes)

*(1) Special services

- What kinds of special services does the Center provide (e.g., SDI, bibliographies, newsletters)?
- Who is responsible for these services?
- Who receives these services?

Illustration: Show or distribute examples of the service products

(2) Information analysis products and special documents

- Does the Center prepare any I-A products or special documents?
- What are the kinds of areas in which these products and documents are prepared?
- How is the need for an I-A product or special document in a particular field determined?
- Who prepares the products?
- What is involved in the preparation?

*(3) Equipment

- What are the major pieces of microfilm equipment used by the Center (e.g., fiche reproducers, fiche readers, microfilm cameras)?
- Does the Center have any audiovisual equipment that it uses for presentations or lends to clients (e.g., cassette recorders, overhead projectors)?
- What computer-related equipment does the Center use?

Illustration: Show picture of equipment

<u>Step 4</u> Question and Answer Session (30 minutes)

The Center representative answers questions that the trainees have noted on their "Guide". If there are not many questions, the staff trainer leads a discussion comparing and contrasting the two centers.

## SESSION NO. 7

## THE RESOURCE AND THE CLIENT SYSTEMS

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide a basic introduction to the resource system and the client system and to discuss some of the factors within each of these systems that affect knowledge dissemination and utilization.

Upon completion of this module, trainees should:

Have a general understanding of the knowledge production system including the kinds of agencies that produce knowledge, some of the factors that affect knowledge production and the effect the reward system has on horizontal and vertical information dissemination.

Understand the composition of the client system, be aware of some of the factors that affect information seeking, and be aware of the general adoption model.

B. Participants

Trainers: 1 instructor

Trainees: All

C Summary of Module Activities

This will be a group discussion based on background material read by the trainees before coming to the training session.

D. Duration

1 hour

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Background paper on resource system (attached).
2. Background paper on client system (attached).
3. Havelock, Ronald G., "Dissemination and Translation Roles," in Knowledge Production and Utilization, Eidell, Terry L., and Kitchel, Joanne, M., eds.

### B. Trainee Preparatory Reading

1. Background paper on resource system (attached).
2. Background paper on client system (attached).

### C. Aids and Equipment

None

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Components of the Resource System | Discussion | 10 |
| Step 2 | Sources of Information | Discussion | 5 |
| Step 3 | Problems in the Resource System | Discussion | 10 |
| Step 4 | Reasons behind the Problems | Discussion | 5 |
| Step 5 | Who are the Clients? | Discussion | 5 |
| Step 6 | Problems in Interaction with the Resource System | Discussion | 15 |
| Step 7 | The Knowledge-Flow Process | Discussion | 10 |

## IV. SPECIAL CONSIDERATIONS

This module is a group discussion based on background papers read by trainees prior to the session. Trainer should be familiar with the papers and should use them to guide the discussion.

## V. CONDUCT OF THE SESSION

Step 1. Components of the Resource System (10 minutes)
- A. print channels
- B. other media channels
- C. Informal channels

Step 2. Sources of Information (5 minutes)
- A. researchers
- B. research and development groups
- C. subject specialists
- D. packagers
- E. educators

Step 3. Problems (10 minutes)
- A. poor dissemination
- B. poor reporting
- C. lack of policy relevance and utility

Step 4. Reasons behind the problems (5 minutes)
- A. the reward system
- B. the publication system

Step 5. Who are the clients? (5 minutes)
- A. state level personnel
- B. district level personnel
- C. school level personnel

Step 6. Problems in Interacting with Resource System (15 minutes)
- A. time
- B. access
- C. reward
- D. need
- E. overload
- f. evaluation

Step 7. The Knowledge-Flow Process (10 minutes)
- A. multi-step flow
- B. opinion leaders
- C. innovators
- D. defenders

The Resource System

The resource system is the knowledge base - that is it is the system that produces the knowledge and packages it for access by the client system. To further understand the diversity of the resource system, consider some of the many 'resources' it includes.

1. Components of the resource system.

Since the most common medium for information storage is print, let us first consider the various forms of storage of print. First, there are the formal print channels (e.g. the traditional channels). The basis for the formal channels is the journal article or paper. The journal articles are cataloged and reduced into secondary formal print sources such as indexes and abstracts. In addition, there are tertiary sources, such as reviews which collect and synthesize groups of papers. Finally there are books, which can either be reviews, and thus based on journal articles, or they can be complete original compositions.

In addition to the formal sources or channels, there are also a number of informal print channels. These channels are similar to the formal channels, but since they are not distributed through a formal mechanism, they often lack archival permanence - that is they are seldom cataloged and they often tend to 'disappear' over time. Sources of this type include informally circulated papers, monographs, and technical reports.

Another source, often overlooked in the resource system, is the human resource. Human resources are consultants or subject specialists - individuals possessing a large amount of information on a particular topic.

Other sources include audiovisual sources, such as tapes, films, videotapes, etc. Unfortunately, the cost and time requirements of producing these sources makes it difficult to use them as efficient channels for providing up-to-date information, so they tend to be used more for illustration and demonstration purposes.

2. Sources of Information

The information fed into the resource system comes from a variety of sources: researchers prepare reports describing their research; subject experts prepare guidance for teaching specific topic areas; research and development groups issue papers describing and explaining how to use their latest products; innovative educators and field researchers perpare case studies describing the acceptance of program innovations; and experienced teachers and subject specialists write 'how to' articles describing how to conduct a new type of program. In short, nearly everyone in education, from researchers on down is a potential source for the resource system.

3. Problems

Unfortunately, there are a number of problems which affect the operation of the resource system.

Poor dissemination - One of the greatest problems is that of poor dissemination. Many researchers tend to use only informal channels to report their findings - finishing only with a technical report or monograph which has only limited distribution. In such cases, the distribution is generally to the researcher's peers - that is a horizontal distribution to people of the same level of expertise. Vertical dissemination - that is disseminating the results to those who can apply it in actual situations (practitioners, rather than researchers), is generally either ignored, or left to others.

Poor reporting - Another common problem is the resource system is poor reporting. This area covers problems such as use of scientific jargon, failure to properly interpret findings, improper or incomprehensible statistics, etc.

Lack of policy relevance and utility - Much of the federally funded research in education today is mission oriented - research applied to solving specific problems. Unfortunately, many of the researchers active today still prefer to do basic research - particularly in universities, where applied research is considered 'less proper' than basic research. Although researchers accept funding to do mission-oriented research, they continue to do basic research. The completed research often has no policy relevance, and only infrequently are the results translated into policy-relevant statements. This problem may become less common as the federal government continues to stress applied research - particularly if researchers are made accountable for their work.

4. Reasons behind the problems

The reasons behind these problems generally have to do with the organization of the research community. In particular, the reward system in science, and the publication system both contribute significantly to the problems discussed above.

The reward system - The researcher receives his rewards from his peers, not necessarily from those who will use the results of his work. This statement has a number of implications. For example, since the researcher receives his rewards from his peers- either in the form of promotions, aclaim, etc., it follows that most of his efforts to disseminate his work will be directed towards his peers - e.g. horizontal dissemination. Since basic research has more prestige than applied research, it also follows that the reward system currently gives more "credit" for it. Consequently, researchers prefer to do basic research. Also, since applied research builds upon already completed basic research, the scientist may feel less "visible" to his peers when conducting applied research, while at the same time worrying because he is not where the action is - out in the forefront of his field doing basic research.

The publication system - The publication system also places constraints on the resource system. Before it is published, a journal article must first be reviewed by a group of editors, and possibly be revised and reviewed again. After acceptance, the article must wait until there is space for it in the journal. All this takes time - called the publication lag. In some fields the publication lag is as long as 18 months.

Because of this lag, the researcher often feels publication is not worth the effort. Since he is really only trying to reach a certain group of peers, it is easier for him to write up his study and distribute it informally. Normally this is done before a paper is presented for publication anyway, so, he reasons, since everybody who counts has already seen my paper, why go through the fuss and bother of publication?

5. Summary

In summary, the points covered concerning the resource system include:

1. The resource system is responsible for the production and packaging of knowledge. This knowledge is transmitted through a variety of channels including print channels, electronic media channels, and through interpersonal channels.

2. The knowledge produced in the resource system comes from people occupying nearly every possible role in education.

3. There are a number of problems affecting the operation of the resource system. Among them are: poor dissemination, poor reporting, and lack or relevance or utility.

4. Two major causes of these problems are the reward system in science and the publication system.

THE CLIENT SYSTEM

The clients you will deal with come from two areas - professional educators, at the state, district and school level; and "civilian" advisors - school board members, PTA groups, etc. The second group is not really a major target area, however we will start by describing various professional groups.

At the state level, according to recent figures, there are some 825 administrative personnel, 5,221 state-wide professional staff members, and 1,583 regional staff members.

In additional 26 states have intermediate administrative units with a total of 2,300 superintendents and other administrative staff, 1,372 consultants and supervisors of instruction, and approximately 850 other professional personnel.

At the district level, things continue to change. The number of school districts is steadily declining ( from 26,983 in 1965 to 18,244 in 1969). Although it is difficult to give accurate district totals, in general, there are approximately 5 schools per district, 103 teachers per district, and 2,308 students per district. (All figures based on running means across multiple reports for two consecutive years).

In 1968 there were some 93,241 schools serving 44,687,332 pupils with 1,893,954 teachers. The mean number of pupils per school was 479 and the mean teachers per school was 20.3. In addition, there were 85,507 principals or assistant principals, 29.005 consultants or supervisors of instruction, 33,838 librarians, 41.716 guidance personnel 4,665 psychological personnel, and 12,548 other non-supervisory instructional personnel.

2. Problems in Interaction with the Resource System

Now that we have a limited picture of the size of the client system, let's zero in on the problem area of major concern - interaction with the resource base. To start, let us turn to some of the problems found in this area.

Time - Time is one of the greatest problems in dealing with the resourse system. The educator's time is closely scheduled during the working day (and often at night) and leaves little room for dealing with information.

Access - A second major problem in dealing with the resource base is access. Even if time were available, the information is not readily at hand, but is usually stored in some central, but usually remote, location. Both access and time tend to interact - to get access requires more time, etc.

Reward - The administrative structure found in most schools and districts does little to encourage interaction with the resource system. The reward system is usually based on seniority, with little encouragement provided for innovation except personal satisfaction.

Need - Because of the various problems discussed above, there generally has to be an awareness of a specific need to encourage interaction with the resource system. Often the combined effects of time, access and reward tend to delay if not completely destroy any awareness of need.

Overload - For those educators who do have the time, the need and access to the resource system, the mass of information available in the system may overwhelm them. The volume is so great that the task of identifying and obtaining relevant information is becoming increasingly difficult.

Evaluation - One last problem deals with the evaluation of materials obtained from the resource system. The problem here is essentially one of establishing the credibility and validity of the material identified, and putting the information in the proper perspective.

All these problems tend to serve either as barriers to keep the client from using the resource system or as deterrents to discourage him from using it. Given all these problems, let's next look at how the knowledge flow process works.

3. The knowledge flow process.

Until the development of mass communication research following World War II, most researchers felt that knowledge flow was a direct process - an individual gained knowledge about a particular process or product personally - either by trial or by reading about it. Now, most researchers agree that social processes are far more important in the transmission of knowledge. This multi-step flow theory suggests that knowledge flows through informal channels. These channels begin with an 'opinion leader' - someone who does interact with the resource system and, in turn, passes the information to others who come to him for for advice. The information then moves from the opinion leader, through those who consult him directly, to the rest of the group. The role of opinion leader may be topic specific-requiring a number of opinion leaders to cover the range of available topics in a particular group.

Another person who is active in the knowledge flow and adoption process is the innovator. He is willing to experiment and try new techniques, practices, etc. He may, in addition, be an opinion leader, however opinion leaders, in general, serve as information sources only and are not willing to innovate for fear that an unsuccessful experiment may affect their credibility as opinion leader.

A third role in the knowledge flow- innovation process is the defender. A defender is one who plays the conservative role in the process- criticizing new ideas and innovations as the are proposed and introduced. It may appear that this role is essentially a negative one, however we should point out that there are 'fads' in education, as elsewhere, and one function the defender serves is to encourage thoughtful consideration of any proposed new practice.

4. Summary

The major points discussed concerning the client system include:

1. The client system is extremely large and very diverse.
2. A number of problems constrain the clients from interacting freely with the resouces system, including: time, access, reward, need, overload, and evaluation.
3. Knowledge is generally transmitted through the client system via interpersonal channels. These channels interface with the resource system through opinion leaders. Other roles you will confront in this informal system are the innovator and the defender.

SESSION NO. 8

THE LINKAGE SYSTEM

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide a basic introduction to the linkage system, introduce a set of models for linking institutions, and discuss various personnel roles.

Upon completion of this module, trainees should:

Understand the role of the linkage system in the dissemination and utilization of knowledge.

Be aware of some of the models that could be used to design linkage systems, and the advantages and disadvantages of each.

Know the various types of personnel roles involved in the linkage system, and in each of the various linkage models.

B. Participants

Trainers: 1 Instructor

Trainees: All

C. Summary of Module Activities

This is a group discussion based on background papers read by the tranees prior to the session.

D. Duration

One hour

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Background paper on linkage system (attached).

2. Havelock, Ronald C., "Dissemination and Translation Roles", in Knowldge Production and Utilization, Eidell, Terry L., and Kitchel, Joanne M., eds.

### B. Trainee Preparatory Reading

1. Background paper on linkage system.

### C. Aids and Equipment

None

## III. SCHEDULE OF ACTIVITIES

| | TOPIC | ACTIVITY | MINUTES |
|---|---|---|---|
| Step 1 | Problems | Discussion | 10 |
| Step 2 | Current Linkage Structures | Discussion | 10 |
| Step 3 | Models of Possible Linkage Structures | Discussion | 20 |
| Step 4 | Roles | Discussion | 5 |
| Step 5 | Group Discussion | Discussion | 15 |

## IV. SPECIAL CONSIDERATIONS

This module is a group discussion based on the background paper which trainees are to have read prior to the session. Trainer should be familiar with the paper and should structure discusson around it.

V. CONDUCT OF THE SESSION

Step 1. Problems (10 minutes)
- A. overload
- B. marginality

Step 2. Current Linkage Structures (10 minutes)
- A. libraries
- B. information centers
- C. information center/field agent combination

Step 3. Models of Possible Linkage Structures (20 minutes)
- A. information center
- B. information center plus liaison personnel
- C. information center plus field agents
- D. information center, needs analysis, print distribution
- E. information center, needs analysis, multi-media distribution

Step 4. Roles (5 minutes)

Step 5. Group Discussion on Linkage System (15 minutes)

## The Linkage System

The linkage system is the whole reason for this training session - to train you to become members of a new type of active linkage system.

As mentioned earlier, the linkage system is used to move information and knowledge from the resource system to the client system. In fields such as education, where the client system (the educators) is so far removed from the respurce system, it is essential that a strong linkage system be developed and maintained, if information is to flow the the resource to the client system. As we are all aware, this has not been and is not now the case.

1. Problems

The linkage system is in the unfortunate position of having to cope with both the problems of the resource and the client systems, as well as problems specific to linkage. The problems associated with the resource and client systems have already been discussed, however we should consider a few linkage-specific problems.

Overload - The vast amount of information available from the resource system creates overload - there is just too much information avaiable to be processed and transmitted.

Marginality - Another problem is the status of the linkage channel. Generally the linkage agency - be it a library, and information center, or, perhaps, and extension agent - is not part of the system it serves. This leads to problems when trying to encourage both acceptance and utilization.

2. Current Linkage Structures

The library - The library is certainly the most common linkage channel in use today. Essentially, the library collects information from the resource system, generally in the form of print, and catalogs and stores it so it is accessible to the client system.

Unfortunately, there are problems with the library as a linkage channel. One, mentioned earlier, is access - the library cannot be located immediately adjacent to every client, so clients must come to it to use it. Also, to utilize the library properly, the client must invest time - first in learning how to use the library, and secondly, in searching for the materials he (or she) wants. In general, it seems fair to say the library has a very passive role as a linkage channel - it requires the client to do most of the work.

The information center - The information center (such as an ERIC Clearinghouse or a state or local educational information center) is really a subject-specific library with a slightly more active linkage posture. Like the library it identifies, collects and maintians information from the resource system, again, generally in print format. Unlike the library, the information center specilizes in information on a specific topic or range of topics.

Also, unlike the library, the information center is oriented more towards serving remote clients. The center receives requests from clients, conducts a search to obtain the requested information, and then sends it to the client.

The information center is a much more active linkage channel than the library - it is more accessible and requires considerably less effort on the part of the client to obtain information.

The field agent - A third linkage channel is the field agent - a person who works within the client system, interacts with clients, and, in general, serves as an 'advance man' for an information center. Because he can deal directly with the clients at their place of work, the field agent can work with them to 'negotiate' their information need, obtain feedback from them after they receive their information, and later check with them to see if they need additional information. The agent-information center combination is by far the most active of the linkage channels, and is the one that appears to be most effective in meeting the various problems of the linkage system.

3. Linkage Models

One of the major tasks in developing this training package was to develop a series of models for different types of linkage organizations. The models, which follow, all assume 1) availability of resources, 2) a range of personnel roles, 3) a non-profit linkage organization, and 4) a subsidized (either federal or state) operation. Variables that differentiate between the models include: targets (either individual clients or groups of clients); occurance of transactions (either episodic or scheduled); delivery of information (either print, other media or human resources); and products (either citations or abstracts, primary information, synthesized or compressed information, or answers to specific questions).

Model 1 - A central reference facility (information center) answers individual requests submitted by mail and via a telephone hotline.

Model 2 - Same as model 1, except, field liaison personnel (not paid linkage personnel) are added.

Model 3 - A central reference facility supporting a field agent system.

Model 4 - A central reference facility 'keeping tabs' on client needs through user needs studies and issuing scheduled reviews or newsletters to specific client groups.

Model 5 - Same as model 4, but use multi-media approach, including cable television, etc.

4. Linkage Roles

Within these models, there are a number of roles - most of which are common to nearly all models. The first four, project director, project manager, print resources specialist and human resources specialist, are common to all five models. The field agent, is used only in model 3, the editor/publications specialist in model 4, and the media specialist in model 5.

The roles include:

Project Director - responsible for overall operation of the system.

Project Manager - responsible for day-to-day operation.

Print Resources Specialist - responsible for building, maintaining and searching the print knowledge base maintained by the center.

Human Resources Specialist - responsible for identifying and maintaining liaison with consultants and subject experts who serve as human resources.

Editor/Publications Specialist - responsible for repackaging materials in print.

Media Specialist - responsible for repackaging materials in forms other than print (e.g. television, films, etc.)

Field Agent - serves as interface between the information center and the individual client.

5. Summary

1. The linkage system must overcome the problems of both the resource and the client system and serve as an interface between them to facilitate the transfer of information.

2. Problems specific to the linkage system include overload and marginality.

3. Current linkage organizations include libraries, information centers and the information center/field agent combination. These organizations are progressively more active, that is, the information center requires less from the client than does the library, and the center/field agent combination requires the least effort on the part the client, hopefully increasing the probability of client acceptance.

4. There are a number of models for the development of a linkage institution. The models differ primarily in type

of target, occurance of transaction, delivery channel and products.

5. There are a number of role positions common to all of the models and some that are model specific.

SESSION NO. 9

## INITIAL CONTACT WITH SCHOOL PERSONNEL--A

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide a basic introduction to the field agent's initial task of establishing himself in the district to which he is assigned

Upon completion of this module, trainees should be able to:

1. Understand the variety of functions to be performed and the types of situations that might be encountered

2. Identify the kinds of interpersonal relationships that might be developed with administrators and educators within their district

3. Explain some of the considerations involved in gaining initial access and acceptance for themselves and their services.

B. Participants

Trainers: A moderator and two panel members

Trainees: Field Agents and Project Managers/Directors

C. Summary of Module Activities

The moderator will begin by outlining the session objectives and describing the role of the field agent as it relates to this session. The two trainers will join the moderator in a discussion of the session topic, "Initial Access and Acceptance."

A question and answer period will be conducted following each of the discussion periods. Session attendees will be given the opportunity of commenting and asking questions of the panel members. The session will be concluded by a summary statement presented by the session moderator.

D. Duration

Three hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

Introduction to the Educational Field Agent.

Sieber, Sam D., et al., The Use of Educational Knowledge: An Evaluation of the Pilot State Dissemination Program. New York: Bureau of Applied Social Research, Columbia University, 1972 pp. 71-77.

B. Trainee Preparatory Reading

Introduction to the Educational Field Agent.

Sieber, Sam D., et al., The Use of Educational Knowledge: An Evaluation of the Pilot State Dissemination Program. New York: Bureau of Applied Social Research, Columbia University, 1972, pp. 71-77.

C. Aids and Equipment

None

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to Session | Presentation | 10 |
| Step 2 | Initial Access and Acceptance | Panel Presentation and Group Discussion | 105 |
| Step 3 | Session Summary | Presentation | 5 |

IV. SPECIAL CONSIDERATIONS

None

V. CONDUCT OF THE SESSION

Step 1 Introduction to Session (10 minutes)

The purpose of this session is to provide information regarding the field agent's initial task of "selling" his services to the school personnel in the district where he is located. This objective will be given proper attention. But first, let me take a few minutes to comment on the role of a field agent, and and some of the different organizational patterns of the school districts in which he will serve.

To the best of my knowledge, no single definitive job description has yet been adopted for the field agent. He has been described as a "linker," that is, a "personal linkage" between individuals who wish information and specific resource agencies, an "educational field agent," a "change agent," a "coordinator," a "translator" of educational objectives, a "mediator," "interpreter," and "innovator," just to mention a few. Seemingly, the field agent is supposed to be "all things to all people." While this generalization may be both impractical and impossible, it appears that it may also contain more than a germ of truth.

I do not wish to confuse you further, but let me add one more descriptor to those I have already mentioned. For the purposes of this session, the field agent is a "salesman"--a salesman who has a product he believes in, and a clientele that he understands and respects. He is loyal to the organizztion of which he is a part, but his primary concern must be for the clients that he serves. He does not function within the organizational structure of the "home office" as does the Retrieval Specialist. Instead, he must learn the organizational and political structure of his district, and identify with the daily as well as long range problems of its educators and administrators. His personal concern should be that he exhibit a professional level of competency that will elicit the confidence and respect of those he serves.

The concept of a field agent who is attached to an educational agency, yet functions in a relatively autonomous manner, is not a traditional part of most school district organizational patterns. Therefore, the degree of support a field agent can expect within the educational agency to which he is assigned may vary. Administrative support may range from nonrecognition of the field agent's role in the agencies overall plan of operation, to the expectation that he can provide the solutions to every agency problem. Administrators may provide little guidance or be overzealous in their attempt to monitor the field agent's every action. Agency staff members may view the field agent as a personnel threat or as someone they can burden with their busy work. In any event, the personal ability of the field agent to overcome these extremes, create a professional image, and establish himself within the organizational channels of the agency to which he is assigned will have an important bearing on his future success with school district educators and administrators as well as with the administrative and staff personnel within his agency.

Numerous approaches to the initial problem of gaining access and acceptance within the school district have been attempted. Briefly stated, it appears that the field agent must "educate the educators" regarding the service he offers. While formal meetings and official letters provide the field agent with a mass method for reaching educators and administrators in his district, small informal group sessions and individual interviews appear to yield better results.

Within the school district, the field agent must continue to "sell" both himself and his service. The value of being considered an "outsider," who can objectively assess and serve the school district's needs, yet who is looked upon as an "insider," who understands and is not critical, must be demonstrated if the field agent concept is to become fully accepted.

Step 2 Panel discussion of Initial Access and Acceptance (105 minutes)

The moderator should read or paraphrase the opening statement. After that has been accomplished, he is to introduce each of the topic areas that the panel members are to discuss. Following each panel discussion period, the trainees should be encouraged to ask questions or make comments.

a. Opening Statement

The reason the field agent has been cast in the role of a salesman for this session is that it is believed that the accomplishment of all the other field agent descriptors, e.g., linker, change agent, innovator, and the like, are dependent upon the field agent's success in first selling himself and his service. Furthermore, studies conducted regarding the opinions expressed by field agents prior to their first job assignment have indicated that the task of publicizing the program, and stimulating requests, was not thought to be a very difficult one. In fact, it has proved to be both challenging and time consuming.

In order that we might communicate a few of the successes and failures that other newly assigned field agents have experienced in their initial attempts to gain access and acceptance in the districts to which they were assigned, we will review several of the case histories reported in the Columbia University report, The Use of Educational Knowledge. These case histories provide a certain degree of insight into the results of a variety of approaches attempted by field agents in the Pilot State Dissemination Program. Let me point out that none of the experiences were really failures. Each experience did provide some help in acquainting the potential clients with the field agent and his services. The thing to remember is that each form of contact has its limitations.

If time permits, there are a few additional questions not specifically commented on in the portion of the Columbia Study that you received in your trainee package that we will also ask our panel members to comment on.

b. Topic Areas

From the Columbia Study, six areas seem to be of importance within the context of this session's objective.

[Write these points on the chalkboard.]

(1) Gaining the Acceptance and Support of your Agency and School District Administrators

Please comment on the importance of the field agent's task of gaining initial acceptance and support from his agency and school district administrators in terms of the future success of his program in the district to which he is assigned.

(2) Large Group Meetings

What are the strengths and weaknesses of this approach? Points you should cover include:

- The understanding of individuals regarding the functions of the program relative to their own needs
- The difficulty of overcoming the formality of a large group meeting; also, the usual time restrictions
- The problems associated with a setting where there is little two-way communication
- The reluctancy of individuals to relate any of their real problems in front of a large group

- An assessment of your realistic expectations in terms of personal exposure, communication, client requests, etc.

- The advantages associated with getting yourself and your service before a large group of people in a relatively short time

- Approaches that might be used to improve the communication and increase the overall value of the large group meeting, e.g., keep the presentation simple and to the point, use audio-visual aids during the meeting, and have descriptive materials available for the attendees to take with them

(3) <u>The Small Group</u>

This approach also has certain advantages and disadvantages. Please include the following items in your discussion:

- The level of success you can expect relative to the stimulation of personal group interest in your service

- The effect of a supportive atmosphere in which the group begins to think of methods they might use to solve a common problem

- The intragroup communication that takes place regarding previous experiences and availability of inhouse resources

- The difficulty of adequately covering a large district if the small group approach is your primary method of making yourself known

- An assessment of your realistic expectations in terms of personal exposure, communication, client requests, etc.

(4) <u>Meetings with Individuals</u>

This approach is at the opposite end of the spectrum in relation to the large group meetings. What do you think of this method of getting known in your district relative to:

- Generation of client requests?
- Interperpersonal communication regarding the value of your service?
- Your ability to provide adequate district coverage?
- Your realistic assessment of the use of this approach during the initial phase of your program?

(5) <u>Development and Distribution of Written Material and Audiovisual Aids</u>

The use of literature and audiovisual aids has obvious advantages. Does it also have disadvantages in respect to a new field agent's attempt to gain initial access and acceptance? Consider the following points:

- Time and cost of development
- The expected response of literature recipients who are not among the small minority that can be classed as "innovators"
- The danger of developing literature or audio-visual aids before adequate knowledge of your district's needs have been assessed
- Your realistic assessment of the results you would expect from this approach in terms of personal exposure, communication, district coverage, client requests, etc.

(6) <u>Prior Familiarity of the Field Agent with Administrators and Educators Within His District</u>

This seems to be helpful in getting a program started. However, this is an either/or situation. Either you are known in the district or you are not. If you fall into the "not" category, you must do all you can to get acquainted with the district and its people as soon as possible. Conversely, if you <u>are</u> known, what should your approach be with:

- Agency administrators
- Superintendents
- Principals
- Teachers

The following optional topics may be discussed by the panel members and session attendees if time permits.

(1) The advantages of a field agent functioning within an agency that provides him strong support

(2) The importance of a field agent being placed in an agency that has a history of good working relations with the local educators

(3) Definition of the field agent role from the point of view of the field agent

(4) Definition of the field agent role as viewed by school district personnel

(5) The problem of allocation of time and effort in terms of field agent and school district priorities

(6) The differences in approach that are required by the field agent located in an urban area versus the larger district composed of small towns and rural areas

(7) Client needs in terms of informational requirements, field agent resources, and time restrictions of each

(8) Problem solving both in terms of crisis situations and long-range programs that require group action

(9) The selection and use of human resources

(10) Field Agent/Retrieval Specialist communication

Step 3 Session Summary (5 minutes)

The session moderator should provide a summary statement based upon the material presented and the exchange of comments made during the group discussion periods.

SESSION NO. 10

ESTABLISHING AND ORGANIZING THE COLLECTION

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To acquaint trainees with some basic materials that might form the core of the Center's collection, with some of the alternatives in building the inhouse collection, and with some procedures that might be used in handling local and fugitive materials.

Upon completion of this module, trainees should be able to:

1. Identify some of the major reference and announcement tools in the field of education and describe their scope and arrangement

2. Outline alternative procedures for acquiring, processing and maintaining a collection of local and fugitive materials

3. Describe several kinds of materials that might be included in fugitive collection

4. Identify some criteria that might be used for including material in the Center's collections

B. Participants

Trainers: An instructor [and an information center staff member]

Trainees: Retrieval specialists

C. Summary of Module Activities

The module begins with a presentation by the instructor on the types of materials an information center might have and the ways in which the information center's collection might be unique. The instructor then introduces some basic tools that might be used by the retrieval specialist in working with the collection and in conducting searches. The trainees examine the tools individually, recording the important features of each. Following this exercise, the instructor presents several considerations involved in the maintenance of a fugitive and local collection. The module concludes with small group exercises in the handling of fugitive documents and a group discussion of exercise results.

D. Duration

Three hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

1. Burke, Arvid J. and Mary A. Documentation in Education. New York: Teachers College Press, Teachers College, Columbia University, 1967. [Skim for background, especially Parts Two and Three.]

2. Taylor, Celianna I. and Joel H. Magisos. Guide for State Vocational Technical Education Information Dissemination Systems. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1971. [Chapter IV and Appendix 4]

3. Sherman, C. Neil, et al. The Educational Information Center: An Introduction. Los Angeles, Calif.: Tinnon-Brown, Inc., 1969. [Chapter III, "Acquiring The Center's Collection"]

4. Woodbury, Marda. A Guide to Educational Resources. Berkeley, Calif.: Far West Laboratory for Educational Research and Development, 1971.

B. Trainee Preparatory Reading

None

C. Aids and Equipment

The following reference tools are recommended as a minimum selection to be assembled for examination by the trainees in this session. (See paragraph IV. SPECIAL CONSIDERATIONS, below) The tools should be arranged in broad categories as in this list.

Education Guides:

Burke, Arvid J. and Mary A. Documentation in Education. New York: Teachers College Press, Teachers College, Columbia University, 1967.

Manheim, Theodore, et al. Sources in Educational Research. Detroit, Mich.: Wayne State University Press, 1969, Vol. I.

Winchell, Constance M. Guide to Reference Books (8th ed.). Chicago, Ill.: American Library Association, 1967.

Woodbury, Marda. A Guide to Educational Resources. Berkeley, Calif.: Far West Laboratory for Educational Research and Development, 1971.

Basic References:

Buros, Oscar K. The Seventh Mental Measurements Yearbook. Highland Park, N.J.: Gryphon Press, 1972.

Good, Carter V. Dictionary of Education (2nd ed.). New York: McGraw-Hill, 1959.

Kawakami, Toyo S., and Lois J. Inskeep. Acronyms in Education and the Behavioral Sciences. Chicago: American Library Association, 1971.

Bibliographies and Indexes (Recent issues):

Current Index to Journals in Education (CIJE). New York: CCM Information Corporation.

Education Index. New York: H.W. Wilson.

Psychological Abstracts. Lancaster, Pa.: American Psychological Association.

Research in Education (RIE). Washington, D.C.: Government Printing Office.

Trainees will need the Bibliography Forms from their packets.

For the exercise on the handling of materials for the inhouse collection, five or six examples of fugitive and local materials will be needed for every two or three trainees. These should be selected to present a number of different handling problems. For example:

- Materials that are of sufficiently general interest that they should be included in the ERIC system
- Materials that are of very limited interest or application
- Materials that are in an area currently receiving much attention
- Materials particularly pertinent to one user group
- Curriculum or learning "packages"

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | The Center Collection--An Introduction | Presentation | 20 |
| Step 2 | Basic Reference Tools | Presentation/ Individual Exercise | 60 |
| Step 3 | Acquiring and Maintaining the Collection | Presentation | 20 |
| Step 4 | Handling Fugitive and Local Materials | Small Group Exercises | 60 |
| Step 5 | Discussion of Exercise Results | Group Discussion | 20 |

## IV. SPECIAL CONSIDERATIONS

The optimal setting for this module is in an educational information center, where the Center's entire collection is available and its organization and contents are visible. A member of the Center's staff, using the Center's collections as illustration, would be valuable in substantiating the session.

If it is not possible to conduct the session in a Center, a sample collection may be assembled for use in the session. A skeleton collection of reference tools is listed in paragraph II.C. above. In addition, an assortment of journals, curriculum guides, professional books, and fugitive materials should be available to illustrate the presentations.

## V. CONDUCT OF THE SESSION

Step 1 The Center Collection--An Introduction (20 minutes)

In this session we are concerned with the collection of an education information center. Perhaps we should say "collections", since many different types of materials combine to make up the Center's resources. In considering the kinds of materials a Center needs for its collection, we might first consider what are some of the ways in which the Center and its collections are used.

Ask trainees to suggest what purposes might be served by the Center's collections. Some uses that might be mentioned are the following:

- Center personnel might look to the Center's collections for help in understanding the subject area of a request or for guidance in planning an approach.
- Center personnel might use the Center's collections to gain access to other sources.
- The collections might be used to supply materials in answer to information requests.

The various purposes that must be served obviously play a major role in determining what kinds of materials the Center will need for its collections. This session will give you an opportunity to become acquainted with some of the materials and the ways in which they serve the purposes we have identified. We will also be concerned with the acquisitions of new materials and the decisions involved.

First, let's consider what are the main types of materials that will serve the Center's purposes. To give the Center personnel the support they need in deciding how to approach research problems and in locating information or materials, there must be a collection of reference tools.

Once we know what a client needs in the way of information, we must be able to call upon the resources of the Center to provide this information. So the Center should have access to one or more collections of substantive materials. In some cases, where the funds are limited, this may involve cooperative agreements with other institutions that have the necessary materials.

If the Center engages in current awareness activities such as newsletters or bibliographies, there must be a collection of materials that can be used by Center personnel to provide up-to-date information on special interest areas. This might include various periodicals as well as topical publications produced by national, state, and local organizations.

The Center may provide the mechanism for storing and disseminating locally generated materials and materials useful to the state that would not otherwise be available. So this material might make up another of the Center's collections.

The total scope and size of the Center's collections will naturally vary to a large extent, depending on the funds that are available not only for the actual purchase of materials but also for the staff and facilities needed to maintain them. The possibilities range from a Center that is strictly a referral service to one that is able to fill virtually all kinds of requests from its resources.

[If the session is being held in a Center, locate the Center on this spectrum.]

Even Centers that are able to provide full documents in response to most requests rarely maintain and circulate materials in book form. It is not practical or even desirable for an information center to assume the functions already covered by an existing institution such as a research library.

Since the primary emphasis of the information center is on providing <u>access</u> to educational information, it may be desirable to have the capability of providing full documents that are not readily available elsewhere, while maintaining only a basic collection of important books in the field of education for reference purposes and referring requests for book materials to a research library.

Step 2 Basic Reference Tools (60 minutes)

Let's turn now to some of the materials we have identified as necessary to the Center's collections. We'll begin by looking at some of the basic tools that the Center's personnel might be using as references.

Reference books fall into two main types--those that contain the factual information sought and those that show how and where to find the information. Within these two main types, references break down into smaller categories such as: dictionaries, encyclopedias, directories, handbooks, guides, indexes, bibliographies, and so on.

Show trainees where the reference tools have been assembled and indicate the categories into which they have been grouped. Ask trainees to find their Bibliography Forms in their packets and explain that they are to be used to record general bibliographic information about the materials they are about to examine. This information may be used in assembling a similar collection for their own centers. Tell trainees that they have about 60 minutes to examine the materials and make notations on them. If the session is being held in a Center, the trainer may wish to shorten the time to 45 minutes and use the remaining time to show trainees the other Center references _in situ_, providing a brief description of some of the more important ones.

Step 3 Acquiring and Maintaining the Collection (20 minutes)

Now that we have seen some of the materials that comprise the basic collection of any Center, let's move on to an area of much greater flexibility among centers--that is, the collections used by the Center to supply materials in answer to information requests.

What kinds of materials might these collections include? As we've already noted, the variety and size of the collections are dependent on the funds, personnel and facilities the Center has to maintain them. However, the main types of collections that might exist in a Center are:

- ERIC--the complete Educational Resources Information Center document collection on microfiche and various ERIC clearinghouse publications.

- Periodicals--this might range from a basic collection of educational journals, magazines and newsletters to a complete collection of the periodicals indexed by CIJE and Education Index.

- Fugitive literature file--this collection might contain a number of different kinds of materials. For example, locally generated curriculum materials, program packages, or unpublished research reports.

- Vertical files--this might also be called a pamphlet file or an information file. The collection might consist of miscellaneous materials such as bibliographies, articles papers, pamphlets, etc., that do not fit easily elsewhere, arranged by broad subject areas.

We will be introduced to ERIC, the national educational information system and will be working with it extensively in later sessions. ERIC will serve as one of the Center's major resources, to be supplemented by the other collections.

The periodicals collection might be used either for reference by the Center personnel or to answer information requests. If the Center does not have the facilities for an extensive collection of periodicals, it has the options of referring the client to a library to locate the materials himself or arranging with a library near the Center for the use of their materials. Uncopyrighted materials can be reproduced and sent to clients. But materials covered by copyright must be handled differently. Either arrangements must be made to lend the materials to the client, or the client should be provided with the citation and referred to a library. Since periodicals are accessible through CIJE and Education Index, they do not require classification or indexing by the Center.

The establishment of a fugitive collection should be done with an emphasis on materials generated within or of special interest to user groups within the state. Some preliminary decisions should be made on the criteria for selecting materials for the collection. For example, a Center may wish to limit itself, at least initially, in the scope and kinds of materials it acquires.

The Center may acquire its fugitive collection in a number of ways. Some materials may be submitted by their developers so that they may receive wider exposure. Others might be included as particular types of documents that the Center wishes to retain (for example, masters theses). Still others might be solicited or ordered by title. Of course, gift materials should be emphasized.

When the material is in hand, it should be checked against the ERIC system to determine whether or not it is in the system. If it is, further processing is unnecessary and the hard copy may be retained or not. (If the space permits, some Centers prefer to retain hard copies for use in the production of additional hard copies.) If the material is not in the ERIC system, it should be decided whether it is of sufficiently general interest to submit to Central ERIC.

Materials may also be received that are not appropriate to the Center's collections, either because they are beyond the predetermined scope or because they are very limited in length or breadth of application. These materials should not be retained.

[Here the instructor may wish to discuss some of the selection criteria used by various Centers.]

In the tour of the Center, we saw some of the steps in the acquisitions process. Let's look at those steps a little more closely now as we consider the kinds of decisions you will be making in establishing your center's procedures.

I have already mentioned that some materials are received without being specifically solicited.

These types of materials should be checked ' sely for their appropriateness to the Center. However, many materials that may be useful additions to the Center will have to be ordered.

[Discuss with trainees some of the procedures for ordering materials that they observed in the tour of the Center.]

Each Center will have to develop its own procedures for ordering, in keeping with the requisitioning process required by the state. However, the basic steps are:

(1) Check for duplication in collection indexes and other files

(2) Complete a purchase order or requisition form

(3) Send order to publisher or source with appropriate letter (directly or through channels)

(4) File copy (or copies) of order slip in order file

Once the materials that were ordered have been received and unsolicited materials have been accepted, they are ready for processing. The main function of the processing is the assignment of a unique identification to each document. This identification allows for retrieval through printed index systems, manual card systems, punched card systems, or computer systems.

When we speak of processing materials, we are speaking of local materials that are not in other systems. Even fairly simple processing is too time-consuming and expensive to duplicate processing already performed elsewhere. Therefore, existing indexing or cataloging should be used whenever it is available. For example, Library of Congress catalog cards should be ordered for items in the book collection.

Local materials may be processed by any one of a number of manual systems. Three types of systems are described briefly in the Guide for State Vocational-Technical Education Information Dissemination Systems by Taylor and Magisos. [Refer to the suggested readings.] Catalog card, snapform, and keyword card are the three systems described.

[Describe the system used by the Center in which the session is held. If the session is not held in a Center, describe the system used by the Oklahoma Center as documented in Taylor and Magisos, Appendix 4.]

The physical processing of materials can also take many forms. The possibilities range from simply adding the identification number and property marks to the document to reproducing it in hard copy or microfiche.

<u>Step 4</u> Handling Fugitive and Local Materials (60 minutes)

Considerable judgment is required in deciding on the proper disposition of materials that come into the Center. The purpose of this exercise is to acquaint you with some examples of fugitive and local materials and give you some practice in deciding how they should be handled.

Divide the trainees into teams of two or three. Distribute five or six sample fugitive materials to each team.

Ask trainees to examine the materials and, given the assumption that none of the materials is currently included in the Center's collections, decide how each of them should be handled. Review some of the possibilities and write on the chalkboard:

- Submit to Central ERIC
- Retain in the fugitive file
- Retain in the vertical file
- Do not retain

Ask trainees to record their decision and tell them that they have about 60 minutes for this exercise.

<u>Step 5</u> Discussion of Exercise Results (20 minutes)

Reconvene trainees for a group discussion of the exercise. Ask each team to explain any difficulties they had in deciding how to handle material and discuss these difficulties. In addition, the following questions may be used to stimulate discussion:

(1) What criteria did you use to decide whether or not document should be retained?

(2) What criteria did you use to decide whether or not a document should be sent to Central ERIC?

(3) How would you suggest disseminating various fugitive materials, in addition to use in answering information requests?

SESSION NO. 11

## INITIAL CONTACTS WITH SCHOOL PERSONNEL--B

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To emphasize the importance of the field agent's task of explaining his role and related project activities to the various administrators and educators with whom he works and serves. Also, to provide the trainees with the opportunity of participating in one or more role-playing exercises designed to demonstrate the similarities and differences in client attitude they may encounter in their initial contacts with different users/user groups.

Upon completion of this module, trainees should be able to:

1. Prepare for presenting their role and services in making initial contacts with different user groups

2. Explain the need for sensitivity to the differences among users--and user groups--that will, in turn, affect the approach they use

3. Recognize the basic similarities that exist in interactions with individuals in all types of positions

B. Participants

Trainers: A session moderator and one or more of the panel members who participated in Session No. 9

Trainees: Field agent

C. Summary of Module Activities

Following a brief introduction by the session moderator regarding the purpose of the module, trainees will participate in a series of five role-playing exercises. The five role-playing exercises to be demonstrated and discussed during this session will simulate interviews between field agent and:

- Agency administrator
- Agency staff member
- School district superintendent
- School district principal
- School teacher

The purpose of the role-playing exercises is to develop a point of departure for the discussion periods that follow each of the exercises. The enactment of these situations will provide all attendees with some insight regarding the effectiveness of different approaches and the kinds of statements and responses that might result within a given situational context. For each exercise, a trainer will:

1. Introduce the trainees who are to participate in the role-playing exercise, and get them started by either reading or paraphrasing the "set the stage" information

2. Observe the trainees and make comments if necessary to re-direct the discussion or keep it moving

3. Be prepared to critique and/or discuss the exercises in terms of the major points made by each participant

After all five exercises have been completed, the session moderator will summarize the overall results of the role-playing exercises and discussion periods.

D. Duration

Three hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

None

B. Trainee Preparatory Reading

The "set the stage" scripts for each of the five role-playing exercises

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to Session | Presentation | 5 |
| Step 2 | "Set the Stage for Field Agent/Agency Administrator Role-Playing Exercise | Presentation | 3 |
| Step 3 | Conduct of the Field Agent/ Agency Administrator Role-Playing Exercise | Role-Playing | 5 |

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 4 | Discussion of Exercise Observations | Group Discussion | 25 |
| Step 5 | Set the Stage for Field Agent/ Staff Member Role-Playing Exericse | Presentation | 3 |
| Step 6 | Conduct of the Field Agent/ Staff Member Role-Playing Exercise | Role-Playing | 5 |
| Step 7 | Discussion of Exercise Observations | Group Discussion | 25 |
| Step 8 | Set the Stage for Field Agent/ School District Superintendent Role-Playing Exercise | Presentation | 3 |
| Step 9 | Field Agent/School District Superintendent Role-Playing Exercise | Role-Playing | 5 |
| Step 10 | Discussion of Exercise Observations | Group Discussion | 25 |
| Step 11 | Set the Stage for Field Agent/ School District Principal Role-Playing Exercise | Presentation | 3 |
| Step 12 | Field Agent/School District Principal Role-Playing Exercise | Role-Playing | 5 |
| Step 13 | Discussion of Exercise Observations | Group Discussion | 25 |
| Step 14 | Set the Stage for Field Agent/ School Teacher Role-Playing Exercise | Presentation | 3 |
| Step 15 | Field Agent/School Teacher Role-Playing Exercise | Role-Playing | 5 |
| Step 16 | Discussion of Exercise Observations | Group Discussion | 25 |
| Step 17 | Session Summary | Presentation | 10 |

IV. SPECIAL CONSIDERATIONS

The role-playing portion of this session need not be restricted to trainees. The session moderator may use any combination of trainers/trainees he believes will best meet the objectives of this session. If more than one trainer is available, the session moderator may elect to have two trainers conduct the first role-playing exercise. Another option would be to use the trainee in the role of the field agent and the trainer as the agency staff member, school, district principal, etc. However, no matter what direction the role-playing takes, you should help the trainees see what the action would do for or to them and their program. Be ready to provide guidance so that they can see the necessity of being confident but not arrogant, willing to listen to leadership but keeping some autonomy of operation so that individual needs can be met.

V. CONDUCT OF THE SESSION

Step 1 Introduction to Session (5 minutes)

The object of this session is to demonstrate the concepts discussed by the panel members during Session No. 9, "Initial Contacts with School Personnel--A," that relate to the field agent's task of explaining his role and project activities to the various administrators and educators with whom he works and serves.

Session No. 9 emphasized the importance of the field agent's task of selling himself and his service by creating an image of professional competency--the outsider with valuable resources, but the insider in terms of understanding the people and problems within both his intermediate agency and school district.

The five role-playing exercises to be demonstrated and discussed during this session will simulate interviews between field agent and:

- Agency administrator,
- Agency staff member
- School district superintendent
- School district principal
- School teacher

Step 2 Set the Stage for Field Agent/Agency Administrator Role-Playing Exercise (3 minutes)

This exercise places the new field agent in a position that could develop into a direct role-conflict situation. The field agent should attempt to avoid any direct confrontation with his new supervisor, yet he must project himself as a competent professional. This will require the field agent to walk a fine line between appearing too inflexible or over-confident and too passive or indecisive. One approach the field agent might use would be to express his gratitude for the personal interest the agency administrator was taking in the program. This then could be followed with some specific evidence of the field agent's activity during his first three weeks. An example of this might be a draft of a six-month plan that indicates a general awareness of the organizational structure of the administrator's agency as well as the local school districts. This plan could include (1) several approaches to the field agent's task of making initial contacts with the local educator and (2) suggestions for various methods he might employ to ensure that his time was well scheduled, and that an adequate set of records would be maintained to assess the effectiveness and efficiency of his operation. By doing his homework and anticipating the agency administrator's suggestions, he has demonstrated his initiative and professional approach. He also has avoided being caught in a situation where he would be forced to operate without the very thing he is purporting to provide through his service i.e., information.

The field agent reports to his agency during the absence of its chief administrator, who is on vacation. The assistant to the chief administrator advises the field agent to set up his office and then go ahead and get acquainted with district personnel. Three weeks later, the agency chief administrator returns from vacation and immediately requests a meeting with the field agent. The stated purpose of the meeting is to discuss the results of the field agent's initial contacts with district school personnel. However, the chief administrator quickly moves to the subject of setting up guidelines for the field agent's future mode of operation within the agency. The guidelines include items such as who the field agent should not contact, written reports regarding his discussion with clients, and some rather firm suggestions as to how he should go about making his initial presence known within the district. The agency chief administrator begins the conversation by greeting the field agent as he enters his office.

Step 3 Conduct of the Field Agent/Agency Administrator Role-Playing Exercise (5 minutes)

Step 4 Discussion of Exercise Observations (25 minutes)

The trainer should emphasize the portion of the role-playing exercise related to the chief administrator's attempt to establish agency guidelines for the field agent and discuss the reaction of the field agent to the chief administrator's "suggestions."

Did the field agent:

- Avoid direct role conflict with the agency administrator without appearing too passive and indecisive?

- Indicate he had anticipated any of the agency administrator's "suggestions" and prepared himself in terms of logical alternatives or documented plans/schedules regarding his approach to gaining access and acceptance within the district?

- Create a feeling of confidence in his professional competency by exhibiting a reasonable awareness of the organizational and political structure of the agency and school district?

<u>Step 5</u> Set the Stage for Field Agent/Agency Staff Member Role-Playing Exercise (3 minutes)

This exercise is intended to stress the new field agent who might encounter an individual within his agency that could make it difficult for him to function effectively in his new position. The staff member is obviously concerned about his future as a consultant to the school districts served by the agency. He also realizes the new field agent is probably better qualified and has more information resources than he does. His intentions are to make it very clear that he considers the new field agent to be his assistant or "helper." The field agent realizes that the staff members's concept of their working relationship is completely unfounded and in direct conflict with the agency administrator's plan.

The field agent is asked to share an office with an agency staff member who has been serving as a consultant to district school personnel in addition to his regular agency duties. While the staff member complains about the excessive time that the consultant role duties have taken away from his regular job, he also is somewhat hesitant about someone else taking over the portion of his job that has afforded him a certain degree of status and prestige. The staff member begins the conversation by telling the field agent that he is very pleased to have someone in the agency who can help him with his consulting duties.

Step 6 Conduct of the Field Agent/Agency Staff Member Role-Playing Exercise (5 minutes)

Step 7 Discussion of Exercise Observations (25 minutes)

The trainer should emphasize the portion of the demonstration related to the staff member's fear that the field agent will take over his consulting role within the school district. He should also generalize on other areas of interpersonal relationship with agency staff members that might occur and discuss ways of avoiding or assuaging them.

Did the field agent:

- Emphasize the importance of the consulting service the staff member was providing?
- Appear reasonably understanding of the staff member complaints by offering his support in a non-threatening way?
- Become defensive regarding his "professional status" and strike back when the staff member cast him in a supporting role?

Step 8 Set the Stage for Field Agent/School District Superintendent Role-Playing Exercise (3 minutes)

This exercise portrays a situation in which the agency to which the field agent has been assigned does not have a good working relationship with one of its district superintendents. The field agent is faced with the task of selling himself and his services without becoming embroiled in a political controversy that has been going on for several years. At this point in time, the field agent does not really know whether his agency is at fault or if this particular superintendent is just difficult to deal with. A third possibility, of course, might be that the entire situation is just a matter of poor communication. Whatever the cause, the field agent must convince the superintendent that he has a service that is worth considering, and that he as an individual is sincerely interested in being of assistance.

The school district superintendent has devoted considerable time and effort in establishing himself as a buffer between what he considers to be the "red tape operation" of the field agent's agency and his school district. The field agent is faced with the problem of selling himself and his services to the superintendent without getting involved in the political struggle between his agency and the superintendent. The superintendent speaks first.

Step 9 Conduct the Field Agent/School District Superintendent Role-Playing Exercise (5 minutes)

Step 10 Discussion of Exercise Observations (25 minutes)

The trainer should make special note of the field agent's success in allaying the fears of the superintendent by defining his role as a field agent, and offering to demonstrate his service.

Did the field agent:

- Listen to the criticisms of the superintendent before he attempted to present himself and his service in terms of the superintendent's goals for his district?
- Attempt, in a subtle way, to draw out the superintendent so that he would reveal one or more of his high priority goals?
- Succeed in establishing the nature of his dual role, i.e., his need to maintain the good will and support of both his agency and the superintendent if he is to perform effectively within the school district?
- Leave the superintendent with the belief that "at last I've found someone in that agency that understands my problems and will work with me to attain my goals"?

<u>Step 11</u> Set the Stage for Field Agent/School District Principal Role-Playing Exercise (3 minutes)

The field agent in this exercise has gained the half-hearted support of the high school principal. Even though the school district has sanctioned the field agent's activity, the principal still considers him to be an outsider and is considering the possibility of restricting the field agent's freedom of movement within his school. The field agent needs to demonstrate both his service and professional integrity to the principal. The types of restriction the principal might impose include:

- Advising him when he is in the building
- Reporting on the information requests made by each of the teachers
- Providing his secretary with a monthly schedule of all teacher interviews
- A general suggestion that he not spend too much time in the building, talking informally with teachers. "If they have a need for your service, they'll let you know."

The field agent is meeting with a high school principal who is not sure of the field agent's role in the school district. The principal, because of his lack of information regarding the role of the field agent and the potential value of the field agent's service, is thinking about setting up some rather complicated and time-consuming restrictions related to the field agent's freedom of access within his school. The field agent is attempting to inform the principal regarding his role and is hopeful the restrictions the principal has been alluding to will not be formally imposed. The field agent speaks first.

<u>Step 12</u> Conduct of the Field Agent/School District Principal Role-Playing Exercise (5 minutes)

<u>Step 13</u> Discussion of Exercise Observations (25 minutes)

The trainer should comment on the technique used by the field agent to persuade the principal not to impose any unwarranted restrictions on the field agent's access within the school. Session attendees should discuss the trainer's observations.

Did the field agent:

- Explain his role and the potential value of his service?
- Reject the restrictions the principal was alluding to, or did he attempt to work around them with the intent of gaining the confidence of the principal by demonstrating his value over a period of time?
- Succeed in presenting himself as a professional who was sincerely interested in being of service to the principal and his teaching staff?

<u>Step 14</u> Set the Stage for Field Agent/School Teacher Role-Playing Exercise (3 minutes)

This exercise is intended to point out a potential conflict situation between two individuals within a local school. The field agent has become a part of this conflict only because he has provided resources to one of parties involved.

The field agent is meeting with a junior high school student counselor who is upset because a teacher in his school, who never refers any of his students to the counselor, has been provided a rather extensive package on the "counseling of junior high age students." The field agent, sensing the personal threat the counselor feels regarding the teacher's interest in student counseling, speaks first.

Step 15 Conduct of the Field Agent/School Teacher Role-Playing Exercise (5 minutes)

Step 16 Discussion of Role-Playing Exercise (25 [illegible] utes)

The trainer should discuss the app[illegible] used by the field agent to allay the fears of the student counselor. Session attendees should comment.

Did the field agent:

- Listen to the complaints of the counselor?
- Attempt to smooth over the incident without minimizing the seriousness of the situation from the viewpoint of the counselor?
- Comment on the good reports he had received from other teachers regarding the effectiveness of the counselor's program?
- Suggest that he meet with the teacher and the counselor to review the contents af the teacher's resource package and perhaps reestablish some form of communication between them?

Step 17 Session Summary

The session moderator should summarize the overall results of the role-playing exercises and discussion periods. In addition, he should provide the trainees with a few basic thoughts that will enable them to understand the similarities that exist in interacting with people at different levels of authority, even though there may be a difference in approach or situational context. For example:

- In each of the role-playing exercises, the client exhibited an aversion to change (The field agent should not project himself as a "change agent"; however, he must always keep change in mind. The change may be just a willingness to consider new information before making a decision.
- In each case the field agent was seen as a threat to the status quo.
- None of the administrators or educators had any real understanding of the field agent's professional role or personal intentions.

- In all of these situations, lack of knowldege created fear.

SESSION NO. 12

## NON-ERIC SEARCH STRATEGY AND RETRIEVAL

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To introduce trainees to the use of the Center's resources in answering information requests and the management of records for in-process and completed searches.

Upon completion of this module, trainees should be able to:

1. Describe some of the considerations in selecting resources to answer an information request and outline an approach to filling the request

2. Plan a search of non-ERIC resources

3. Develop a form for recording search activities and maintaining search records

4. Explain the role of previous searches in the development of a search strategy

B. Participants

Trainers: An instructor [and an information center retrieval specialist]

Trainees: Retrieval specialists

C. Summary of Module Activities

Following a brief introduction to the module, the instructor presents some of the decisions and actions involved in planning a search. The trainees then practice developing search strategies involving one or more non-ERIC resources and share their decisions in a group discussion of the exercise. Next, the trainees participate in an exercise using indexes and other tools to retrieve non-ERIC materials. Finally, the trainees examine some sample search forms and discuss their use.

D. Duration

Three hours

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Far West Laboratory for Educational Research and Development. The Educational Information Consultant (EIC): Skills in Disseminating Educational Information. Berkeley, Calif.: Far West Laboratory for Educational Research and Development, 1972. [Retrieval Module, Elements 3 and 4 of Trainer's Manual and "Explanation of the Search Procedure Form".]

2. Sherman, C. Neil et al. The Educational Information Center: An Introduction. Los Angeles, Calif.: Tinnon-Brown, Inc., 1969. [Chapter V "The Center's Services"]

3. Sieber, Sam D. et al. The Use of Educational Knowledge. Evaluation of the Pilot State Dissemination Program: Final Report. New York: Bureau of Applied Research, Columbia University, 1972. [Part III "The Information Retrieval Process"]

4. Weisman, Herman M. Information Systems, Services, and Centers. New York: John Wiley & Sons, Inc., 1972. [Chapter 5 "Documentation Practices--Classification and Indexing for Storage and Retrieval" and Chapter 6 "Documentation Practices--Information Services"]

### B. Trainee Preparatory Reading

1. Far West Laboratory for Educational Research and Development. The Educational Information Consultant (EIC): Skills in Disseminating Educational Information. Berkeley, Calif.: Far West Laboratory for Educational Research and Development, 1972. ["The Search Strategy"]

### C. Aids and Equipment

1. Information Center reference collection (or sample collection listed in Module 10, Section II.C.)

2. Resource "Shopping Lists"

3. Request Forms

4. Search Records

5. Problems in Search Strategy

6. Exercises in Non-ERIC Retrieval

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Using the Center's Resources to Answer Requests | Presentation | 20 |
| Step 2 | Developing Search Strategies | Small Group Exercises | 60 |
| Step 3 | Group Discussion of Exercises | Discussion | 20 |
| Step 4 | Retrieving non-ERIC Materials | Small Group Exercises | 60 |
| Step 5 | Search Forms and Records | Discussion | 20 |

IV. SPECIAL CONSIDERATIONS

As with Session No. 10, this session should be held in an information center. If no center is available for the session, the sample collection listed in Session No. 10, Section II.C. may be used.

If the session is held in an information center, it is desirable that a retrieval specialist from the Center's staff be available to assist in the use of the Center's reference collection.

V. CONDUCT OF THE SESSION

Step 1 Using the Center's Resources to Answer Requests (15 minutes)

We have considered what the components of an educational information center might be and the purposes the Center's collection might serve. In this session we'll be looking at how the collections might be used in filling information requests and how the search request might be approached.

Let us first think about what we mean when we speak of an information request. Clients will be calling upon the Center for help in any number of different pursuits. The type of request is one of the most important factors in deciding on the appropriate approach in fulfilling it.

Harold Borko (quoted in Herman Weisman's Information Systems, Services, and Centers) identifies five types of requests: [Write these points on a chalkboard.]

(1) Request for a specific document.

(2) Request for information by subject. Generally, the user wants relevant documents, but not necessarily all relevant documents, and he wants them in a reasonable period of time.

(3) Requests for exhaustive search. The user needs all of the literature published on that particular subject.

(4) Browsing. The user wants to "wander" through the literature to find whatever stimulation or interest the documents may hold for him.

(5) Current awareness. Users need to keep abreast of the developments in their field(s) of interest.

Weisman adds to these a sixth:

(6) Request for an answer to a specific question. The answer might be a single data point or a substantive and substantial chunk of information.

Included in the request may be some other clues that help determine how to approach the problem. For example, the client who asks for information on "how-to-do" something is indicating material with a particular kind of approach.

Another way of looking at types of requests is in terms of the type and level of effort that is implied in the retrieval process. Weisman categorizes them in ascending order of difficulty:

[Write these points on a chalkboard.]

(1) Requests for available "off-the-shelf" data, information or documents.

(2) Questions that can be answered "off the top of the head" by the assigned specialist.

(3) Requests for readily available data and information that require simple duplication.

(4) Requests for data or bibliographic references available via routine manual or computer processing.

(5) Requests for data, information, or specialized retrospective bibliographical references requiring a moderate degree of definition and/or processing.

(6) Requests requiring correlation of information from various documents in the file to develop an appropriate and valid response.

(7) Requests for counseling and guidance on specific problems within the mission of the system. Specialists should not be expected to solve a user's problem but to provide reference sources, documents, or information that might help the user solve his own problem.

(8) Complex requests requiring a great degree of definition and/or complex or special processing. Definition in some instances may require days or weeks of effort on the part of the specialist and many interchanges with the requester. Information and data from the system's files may need to be correlated with data furnished by the requester or from other sources.

With the exception of requests for specific documents or answers to specific questions, most requests require a combination of methods and tools to be answered fully.

In your reading of The Search Strategy, you were introduced to the "Bibliographic Chain" (in the Information Search Procedure Chart) as a graphic representation of the progression of information from its conception to its final disposition or replacement. This "Bibliographic Chain" is a useful tool for plotting methods and tools we may need to employ, since it summarizes the alternatives that should be considered.

Your primary decision at this point is what type of resource will probably supply the bulk of information needed to fill a request. In some cases, the request will require a combination of two or more sources in roughly equal amounts. In any case, you need to consider your primary approach.

In deciding which resources to use in your approach, you should consider what functions each resource serves, as suggested by the EIC materials cited in your bibliography. This means considering which resources:

[Write these points on chalkboard.]

- Supply relevant background readings
- Index periodicals
- Help locate current bibliographies
- Lead to reviews of recent books
- Help locate individuals, institutions, and/or associations working in your field of interest
- Help in selecting appropriate media material
- Supply relevant criteria for evaluating alternative solutions

A good way to be sure you don't neglect any of the resources available to you is to use a shopping list of all the resources in the Center or accessible to it through cooperative agreements. Two examples of such shopping lists are included in your packets. [Ask trainees to find these displays.] You will notice that the groupings in the second form closely follow the scurces shown in the Bibliographic Chain.

As your experience increases and you become more familiar with your resources, you will probably find that you need to refer to your shopping list less and less often in planning your approach. However, with regular updating to reflect changes in available resources, it will remain a valuable checklist.

Step 2 Developing Search Strategies (45 minutes)

Divide trainees into teams of two or three and distribute the Problems in Search Strategy to each team. Instruct the teams to read through each problem carefully, discuss the possible approaches, using the two "shopping lists" as references, and record their approaches in the space provided. Explain that the purpose of the exercises is to provide some practice in choosing an approach rather than a specific source. Therefore, trainees should not be concerned if they are unfamiliar with some of the items on the shopping lists.

Step 3 Group Discussion of Exercises (15 minutes)

Reconvene the trainees to discuss the decisions they made in determining the appropriate search approaches for each of the exercises.

Step 4 Retrieving Non-ERIC Materials (30 minutes)

Now that we've determined the kinds of resources that are likely to yield the information we need, the next step is to consult these resources to see if they do, in fact, fill the request. Consulting these resources will also tell us whether or not they should be supplemented with additional resources.

The next exercises are designed to give you some practice in using reference or location tools in locating materials. We will not be working with RIE or CIJE in these exercises, because they will be covered separately in later sessions.

Divide trainees into new teams of two or three and distribute Exercises in Non-ERIC Retrieval to each team. Indicate the location of the reference tools.

Step 5 Search Forms and Records (15 minutes)

We have already worked a little with the resource checklist or "shopping list" as a tool in planning the search approach. Before we conclude this session, we should consider two other kinds of forms that are associated with the Center's retrieval function. They are the search request form and the forms used for search records.

With the search request form, we have a checklist of basic information needed to process an individual search. In addition, the form serves to provide a history of the request, including background information on the client.

The search records summarize search activities and can be used to show trends in user types, subject areas of requests, and so forth. These search records are also necessary to the reporting of search activities. The data derived from search records will provide input to planning Center's priorities.

Let's start with the search request forms. Included in your packets are examples of request forms used by various Centers.

Ask trainees to find these displays in their packets. Instruct trainees to examine the sample forms for two of three minutes, then lead a discussion of the main types of information covered by the various forms. The following points may be considered in the discussion:

- What kinds of information seem necessary for the Center's records?
- What kinds of information would be helpful for planning and conducting a search? How?
- How might these forms prove useful in future searches?
- What are some of the ways in which the search request forms might be organized?

Now let's look at some of the forms used to maintain records of search activities. Included in your packets are examples of the types of forms used by Centers for their record keeping.

Ask trainees to find these displays in their packets. Allow them two or three minutes to examine the forms and then lead a discussion of them covering the following points:

- What are some of the kinds of information that it may be useful to record?
- What are some of the ways in which search records might be used (e.g., reporting, planning purchases, detecting areas of high or low usage)?
- What are some of the dimensions that are needed for reporting purposes?

Briefly summarize the major areas covered in the session and point ahead to the modules on ERIC retrieval and packaging of materials.

SESSION NO. 13

## ESTABLISHING AND MAINTAINING A FIELD OFFICE

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide the trainee with practical information that will assist him in his task of establishing a field office within the district to which he is assigned.

Upon completion of this session, trainees should have a basic understanding of the more important aspects of the following five tasks that pertain to 'he setting up of a field office:

1. Allocation of office space
2. Obtaining and using secretarial support
3. Scheduling interviews
4. Setting up files
5. Identifying materials for a local collection

B. Participants

Trainers: A moderator and two experienced field agents

Trainees: Field agents

C. Summary of Module Activities

Following a brief explanation by the moderator regarding the purpose of this module, the moderator and the two field agents will conduct a group discussion of each of the five topics that were selected for this session. The session will conclude with a summary review by the moderator.

D. Duration

One hour

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

Summary Outline - Session No. 13, "Establishing and Maintaining a Field Office"

B. Trainee Preparatory Reading

Summary Outline - Session No. 13, "Establishing and Maintaining a Field Office"

C. Aids and Equipment

None

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Session Introduction | Presentation | 2 |
| Step 2 | Allocation of Office Space | Group Discussion | 10 |
| Step 3 | Obtaining and Using Secretarial Support | Group Discussion | 15 |
| Step 4 | Scheduling Interviews | Group Discussion | 10 |
| Step 5 | Setting up Files | Group Discussion | 10 |
| Step 6 | Identifying Materials for a Local Collection | Group Discussion | 10 |
| Step 7 | Session Summary | Presentation | 3 |

IV. SPECIAL CONSIDERATIONS

This session should not be scheduled until the trainees have had time to read the Summary Outline that is included in their trainee package. The session format is primarily an open discussion of the five areas selected as being important to the new field agent who is faced with the task of setting up his field office operation. Formal presentations should be avoided. The session moderator should encourage the trainees to ask questions and discuss different points of view with the experienced field agents who are serving as the session trainers.

V. CONDUCT OF THE SESSION

Step 1 Session Introduction (2 minutes)

The purpose of this session is to provide you with the opportunity of discussing with our panel of experienced field agents a series of five topics that will assist you in the establishment of a field-based operation. This session has been included in your training program because field office management frequently differs from that of a normal home office.

Each of our panel members will respond to your questions from his particular point of view. It is expected that some differences of opinion will emerge. The reason for this is that different individuals very often adopt different approaches to solve the same problem. Also, our field agents have served in different locations that of necessity dictated diverse solutions.

The five topics to be discussed are:

- Allocation of office space
- Obtaining and using secretarial support
- Scheduling interviews
- Setting up files
- Identifying materials for a local collection

Step 2 Allocation of Office Space (10 minutes)

This topic should be discussed in terms of:

- Office location
- Need for access to meeting rooms for groups
- Basic office furniture and equipment
- Storage space

Step 3 Obtaining and Using Secretarial Support (15 minutes)

This topic should be discussed in terms of:

- Full-time versus part-time secretarial support
- Technical and personal qualifications
- The expanded role of the secretary as a paraprofessional field agent and retrieval specialist

Step 4 Scheduling Interviews (10 minutes)

This topic should be discussed in terms of:

- Initial contacts versus follow-up visits
- Geographical area scheduling
- Time scheduling
- Teacher interview scheduling
- Appointments versus drop-in visits
- Formal meetings versus informal gatherings
- Interview schedule records

Step 5 Setting up Files (10 minutes)

This topic should be discussed in terms of the various types of files the panel members recommend be maintained. Examples should include descriptions of files such as:

- Personal files for each request
- Master log book of daily requests
- District log
- Correspondence files
- Agent requests to nonretrieval center sources
- Loaned material
- Special consultant references

Step 6 Identifying Materials for a Local Collection (10 minutes)

This topic should be discussed in terms of:

- Time
- Space
- Retrieval center response
- Budget, i.e., high-demand items that are easily reproduced versus "nice to have" materials that may be more costly

Step 7 Session Summary (3 minutes)

The moderator should briefly summarize the important points made by the field agents and trainees during the group discussion periods.

SESSION NO. 14

## ESTABLISHING AND MAINTAINING STAFF RELATIONS

I. SUMMARY DESRIPTION OF MODULE

A. Objective

To broaden trainees' understanding of the elements involved in building and sustaining good staff relations.

Upon completion of this module, trainees should:

1. Understand the dimensions of staff selection criteria.
2. Understand staff management philosophies.
3. Understand goals of staff meetings.
4. Understand ways of maintaining contact with staff.
5. Understand relations between central office staff and SEA personnel.

B. Participants

Trainers: 1 Instructor

Trainees: Project Managers

C. Summary of Module Activities

This is a series of case studies used to illustrate points regarding staff relations.

D. Duration

1 hour

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Lippitt, R. and White, R.K. "An experimental study of leadership and group life" in Maccoby, Newcomb, and Hartley (editors), Readings in social psychology. New York: Holt, Rinehart, & Winston, 1958, 496-511.

2. Luft, J. Of human interaction. Palo Alto: National Press Books, 1969.

3. Sieber, S.D., et al. The use of educational knowledge; evaluation of the pilot state dissemination program. New York: Columbia University, 1972, 263-266, 398-408.

### B. Trainee Preparatory Reading

None

### C. Aids and Equipment

None

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Determine individual situations regarding staff, priotities, etc. | Group discussion | 10 |
| Step 2 | Hiring staff | Mini-case study/ presentation | 20 |
| Step 3 | Characteristics and value of staff meetings | Presentation | 10 |
| Step 4 | Contact between director and staff | Mini-case study/ presentation | 10 |
| Step 5 | Contact between project and SEA | Mini-case study/ presentation | 10 |

## IV. SPECIAL CONSIDERATIONS

This session is best handled by an experienced information center manager. However, readings and mini-case studies are provided so that the module can be carried by other trainers. If an information center manager is available, he may choose to add or to exchange these case studies for some drawn from his own experience.

## V. CONDUCT OF THE SESSION

Step 1 Determine individual situations regarding staff, priotities, etc. (10 minutes)

Ask trainees to briefly describe individual project. Have each specify its size, number and type of employees, priorities, etc. Points raised by trainees may alter the use of the following outline and case studies. For instance, if there are no field agents, do not use the part of the outline that discusses selection criteria for field agents.

Step 2 Hiring staff (20 minutes)

Each trainee has a copy of the following case study. Quickly read it aloud.

HIRING A NEW RETRIEVAL SPECIALIST

The dissemination project in Ceanville is now one year old. The original staff included one retrieval coordinator, one retrieval specialist, 3 field agents, and the project director. During the first year, two parttime field agents were added to the staff. Now a retrieval specialist is to be added. The director has agreed to the new position because John, the retrieval coordinator, has convinced the director that there are simply too many requests to be handled by the two-person staff. The director has not made any decisions about possible reorganization within the retrieval office. He has simply been thinking about hiring another person that would take over the same kinds of responsibilities that the other retrieval specialists now do. For instance, John reviews all incoming requests. He then assigns half of them to Judy, the retrieval specialist and does half himself. The three job applicants are each highly qualified, yet possess very different strengths. The director finally decides he must consider possible reorganization strategies before he can hire the new retrieval specialist.

Discussion Points:

1. What strategies are open to the director?

   Possible strategies -- 1. organize by resource specialities e.g. human resources, ERIC computer search resources, and local collection resources. 2. organize by regions, e.g. divide the state into three regions and have each retrieval specialist handle requests from that area so there is close liaison between specialist and field agents in region. 3. Organize by topic area so that each specialist can know all the relevant sources, human, print, etc. for several given areas.

Having decided on a strategy, which of the three applicants will the director choose?

(The trainer should read the brief description of each applicant.)

APPLICANT A. Marie, at the age of 26 has just received her master's degree in library science. During her last quarter in the University in Ceanville, Marie met the retrieval staff and became enthusiastic about active dissemination rather than passive holding of resource materials. In fact, her master's thesis was influenced greatly by the kinds of work she has seen in this project. She has had no directly relevant experience. The only job she had before getting her master's was as the librarian in an elementrary school library where the main concern was getting books back on time.

APPLICANT B. George is highly qualified. At the age of 35, he agreed to leave his position as a retrieval coordinator in a regional information center so that his wife could continue her education at the University at Ceanville. Since her major is fairly unusual, she felt she had to go where the courses were being offered. George has a B.A. in English.

APPLICANT C. Barbara is currently one of the two part-time field agents. Her husband has changed jobs and they will be moving to Ceanville next month. She has worked well with the staff and is liked by all. Her particular strenghts are sensitivity to other's needs, and of course, her great knowledge of the kinds of problems as well as human resources found in the region she has been working.

DISCUSSION QUESTIONS:

1. Which applicant will the director choose? Why?
2. How much weight should he give to the opinions of the retrieval staff?

(Trainer: The answers will be based on the strategy chosen for retrieval staff reorganization. Would prior knowledge of the applicants have persuaded the director to choose a different strategy?)

Following is an outline of points that cover more general hiring criteria. Some of these points may have been brought out during the previous discussion.

I. Hiring Staff: Identify needs and hire personnel with strenghts that are complimentary, e.g. a retrieval specialist with administrative skills. Selection criteria include:

A. Retrieval Specialist

1. Record of ability to work well as part of a team.
2. Willingness to be trained in new skills.
3. Research background or understanding of research
4. Some experience in writing.
5. Potential for growth based on recommendations.

B. Extension Agent.

1. Verbal communication skills.
2. Sensitivity to others.
3. Good listener.
4. Background in working with people
5. Enthusiasm.
6. Experience in information science.

<u>Step 3</u> Characteristics and value of staff meetings (10 minutes)

The following outline of points represent the material to be covered in this brief presentation. Point A.1. is well documented in the reading by Lippitt and White. Although their illustrations of a democratic leader, a autocratic leader, and a laissez-faire leader need to be adapted for this presentation, these management styles are useful to consider.

II. Characteristics and Value of Staff Meetings

A. Characteristics of Staff Meetings

1. Management philosophies -- democratic, autocratic, and laissez-faire.

2. Open communication -- objective attitudes toward policy discussions and conflict resolution.

3. Discussions centered on goals rather than individual grandstanding.

4. Emphasis on teamwork.

B. Values of Monthly Staff Meetings

1. Plays key role in conceptualizing individual roles and the purpose of the project.

2. Gives extension agents approval and support, especially when agents operate in isolated conditions.

3. Content of meetings: problems, successes, plans and goal modifications, evaluation of activities, training needs.

Step 4 Contact between director and staff (10 minutes)

The following case study will help illustrate the need for contact with the staff. The discussion should focus on ways to initiate and maintain contacts. The trainer should read the following case study.

MAINTAINING CONTACT WITH FIELD AGENT

The state has a combination of big cities and rual isolated areas. Most of the field agents work in or near a big city. One agent was assigned to a rual area. The director has told the agent when he was hired that he thought there would be a position available for him in one of the cities within six months. The agent has now been in the field for seven months. He is unhappy, feels lonely, and thinks that he has been forgotten. The director tried to phone him often during the early months since he was aware of the loneliness problem. However, the project has been expanding lately and the director does not have time for the bi-weekly calls. The agent is a good one and the director does not want to loose him. However, the position in the city has not worked out. It now looks like the agent will have to stay in his present location for another five or six months. What kinds of new communication links can the director provide for the agent to relieve his sense of 'nobody cares'?

DISCUSSION QUESTIONS:

1. What can be done by the director?
2. What can be done by the retrieval staff?
3. What can be done by the other agents?

The following outline may suggest additional points to be covered.

III. Contact between Director and Staff

A. Staff meetings.

B. Telephone contact between Center and extension agents, two or three times per week.

C. Written reports.

1. Weekly report from extension agents -- daily log of all contacts, input or output, summary of what transpired, outcomes, and approximate amount of time.
2. Monthly statistical report from Retrieval Center.

D. Visits to the field by directors -- learns field problems, needs, successes, and gives agent support and prestige

E. Continual informal contacts with Center staff.

F. Assignment of multiple tasks to each retrieval specialist to develop expertise in all aspects of the program and to minimize routine tasks.

Step 5 Contact between project and SEA (10 minutes)

The following case study illustrates a situation where there is little formal contact between the project and the SEA staff. It is followed by an outline that may provide ideas not brought out in the discussion. The trainer should read the case study.

LACK OF CONTACT BETWEEN DISSEMINATION PROJECT AND SEA

The setting is a staff meeting. The project director, two full time field agents, one parttime field agent, and two retrieval specialists are seated around a table. The first item on the agenda is the lack of communication between the project staff and the SEA staff. Early contacts were not made because the project staff were busy learning new jobs and starting operations. At present, there are no real problems. The project staff and the SEA staff just leave each other alone. After bringing this situation to the attention of the staff, the director says:

Director: We have several options open to us at this time. We could just accept the situation as it is, being grateful that we don't have any enemies. Or we could try to initiate some contacts with individual staff members, or with groups of them in which we explain our function.

These contacts could be made through memos or they could be made personally with each of us making a few of the contacts. I suppose there are several other ways of changing the situation. I would like to know what ideas each of you have. Hank, do you think we should try to alter our relationship with the SEA?

DISCUSSION QUESTIONS:

1. Did the director pose the problem in an open way?
2. Will the staff be able to present their ideas?
3. What ideas might they present?
4. How should the director handle the situation if the retrieval specialist who deals only with print materials, and the parttime field agent think the situation should be left as it is while the rest of the staff, including the project director feels that better contacts need to be established between the project and the SEA?
5. How should the director help the staff decide on a strategy -- e.g. what should be done first and when it should be done, what should be done second and when it should be done, etc.

IV. Establishing Contact Between Project Staff and Other Sea Personnel. Various steps can be taken to raise the level of awareness within the Department.

A. A brief explanation of services at a cabinet meeting by the director.

B. Personal contact with individual directors (general education, career education, etc.) to negotiate the use of specialists in the various department sections.

C. Follow-up slide/tape presentations to section staff meetings by retrieval specialists. This can initiate requests for services within the department.

D. Use of various specialists for technical assistance.

E. Send copies of field requests to appropriate specialists for information.

F. Use of services by specialists.

G. Notification of all personnel of newly acquired publications.

H. Channeling of special articles to specialists.

I. Keeping the Associate Superintendent, Deputy Superintendent, and Superintendent informed via memo and progress reports and/or personal reports.

J. Visiting IED superintendents, discussion reports.

Trainer should briefly summarize the major points of this session. Trainer should determine if trainees feel they have an understanding of:

1. Staff selection criteria.

2. Staff management philosophies.

3. Goals of staff meetings.

4. Ways of maintaining contact with staff.

5. Ways of establishing relations between central office staff and SEA personnel.

SESSION NO. 15

# INTRODUCTION TO COMPUTER-BASED EDUCATIONAL INFORMATION SYSTEMS

## I. SUMMARY DESCRIPTION OF MODULE

### A. Objective

To provide a comprehensive overview of the state of the art in computer retrieval systems for educational information data bases.

Upon completion of this module, trainees should:

Be aware of the various educational information data files, and the kinds of information available in each.

Be aware of the differences between batch and on-line searching systems and understand the advantages and disadvantages of each.

Be aware of the various batch and on-line systems currently available, and know who is using each one.

### B. Participants

Trainers: 1 Instructor

Trainees: All

### C. Summary of Module Activities

This is a lecture, with time for questions and discussion at the end of the presentation.

### D. Duration

1 hour

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

There is some new material in press on this area and we suggest that the trainer obtain this for preparation. ERIC and LEASCO are distributing a new handout which should a complete description of the ERIC tapes. Also, Allan Humphrey of the School of Library Science at U.C. Berkeley, is now completing a report for ERIC which describes the status of batch searching systems for the ERIC tapes. Materials on DIALOG and ORBIT, the two interactive systems currently available can be obtained from Lockheed and System Development Corporation.

B. Trainee Preparatory Reading

None

C. Aids and Equipment

None needed, however, if additional time is available, films might be obtained from ERIC, Lockheed and S.D.C.

III. SCHEDULE OF ACTIVITIES

| TOPIC | ACTIVITY | MINUTES |
|---|---|---|
| Step 1 The ERIC Date Base | Lecture | 10 |
| Step 2 Searching te ERIC Tapes | Lecture | 15 |
| Step 3 Currently Available Systems | Lecture | 15 |
| Step 4 Getting Started | Lecture | 15 |
| Step 5 Summary and Questions | Discussion | 5 |

IV. SPECIAL CONSIDERATIONS

If possible, an expert in this area should be obtained to present this session. In addition to his session, if possible, trainees should be provided some "hands on" experience in working with a computer search system during the training session.

## V. CONDUCT OF THE SESSION

Step 1. The ERIC Data Base (10 minutes)

- A. the ERIC system
- B. the ERIC tapes
    1. contents
    2. format
        - a. sequential files
        - b. inverted files
    3. availability and distribution

Step 2. Searching the ERIC Tapes (15 minutes)

- A. overview
- B. search logic
- C. searching strategies
    1. sequential vs. inverted files
    2. batch vs. on-line systems

Step 3. Currently Available Systems (15 minutes)

- A. batch systems
- B. on-line systems

Step 4. Getting Started (15 minutes)

- A. buying a package
- B. buying a searching service
- C. developing your own software
- D. modifying existing software

Step 5. Summary and Discussion (5 minutes)

SESSION NO 16

RETRIEVING ERIC INFORMATION--A

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide a basic introduction to the interdependencies of personnel functions with the retrieval process, and to illustrate several elements of the retrieval process through the use of selected ERIC products.

Upon completion of this module, trainees should be able to:

1. Relate the retrieval process to the sequence of several activities in a service center and identify its interdependencies with other functions

2. Explain the structure and format of the ERIC vocabulary authority (Thesaurus of ERIC Descriptors) and describe the impact of indexing practices on the searchers' translation activities

3. Conduct manual searches of Research in Education and Current Index to Journals in Education--beginning with the use of the Thesaurus-- to understand some of the decisions and judgments that must be made by searchers

B. Participants

Trainers: One instructor

Trainees: All

C. Summary of Module Activities

The trainer introduces the module with a presentation on the interface points and interdependencies in the flow of major center functions. Emphasis is on various translation activities involved in this flow. The major portion of this presentation is then devoted to explaining the structure and format of the Thesaurus of ERIC Descriptors, a principal tool in handling these translation problems. As a group, trainees work through some Thesaurus exercises with the trainer and then conduct a search of RIE and CIJE in small groups (or individually). The session is concluded by a review and discussion of the search exercise.

D. Duration

Two hours.

II. A. Trainer Preparatory Reading

1. Far West Laboratory for Educational Research and Development. The Educational Information Consultant (EIC): Skills in Disseminating Education Information. Berkeley, California: Far West Laboratory for Education Research and Development 1972. [Retrieval Module, Elements 1, 2, and 3 of Trainer's Manual.]

2. Mathies, M. L. and Peter G. Watson. Computer-Based Reference Service. (To be published by American Library Association, Summer 1973.) [Part One and Appendices A and B]

3. How to Use ERIC. Washington, D.C.: Superintendent of Documents, The U.S. Government Printing Office, 1972. (OE72-129)

4. Goodman, Frederick. "The Role and Function of the Thesaurus in Education" in Thesaurus of ERIC Descriptors. New York: CCM Information Corporation, 1972.

B. Trainee Preparatory Reading

1. How to Use ERIC. Washington, D.C.: Superintendent of Documents, The U.S. Government Printing Office, 1972. (OE72-129)

2. Far West Laboratory for Educational Research and Development, The Educational Information Consultant (EIC): Skills in Disseminating Educational Information. Berkeley, California: Far West Laboratory for Educational Research and Development, 1972. ["The Search Strategy"]

   (Retrieval specialists will have read this paper for Session 12, but it will be a new assignment for field agents and project managers.)

3. Sample Search Request Forms

   (Retrieval specialists will have these in their packets for Module 12)

C. Aids and Equipment

At the beginning of the session the instructor should distribute the following items:

1. Thesaurus of ERIC Descriptors
2. Research in Education (September 1972 issue)
3. Current Index to Journals in Education (September 1972 issue)

Displays R1 - R4b and Retrieval Exercise--A are included in the trainees' packets.

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to Personnel Roles in the Translation Activities of the Retrieval Process | Presentation/Discussion | 20 |
| Step 2 | Understanding and Using the Thesaurus | Presentation/Group Exercises | 40 |
| Step 3 | Conducting Manual Searches of RIE and CIJE: RETRIEVAL EXERCISE--A | Small Group Exercise | 30 |
| Step 4 | Review of Search Results on RETRIEVAL EXERCISE--A | Group Discussion | 30 |

IV. SPECIAL CONSIDERATIONS

It would be desirable to supplement this session at Step 2 with a presentation by a representative (indexer/abstractor) from an ERIC clearinghouse. This individual could be asked to give a concluding 15-minute presentation on the specific indexing practices of his clearinghouse with illustrations of the indexer's decision points relative to such items as the use of generic and specific terms, adoption of definitions specific to his clearinghouse's speciality area, and coverage of peripheral subject areas. The clearinghouse representative could also be available to answer questions from trainees on document acquisitions and processing by the ERIC system.

## V. CONDUCT OF THE SESSION

Step 1 Introduction to Personnel Roles in the Translation Activities of the Retrieval Process (20 minutes)

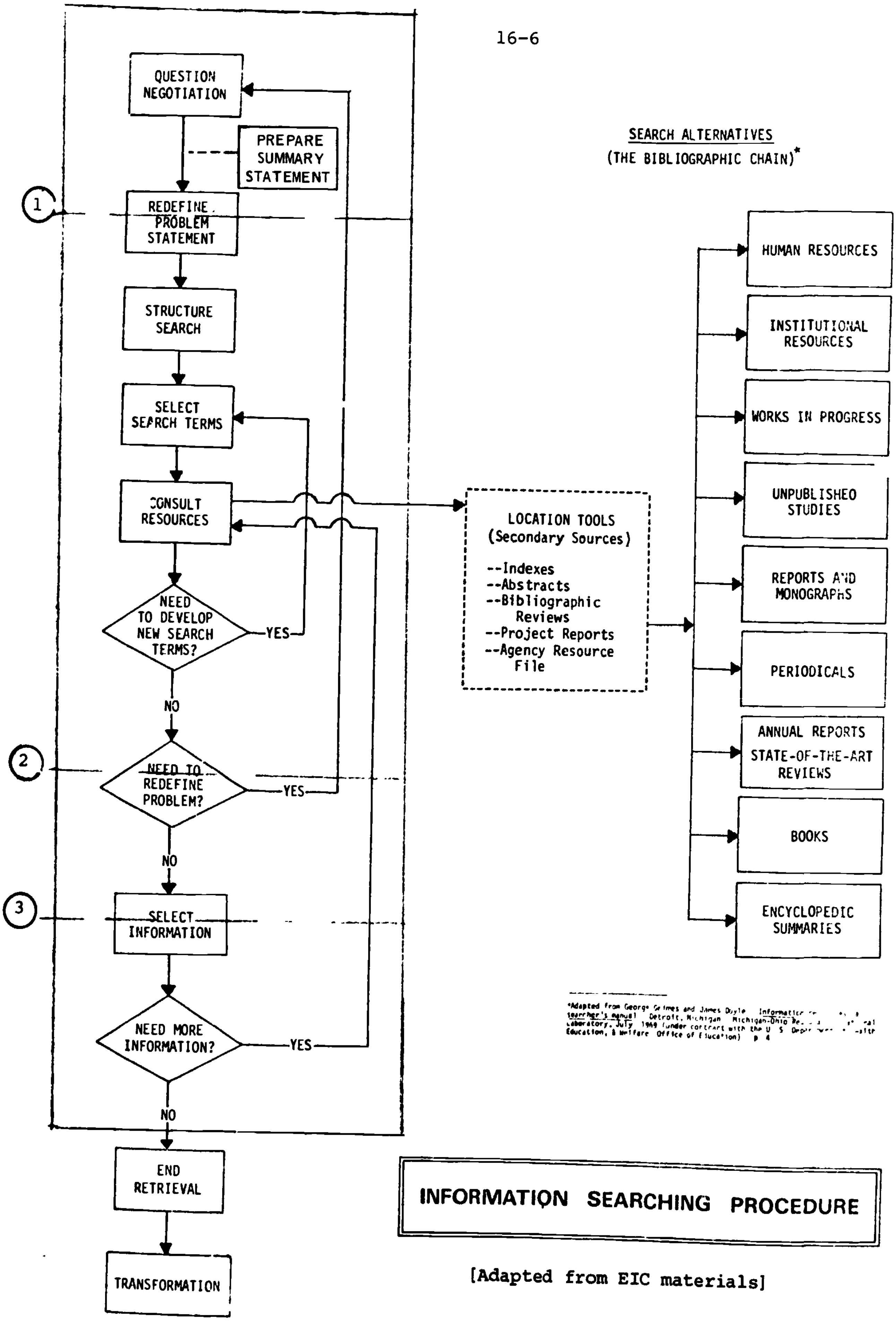
In the introduction to the EIC materials, a well-known quote from James Thurber is cited: "So much has already been written about everything that you cannot find out anything about it." This observation vividly captures the problem of information retrieval. We all encounter difficulty in finding material on a specific topic, even when we are fairly certain that relevant works have been brought under bibliographic control in the published world or in the ERIC system. Thus it is essential that we focus considerable attention on this particular service function in this training session--not only for the retrieval specialists, but for all center or project personnel.

In this first retrieval session we would like to begin our illustration of the importance of understanding the retrieval process--particularly ERIC retrieval--to all Center or project personnel by discussing the sequence of retrieval activities, particularly as the whole process relates to other Center activities and the responsibilities each of you has in developing an understanding of skills required in these areas. We will then concentrate on the problem of translating the natural language of the client into the language of the system. We will be using ERIC to illustrate this problem since the Thesaurus of ERIC Descriptors and the ERIC search tools will be major resources for all of you.

[Ask trainees to find the Information Searching Procedures flowchart (Display R1) in their packets.]

Although some of you have discussed this flowchart in an earlier module, I want to use it now to point out some interrelationships in the normal flow of center activities. In this version of the flowchart, we have added dotted lines through several of the action boxes, indicating that there are definite or potential interfaces between the searcher and other personnel. We should note three key interface points:

(1) Redefine Problem Statement. The results of the query negotiation process are typically summarized on a search request form--a step that we have added to this flowchart. This is our first interaction or interface between project personnel, even if it is




*Adapted from George Grimes and James Doyle. *Information [illegible] searcher's manual.* Detroit, Michigan: Michigan-Ohio Re[illegible] Laboratory, July 1969 (under contract with the U. S. Depar[illegible] Education, & Welfare, Office of Education) p. 4

**INFORMATION SEARCHING PROCEDURE**

[Adapted from EIC materials]

represented by the transmission of a piece of paper. A retrieval specialist or central office staff member reviews this summary statement before developing a search strategy--noting special instructions regarding level or type of documents and any indications from the field agent regarding the type of search that should be performed, e.g., comprehensive or selected, or other clues that characterize the client's needs. Most of the search forms that you will review do not contain sections for comments by the field agent, and some of you may wish to adapt existing forms, but add some sections that supplement areas for guidance from the field agent on the nature of the search or of the client.

Some sample search forms used by currently operating centers are included in your packets.

Before structuring a search strategy, the retrieval specialist may need more information. The arrow pointing down thus should have a yes-no branching to indicate that the retrieval specialist may contact the field agent, or go back directly to the client, to refine the search problem further.

(2) Need to Redefine the Problem. In some cases the need to obtain more guidance on the client's information needs does not reveal itself until the search is well under way. As you will experience particularly in the next retrieval module, the complexities of a particular topic cannot be anticipated--either by the client, the field agent, or the retrieval specialist--until some initial searching has been done. This inevitability poses some problems, similar to the first redefinition:

- Does the retrieval specialist stop to seek further guidance at critical decision points in the search process?

- If the ans[illegible] is yes, to whom does the retrieval specialist turn: the field agent? the client? both?

Do some of you here have any feelings about how situations like this should be handled?

[There is no right or wrong way of handling such situations, but each project or center will have to develop procedures for handling such occurrences. In some centers, the retrieval specialist first contacts the field agent, and if the agent feels that the client should be contacted directly, he or she either makes the follow-up contact with the center or recommends that the specialist make the call.]

(3) Select Information. We will be discussing the task of judging the relevancy of retrieval items in the Packaging and Communications Module. What we might consider at this interface point is who should be responsible for screening materials: the central office staff (i.e., the retrieval specialist) or the field agent?

[Again, this procedural question has no single resolution but varies from center to center, depending partly on the kinds of packages developed to send to clients. For example, in those centers that prepare bound printout listings it is difficult for the field agent to screen items further, but particularly relevant items can be asterisked. In other cases the retrieval specialist notes the most relevant items for the field agent in a cover note, and the agent then screens further, adds locally identified items, or simply passes on the package to the client.]

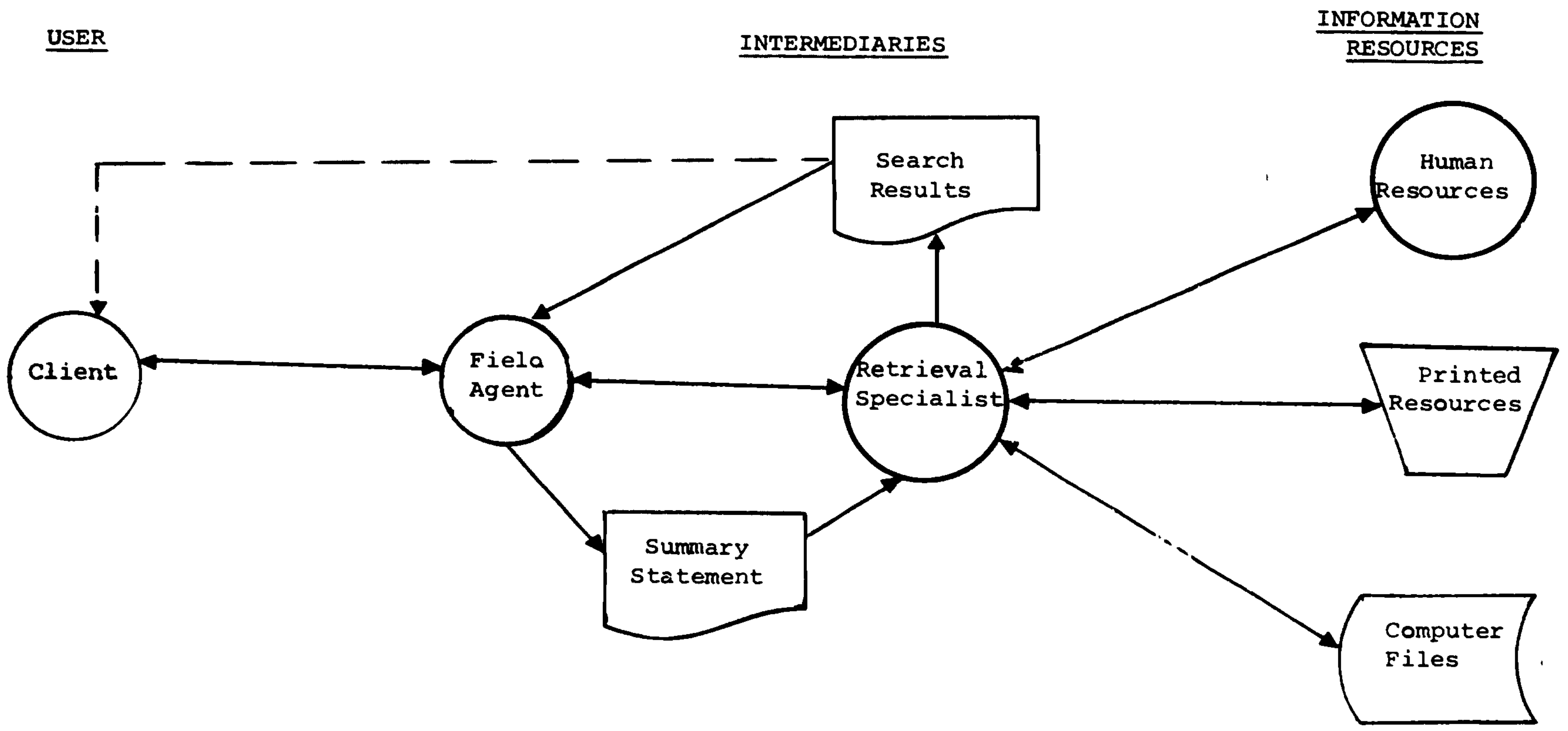
Where in this flowchart do you see action points where the retrieval specialist might seek help from other staff members or personnel outside the center?

[For example, the searcher might bring a particularly difficult search to a full staff meeting for consultation and advice, or might informally request assistance from another staff member. If the subject area is particularly difficult, the searcher might call upon an SEA subject specialist to clarify meanings and help in the selection of terms and/or resources; otherwise the searcher might call an outside agency to identify specific information or additional resources.]

The details and skills for functioning at these interface points are the concern of several modules that follow, but to summarize the point about interdependencies among all personnel in the retrieval process, I would like you to look at Display R2 with me. In this simplified picture of the chain of communication between start and completion of a search, you will notice a common thread of potential difficulty running throughout the communications effort. At each linking point, whether it is between two people, between man and machine, or between man and a system such as ERIC, there are translations that must take place.

To start, the field agent is translating the communications received from the client, who in turn is translating the suggestions and comments from the field agent to guide his/her thinking. [Walk through remaining links.]

This display represents a chain of communications that is somewhat analogous to the infamous whisper game, where the last person to receive the communication (who is also the initiator) may or may not hear a reasonable facsimile of his originally whispered message. However, several elements in




Display R2

Communication Links

the service-related communications differ from this analogy. One element of difference is that the original statement from the client may not be the complete one, and this is not known until the search results are placed before him ("Oh yes, I really only wanted information on the slow learner.") Another difference exists in the kinds of checks and balances that can be built into the service communications. We have:

(1) The skill and focussed effort of the field agent working with clients and understanding the kinds of information that are important in developing a complete statement on the search problem

(2) The request form that is used to guide the query negotiation process, and results in a written record of the initial transaction, which is expanded upon as required by the retrieval specialist

(3) A systematic approach to ferreting out information, represented by the orderly steps and decision points in the flowchart we just discussed

(4) The final opportunity to judge the relevancy of the information to the original problem statement, and the

option of returning to any one point in the process, or turning to outside help

These kinds of safeguards and avenues of resources can contribute to a quality performance in the retrieval area, although they do not all necessarily contribute to rapid throughput and economy of operation. The quantitative aspects are dictated more by such conditions as experienced personnel, continued advances in the technology and in system input developments, and an underlying philosophy of what constitutes a quality job. This latter item is the most difficult issue, and one we will address, along with the others, in other sessions.

Step 2 Using the ERIC Thesaurus of Descriptors (40 minutes)

One other major area in which the translation problem can be brought under control is through center personnel developing an understanding of the resource system and skill in the use of reference tools. The basic philosophy of this training session is that retrieval specialists must have the expertise and skill in Thesaurus, but equally important, that field agents and project managers must have a fairly solid foundation in the same areas. (We hope that the introduction to this module has helped to justify this traininn rationale.) In particular, it is important that all personnel have some knowledge of the language of ERIC. There are several important things to understand about the language or terminology of the Thesaurus: (1) how it was developed; (2) what it tells us about how the clearinghouses index documents; and (3) how to use its several sections.

[Distribute copies of Thesaurus and ask trainees to find Displays R3 and R4 in their packets.]

The best resources for acquiring this knowledge are: (1) the introduction to the Thesaurus, by Dr. Frederick Goodman, and (2) Computer-Based Reference Services, by Dr. Mathies and Peter Watson. Retrieval specialists may wish to refer directly to the ERIC Operating Manual for more specific details on the guidelines for indexing and abstracting.

From these works we can see that there are some basic ERIC input principles and procedures that become very important in the retrieval operation. [Refer to Display R3.]

Discussion Guide for Display R3

(1) The vocabulary used in describing documents (i.e., the descriptors) has been placed under control, and there

| Principles and Procedures | Searching Application |
| --- | --- |
| (1) ERIC vocabulary is controlled | - natural language of the request must be translated into the preferred terminology (descriptors) of the <u>Thesaurus</u>. |
| (2) The Thesaurus is based on the coordinate indexing concept, and includes some multiterm descriptors that have been precoordinated. | If a precoordinated term does not exist, searchers use terms representing different concepts from a search problem and coordinate or combine these selected terms in searching. (This application is particularly important in computer searching.) |
| (3) Only preferred terms from the <u>Thesaurus</u> are used in indexing documents, although new terms may be recommended by indexers. | Searchers must note the "USE" and "Use For" distinction among synonyms that appear in the <u>Thesaurus</u>. |
| (4) Terms in the <u>Thesaurus</u> are not assigned to unique classes, but are displayed in clusters showing relationships between terms in "families." Indexers select terms most appropriate for the general and/or specific levels of discussion in a given document. | Searchers should select appropriate terms (including broader, narrower, and/or related terms) from several different clusters or families. |

Display R3

are guidelines for indexers and searchers to deal with the problems of dissimilar usage of terms in various areas of education, and with the proliferation of terms representing a similar idea or concept. This control is exerted by personnel within several components of the ERIC system: subject specialists in clearinghouses identify new descriptors; the PET (Panel on Educational Terminology) establishes general policy; and ERIC Central in NIE retains final authority in implementation.

For example, COMPUTER ASSISTED INSTRUCTION is the ERIC preferred term, and is used in place of CAI, COMPUTER AIDED INSTRUCTION, and COMPUTER BASED INSTRUCTION--all perfectly good words and part of our natural language usage, but redundant and unwieldy.

(2) The Thesaurus is built on the coordinate indexing concept, which allows the descriptors to be combined in various ways at the time of searching. A variation on this main concept is the multiterm descriptor, which represents already coordinated (i.e., precoordinated) terms that have a clear relationship, e.g., INFORMATION CENTERS, rather than INFORMATION AND CENTERS.

Language or terminology in the Thesaurus stems from the literature, and not from a predetermined classification scheme, such as we see in typical subject-heading systems.

(3) [Refer to Display R4a.] All terms--preferred terms and synonyms--are listed alphabetically in the first section. Preferred terms are indicated in large bold letters (e.g., INDUSTRIALIZATION). Synonyms to preferred terms appear in the listing but are followed by a USE notation, e.g., INDUSTRIAL CRAFTS, and after UF (USE FOR), e.g., EMPLOYEE RELATIONS. This system of cross references helps the searcher enter at any of several terms including your "natural language" preferences, and be pointed to the correct term. [Ask group to identify all the synonyms for ENGLISH (SECOND LANGUAGE).]

(4) The displays of groups of terms in the Thesaurus do not represent comprehensive classes, nor are terms assigned exclusively to any one cluster. Hierarchical relationships are shown, however, through the use of Broader (BT) and Narrower terms (NT). For example, in Display R4a, INFORMATION CENTERS are a more specific kind of INFORMATION SOURCES or RESOURCE CENTERS. BANKING, BRICK INDUSTRY, etc., are more specific kinds of INDUSTRIES.

Shop Curriculum
Trade And Industrial Education
Vocational Education
Woodworking

Industrial Arts Laboratories
USE SCHOOL SHOPS

Industrial Arts Shops
USE SCHOOL SHOPS

**INDUSTRIAL ARTS TEACHERS 380**
BT Teachers
RT Industrial Arts

Industrial Crafts
USE INDUSTRIAL ARTS

**INDUSTRIAL EDUCATION 140**
SN All types of education related to industry including industrial arts and education for occupations in industry at all levels
UF Industrial Instruction
BT Education
RT Fluid Power Education
Industrial Arts
Industrial Technology
Industrial Training
Trade And Industrial Education
Trade And Industrial Teachers
Vocational Education
Vocational Schools

Industrial Instruction
USE INDUSTRIAL EDUCATION

**INDUSTRIALIZATION 490**
BT Development
RT Demography
Developed Nations
Developing Nations
Industrial Structure
Industry
Socioeconomic Influences
Steel Industry
Technological Advancement
Technology
Urbanization

Industrial Nations
USE DEVELOPED NATIONS

**INDUSTRIAL PERSONNEL 380**
BT Personnel
RT Administrative Personnel
Developed Nations
Employees
Employers
Industrial Relations
Industry
Laborers
Mechanical Design Technicians
Production Technicians
Radiographers
Supervisors

**INDUSTRIAL RELATIONS 150**
UF Employee Relations
Labor Relations
BT Relationship
RT Collective Bargaining
Collective Negotiation
Employer Employee Relationship
Employment
Fringe Benefits
Industrial Personnel
Industrial Training
Labor Unions
Public Relations

**INDUSTRIAL STRUCTURE 490**
BT Organization
RT Developed Nations
Industrialization
Industry
Mergers
Organization Size (Groups)

**INDUSTRIAL TECHNOLOGY 400**
BT Technology
RT Industrial Education
Industry
Technical Education

**INDUSTRIAL TRAINING 270**
SN Training for employees conducted by industrial organizations
BT Training
RT Adult Vocational Education
Apprenticeships
Industrial Education
Industrial Relations
Inplant Programs
Job Training
Off The Job Training
On The Job Training
Released Time
Trade And Industrial Education
Trainees
Trainers

Industrial X Ray Operators
USE RADIOGRAPHERS

**INDUSTRY 370**
NT Banking
Brick Industry
Broadcast Industry
Construction Industry
Feed Industry
Food Service Industry
Insurance Companies
Lumber Industry
Manufacturing Industry
Meat Packing Industry
Petroleum Industry
Publishing Industry
Telephone Communications Industry
Tourism
BT Business
RT Coordinators
Equipment Manufacturers
Fluid Power Education
Industrial Arts
Industrialization
Industrial Personnel
Industrial Structure
Industrial Technology
Instrumentation
Mergers
Needle Trades
Office Machines
Organizations (Groups)
Organization Size (Groups)
Producer Services
Production Techniques
School Industry Relationship

Industry School Relationship
USE SCHOOL INDUSTRY RELATIONSHIP

**INEQUALITIES 340**
BT Mathematical Concepts

**INFANCY 130**
RT Childhood
Individual Development
Infant Mortality
Infants
Pediatrics Training
Premature Infants

**INFANT BEHAVIOR 060**
BT Behavior
RT Infants

Infant Death Rate
USE INFANT MORTALITY

**INFANT MORTALITY 070**
UF Infant Death Rate
BT Death
RT Infancy
Premature Infants

**INFANTS 380**
NT Premature Infants
BT Age Groups
RT Infancy
Infant Behavior

**INFECTIOUS DISEASES 250**
NT Communicable Diseases
BT Diseases
RT Dishwashing

Infirmaries
USE HEALTH FACILITIES

Inflatable Structures
USE AIR STRUCTURES

Informal Conversational Usage
USE STANDARD SPOKEN USAGE

**INFORMAL LEADERSHIP 060**
BT Leadership

**INFORMAL ORGANIZATION 020**
BT Organization
RT Communication (Thought Transfer)
Organizational Climate
Organizations (Groups)
Power Structure

**INFORMAL READING INVENTORY 520**
BT Reading Tests
RT Reading Ability
Reading Comprehension
Reading Materials
Word Recognition

**INFORMATION CENTERS 210**
BT Information Sources
Resource Centers
RT Automation
Decentralized Library Systems
Educational Facilities
Information Science
Information Storage
Instructional Materials Centers
Libraries
Library Facilities
Library Technicians

**INFORMATION DISSEMINATION 330**
UF Dissemination
NT Publicize
BT Information Utilization
RT Communication (Thought Transfer)
Diffusion
Documentation
Facsimile Transmission
Information Networks
Information Services

Display R4(a)

Sample Thesaurus Page

To satisfy ourselves that there are reciprocals of the broader and narrower terms, let us trace the two broader terms for INFORMATION CENTERS in the Thesaurus and see the other kinds of narrower terms that are listed under each.

[The trainer might point out that the term RESOURCE UNITS, which is also found under INFORMATION SOURCES, cannot be clearly understood just from its position in this family, and is not similar to INFORMATION CENTERS. Ask the trainee to trace RESOURCE UNITS in the first section of the Thesaurus and in the Descriptor Group Display--in the last two sections of the Thesaurus--as a way of trying to understand how the term might be used.]

Another kind of relationship--Related Terms (RTs)--is found in the group displays. These terms are not necessarily a part of the hierarchical arrangement, but instead are suggestions of alternative terms that may even represent opposite concepts. An interesting example of this "triggering" idea can be found on our sample page, Display R4(b). Dishwashing, for example, leads us to DISEASE CONTROL, INFECTIOUS DISEASES, SANITATION, HEALTH, etc., some of which may help broaden our search or focus in on another aspect of the problem statement.

The major impact of the Thesaurus on searching is the responsibility that it places on the field agent or

**DISCUSSION (TEACHING TECHNIQUE) 510**
UF Class Discussion
NT Group Discussion
BT Teaching Methods
RT Discussion Experience
Discussion Groups
Discussion Programs

**DISCUSSION EXPERIENCE 200**
BT Experience
RT Discussion (Teaching Technique)
Discussion Groups
Discussion Programs

**DISCUSSION GROUPS 280**
UF Study Circles
BT Groups
RT Discussion (Teaching Technique)
Discussion Experience
~~Discussion Programs~~
Group Discussion
Listening Groups
T Groups

**DISCUSSION PROGRAMS 270**
BT Programs
RT Alumni Education
Discussion (Teaching Technique)
Discussion Experience
Discussion Groups
Speeches

**DISEASE CONTROL 250**
RT Cleaning
Communicable Diseases
Community Health
Controlled Environment
Diseases
Dishwashing
Health
Hygiene
Pesticides
Public Health
Sanitation

**Disease Incidence**
USE DISEASE RATE

**DISEASE RATE 250**
UF Disease Incidence
RT Diseases

**DISEASES 250**
NT Alcoholism
Allergy
Asthma
Diabetes
Drug Addiction
Infectious Diseases
Injuries
Mental Illness
Occupational Diseases
Physical Handicaps
Psychosomatic Diseases
Seizures
RT Disease Control
Disease Rate
Health
Hygiene
Pathology
Physical Health
Pollution
Prenatal Influences

**DISHWASHING 250**
BT Cleaning
RT Dining Facilities
Disease Control
Food Handling Facilities
Food Service
Health
Health Needs
Hygiene
Infectious Diseases
Public Health
Sanitary Facilities
Sanitation
Sanitation Improvement

**Dismissal**
USE DISQUALIFICATION

**Disordered Behavior**
USE MALADJUSTMENT

**DISPLAY PANELS 170**
BT Audiovisual Aids
Vertical Work Surfaces
RT Chalkboards
Educational Equipment
Exhibits
Merchandising
Three Dimensional Aids

**DISPLAY SYSTEMS 050**
BT Information Systems
RT Computers
Electronic Data Processing
Electronic Equipment
Information Processing
Input Output
Man Machine Systems
Screens (Displays)

**DISQUALIFICATION 500**
UF Dismissal
RT Withdrawal

**Dissemination**
USE INFORMATION DISSEMINATION

**DISTANCE 160**
UF Proximity
Range (Distance)
RT Geographic Location
Height
Instructional Trips
Intervals
School Location
Topology
Transportation

**DISTINCTIVE FEATURES 290**
NT Phonological Units
BT Linguistics
RT Acoustic Phonetics
Artificial Speech
Componential Analysis
Consonants
Language Universals
Phonemes
Phonetics
Phonology
Physics

**Distribution (Economics)**
USE MARKETING

**Distribution Free Statistics**
USE NONPARAMETRIC STATISTICS

**DISTRIBUTIVE EDUCATION 140**
UF Retail Training
NT Salesmanship
BT Vocational Education
RT Agribusiness
Auto Parts Men
Business Education
Business Subjects
Clothing Maintenance Specialists
Cooperative Education
Distributive Education Teachers
Food Service Occupations
Marketing
Merchandising
Office Occupations
Office Practice
Retailing
Sales Occupations
Sales Workers
Vocational Education Teachers
Wholesaling

**DISTRIBUTIVE EDUCATION TEACHERS 380**
BT Vocational Education Teachers
RT Distributive Education

**District Libraries**
USE REGIONAL LIBRARIES

**DIVERGENT THINKING 310**
BT Creative Thinking
RT Inductive Methods
Problem Solving
Productive Thinking

**DIVIDED CATALOGS 320**
SN Catalogs in which entries are separated into two or more filing sequences
BT Catalogs
RT Bibliographies
Booklists
Cataloging
Dictionary Catalogs
Indexes (Locaters)
Information Storage
Libraries

**DIVISION 340**
BT Arithmetic
RT Addition
Multiplication

**DOCTORAL DEGREES 140**
BT Degrees (Titles)
RT Academic Rank (Professional)
Bachelors Degrees
Degree Requirements
Doctoral Programs
Doctoral Theses
Masters Degrees
Specialist In Education Degrees
Teacher Educator Education

**Doctoral Dissertations**
USE DOCTORAL THESES

**DOCTORAL PROGRAMS 410**
BT College Programs
RT Degree Requirements
Doctoral Degrees
Graduate Study
Higher Education
Teacher Educator Education

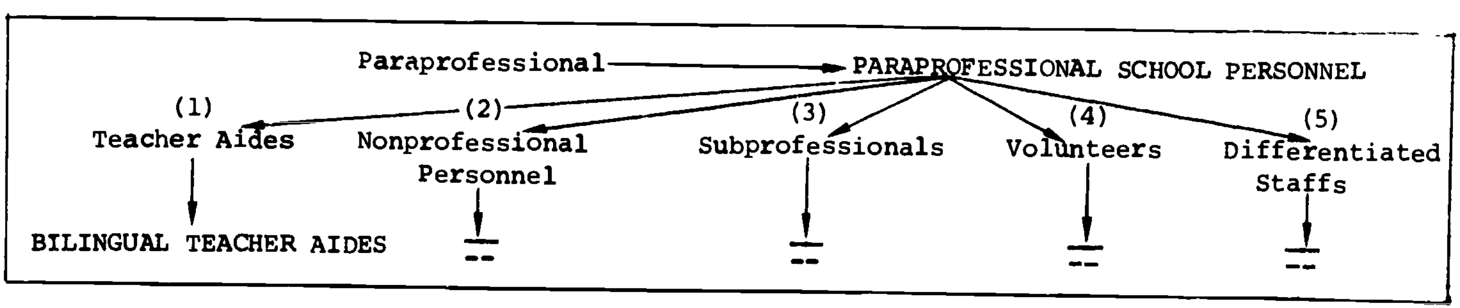
retrieval staff to understand the meaning behind words or terms used by clients so that the searcher can select the most appropriate Thesaurus terms.

Before we do a search in RIE and CIJE, let us work through some examples together so that you understand the format and use of each section of the Thesaurus.

1. The first section--the main body of descriptors--displays the clusters or families of descriptors that we have been talking about. Let us assume we wish to find some information on the use of nonprofessional personnel for a bilingual program, and let us see how you might trace several leads to candidate terms.

[Ask trainees to recommend a term often used for nonprofessional, e.g., paraprofessional, and to find it and related terms in the Thesaurus.]

[The trainer can illustrate the tracing procedure on a chalkboard in the following way, which helps to show that the searcher could enter at several points and get to BILINGUAL TEACHER AIDES.]



2. [Refer to pages 259-300 in Thesaurus.] The second section or Rotated Descriptor Display in the Thesaurus is, in effect, an alphabetical index to the first section. It is an alphabetical listing of all descriptors, with words of multiterm descriptors displayed on either side of the aligned words in the alphabetical listing. To illustrate its utility, you might look for descriptors in the main section that relate to self-instructional learning materials, beginning with a term such as PROGRAMMED MATERIALS, and then find a related term that begins with a prefix that might be followed by several words. Check the Rotated Descriptor Display to find the several different terms that begin with this prefix.

[An example in which the speed of using the Rotated Descriptor Display is obvious is with the term auto-instructional-related terms.]

Often the point of entry is reversed. For example, what are the possible combinations for representing "school and community relations"? A quick way of checking the appropriate multiterm phrase for this kind of descriptor is to use the Rotated Descriptor Display.

[Ask Trainees to cite the three pages (289, 290, and 265) on which the multiterm descriptor SCHOOL COMMUNITY RELATIONSHIP appears.]

A final example of how the Rotated Descriptor Display can be quite useful is in the identification of several multiterm descriptors that begin with a similar word. For example, check the Rotated Descriptor Display for all the descriptors that begin with the word INFORMATION or CURRICULUM.

[Ask trainee to look at both parts of the listing.]

As we will see later, this particular use of the Thesaurus is quite important in computer searching.

3. The final two sections are also indexes to the main body of descriptors. In the third section (pages 301-304) the families of clusters are listed with code numbers that you see used in the main section. Definitions of these groups are provided, and then in the fourth section (page 305 on) the specific descriptors in each of these groups are listed. Again, it is important to note that these groupings do not represent a formal classification scheme.

They were created after the main body of terms was developed. These groupings perform the function of characterizing sets or clusters of descriptors that the searcher can use as starting points in the selection of search terms. However, these last sections should be used in conjunction with the main (first) section. To illustrate the importance of this, I would like you to trace only one term and see that terms in its cluster belong to several different Descriptor Groups.

[Ask the trainees to trace the descriptor UNGRADED CURRICULUM in group 110 to other terms and identify the group numbers to which the other terms belong. For example: UNGRADED CLASSES is 280; UNGRADED ELEMENTARY PROGRAMS is 140; UNGRADED SCHOOLS is 470; and FLEXIBLE PROGRESSION is 510.]

Step 3 Conducting a Manual Search of RIE and CIJE: RETRIEVAL EXERCISE--A (30 minutes)

We are not going to concentrate on the manual searching of the ERIC printed products during this training session, but we would like to have you work on the searching of RIE and CIJE for one exercise, to illustrate several points:

Point 1. It will be worthwhile for you to work backwards into the query negotiation process by taking a somewhat incomplete statement of a search problem, and--by looking at some of the literature in the field--think about some of the questions that might have been posed to this hypothetical superintendent. (We threw in an additional wrinkle by making the topic a relatively new one in which the terminology still belongs to the "buzz word" class.)

Point 2. For both field agents and retrieval specialists, I think you will find manual searching of the ERIC products a useful way of becoming familiar with the terminology used in the system--even if you rely primarily on a batch or on-line system. (In an on-line system, you can test the meaning of terms by browsing through some results on-line; but in a batch system, particularly, you may wish to begin your understanding of a subject area by looking through a few RIEs.)

Point 3. Last, I think that you will all begin to feel the dilemma of making relevancy judgments for your clients, and that you would all like to have as much information as possible from the client on which to base those judgments. Thus, I hope this searching experience can demonstrate the interdependency of the personnel roles--particularly between the query-negotiator and the searcher--and the team effort that is required to serve a client well.

[The trainer should let the trainees work individually or in small groups, depending upon the number of RIEs and CIJEs that are available and the size of the group. Before letting them begin, the trainer might also walk through the Exercise Sheet and the attached worksheet, and point out the various sections of both the RIE and CIJE.]

Step 4 Review of Search Results on RETRIEVAL EXERCISE--A

[A TRAINER DISCUSSION GUIDE has been developed to aid the direction of this discussion, but the trainer should conduct the session primarily by asking the trainees to volunteer their findings and their judgments on each document.]

SESSION NO. 16

# RETRIEVING ERIC INFORMATION--A

## Trainer's Discussion Guide

## for

## Retrieval Exercise--A

This particular exercise may be used to illustrate several important search considerations:

- The search itself is in a new area, and the terms are not yet clearly defined and understood by educators. For example, the descriptor OPEN EDUCATION only entered the ERIC system in September, 1972, and the descriptor OPEN PLAN SCHOOLS can refer to materials on open education as well as those on facilities for "open schools" or "schools without walls."

- The search lends itself to illustrating the overlap in coverage by the different clearinghouses. The trainer might make a point of asking the trainees to identify the several clearinghouses that processed the materials into the ERIC system.

- The manual search, with careful reading of the abstracts or bibliographic citations, helps to illustrate the scope of materials that can be found on a single topic--within a single month's acquisitions. Trainees might be asked to suggest questions they would pose to the superintendent if they were to "renegotiate" the question.

To help the trainer in preparing for this exercise, the worksheets have been completed with suggested search terms, brief comments on each citations are provided. (The complete resumes for each ED and EJ reference are also included.)

WORKSHEET FOR RETRIEVAL EXERCISE--A

KEY CONCEPT OF THE SEARCH PROBLEM: Open Schools 1

Thesaurus Term: Open Education

| Accession No. | Relevant? | Comments |
|---|---|---|
| ED 062708 | | Introduces a new term, ALTERNATIVE SCHOOLS<br>A very specific situation--may not be appropriate for this District. |
| ED 062833 | | May be too theoretical. |
| ED 063043 | | Would probably need to skim document to judge relevance. |
| ED 062726 | ✓ | Looks good, even defines its terms. |
| ED 062681 | ? | Perhaps too broad, but a possible one. |
| ED 062605 | | University level (Should have been indexed by Open University?) |
| ED 063032 | ✓ | Covers an important planning step--preparing teachers for their role. |
| EJ 057167 | | Can't tell--would need to read article. |
| EJ 057263 | | Probably too theoretical--would have to read article. |
| EJ 057481 | | Perhaps more useful at a later stage--in planning for evaluation |
| EJ 057488 | | May be useful as background reading--but sounds theoretical. |
| EJ 058275 | | Too theoretical |
| EJ | | |
| EJ | | |

[3 per package]

WORKSHEET FOR RETRIEVAL EXERCISE--A

**KEY CONCEPT OF THE SEARCH PROBLEM:** Oepn Schools 2

Thesaurus Term: Open Plan Schools

| Accession No. | Relevant? | Comments |
|---|---|---|
| ED 063221 | ✓ | Looks useful. |
| ED 062726 | ✓ | |
| ED | | |
| ED | | |
| ED | | |
| ED | | |
| ED | | |
| EJ 057249 | | Can't really tell--would need to look at article. |
| EJ 057327 | ? | Perhaps useful. |
| EJ 057486 | | Perhaps useful for persuading skeptics, but less for concrete planning. |
| EJ 057487 | | Covers planning element, but would need document to see if ways of traing are described. |
| EJ 059499 | | More facility-design oriented. |
| EJ | | |
| EJ | | |

[3 per package]

WORKSHEET FOR RETRIEVAL EXERCISE--A

KEY CONCEPT OF THE SEARCH PROBLEM: Open Schools 3

Thesaurus Term: Flexible Classrooms

| Accession No. | Relevant? | Comments |
|---|---|---|
| ED ______ | | |
| ED ______ | | |
| ED ______ | | |
| ED ______ | | |
| ED ______ | | |
| ED ______ | | |
| ED ______ | | |
| EJ 057705 | | More philosophy than practice |
| EJ ______ | | |
| EJ ______ | | |
| EJ ______ | | |
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[3 per package]

SESSION NO. 17

## INTRODUCTION TO QUERY NEGOTIATION PROCESS--A

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide the trainee with an introductory-level exposure to the process of query negotiation, and a frame of reference from which he will be able to make future judgments regarding the negotiation process and his own mode of operation.

The five basic ingredients of a negotiation to be introduced in this session are the field agent's ability to:

1. Ask the right questions
2. Guide the discussion
3. Analyze the client's real concerns and motivations
4. Develop a sensitivity to the client's needs through the art of listening
5. Increase his personal rapport with the client

The initial exposure will be accomplished through the trainees' personal evaluation of a taped telephone interview between a field agent and a client. The trainee will be aided in his evaluation by an Observer Checklist that contains a series of questions and multiple-choice answers.

B. Participants

Trainers: One instructor to serve as the session moderator

Trainees: All

C. Summary of Module Activities

Following the session moderator's introductory statement, the trainees will listen to a taped interview of a telephone negotiation between a field agent and a client. The trainees will complete the Observer Checklist that is provided for their use during this session, following which they will participate in a brief discussion of their checklist responses. The trainees will then be divided into five groups. Each group will be assigned one of the five key concepts, e.g., asking the right question, listening, etc. The interview tape will be replayed, and another discussion period will be conducted by the session moderator in which each of the groups will comment on the key concept it was assigned. The session will be concluded by the moderator who will summarize the session results and emphasize the five key negotiation concepts around which this session is structured.

D. Duration

Two hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

1. The EIC Observer Checklist

2. A typed copy of the interview tape (Tape Cassette B: "A Negotiation Interview"--Side 2)

B. Trainee Preparatory Reading

1. A copy of the EIC "Observer Checklist"

2. Key Concepts - Session No. 17

C. Aids and Equipment

1. Cassette Recorder

2. Tape Cassette B: "A Negotiation Interview"--Side 2

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to Session | Presentation | 5 |
| Step 2 | Negotiation Tape Interview | Simulation | 15 |
| Step 3 | Trainee Completion of the "Observer Checklist" | Exercise | 10 |
| Step 4 | Review of Completed Checklists | Discussion | 20 |
| Step 5 | Replay of Negotiation Tape Interview | Simulation | 15 |

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 6 | Review of Those Portions of the Taped Interview Related to the Five Key Session Concepts | Discussion | 50 |
| Step 7 | Session Summary | Presentation | 5 |

IV. SPECIAL CONSIDERATIONS

It is important that the five key session concepts be emphasized throughout this session. For those attendees who will not be attending "The Query Negotiation Process--B" session, it should be the primary session goal. For those attendees who will participate in "The Query Negotiation Process--B", it is a necessary prerequisite.

V. CONDUCT OF THE SESSION

Step 1 Introduction to Session (5 minutes)

The introductory statement will describe three forms of communication between the field agent and the client, provide background information regarding the session simulation tape, and review the proper use of the Observer Checklist.

The field agent is likely to receive and negotiate client requests for information in one of three ways: (1) face-to-face, (2) in writing, and (3) over the telephone.

Face-to-face negotiation with a client is probably the most thorough and personalized mode for identifying a client's problem and establishing his information needs. This mode involves the application of both verbal and nonverbal communication skills.

The field agent will also receive written requests from clients for information on a variety of problems. These requests may come in the form of letters, memos, etc.

The third mode, telephone requests, can be an efficient and effective way to handle the negotiation of a client's problem. Success in this mode depends heavily on the field agent's use of verbal communication skills.

The tape you are about to hear is an example of a telephone interview between a field agent and a client. There are two important things to remember about this interview: (1) it is the second contact between the field agent and the client. The client is calling back to tell the field agent that she has picked a more specific subject area of the original problem and wants to discuss it with him, (2) it was not selected because it was a model negotiation. You should listen carefully for errors or mistakes as well as the good points you believe were made by the field agent in dealing with this client.

The taped negotiation will run for about 12 minutes. When it is over, you will be given 10 minutes to complete your Observer Checklist. We will then discuss the telephone negotiation between the field agent and his client in terms of your check-list responses.

Step 2 Negotiation Tape Interview (15 minutes)

Tape Cassette B: "A Negotiation Interview" (Side 2) is a taped telephone negotiation between a field agent and a client who is calling to discuss a change in subject specificity.

Step 3 Trainee Completion of the Observer Checklist (10 minutes)

Trainees will be given 10 minutes to complete their Observer Checklists.

Step 4 Review of Complete Checklists (20 minutes)

The purpose of this discussion period is to (1) stimulate as many trainees as possible to comment on their checklist responses, (2) provide each trainee with feedback as to how his responses matched up with other trainees in the group, (3) give the trainer some idea of the depth of understanding of the trainees regarding the contents of the simulation tape negotiation, and (4) provide the trainer with the opportunity to emphasize those portions of the negotiations that highlight the five basic negotiation ingredients that have been selected as key session concepts.

An attempt should be made to cover as many checklist items as possible and to ascertain which items evoke the most group interest. The instructor should also attempt to draw out the less vocal trainees, and thereby develop a full discussion among all the trainees.

Step 5 Replay of Negotiation Tape Interview (15 minutes)

The second simulation period is simply a rerun of the simulation tape (Tape Cassette B: "A Negotiation Interview"). The trainees are to be divided into five groups. Each group will concentrate on one of the five key concepts, e.g., asking the right question, listening, etc. It is expected that the narrowing of each trainee's focus to just one key concept, and the insight he has gained from the first group discussion, will enable him to listen with a more critical ear. He should also be able to reevaluate his own checklist responses.

Step 6 Review of Those Portions of the Taped Negotiation Interview Related to the Five Key Session Concepts (50 minutes)

During this discussion period, the trainer should ask each group of trainees to focus on the portions of the simulation tape that best illustrate the key session concept that they were assigned. The trainer should encourage all the trainees to comment and should expand on those comments that show new insight or a greater depth of understanding.

Step 7 Session Summary (5 minutes)

The trainer should briefly summarize the results of the session--commenting on any significant insights to the process of negotiation that were derived from the group discussions. He should then restate the five key concepts and emphasize their importance to the negotiation role of a field agent.

Through use of the negotiation interview tape, the Observer Checklist, and our group discussions, we have looked at the bits and pieces that add to and detract from a meaningful negotiation interview. However, before we break up this session, let us back off and look at the broader skills a field agent should possess if he is to conduct productive negotiation interviews and properly assess the needs of his clients.

- Questioning is an essential skill in negotiation. It enables the field agent to identify the real problem and to elicit from the client the information which is fundamental to the formulation and diagnosis of the problem.

- The ability to guide discussion is needed to provide structure for defining the problem clearly, and to help the client prioritize his informational needs.

- The ability to analyze the client is involved somewhat in negotiation, at least to the extent that the field agent can make inferences as to the real concerns, interests, and motivations of the client, and can judge the level of knowledge and sophistication of the client.

- Listening is an important skill, too. The field agent must comprehend fully and clearly what the client reveals about the problem and the information needed.

- Ability to develop rapport with the client is important if the client is to have confidence in the field agent's integrity, competence, and understanding of his needs.

SESSION NO. 17

# INTRODUCTION TO QUERY NEGOTIATION PROCESS--A

## A Negotiation Interview

[Reprinted from Far West Laboratory for Educational Research Development. The Educational Information Consultant (EIC): Skills in Disseminating Educational Information, Berkeley, California: Far West Laboratory for Educational Research and Development, 1972.]

## A NEGOTIATION INTERVIEW

M. R. Mr. Snyder?

L. S. Yes.

M. R. This is Meredith Ryan.

L. S. Meredith?

M. R. Remember, Mr. Snyder, I talked with you the other day about getting us some materials for our new social studies course. You know, the one at Lynch High School?

L. S. Oh, yes, of course. How are you?

M. R. Just fine, thanks. Well, the reason I'm calling is this--we've been talking, our curriculum committee I mean. We've been talking about the possibility of concentrating on just one issue in depth on that course I told you about instead of a number of different problems and issues.

L. S. I see, now just a second. Let me check my notes here before we go on. Let's see, you wanted to set up a one-semester course as an elective for the 11th and 12th grades, wasn't it?

M. R. That's right.

L. S. And you wanted me to look for materials you could use in the course.

M. R. Yes.

L. S. And now you're thinking about building the course around just one problem instead of several.

M. R. Right.

L. S. Well, that sounds like a good idea, but I am going to have to change my search plans. Could you tell me a little more about what you have in mind?

M. R. O.K. Well, we were thinking that ecology has become such a popular issue nowadays, and a lot of our students seem quite interested in it. You know, they've formed an ecology club. They call themselves "The Clean, Green Team Conspiracy." Well, anyway, we thought ecology would be a good topic. We could use the same format for the course everytime we teach it, but around a different topic. Whatever's current then is the theme.

L. S. You mean, each teacher would pick his own theme?

M. R. Oh no, we're all going to follow the same theme, but the theme would change each year.

L. S. I see. Well, about that format, do you still want the course to be about 15 weeks long and break it up into two-week modules?

M. R. Yes, we do. We sort of thought that each module could focus on a special aspect of the main topic.

L. S. Good, but ecology is a large topic. You know it takes in conservation, overpopulation, pollution, just to name a few. Did you want to touch on all of those things?

M. R. No, we were concerned about that ourselves. We thought we'd like to concentrate just on pollution, especially because our area has been hit so much in the past few years by the oil industry's problems with drilling and spilling. You know, it's a hot topic right now.

L. S. It sure is. Even so pollution is still a pretty big topic. Had you thought about concentrating on one kind of pollution--maybe sound pollution or air or water pollution.

M. R. Well, as I said about the oil industry, there's been spillage in our waters. And then, there was the crash of the tankers in San Francisco Bay and the offshore drilling problems in Santa Barbara, Louisiana, and Texas. Then there was the problem in England about that tanker, "The Torrey Pines." So. . .

L. S. Oh, I see. You want to study pollution problems caused by the oil industry.

M. R. No, that's not it--more general than that.

L. S. Well, how, how general do you mean?

M. R. Well, we're interested more in using the oil industry problems as cases and examples of water pollution.

L. S. Oh, uh, could you expand on that? Tell me more about how you'd like to approach this idea.

M. R. Well, we don't want to concentrate on the technical side of water pollution. We want to bring out the social and political end of it.

L. S. Mm-hm.

M. R. And, we thought that talking about the effects of some of the incidents I mentioned might be a good approach.

L. S. What do you mean by effects?

M. R. Oh, effects on the community, the government, and so on. For example, if we use the San Francisco case, students would discuss how people from different age groups and classes and organizations pull together and work together to save the wildlife. You see, we really want students to examine the personal, the social, and political conditions related to water pollution.

L. S. I see, for example, you might want to talk about how people cleaned off the birds in San Francisco Bay.

M. R. Um, well, that's not exactly what we had in mind.

L. S. Oh, could you clarify your idea a little more for me then?

M. R. Well, as I said, we really want students to examine the social, political, and other side effects, the ramifications of incidents affecting water pollution, not just the incidents themselves or the people involved.

L. S. Then, you mean you could build on these side effects as sub-topics for the modules in the course.

M. R. Yes, that's it. You know, like community action could be a sub-topic--how different groups and individuals rally together in response to a common concern.

L. S. O.K. Then, uh, perhaps it would help to list some other possible sub-topics. Do you have some in mind?

M. R. Well, one thing we're particularly interested in, since this is a social studies course is the legislative aspects of the problem.

L. S. Mm-hm. Could you explain what you mean?

M. R. We want students to consider legislation about pollution that grows out of incidents like oil spills--the development of preventive and regulatory legislation. We want to consider politics too, lobbyist activities by the oil industry representatives and conservation groups like the Sierra Club and Friends of the Earth. Oh, and also, how this might affect elections.

L. S. Do you mean federal or state elections?

M. R. Both, I think, yes, both. Oh, and that should also cover governmental action, agency review, inter-agency coordination, and that sort of thing.

L. S. How about listing that as a separate topic, separate from legislative reaction?

M. R. Hm, yeah, that sounds like a good idea.

L. S. O.K. Anything else?

M. R. Hm, let's see, well, there's the historical side of it too. Students shouldn't look at an incident in an isolated way. They need some kind of perspective on the problem. They should examine past cases, look for relationships among incidents.

L. S. I see what you mean like comparing the "Torrey Pines" tanker case to the San Francisco Bay crash.

M. R. Yes.

L. S. O.K. Any other topics you'd like to cover?

M. R. Um, I guess we should touch on economic issues--you know, lawsuits, property damage, and so forth. I think that should be one of our shorter modules though.

L. S. O.K. Any other topics?

M. R. Um, no, I think that's about it.

L. S. All right. Now, let me list these topics again to make sure I've got them straight. Your major theme will be water pollution with case material based on the oil spillage and drilling problems, right?

M. R. Right.

L. S. Then, sub-topics for the modules will be community and social action, legislation, governmental agency involvement, political action, historical review, and economic issues. Does that sound right?

M. R. Yes, sounds good to me.

L. S. O.K. Now that we've got those topics in mind, let's talk about the materials you want me to locate for you. What kind of information do you think you'll need?

M. R. Well, we definitely want to review some sample materials--stuff we could use for case histories and readings in the different modules.

L. S. How about anything else? Would you be interested in any programs or short teaching units that are available?

M. R. Well, if they deal with the problem of pollution we'd certainly like to look at those. I suppose we might be able to use parts of them and maybe even pick up the whole thing.

L. S. You want published materials?

M. R. Yes, do you know of any?

L. S. I do know that there were a few being developed, and since the demands for educational materials on this topic has grown so much lately, I think some might be in publication now, but I'll have to check that out for you. Maybe I can find some curriculum guides or course outlines that other schools have developed.

M. R. Mm, yes, that would really help.

L. S. Would you or anyone on your committee be interested in visiting such programs or talking to the people responsible fo them?

M. R. We would, but it depends on the time it would take.

L. S. Well, how about if I confine the list to people in schools in the area?

M. R. Yes, that would make it much easier for us.

L. S. O.K. Any other information I should look for?

M. R. Um es, on those published materials and curriculum guides, we'd especially like to see any evaluations of them.

L. S. You mean things like federal reports, data on achievement, teacher comments.

M. R. Yes, definitely, all of those things.

L. S. Anything else?

M. R. Mm, no, I don't think so.

L. S. O.K. Then what you want are sample instructional materials and evaluations and some histories and reading material.

M. R. Yes.

L. S. Is there anything you're especially looking for in these materials?

M. R. Uh, I'm not sure what you mean.

L. S. Well, for example, do you want a lot of films and filmstrips?

M. R. Oh, I see. No, we want our course to emphasize student activity, so the materials would have to be pretty flexible. We want a lot of room for student-initiated activity, materials that call for teacher guidance and questioning, but not a lot of lecture or direction.

L. S. Mm-hm.

M. R. And we really want students to learn skills and processes. We'll try to use this content as a vehicle to teach the social science method.

L. S. O.K. That's quite helpful for me to know. Now, how about ability levels? Are your students grouped homogeneously?

M. R. No, they're not.

L. S. So, you'd want materials that could be adjusted for students of varying abilities.

M. R. Yes, definitely.

L. S. O.K. I think I've got the information I need to start looking. One more thing though, when do you and your committee want to begin reviewing the materials?

M. R. Well, our next meeting is a week from Tuesday, and I'd like to have some samples to show them then.

L. S. Mm-hm, and how do you plan to do your review?

M. R. Well, we'll probably divide up the materials, each of us reviewing some individually, and then reporting back our evaluations of the material to the rest of the group at the committee meeting.

L. S. And when do you have to have your course outline ready?

M. R. In about six weeks.

L. S. O.K. I'll do everything I can to get some sample materials to you.

M. R. Great, and thanks so much.

L. S. Oh, glad I can help. I'll send the materials to you a couple of days before your meeting, and in case I have any questions, can you give me your phone number?

M. R. Mm-hm, Maryhill 4-6803.

L. S. O.K. Then good to talk to you, Meredith.

M. R. Thank you. Good-bye, Mr. Snyder.

SESSION NO. 18

## THE QUERY NEGOTIATION PROCESS--B

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

The purpose of this session is to provide the trainees with an opportunity to acquire practical experience in one or more role-playing exercises that demonstrate the five basic negotiation ingredients identified in the Introduction to Query Negotiation Process--A.

Upon completion of this session, each trainee should be able to prepare for the conduct of a Query Negotiation in which he could apply his understanding of:

Asking the right questions
Guiding the discussion
Developing a sensitivity to the client's needs through the art of listening
Increasing his personal rapport with the client

B. Participants

Trainers: A session moderator and two experienced field agents to conduct the role-playing exercises
Trainees: Field agents and project managers directors

C. Summary of Module Activities

This session should be conducted by a panel of three trainers: one to serve as the moderator and two to conduct the role-playing exercises.

The session moderator will be responsible for the Introductory Statement and presentation of the Session Summary (Steps 1 and 7). The other two trainers, in addition to providing the moderator with additional technical expertise, will be responsible for the presentation of the five key session concepts (Steps 2 through 6). Before each role-playing exercise a trainer will provide a definitive description of the session concept, and set the stage for the field agent/client negotiation. He will then be aided by two trainees for each of the two exercises. Following the role-playing exercises, the trainer will moderate a brief discussion period.

After all five concepts have been described, demonstrated, and discussed, the session moderator will present the Session Summary.

D. Duration

Three hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

None

B. Trainee Preparatory Reading

The "Set the Stage" scripts for the ten role-playing exercises

C. Aids and Equipment

None

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Session Introduction | Presentation | 1 |
| Step 2 | Key Concept No. 1: Asking the Right Questions | Presentation<br>Exercise/Discussion | 33 |
| Step 3 | Key Concept No. 2: Guiding the Discussion | Presentation<br>Exercise/Discussion | 33 |
| Step 4 | Key Concept No. 3: Analyzing the Client's Real Concerns | Presentation<br>Exercise/Discussion | 33 |
| Step 5 | Key Concept No. 4: Learning to Listen | Presentation<br>Exercise/Discussion | 33 |
| Step 6 | Key Concept No. 5: Establishing Rapport with the Client | Presentation<br>Exercise/Discussion | 33 |
| Step 7 | Session Summary | Discussion/Presentation | 14 |

IV. SPECIAL CONSIDERATIONS

While it is recommended that practical experience in conducting a field agent/client negotiation be a part of this session's objective for each trainee, discretion should be used in attempting to achieve this goal. Consideration should be given to optional approaches such as having the two trainers demonstrate the first exercise, or using a trainer in the client role to encourage and assist the trainee if the interview begins to falter. Also, observation of the trainees would be most comfortable in a role-playing situation. Role-playing is not equally suited to all individuals in any group. Many individuals who are capable of conducting a successful negotiation interview are unable to cope with the theatrical aspects of a role-playing exercise. The best guideline to follow, therefore, is to plan options in advance of the session and to be ready to employ them if the situation indicates a need to do so.

## V. CONDUCT OF THE SESSION

Step 1 Session Introduction (1 minute)

The purpose of this session is to provide you with the opportunity to acquire practical experience in one or more role playing exercises. Each exercise has been designed to demonstrate one of the five basic negotiation ingredients identified in the introductory query negotiation session that you attended earlier.

We hope you will feel comfortable in joining us as we enact several of these situations and discuss some of the possible approaches and considerations involved in each.

Step 2 Key Concept No. 1: Asking the Right Questions (33 minutes)

The portion of the interview process that deals most directly with information gathering on the part of the field agent is that of asking the right questions.

No interview can be considered successful if the information required for proceeding to the next step in the field agent/client relationship is not acquired. Of the five key concepts to be covered in this session, the questioning process is perhaps the most basic, the most structured, and quite likely the most mechanical. It is basic in the sense that questions lead to the answers that are needed to continue the interview, or assist the field agent in his task of satisfying the informational requirements of the client. Structured, from the standpoint that questions can be viewed as the building blocks that make up a complete interview; mechanical because the questions asked during an interview can be listed under the rather standard headings of what, where, when, who, why, how, etc. But don't make the mistake of concluding that something that is basic, structured, and mechanical is also simple. Remember, the title of this concept is not "Asking Questions," but is "Asking the Right Questions." And I might add--, "at the Right Time and in the Right Way."

If a question is to be more than just a question--a "right question," it must have a purpose. This is where your interview questions begin to interleave with the other four key concepts. Therefore, <u>what is the purpose of your question</u>? Are you attempting to guide the discussion in a direction that you believe will be more productive? If you are, you should be fairly certain that the new direction you have chosen is the proper way to go. Are you asking a specific question that will allow you to evaluate the client's response and thereby analyze his real concerns and motivations? If so, you must first analyze your own feelings about the client's problem. If you do not, you might very well read your own concerns and motivations into the client's response and miss his point of view entirely. Are you asking a question that you hope will draw out the client? If that is your purpose, remember that gaining insight to a problem is a two-way street. Both you and the client can benefit from this kind of question. You should be ready to act as a sounding board as well as a sponge. If, during the listening process, you are able to interject brief but pertinent comments, the client may provide you with a major portion of your informational needs. Finally, are you asking a question to help you establish rapport with the client? If so, you should be ready to comment on the client's response. For example, a very commonplace question might be, "How are you today?" How do you answer if the client's response is, "I feel terrible," rather than the usual response of "Fine."? In other words, if you are using a question in an attempt to establish rapport, be certain you are ready to respond intelligently to the unexpected as well as the expected answer to your questions.

Asking questions at the right time and in the right way is a subjective decision the field agent must make every time he conducts an interview. All the standard interpersonal interviewing techniques come into play. The field agent not only needs to know the interviewing techniques that best fit his own personality, but should also attempt to use an approach that will put the client at ease.

The two exercises we have prepared for you are intended to emphasize the importance of "asking the right questions."

Set the Stage for Exercise No. 1

The field agent is attending a meeting of guidance counselors from schools in his district. During a coffee break he is engaged in casual conversation by one of the counselors. The counselor is new to the district and is unaware of the service provided by the field agent. The field agent briefly explains his position and role in the district. As the counselor begins to tell about a problem in his school concerning underachieving students, the meeting is called back to order. The field agent quickly suggests they get together immediately after the meeting in a nearby coffee shop. The counselor agrees. The field agent and counselor are now at the coffee shop. All preliminary conversation and explanation of the field agent's role has been completed.

The counselor has been prepared for the field agent's first question regarding the problem he commented on earlier in the evening. The field agent is the first to speak -

Discussion Period (Conducted by trainer)

The trainer should emphasize the portion of the interview related to the insight and appropriateness of the field agent's questions.

Did the field agent:

1. Open the interview with a question that encouraged the counselor to describe his problem regarding underachieving students, or did the lead off question just require a simple "yes" or "no" answer?

2. Use the information provided by the counselor to frame questions that would further define the problem?

3. Ask the counselor any questions that cause him to consider the possibility of some underlying social problem that might be a significant factor that was contributiong to the low level of academic achievement within his school?

4. Ask whether the problem was related to specific subjects or was of a more general nature?

5. Ask if other schools in the district were experiencing similar problems? If so, were there areas of difference as well as similarities?

6. Suggest any specific types of resources he had which might be of value, and ask the counselor for his opinion regarding their appropriateness?

Set the Stage for Exercise No. 2

TRAINER NOTES:

In this role-playing exercise a trainer should take the part of the "meeting chairman". This will give the trainer the opportunity randomly of involving several other session attendees in the exercise by asking them to comment or respond to questions as the need arises. This will require the person who has assumed the field agent role simultaneously to interact with a number of individuals in much the same way as he would in an actual group meeting.

The field agent is attending a meeting of junior high school teachers who are discussing the need to develop a long range program for the purchase and coordinated use of a number of new films they plan to add to their film library. He has not yet been called on to speak. A few of the more vocal teachers are monopolizing the floor. Their conversation to this point has consisted primarily of complaining about the lack of good films. No attempt has been made to structure a plan. Finally, the meeting chairman breaks in and asks the field agent to comment. The field agent, not wishing to appear too authoritative, decides to ask the chairman a question he believes will provide some constructive direction to the meeting.

Discussion Period (Conducted by trainer)

Did the field agent:

1. Succeed in providing some constructive direction to the meeting with his opening question?

2. Ask questions regarding the current size and subject content of the present film library, availability of funds, possibility of checking with other schools in the district to see if they would be interested in a cooperative venture, etc.?

3. Answer some of the questions put to him by the other meeting attendees with a question of his own to define their questions further?

4. Succeed in staying out of the spotlight by putting the chairman back in control of a meeting that was now generating some constructive comments?

Step 3 Key Concept No. 2: Guiding the Discussion (33 minutes)

Definitive Description of the Concept

The importance of guiding the discussion should not be overlooked in any description of the interview process. Simply stated, it means that you, the field agent, control the format and direction of the interview.

This key concept carries with it a certain degree of responsibility. As in any other form of interpersonal relationship, when you are in charge you are also responsible for the final results. Do not associate this concept with any one approach to interviewing. The concept is that the field agent should establish an interview format that he believes will best serve the needs of the client. The format may vary from one that allows the free association of ideas related to the client's stated problem to a highly structured and formal interview. In many cases the approach may change during the interview or over a period of several interviews from free association to a more structured format. In any event--whether the interview is formal or informal, structured or free--the field agent should attempt to establish and maintain control of the interview.

Another aspect of guiding the discussion is that of either directing a client down a certain path during the interview or redirecting the client who begins to wander off the subject. In either case the field agent should use discretion. For example, while on a vacation trip many of you have probably realized your greatest enjoyment and satisfaction through an unplanned excursion down a side road. Of course, you probably have run out of gas also or been stuck in the mud on similar side trips. The field agent needs to use good judgment about when "side trips" should be taken and how long he should allow the client to stay off the main road.

In brief, the field agent is responsible for assessing the situation and establishing an interview format best suited to the client's position, personality, and stated problem.

The field agent should be flexible in his approach, but should remain in control of the interview. Finally, he should remember that because he is in control, he is also responsible for the results.

Let us go ahead with our next two exercises and see what develops.

Exercise No. 1

The field agent is discussing a plan that a local high school principal has for involving the students in a drug education program.

While the principal says he is convinced that "The kids need to participate actively in the development of the program if it is to be a success," he is hesitant about allowing them freedom in the selection of guest speakers, films, and drug abuse literature.

The field agent, sensing the conflict between the principal's goal of student involvement and his lack of confidence in the students' judgment, is faced with the need to redirect the discussion and reassure the principal. The field agent comments...

Discussion Period (Conducted by trainer)

Did the field agent:

1. Clearly define his role and the potential value of his service?

2. Attempt to find out the key interests of the principal, and thereby find some service he could perform that would demonstrate his service?

3. Present himself and his service in a nonthreatening way so that there may be an initial attempt to guide the discussion away from the fears and suspicions of the principal and toward a more open and friendly relationship?

Step 4 Key Concept No. 3: Analyzing the Client's Real Concerns and Motivations (33 minutes)

Definitive Description of the Concept

Analysis of a client's real concerns and motivations is very possibly the most difficult of the five key concepts to achieve. Very often the field agent must read between the lines and look behind the statements of a client to assess his true needs. For example, many requests for information are simple and straightforward, but others will require the field agent's assistance in the formulation of the problem statement as well as the information request. The overgeneralization of a problem can result in too much information being requested which in turn may discourage the client from using any of the information provided. Conversely, if the information acquired from the client is too sketchy or the problem statement is drafted with too much specificity, important supporting concepts underlying the problem may be overlooked.

Misinformation also might be provided to a client if his real concerns and motivations are not surfaced by the field agent. For example, many problems facing educators today stem from Supreme Court decision concerning the violation of individual rights. Requests for information regarding religious courses, dress codes, moral conduct, extracurricular activities, off-campus clubs, etc., may not be identified initially by the client as legal problems. the requests may ask only for information as to what other schools are doing. Two obvious problems associated with responding to this type of request without checking possible legal aspects are (1) the practices of other schools may never have been legal, and (2) the information provided may reference school practices that were legal when adopted in the past, but need to be changed because of recent court rulings.

Very often the real concerns and motivations of a client can be discovered by finding out how he plans to use the information provided.

In summary, field agents should attempt to develop a sensitivity to their clients' real concerns and motivations. Many unspoken concerns can be uncovered through a definitive development of the problem statement and a more complete description of the information use.

Exercise No. 1

The field agent is conducting an interview with a vice-principal of an inner-city high school who is interested in the development of an expanded intramural sports program at his school. The student body of approximately 1000 is composed of 42% Mexican-American, 40% black, and 18% white. Due to district-level fiscal problems, the athletic program has been severely curtailed. The vice-principal believes the athletic program in his school has been a racially unifying force, and attributes a recent increase in racial tension to its curtailment. Seemingly he has not considered any of the other social aspects of racial conflict that are present in his community.

The vice-principal has told the field agent about the reduced school budget and the resultant de-emphasis of sports at his school. He has not, however, voiced his real concern that an actual outbreak of violence may occur within his student body. His belief that a topflight sports program will reverse the recent trend is probably just wishful thinking.

As the exercise interview opens, the vice-principal is asking the field agent if he has any information regarding the development of expanded intramural programs in other inner-city schools where athletics budgets have been curtailed.

Discussion Period (Conducted by trainer)

Did the field agent:

1. Surface the fear of the vice-principal regarding the threat of a racial outbreak?

2. Suggest the possibility of other community problems that could be contributing to the increased racial tension? Also, available resources that might provide additional insight regarding the role that a school might play in alleviating racial tension within the community?

3. Suggest the idea of promoting a student program directed toward encouraging open expression and group participation in solving the problem that the students believe to be the cause of racial tension within the school.

Exercise No. 2

The field agent received a telephone request from an elementary teacher for information regarding different forms of student grading systems in use within her state. The field agent complied with her request, and made an appointment to deliver the material to her in person.

During his explanation of the contents of the package, she casually mentioned that this was her first year of teaching and that "parent conferences scare me to death." This clue led the field agent to discuss in more detail the real concern she neglected to reveal in her telephone conversation (the conduct of parent-teacher conferences).

The field agent is the first to speak.

Discussion Period (Conducted by trainer

Did the field agent:

1. Appear to understand the new teacher's fear of conducting parent/teacher conferences?

2. Suggest other available resources that might be helpful in conducting small meetings?

3. Offer to discuss the matter with other teachers that he knew to find out how they prepared for parent/teacher conferences?

4. Generally encourage the teacher by commenting on the good comments he had heard about her from the other teachers?

5. Suggest that she openly discuss her fear with someone in her school that she respected and trusted?

Step 5 Key Concept No. 4: Learning to Listen (33 minutes)

Definitive Description of the Concept

The art of listening cannot be overstressed. The field agent who is an active listener will find that he is also enhancing his ability to do well with the other four key concepts we are discussing today. In contrasting an active listener with a passive listener, an active listener's mind is wide awake and alert...fully focused on the attitude and unspoken intent of the client's words as well as his verbalization of the problem. A passive listener is one who, while the client is speaking, is thinking about what he wants to say next, and is not too interested in the client's statements. Perhaps he feels he has the problem figured out already. Or, worse yet, he may be saying "yes, I see, uh-huh...," but is not fully listening to or comprehending the client's viewpoint.

With reference to the other four key concepts, an active listener will be better prepared to ask the right question at the right time and in the right way. He will also be able to use better judgment in his attempt to guide the discussion because the real concerns and motivations of the client will be more discernible. Finally, the field agent who wishes to develop better rapport with his client should not overlook the advantages of being a good listener. Clients are people, and being a "people" yourself should convince you of the importance of letting the client know that you believe his problem is important enough to merit your undivided and active interpersonal attention.

The demonstration we have prepared for today regarding the art of listening should not be viewed as a one-sided conversation The trainee who is role-playing the field agent should, in addition to being an active listener, ask the right questions, guide the discussion, uncover the client's real concerns and motivations, and establish rapport with the client. Those of you who are observing the demonstration should watch for unspoken actions such as hand gestures, head motions, eye contact, and other ploys used by the field agent to guide and encourage the client.

Exercise No. 1

The field agent is working very hard on a program that is intended to evaluate the results of a new method of teaching history.

During a visit to one of the high schools in his district that is participating in the design of the program, he is confronted by a history teacher who has some very negative comments to make about the value of the program.

The teacher speaks first.

Discussion Period (Conducted by trainer)

Did the field agent:

1. React defensively?

2. Listen actively?

3. Express an interest in the teacher's comments and solicit his aid in re-evaluating the documentation related to the phases of the program he was objecting to?

Exercise No. 2

A field agent is making a personal visit to the office of a high school principal with whom he has been friends for some time. His opening remark is "Good morning, George. I haven't seen you for several months now. Is there anything going on around here that I ought to know about?"

Discussion Period (Conducted by trainer)

Did the field agent:

1. Use his opening remark as a friendly comment? (Or, did he begin to pry and gossip?)
2. Take advantage of his friendship and occupy too much of the principal's time?
3. Take the opportunity to comment briefly on any new resources or services that he believed might be of interest to the principal?

Step 6 Key Concept No. 5: Establishing Rapport with the Client (33 minutes)

Definitive Description of the Concept

The establishment of good rapport is primarily the responsibility of the field agent. A good working relationship between the field agent and client is an absolute requirement if the full potential of the negotiation process is to be realized.

Interpersonal interviewing techniques may vary, but the field agent who totally relies on personal flattery to establish rapport may find that his relationship with the client is deteriorating after a time. While a sincere form of flattery may help to break the ice with a client, any lasting relationship must be based on mutual respect and the client's confidence in the field agent's professional competency.

Exercise No. 1

The field agent is making a personal call on a social science teacher in a local junior high school. The teacher was referred to the field agent by the school principal. All the field agent knows about the teacher is his name and the course that he teaches. The field agent has never been to this school before. His only contact with the principal was a brief meeting at a district curriculum conference where he had made a presentation regarding his role in the district and the kinds of resources available to him.

The principal had indicated an interest in the field agent's services and had suggested that he make an appointment to talk with the social science teacher.

Discussion Period (Conducted by trainer)

Did the field agent:

1. Take the time properly to introduce himself and to explain briefly his role and services?

2. Demonstrate his interest in the teacher's current program by being a good listener?

3. Express an interest in being of service if the teacher should need additional social science resource material? (Or, did he present himself as a problem solver?).

4. Succeed in creating a friendly, and professional, image in his first meeting with this teacher?

Exercise No. 2

The field agent was contacted by the secretary of a high school principal who was new to the area. The secretary indicated an interest on the part of the principal in becoming acquainted with the field agent. Furthermore, she mentioned the name of a field agent in a city nearby that the principal had worked with in the past. The field agent expressed his interest in meeting the principal, and a meeting date was set.

Before the meeting, the field agent contacted the field agent in the city nearby and obtained the following information:

- The principal is in his late forties; he is cordial but businesslike.

- He is a graduate of USC and holds a master's degree in Business Administration.

- He has been president of the principals' association in his former area.

- He is a sports enthusiast, and actively participates in sports such as golf, hand ball, and swimming.

- Most of the serv  the field agent in the city nearby had provided him were related to his interest in educational research; especially curriculum development and new teaching methods.

- He was well respected by his colleagues, but was known for his "take-charge" personality. Projects he was associated with had a way of "getting done."

The initial meeting between the field agent and the principal takes place with the secretary ushering the field agent into the principal's office and the principal saying "Good morning. I've been looking forward to meeting you."

<u>Discussion Period (Conducted by trainer)</u>

Did the field agent:

1. Speak up clearly and present himself in a friendly, professional manner?

2. Answer the principal's questions directly" (Or, did he ramble?)

3. Use the information he received from the field agent in the city nearby to establish good rapport with the principal?

Step 7 Session Summary (14 minutes)

The session moderator should conduct a brief discussion period; he then should critique the session by emphasizing the major points that were made regarding each of the five key session concepts.

SESSION NO. 19

RETRIEVING ERIC INFORMATION--B

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To help trainees acquire skill in selecting descriptors and formulating search strategies for computer searching--using Boolean logic--through problem solving with the Thesaurus and use of on-line retrieval systems.

Upon completion of this module, trainees should be able to:

1. Develop search statements, using the Boolean operators AND, OR, and AND NOT

2. Apply different search strategies to broaden searches (for low-yield search results) or to limit searches (for high-yield search results)

3. Understand some of the decision points that are involved in selecting from among alternative search strategies

B. Participants

Trainers: One instructor and at least one assistant, per terminal, who is familiar with the particular on-line system being used

Trainees: Retrieval specialists

C. Summary c Module Activities

The instructor introduces the concept of Boolean logic and its application in formulating searches. This 15-minute introduction is followed by an exercise period in which each trainee is asked to select terms from the Thesaurus and prepare Boolean searches for several problem statements. The trainees are then divided into small groups to submit their search strategies to search specialists working with an on-line system. After this demonstration the groups are convened to discuss the variations in search results produced by alternative search strategies. This session concludes with a brief summary presentation and discussion of the critical decision points in developing search strategies.

D. Duration

Three hours

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Mathies, M. L. and Peter G. Watson. Computer-Based Reference Service (To be published by American Library Association, Summer 1973.) [Part Two]

2. SDC. SDC/ERIC User Manual, January 1973. [Chapter VII]

3. Lockheed. User Manual for DIALOG.

4. Resource Information Center, Grand Forks, North Dakota. An Alternative to Query.

5. Macmillan Information. Myriad-ERIC Search System: Instruction Manual.

### B. Trainee Preparatory Reading

1. Mathies, M. L. and Peter G. Watson. Computer-Based Reference Service. (To be published by American Library Association, Summer 1973.) [Part Two]

2. Sample Search Statements for Level-Related Terms

3. Sample On-Line Search Printouts

4. Sample Coding Sheets for Batch Systems

### C. Aids and Equipment

1. At the beginning of Step 2, the instructor should distribute copies of the Thesaurus of ERIC Descriptors.

2. "Retrieval Exercises--B," to be completed during the session, are included in the trainees' packages.

3. A terminal should be available for each of three or four trainees involved in the session, with a telephone and table for each terminal.

### D. Other

The trainer should work with the terminal operators before the session, reviewing the search exercises and discussing the kinds of search experiences the trainees should observe. The trainer and the terminal operators should be prepared to initiate activities t the terminal to demonstrate principles that are not necessarily illustrated by the trainees' suggested search formulations.

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to Boolean Logic | Presentation/Discussion | 30 |
| Step 2 | Developing Search Statements Using Boolean Operators | Completion of "Retrieval Exercises--B" by Individual Treainees | 30 |
| Step 3 | Demonstration of Search Results for "Retrieval Exercises--B" | On-Line Demonstration | 60 |
| Step 4 | Review of Search Results | Discussion | 45 |
| Step 5 | Summary of Searching Strategies | Presentation/Discussion | 15 |

IV. SPECIAL CONSIDERATIONS

Although this session could be conducted without the on-line system segment (Step 3), trainers are strongly encouraged to provide for its inclusion so that trainees can "see" retrieval occurring and receive immediate feedback on the impact of their decisions during the training session. If access to an on-line system cannot be obtained, this session should include more discussion time on the review of the paper/pencil printouts to illustrate some of the searches and variations in search results.

V. CONDUCT OF THE SESSION

Step 1 Introduction to Boolean Logic (15 minutes)

Boolean logic, named after the English mathematician George Boole, is one way in which a file of bibliographic information can be searched by computers. I think you can gain some degree of expertise and reduce some of the confusion associated with the application of Boolean logic to search formulations if we examine a few essential principles that are involved and note some of the more common problems that occur in practice.

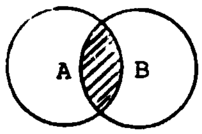
[The trainer should illustrate the concepts introduced in this section on a chalkboard.]

Point 1: Boolean logic employs the most basic form of logic: something is either present or absent; it is there or not there. Thus, in specifying one term in relation to another, the computer checks for the presence or absence of these specifications in the file.

Point 2: Your specifications are stated in terms of one of three conditions: AND, OR, or NOT (perhaps more easily thought of as AND NOT).

[Place three Venn diagrams on the board and ask the trainees to indicate which parts of the circles would be retrieved by each logical operator.]

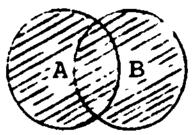
AND



A AND B

[When two or more terms are linked by AND, the computer retrieves only those document citations that have been indexed by all the ANDed terms in the search statement.]

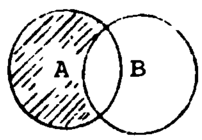
OR




A OR B

[When two or more terms are linked by OR, the computer retrieves all document citations that have been indexed by either one or more of the ORed terms in the search statement.]

AND NOT

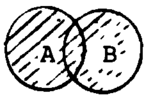
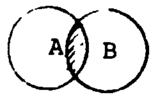



A AND NOT B

[When terms are linked by an AND NOT, the computer rejects any document citations that have been indexed by those terms.

Stated another way, the computer retrieves only those document citations that meet the positively stated specifications, and excludes the negated term(s).]

Point 3. A common source of confusion lies in the difference between our natural-language meaning of "and" (little a-n-d) and the Boolean logic operators. In stating requirements of and ORed statement--TERM A OR TERM B--in plain English, we might say, for example, "I want all the documents that are indexed by either Term A or Term B, and those indexed by both terms." However, a client will not state his requirements in those explicit terms; most likely he would say, "I want information on A and B." However, it is the responsibility of the field agent or the retrieval specialist who is working with the client to find out what the "and" means during the query-negotiation process.

| BOOLEAN "OR" | BOOLEAN "AND" |
| --- | --- |
| A OR B = | A AND B = |
| A only | A AND B only |
| +B only | |
| +A AND B | |
| Total:   | Total:   |

As you can see, the Boolean OR will yield a far greater number of document citations than the Boolean AND. To distinguish between the two, it is often useful to think of AND as being restrictive and OR as being comprehensive. This kind of thinking must be in the back of the query negotiator's mind when he or she is talking to the client, to insure that the natural language statement of the problem can later be translated into the most appropriate Boolean statement, or that the latitude in developing Boolean statements is clearly understood.

Point 4: The use of OR broadens a search; AND limits or narrows a search.

Before we continue to Point 5, let's work through one problem together. Imagine that we are working with a superintendent who wishes to obtain planning information on year-round schools and is particularly interested in cost-related information.

[The trainer should ask the group to suggest some <u>Thesaurus</u> terms for each concept in the search problem, and then show how each of the terms would be ORed in several statements to start broadly, and how the ANDing of groups or "sets" of descriptors then restricts the search. (Since systems vary in how they handle combinations of Boolean operators, the trainer can use both parentheses and sets to illustrate on the board the search statement logic.)] For example, one formulation for this particular search problem is:

((YEAR ROUND SCHOOLS OR EXTENDED SCHOOL YEAR OR
TRIMESTER SCHEDULES)
AND
(EDUCATIONAL FINANCE OR COST EFFECTIVENESS OR OPERATING
EXPENSES OR BUDGETING)
AND
(EDUCATIONAL PLANNING OR SCHOOL PLANNING))

Another way to think of the relationships is in "sets":

| | Set 1 | | | Set 2 | | | Set 3 |
|---|---|---|---|---|---|---|---|
| | YEAR ROUND SCHOOLS | | | EDUCATIONAL FINANCE | | | EDUCATIONAL PLANNING |
| OR | EXTENDED SCHOOL YEAR | AND | OR | COST EFFECTIVENESS | AND | OR | SCHOOL PLANNING |
| OR | TRIMESTER SCHEDULES | | | OPERATING EXPENSES | | | |
| | | | | BUDGETING | | | |
| | POSTINGS = 135 | | | POSTINGS = 3265 | | | POSTINGS = 2230 |

A search on several combinations of sets results in different postings levels, i.e., the number of documents in the file that meets the particular specifications:

1 AND 2 = 29 postings

1 AND 3 = 4 postings

1 AND 2 AND 3 = 0 postings

Because the combination of all sets of terms produces a "no-hit" situation, the searcher might choose to use the following search combination:

1 AND 2 OR 1 AND 3 = 33 postings

In this case, the main concept (YEAR ROUND SCHOOLS) is matched with both secondary concepts, and then ORed to approach a more comprehensive search strategy than the combination of the main concept with only one secondary concept.

Point 5: Although you may decide to coordinate only two terms (A AND B), you frequently run two risks: (1) you may not retrieve comprehensively on your search, and (2) you may not get any "hits," i.e., there may not be any document citations indexed by both of the particular terms. This element of surprise becomes more acute in batch-mode searching, and the overly comprehensive search formulation is a safeguard against lost time in discovering this "no hit" situation only after a run has been made. The first risk takes us back to the first Retrieval Module in our discussion of the ERIC indexing and the need to select several appropriate terms. The second risk is directly related to file size and the number of postings (i.e., frequency with which any given term hs been used to index documents). As of June 1971, three-fourths of the some 7000 ERIC descriptors were indexed to fewer than 100 documents, although some terms had postings as high as 1500 and over. You can see that the probabilities for finding a match or hit for only two terms (e.g., if TERM A has 25 postings and TERM B has only 6 postings) are much lower than if you had said:

( (A OR H OR K) AND (B OR G OR Z) )

Postings = 150    Postings = 80

Step 2 Developing Search Statements Using Boolean Operators (30 minutes)

For the remainder of this session we will be working on and discussing several exercises, which have been drawn primarily from the request files of the San Mateo center. The first step in preparing for a search is to review the problem statement and select the resources that are going to be used. For some of the problems we have given you, you may not believe that a search of ERIC will entirely satisfy the request, or in other cases that ERIC is even the appropriate resource. We would like for you to note the other resources you might wish to check as a supplement to, or substitute for, an ERIC search, but we are primarily interested in your working at this time with the ERIC Thesaurus in selecting terms and developing search statements--using the Boolean operators--for computer searching, whether batch or on-line.

After you have completed preliminary work with the Thesaurus and have formulated your searches, we will work through your formulations at the terminal, on-line, so that you can see the results and understand how some of your decisions impacted on these results.

In your packet you will see Retrieval Exercises--B, both the problem statements and worksheets, which may be used in completing your search formulations. The worksheet format is one kind of convenient form for developing a strategy of ORed and ANDed statements. Sample searches are provided on the first exercise sheet to illustrate how you can use the form.

[The trainer should distribute copies of the Thesaurus to trainees, and should be available through this period, to answer questions and help trainees who may have difficulties in using the Thesaurus.]

Step 3 Demonstration of Search Results for "Retrieval Exercises--B" (60 minutes)

[After the trainees have completed the paper/pencil exercises, they should bring their search formulations to the terminal area. The terminal operator should ask one of the trainees in his or her group to volunteer a search formulation for Exercise 1, and proceed to insert it into the system. The operator should explain to the trainees what he or she is doing with regard to particular features of the system being used, but the teaching of the on-line system should be only incidental to arriving at the search results, showing sample displays of citations and abstracts of the search results, and exploring different results with different search formulations. The trainees should be asked to volunteer any different search formulations--different terms or sets of terms or different uses of Boolean operators--that they have prepared for the search problem.

This segment will be most instructive if the terminal operators are able to take the lead provided by the search strategies recommended by the trainees, but are also able to supplement the demonstration with approaches that are not recommended by the trainees. Illustrative searches and variations in strategies contained in the RETRIEVAL EXERCISES--B (DISCUSSION GUIDE FOR TRAINER) can be used as background for developing this part of the session.]

Step 4 Review of Search Strategies and Results (45 minutes)

[The trainer should convene the group and direct a discussion of each search problem--the search strategies that were devised and their observations of the on-line applications. Although trainees' questions may serve as a guide to this session, the trainer can use the background on the RETRIEVAL EXERCISES--B (TRAINER) to direct the discussion on each search problem.]

Step 5 Summary of Searching Strategies (15 minutes)

The exercises that you have completed illustrate some important decision points in the retrieval process, two of which I'd like to review, and perhaps you will add some of your own.

Point 1. One of the most important points to be made is that a searcher will almost always be working with insufficient information--even if the query negotiation process has been an excellent one. I am reminded of Dr. Fairthorne's vivid and telling definition quoted in your retrieval packets:

The purpose of searching is "the recovery from a given collection of documents, with stated probability, a set of documents that includes, possibly with some irrelevant ones, all documents of specified content; or, a set of documents that includes nothing but documents of specified contents, but possibly not all of them."

A search will often reveal complexities that cannot possibly be anticipated until the search is well under way. These complexities result from one, or a combination of several, factors including:

- The multiplicity of terms in the educational language, as we saw in the tutoring problem, where there were at least four different tutoring programs (cross-age, peer, programmed, and after-school). And the possibilities even increased with the non-tutoring elements, reflecting the persons to be involved in the tutoring (e.g., teachers, parents, volunteers, paraprofessionals).
- The subtleties or focus of a document's contents that are reflected in a wide variety of combined descriptors, such as we saw in the academic achievement and self concept problem. The combinations of descriptors focussed on one or several elements of the relationship, in the use of test instruments, reports of educational research, the effect of home elements (e.g., one parent children, mother's attitudes).
- The potential of "hidden contents" not covered by the indexing terms. Is teaching time perhaps a secondary topic in many of those mathematical concepts or concept-formation-indexed documents?
- The search process itself, with the powerful capability of a machine search, on the one hand, to coordinate the likeliest terms we can select and produce a masterful listing, but the

limitations of the machine search, on the other hand, to deal with some of the intellectual elements I have just enumerated.

Because the searcher will not always have the information from the client--who perhaps would not know himself--on which to base certain decisions, he or she must understand what is involved in the alternatives available to him. This brings me to Point 2.

Point 2. There are several alternatives available to the searcher, and to the center as a whole, in making the retrieval decisions. Some of these alternatives concern the search strategy itself, but others relate to the screening of printouts, the use of substitute resources, and the packaging and communications of search results. We will address packaging and communications in a later session, but it is certainly relevant to mention it at this time.

Some of the alternatives are:

- Conduct a slightly more comprehensive search, one that will contain the peripheral and seemingly unrelated items, so that the client can then pick out the items of relevance to him.
- A variation on this theme, to conduct the comprehensive

search and make notes on the printout to point out the variations in search results (e.g., the variations in student populations or in terminology for a given topic) for the client.

- Select the most on-target search strategy possible, to identify a few items for the client to "get started".

These alternatives can be varied even more with the addit[illegible] of steps in which complete documents are checked for their relevance, or printouts are organized according to some principle or classes of information. We will be addressing these possibilities later, but the basic decision for selecting among the variety of alternatives is based on at least two key elements:

- The available resources (staff time, relative to volume of activity; search/retrieval resources, in terms of machines and materials).
- The best knowledge of what is <u>most</u> likely to meet the client's needs given his position, his apparent level of sophistication in the subject of the search, and the use which is planned for the information.

The first element will be a fairly fixed constraint for any center, but the second element is one that can be dealt with in the query negotiation process through the insights gained by the field agent in talking to the client, which should be transmitted to the searcher.

[The trainer might wish the trainees to volunteer their thoughts on the important decision points that they believed were raised through the exercises--whether they are technical, relative to the use of different Boolean operators, or operational, relative to the process of choosing between alternatives.]

Although we are operating on a limited amount of information, why don't we think through the client's "best interests" in each of the searches we have performed, and discuss the course that we believe would have most likely met the client's needs, if only initially.

[The trainer may wish to start off with one example, and then ask the trainees to state their preferences, based on their understanding of the time, expectations, and typical uses of information by school personnel.]

For example, on the teaching of time to TMRs. I read this request as a very specific one, for the TMR teachers have many responsibilities, and teaching time is only a part of this responsibility. I would search only on TIME and not go into the mathematical concepts or concept formation materials, where we can assume that the finding of relevant materials would take some digging and reading by the teachers. I might supplement my findings by talking to my special education consultants in the SEA to see if they know of any materials, or by checking the Curriculum Laboratory personnel or my curriculum materials collection. I would also check my project/people file, to see if there were any Special Education Instruction Materials Centers in my area with whom I could check.

Agreements? Disagreements?

[Trainer should let the trainees discuss their preferences for the remainder of searches.]

SESSIONS NUMBERS 19 AND 22

RETRIEVING ERIC INFORMATION--B

Retrieval Exercises--B Trainer Discussion Guide

SESSION NOS. 19 AND 22

RETRIEVAL EXERCISES--B

(TRAINER DISCUSSION GUIDE)

1. (Affiliation or position not specified): Wants various kinds of tutoring programs in the public schools--reading and math--to be utilized in the district.

TRAINER DISCUSSION GUIDE:

The selection of terms from the Thesaurus for the instructional program areas--READING INSTRUCTION and MATHEMATICS INSTRUCTION--is fairly straightforward. The choice of terms for the tutoring program part of the search is less clear, for the possibilities include TUTORING, TUTORIAL PROGRAMS, CROSS AGE TEACHING, PEER TEACHING, and PROGRAMED TUTORING. The peer-group representation in this concept also suggests other possibilities, such as the use of paraprofessionals and volunteers from the community (e.g., parents).

It will be useful for the trainees to scan the results of several different strategies, to see a fairly narrow search:

> ((TUTORIAL PROGRAMS OR TUTORING) AND (READING INSTRUCTION OR MATHEMATICS INSTRUCTION))

and, to see a broader search:

> ((TUTORIAL PROGRAMS OR TUTORING OR CROSS AGE TEACHING OR PEER TEACHING OR PROGRAMED TUTORING) AND (READING INSTRUCTION OR MATHEMATICS INSTRUCTION)

After the trainees have explored several possibilities, and seen, for example, the kinds of materials included in PROGRAMED TUTORING, they should be prepared in the discussion to suggest how they might actually handle the search: (1) to give the client a full printout--with notations on some of the variations of materials included--and ask the client to indicate those that look of interest; (2) to re-establish contact with the client, to determine more specifically the kinds of programs that would be most relevant; or (3) to supplement or substitute the printout with names of individuals in area schools that have instituted tutorial programs.

The two sample search formulations shown on the third page illustrate the difference between a narrow search and a broad search. There are, in addition, points between, in terms of the number of descriptors that are selected to represent the tutoring concept in the search problem.

The printout of selected citations that is attached illustrates the results yielded from Search Formulation 1. Trainees will have seen some of these citations (with descriptors and/or abstracts) on-line, and this should generate discussion on the issue of second-guessing the true concerns of the user (does he want programs with parent involvement or the use of paraprofessionals?). The Trainer may choose to read a few of these citations to illustrate the inclusion of materials on (1) adult and university students, (2) the use of paraprofessionals, and (3) research studies.

Search Formulation 1:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:

READING INSTRUCTION OR MATHEMATICS INSTRUCTION
PROG:

PSTG---NUMBER POSTINGS (2291)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?

USER
TUTORING OR TUTORIAL PROGRAMS OR CROSS AGE TEACHING OR AFTER SCHOOL TUTORING OR
PROG:

CNT 2--CONTINUE SS 2

USER:
PEER TEACHING OR PROGRAMED TUTORING
PROG:

PSTG---NUMBER POSTINGS (596)
SS 3/C---SEARCH STATEMENT 3 OR COMMAND?

USER:
1 AND 2
PROG:

PSTG---NUMBER POSTINGS (59)

Search Formulation 2:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:
TUTORIAL PROGRAMS
PROG:

PSTG---NUMBER POSTINGS (239)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?

USER:
READING INSTRUCTION OR MATHEMATICS INSTRUCTION
PROG:

PSTG---NUMBER POSTINGS (2291)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?

USER:
1 AND 2
PROG:

PSTG---NUMBER POSTINGS (31)

SELECTED CITATIONS

FROM

EXERCISE 1 SEARCH RESULTS

EJ- EJ058238
YR- 7
CH- TM50054
AU- HAMBLIN, JUNE A.
AU- HAMBLIN, ROBERT L.
TI- ON TEACHING DISADVANTAGED PRESCHOOLERS TO READ: A SUCCESSFUL EXPERIMENT
PD- SPR 72
IS- CIJSEP72
PR-
CG- 6 6 6 6
JC- AMERICAN EDUCATIONAL RESEARCH JOURNAL; 9; 2; 209-16
DE- ATTENDANCE
DE- DISADVANTAGED YOUTH
DE- PEER TEACHING
DE- PRESCHOOL CHILDREN
DE- READING INSTRUCTION
DE- READING RESEARCH
DE- REINFORCEMENT
DE- TABLES (DATA)
DE- TEACHING MACHINES
DE- TUTORING

ED- ED063085
YR- 72
CH- RE004131
AU- PURCETT, RUSSELL E.
TI- PUPIL ACCOUNTABILITY AND READING.
PD- MAY 72
IS- RIESEP72
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-2-710039
NO- 9P.; PAPER PRESENTED AT MEETING OF INTERNATIONAL READING ASSOCIATION (17TH, DETROIT, MICHIGAN, MAY 10-13, 1972)
DE- INDIVIDUAL INSTRUCTION
DE- ORAL READING
DE- READING COMPREHENSION
DE- READING DEVELOPMENT
DE- READING INSTRUCTION
DE- READING SKILLS
DE- REMEDIAL READING
DE- SECONDARY GRADES
DE- SELF EVALUATION
DE- STUDENT EVALUATION
DE- TUTORIAL PROGRAMS
DE- TUTORING

AB- IN A STUDY UTILIZING HIGH SCHOOL SOPHOMORES WITH READING PROBLEMS AND THEIR TUTORS IT WAS FOUND THAT SIGNIFICANT CHANGES OCCURRED WHEN STUDENTS WERE TAUGHT TO IDENTIFY AND CLASSIFY THEIR OWN READING ERRORS AS A REGULAR PART OF A CORRECTIVE AND REMEDIAL READING PROGRAM. THE INSTRUCTIONAL PROGRAM BEGAN WITH THE STUDENTS ANALYZING THEIR RESULTS ON A STANDARDIZED READING TEST. FROM THIS ANALYSIS THEY FORMULATED GENERAL READING GOALS. SKILLS PACKAGES EMPLOYING SELF-CORRECTING FORMATS WERE UTILIZED IN MEETING GENERAL AND SPECIFIC READING NEEDS. STUDY QUESTIONS WITH "KEY WORDS," OR CONCEPT WORDS, WERE USED TO SCAN LITERATURE AND DETERMINE ANSWERS. IF TUTOREES NEEDED EXTRA WORD IDENTIFICATION SKILLS, THEY COULD SELECT SKILLS PACKAGES TO STUDY. STUDENTS' ORAL READING WAS RECORDED AND ERRORS WERE NOTED AND CLASSIFIED BY THE TUTOR. GRADUALLY STUDENTS WERE ASKED TO DETECT AND CLASSIFY THEIR OWN ORAL READING ERRORS. SUCH SELF-EVALUATIVE PROCEDURES ENCOURAGED STUDENTS TO ENGAGE IN MORE FREQUENT ASSESSMENTS OF READING PERFORMANCE, CONSERVED TEACHER TIME FOR INSTRUCTION, PROMOTED STUDENT SELF-COMPETITION, AND ENCOURAGED A MORE AMENABLE ATTITUDE ON THE PART OF STUDENTS TOWARD TEACHER SUGGESTIONS FOR IMPROVEMENT. (REFERENCES ARE INCLUDED.) (AL)

ED- ED061498
YR- 72
CH- AC012516
AU- BRUOKHART, NORMA
TI- HANDBOOK FOR VOLUNTEER READING AIDES.
PD- MAR 72
IS- RIEAUG72
IC- BBB06192
IN- LUTHERAN CHURCH WOMEN, PHILADELPHIA, PA.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-70-3409
NO- 56P.
DE- ADULT BASIC EDUCATION
DE- ADULT EDUCATION
DE- BIBLIOGRAPHIES
DE- EDUCATIONAL PROGRAMS
DE- ENGLISH (SECOND LANGUAGE)
DE- FUNCTIONAL ILLITERACY
DE- GUIDES
DE- INSTRUCTIONAL MATERIALS
DE- OBJECTIVES
DE- ORGANIZATION
DE- PARAPROFESSIONAL SCHOOL PERSONNEL
DE- READING INSTRUCTION
DE- REINFORCEMENT
DE- STUDENT MOTIVATION
DE- TUTORING
DE- VOLUNTEERS
DE- WORKSHOPS
AB- A HANDBOOK PREPARED FOR THE VOLUNTEER READING AIDE WHO HAS BEEN INSTRUCTED IN A 10-HOUR BASIC WORKSHOP ON TUTORING THE ADULT NON-READER IS PRESENTED. ITS PURPOSE IS TO REINFORCE THE KNOWLEDGE THE AID HAS GAINED AND TO SUGGEST ADDITIONAL RESOURCES. IT IS DIVIDED INTO SEVEN CHAPTERS: LEARNING TO KNOW THE ADULT NON-READER, MOTIVATING THE ADULT NON-READER, TEACHING THE ADULT NON-READER, RECRUITING THE ADULT NON-READER, PUBLICIZING THE LITERACY PROGRAM, WORKING WITH OTHER GROUPS AND AGENCIES, AND ORGANIZING. A SELECTED BIBLIOGRAPHY INCLUDING INFORMATION FOR THE TUTOR, INSTRUCTIONAL MATERIALS, HELP FOR NON-NATIVE SPEAKERS OF ENGLISH, AND SUPPLEMENTARY READING MATERIAL IS ALSO GIVEN. (AUTHOR/CK)

ED- ED061154
YR- 72
CH- SP005556
AU- MOHAN, MADAN
TI- PEER TUTORING AS A TECHNIQUE FOR TEACHING THE UNMOTIVATED.
PD- JAN 72
IS- RIEJUL7.
IC- [illegible]6037
IN- STATE UNIV. OF NEW YORK, FREDONIA. TEACHER EDUCATION RESEARCH CENTER.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-70-5025
NO- 47P.; A RESEARCH REPORT
DE- CROSS AGE TEACHING
DE- INDIVIDUAL INSTRUCTION
DE- LOW MOTIVATION
DE- MATHEMATICS INSTRUCTION
DE- PEER TEACHING
DE- TUTORING
AB- THIS STUDY TESTED THE HYPOTHESIS THAT PEER TUTORING WOULD HAVE A SIGNIFICANT, FAVORABLE EFFECT ON THE SCHOOL ACHIEVEMENT, MOTIVATION, ATTITUDE, AND SELF-CONCEPT OF UNMOTIVATED CHILDREN, BOTH TUTORS AND TUTEES. A PILOT STUDY AND A MAIN STUDY WERE UNDERTAKEN, USING EXPERIMENTAL AND CONTROL GROUPS. THE EXPERIMENTAL GROUPS HAD AN ORIENTATION SESSION BEFORE THE START OF THE PROJECT, AND TUTORS HAD A TRAINING SESSION. THE PROGRAM WAS CARRIED OUT FOR 6 MONTHS IN THE PILOT STUDY AND 3 MONTHS IN THE MAIN STUDY. INFORMAL EVIDENCE CLEARLY INDICATED THAT THE PROGRAM WAS ENTHUSIASTICALLY ACCEPTED BY TEACHERS, PARENTS, AND STUDENTS. ANALYZING THE DATA ON FIVE DEPENDENT VARIABLES, IT WAS FOUND THAT TUTORS AND TUTEES IN THE EXPERIMENTAL GROUP EVIDENCED SIGNIFICANT GROWTH ON MEASURES OF ACADEMIC ACHIEVEMENT, MOTIVATION AS ASSESSED BY THE TEACHERS AND THE STUDENTS, AND, FOR THE TUTORS, IN ATTITUDE TOWARD SCHOOL. THE ONLY OBJECTIVES WHICH WERE NOT MET WERE A FAVORABLE CHANGE IN THE SELF-CONCEPT OF BOTH TUTORS AND TUTEES AND A POSITIVE ATTITUDE CHANGE IN TUTEES, PROBABLY DUE TO THE SHORT DURATION OF THE PROJECT. IT IS SUGGESTED THAT TEACHERS SHOULD BE PROVIDED WITH TRAINING AND SUPPORT FOR A CHANGE TO A SELF-DIRECTED INSTRUCTIONAL PROGRAM, AND A TEACHER MANUAL IS BEING DEVELOPED. THE INSTRUMENTS USED ARE INCLUDED IN THE DOCUMENT. (MBN)

ED- EJ052312
YR- 72
CH- RE503676
AU- LANE, PATRICK
AU- AND OTHERS
TI- REMOTIVATION OF DISRUPTIVE ADOLESCENTS
PD- FEB 72
IS- CIJMAY72
PR-
CG-
JC- JOURNAL OF READING; 15; 5; 351-54
DE- ADOLESCENTS
DE- BEHAVIOR CHANGE
DE- BEHAVIOR PROBLEMS
DE- CROSS AGE TEACHING
DE- ELEMENTARY SCHOOL STUDENTS
DE- MOTIVATION TECHNIQUES
DE- READING IMPROVEMENT
DE- READING INSTRUCTION
DE- REMEDIAL READING PROGRAMS
DE- TUTORIAL PROGRAMS

ED- ED059855
YR- 71
CH- RE004 93
AU- HELM, PHOEBE
TI- A PROGRAM TO TRAIN PARAPROFESSIONALS IN READING INSTRUCTION.
PD- DEC 71
IS- RIEJUN72
PR- EDRS PRICE MF-$0.65 HC NOT AVAIL
CG- OEG-0-9-460531-5524(0
AV- NATIONAL READING CONFERENCE, INC., MARQUETTE UNIVERSITY, 1217 W. WISCONSIN AVE., MILWAUKEE, WIS. 53233
NO- 13P.; PAPER PRESENTED AT THE NATIONAL READING CONFERENCE, TAMPA, FLA., DEC. 1971
DE- COMMUNICATION SKILLS
DE- ON THE JOB TRAINING
DE- PARAPROFESSIONAL SCHOOL PERSONNEL
DE- PRACTICUMS
DE- READING DIFFICULTY
DE- READING INSTRUCTION
DE- READING SKILLS
DE- TEACHING METHODS
DE- TRAINING
DE- TRAINING OBJECTIVES
DE- TUTORING

AB- AS A COMMUNITY SERVICE, JACKSON STATE COMMUNITY COLLEGE HAS DEVELOPED PROGRAMS FOR TRAINING PARAPROFESSIONALS IN THE FIELD OF READING AND COMMUNICATION SKILLS TO BECOME PROFICIENT ENOUGH IN THE INSTRUCTION OF READING SKILLS TO ASSIST DISABLED READERS. THE SUGGESTED SOURCES OF PARAPROFESSIONAL TRAINEES ARE COLLEGE STUDENTS, MOTHERS, COMPANY WIVES, ELDERLY PEOPLE, AND GROUPS OF CONCERNED CITIZENS. THE TRAINING PROGRAM IS BROKEN INTO THREE DISTINCT PHASES: THEORY, PRACTICUM, AND SUPERVISED EMPLOYMENT. IN THE THEORY PHASE, THE TRAINEES ARE TESTED FOR KNOWLEDGE OF READING SKILLS AND PROVIDED WITH INSTRUCTION IN THE METHODOLOGY OF TEACHING READING SKILLS AND THE PREPARATION AND USE OF MATERIALS. IN THE PRACTICUM PHASE, THE TRAINEES ARE INVOLVED IN PREPARATION OF MATERIALS AND CONSULTATION WITH THE READING SPECIALIST, TUTORING OF STUDENTS, AND IN SELF-EVALUATION. THE SUPERVISED EMPLOYMENT PHASE INVOLVES PERIODIC VISITS BY THE READING SPECIALIST TO PROVIDE ON-THE-JOB ASSISTANCE TO THE PARAPROFESSIONALS AND A WEEKLY SEMINAR. A PILOT PROJECT HAS BEEN CONDUCTED, AND APPLICATION IS BEING MADE FOR FUNDS TO CONDUCT A COMPREHENSIVE PROGRAM. A FLOW CHART FOR THE TRAINING PROCESS, A LIST OF MATERIALS TO BE USED, AND REFERENCES ARE INCLUDED. (AUTHOR/AW)

ED- ED059851
YR- 71
CH- RE004029
AU- MCDANIEL, MARJORIE C.
TI- AN ENRICHMENT AND LEARNING SKILLS CENTER FOR STUDENT AID.
PD- DEC 71
IS- RIEJUN72
PR- EDRS PRICE MF-$0.65 HC NOT AVAIL
CG- OEC-0-9-460531-56210
AV- NATIONAL READING CONFERENCE, INC., MARQUETTE UNIVERSITY, 1217 W. WISCONSIN AVE., MILWAUKEE, WIS. 53233
NO- PP.; PAPER PRESENTED AT THE NATIONAL READING CONFERENCE, TAMPA, FLA., DEC. 1971
DE- ACADEMIC ENRICHMENT
DE- COLLEGE PROGRAMS
DE- COLLEGE STUDENTS
DE- FOREIGN STUDENTS
DE- READING CENTERS
DE- READING INSTRUCTION
DE- READING SKILLS
DE- REMEDIAL COURSES
DE- SECOND LANGUAGE LEARNING
DE- STUDY SKILLS
DE- TEACHING MACHINES
DE- TUTORING
AB- THE ACADEMIC ENRICHMENT AND LEARNING SKILLS CENTER AT INDIANA STATE UNIVERSITY CAME INTO BEING PRIMARILY BECAUSE OF THE READING PROBLEMS AMONG THE STUDENT BODY. THE CENTER HAS TWO LANGUAGE LABORATORIES, EACH HAVING 30 POSITIONS. EMPHASIS IN DESIGNING THE PHYSICAL PLANT WAS PLACED ON ATTRACTIVENESS AND QUIET. TEACHING MACHINES SUCH AS THE TACHOMATIC 500, THE SHADOWSCOPE, AND THE CRAIG READER AS WELL AS PERSONAL HELP SUCH AS TUTORING IN SPECIAL AREAS OF DIFFICULTY ARE AVAILABLE FOR STUDENT USE. THE CENTER IS OPEN FREE TO ALL REGISTERED STUDENTS EXCEPT FOR THOSE REGISTERED IN A SPECIAL REMEDIATION COURSE. STUDENTS GRADUATING IN THE LOWEST 30 PERCENT OF THEIR HIGH SCHOOL CLASSES ARE REGISTERED IN THIS NONCREDIT COURSE DURING THE SPRING SEMESTER AND THE SUMMER SESSIONS. THE COURSE EMPHASIS IS UPON SKILL DEVELOPMENT IN READING, STUDYING, TESTING, WRITING TERM PAPERS, AND WORK IN SPECIAL AREAS OF NEED. THE CENTER IS WIDELY USED BY FOREIGN STUDENTS TO IMPROVE THEIR ENGLISH PROFICIENCY AND BY DOCTORAL STUDENTS TO ACQUIRE FOREIGN LANGUAGE PROFICIENCY. (AW)

ED- ED059614
YR- 71
CH- EM009613
AU- STRANG, HAROLD R.
TI- THE AUTOMATED INSTRUCTION OF PRACTICAL READING SKILLS TO
DISADVANTAGED SIXTH GRADE CHILDREN.
PD- 71
IS- RIEJUN72
IC- YUB92100
IN- VIRGINIA UNIV., CHARLOTTESVILLE.
SC- RMQ66000
SC- YUB92175
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.; VIRGINIA UNIV.,
CHARLOTTESVILLE. SCHOOL OF EDUCATION.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-3-70-0007(010)
NO- 15P.
DE- DISADVANTAGED YOUTH
DE- GRADE 6
DE- PROGRAMED TUTORING
DE- READING ACHIEVEMENT
DE- READING INSTRUCTION
DE- READING SKILLS
DE- REMEDIAL READING
AB- AN ASSESSMENT WAS MADE OF THE EFFECTS OF AN AUTOMATED TUTORING PROGRAM IN TEACHING SIXTH GRADE DISADVANTAGED CHILDREN PRACTICAL READING SKILLS. NINETEEN EXPERIMENTAL AND FIVE CONTROL STUDENTS WERE RANDOMLY SELECTED AND TESTED ON 51 PRACTICAL SKILLS. EXPERIMENTAL STUDENTS THEN RECEIVED AUTOMATED INSTRUCTION ON 24 OF THE SKILLS. CORRECT ANSWERING YIELDED EXTRINSIC REINFORCEMENT, AND ERRORS YIELDED AUDIO TUTORING. DURING INSTRUCTION CONTROL STUDENTS REMAINED IN THEIR CLASSROOMS. AFTER INSTRUCTION ALL STUDENTS WERE RETESTED ON THE 51 SKILLS. THE EXPERIMENTAL GROUP'S AVERAGE SKILL'S GAIN WAS SIGNIFICANTLY HIGHER THAN THE CONTROL GROUP'S. WHILE EXPERIMENTAL STUDENTS SHOWED GREATEST CROSS-TEST GAINS ON SKILLS TRAINED DURING INSTRUCTION, THEY ALSO SHOWED CONSIDERABLE IMPROVEMENT ON THE REMAINING UNINSTRUCTED SKILLS. (AUTHOR)

ED- ED059315
YR- 71
CH- UD012078
AU- HILL, CELINA J.
TI- EVALUATION OF THE BOSTON RESOURCE TEAM, 1970-1971.
PD- 71
IS- RIEMAY72
IC- GZY23587
IN- EDUCATION DEVELOPMENT CENTER, INC., NEWTON, MASS.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-70-0013(010)
NO- 74P.
DE- CONSULTATION PROGRAMS
DE- CURRICULUM DEVELOPMENT
DE- INNER CITY
DE- MATHEMATICS INSTRUCTION
DE- PARENT PARTICIPATION
DE- PROGRAM EVALUATION
DE- READING INSTRUCTION
DE- RESOURCE TEACHERS
DE- SCHOOL COMMUNITY RELATIONSHIP
DE- SCIENCE INSTRUCTION
DE- SECONDARY EDUCATION
DE- TEACHER WORKSHOPS
DE- TUTORIAL PROGRAMS
DE- URBAN EDUCATION
ID- MASSACHUSETTS

AB- THIS REPORT IS AN EVALUATION OF THE ATTEMPT OF THE BOSTON RESOURCE TEAM TO IMPROVE THE PHYSICAL AND EDUCATIONAL CONDITIONS IN THE DEARBORN SCHOOL DISTRICT DURING THE 1970-71 SCHOOL YEAR. THE TEAM IDENTIFIED FOUR GOALS FOR ITS WORK IN THE DEARBORN ANNEX: (1) IMPROVING THE PHYSICAL APPEARANCE OF THE DEARBORN SCHOOL; (2) INVOLVING MORE PARENTS IN THE SCHOOL; (3) INSTITUTING A MORE RELEVANT CURRICULUM FOR THE STUDENTS; AND, (4) IMPROVING THE MORALE OF THE SCHOOL STAFF AND THE STUDENTS. THE TEAM DECIDED THAT THE CREATION OF A RESOURCE ROOM WHICH WOULD TOTALLY INVOLVE THE SCHOOL, ITS STUDENTS AND TEACHERS, AND THE COMMUNITY, WOULD EFFECTIVELY ADDRESS ALL FOUR GOALS AT ONCE. A TUTORIAL PROGRAM WAS COORDINATED BY A TEAM MEMBER, INVOLVING THE SERVICES OF TEN STUDENTS FROM MIT'S BLACK STUDENT UNION. A PROJECT WAS CONCEIVED BY THE ELEMENTARY SCIENCE STUDY PROGRAM TO ENCOURAGE STUDENTS TO DEVELOP UNITS IN WHICH SCIENCE AND MATHEMATICS WERE INTERRELATED. A TEN-WEEK WORKSHOP WAS RUN IN THE FALL OF 1970 FOR THE 18 MEMBER TEACHING STAFF OF THE ANNEX, THE SEVENTH AND EIGHTH GRADES OF THE DEARBORN SCHOOL. THE WORKSHOP INTRODUCED VARIOUS READING METHODS AND WAYS OF RELATING THESE TO THE DIFFERENT SUBJECT AREAS AND ASSISTED TEACHERS IN DEVELOPING CURRICULUM MATERIALS. (AUTHOR/JM)

ED- EJ052575
YR- 71
CH- UD501217
AU- CAPLIN, MORRIS D.
TI- TO IMPROVE READING
PD- [illegible] 71
IS- CIJMAY72
PR-
CG- 0
JC- ILLINOIS SCHOOLS JOURNAL; 51; 152, 154-159
DE- DISADVANTAGED YOUTH
DE- READING DIFFICULTY
DE- READING INSTRUCTION
DE- TUTORIAL PROGRAMS
DE- TUTORING

ED- EJ051082
YR- 71
CH- PS501528
AU- CRAMER, WARD
TI- MY MOM CAN TEACH READING TOO
PD- NOV 71
IS- CIJAPR72
PR-
CG- 0
JC- ELEMENTARY SCHOOL JOURNAL; 72; 2; 72-5
DE- BEGINNING READING
DE- INDIVIDUALIZED INSTRUCTION
DE- PROGRAMED TUTORING
DE- READING INSTRUCTION
DE- READING READINESS
DE- REMEDIAL READING PROGRAMS
DE- TEACHER AIDES
DE- TUTORIAL PROGRAMS
ID- INDIANA UNIVERSITY

ED- EJ050597
YR- 71
CH- RE503464
TI- RE: EXECUTIVE TUTORING
PD- APR 71
IS- CIJAPR72
PR-
CG- 0
JC- READING NEWSREPORT; 5: 6; 10-14
DE- ELEMENTARY GRADES
DE- INDIVIDUALIZED INSTRUCTION
DE- INNER CITY
DE- READING IMPROVEMENT
DE- READING INSTRUCTION
DE- RETARDED READERS
DE- SCHOOL COMMUNITY RELATIONSHIP
DE- SCHOOL INDUSTRY RELATIONSHIP
DE- TUTORIAL PROGRAMS
DE- VOLUNTEERS

ED- EJ050594
YR- 71
CH- RE503447
AU- CRISCUOLO, NICHOLAS P.
TI- SOME PITFALLS IN WORKING WITH READING TUTORS
PD- DEC 71
IS- CIJAPR72
PR-
CG- 0
JC- FLORIDA READING QUARTERLY; 8; 1; 10-13
DE- ATTITUDES
DE- COMMUNICATION SKILLS
DE- INSERVICE PROGRAMS
DE- READING INSTRUCTION
DE- READING MATERIALS
DE- SUCCESS FACTORS
DE- TEACHER AIDES
DE- TUTORIAL PROGRAMS
DE- VOLUNTEER TRAINING
DE- VOLUNTEERS

ED- EJ050209
YR- 71
CH- RE503628
AU- GUSZAK, FRANK J.
TI- PRESERVICE PROGRAM IN THE CLASSROOM
PD- DEC 71
IS- CIJAPR72
PR-
CG- U
JC- JOURNAL OF READING; 15; 3; 199-202
DE- COLLEGE SCHOOL COOPERATION
DE- ELEMENTARY SCHOOL STUDENTS
DE- METHODS COURSES
DE- PRESERVICE EDUCATION
DE- PROGRAM EVALUATION
DE- READING INSTRUCTION
DE- READING LEVEL
DE- READING SKILLS
DE- STUDENT TEACHING
DE- TUTORIAL PROGRAMS

ED- EJ049703
YR- 71
CH- AA511221
AU- SHAVER, JAMES P.
AU- NUHN, DEE
TI- THE EFFECTIVENESS OF TUTORING UNDERACHIEVERS IN READING AND WRITING
PD- NOV 71
IS- CIJE1972
PR-
CG- U
JC- JOURNAL OF EDUCATIONAL RESEARCH; 5; 3; 107-12
DE- ACADEMIC ACHIEVEMENT
DE- ACADEMIC PERFORMANCE
DE- READING INSTRUCTION
DE- SKILL DEVELOPMENT
DE- STUDENT TEACHER RATIO
DE- TUTORING
DE- UNDERACHIEVERS
DE- WRITING SKILLS

ED- EJ049098
YR- 71
CH- TE501755
AU- MILLER, WILMA H.
TI- SOME LESS COMMONLY USED FORMS OF GROUPING
PD- DEC 71
IS- CIJE1972
PR-
CG- U U
JC- ELEMENTARY ENGLISH; 48; 8; 989-92
DE- DIRECTED READING ACTIVITY
DE- GROUP INSTRUCTION
DE- GROUP READING
DE- MATCHED GROUPS
DE- READING INSTRUCTION
DE- TEACHING PROGRAMS
DE- TEACHING TECHNIQUES
DE- TUTORIAL PROGRAMS

ED- EJ049071
YR- 71
CH- SP501192
AU- DAVIDS, LEO
TI- A VOLUNTEER TUTORING PROGRAM
PD- DEC 71
IS- CIJE1972
PR-
CG- J J
JC- URBIT; 2; 5; 6-9
DE- COLLEGE STUDENTS
DE- LOW ACHIEVERS
DE- PART TIME STUDENTS
DE- READING INSTRUCTION
DE- SECONDARY SCHOOL STUDENTS
DE- STUDY SKILLS
DE- TUTORIAL PROGRAMS
DE- VOLUNTEERS

ED- EJ048059
YR- 71
CH- RE503339
TI- TUTORING: IT WORKS
PD- FEB 71
IS- CIJE1972
PR-

2. From a High School Counselor: Wants methods on dealing with, and preventing vandalism at the secondary level.

Comments:

TRAINER DISCUSSION GUIDE:

This search illustrates several retrieval problems and considerations. One, the materials in the ERIC file on this subject are not typically indexed by level (e.g., secondary level), and a search by level introduces a very low-yield (as shown in the sample search below).

```
SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?
USER:
VALDALISM OR SCHOOL VANDALISM
PROG:
PSTG---NUMBER POSTINGS (45)
SS 2/C---SEARCH STATEMENT 2 OR COMMAND
USER
HIGH SCHOOLS OR SECONDARY GRADES OR SECONDARY SCHOOL STUDENTS OR
PROG:
CNT 2---CONTINUE SS 2
USER:
PROG:
PSTG---NUMBER POSTINGS (4380)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?
USER:
1 AND 2
PROG:
PSTG---NUMBER POSTINGS (1)
SS 4/C?---SEARCH STATEMENT 4 OR COMMAND?
USER;
"PRINT TI, DE"
PROG:
TI- "YES" TO A SELF-DIRECTIVE DAY. FOCUS ON HIGH SCHOOLS
DE- CONTRACTS
DE- DISCIPLINE PROBLEM
DE- EDUCATIONAL CHANGE
DE- EDUCATIONAL IMPROVEMENT
DE- EDUCATIONAL INNOVATION
DE- SCHOOL VANDALISM
DE- SECONDARY SCHOOL STUDENTS
DE- STUDENT PARTICIPATION
DE- SUBURBAN SCHOOLS
```

The on-line demonstration (or scan through the attached printout from the full 45 citations) should illustrate the second part of the search problem. Most citations in this area relate to prevention through modifications or improvements in the school facilities (e.g., lighting, design, construction). Less than 10 of the citations appear to deal with non-facility matters, such as community involvement, police and school relationship, or student involvement. The search problem statement provides no insight into the client's definition of "prevention."

The on-line demonstration should also be used to show the difference in the use of terms VANDALISM and SCHOOL VANDALISM. It would appear that our search should be limited to only SCHOOL VANDALISM, for VALDALISM draws in the college-level and recreational areas. The number of postings for SCHOOL VANDALISM alone is 33. This illustrates the point of having searchers learn the use of terms and make notations in their copies of the Thesaurus for future reference. With an on-line system, the searcher can check some of these meanings, but those using batch systems will need to rely primarily on their study of search results--after the fact--to determine these usages.

SELECTED CITATIONS

FROM

EXERCISE 2 SEARCH RESULTS

ED- EJ055914
YR- 72
CH- EA50[illegible]
TI- FLOODLIGHTING IS MULTIPURPOSE
PD- APR 72
IS- CIJAUG72
PR-
CG- 6 8 8
JC- MODERN SCHOOLS; 7
DE- ARCHITECTURAL CHARACTER
DE- BUILDING OPERATION
DE- CRIME
DE- LIGHTING DESIGN
DE- OUTDOOR LIGHTING
DE- PHYSICAL ENVIRONMENT
DE- SCHOOL VANDALISM

ED- [illegible]
YR- 72
CH- [illegible]
TI- UPGRADED GLAZING PRESENT A STRONGER IMAGE. PLANT OPERATION
PD- APR 72
IS- CIJAUG72
PR-
CG- 6 8 8 8
JC- NATION'S SCHOOLS; 89; 4; 90, 94
DE- ENVIRONMENTAL INFLUENCES
DE- FIRE PROTECTION
DE- SCHOOL MAINTENANCE
DE- SCHOOL SAFETY
DE- SCHOOL VANDALISM
DE- WINDOWS

ED- ED060547
YR- 72
CH- [illegible]
AU- PROPST, ROBERT
TI- HIGH SCHOOL: THE PROCESS AND THE PLACE. A REPORT.
PD- JAN 72
IS- RIEJUL72
IC- [illegible]
IN- EDUCATIONAL FACILITIES LABS., INC., NEW YORK, N.Y.
PR- [illegible]
CG- OEC-0-8-080353-3514
AV- EFL, 477 MADISON AVENUE, NEW YORK, N.Y. 10022 ($3.00)
NO- 121P.
DE- CLASSROOM FURNITURE
DE- EDUCATIONAL ENVIRONMENT
DE- EDUCATIONAL EQUIPMENT
DE- EDUCATIONAL FACILITIES
DE- EDUCATIONAL PLANNING
DE- ENVIRONMENTAL INFLUENCES
DE- FLEXIBLE FACILITIES
DE- HIGH SCHOOL [illegible]
DE- HUMAN [illegible]
DE- INTE[illegible]
DE- LEARNING PROCESSES
DE- MOVABLE PARTITIONS
DE- OPEN PLAN SCHOOLS
DE- SCHOOL DESIGN
DE- SCHOOL VANDALISM
DE- SOCIAL CHANGE
DE- SOCIAL ENVIRONMENT
DE- SPACE UTILIZATION

AB- THIS REPORT INVITES EXAMINATION OF WHAT THE SCHOOLHOUSE IS AND WHAT IT CAN BE -- AN INSTRUMENT TO EQUIP YOUNG PEOPLE TO COPE WITH AN INCREASINGLY COMPLEX WORLD, ENABLE THEM TO CONTRIBUTE TO THE COMMON GOOD, AND HELP THEM FIND JOY IN THEIR OWN EXISTENCE. THE FIRST SECTION DISCUSSES TRADITIONAL SCHOOL DESIGN AND HOW THE KNOWLEDGE EXPLOSION HAS MADE THE STRUCTURE AND THE ORGANIZATION OF THE SCHOOL OBSOLETE. THE NEXT SECTION CONSIDERS THE VALUES AND PURPOSES THAT AN EDUCATIONAL FACILITY DESIGN SHOULD SUPPORT. THE IDEA OF DYNAMIC MANAGEMENT OF THE SCHOOL ENVIRONMENT IS PROPOSED IN THE OPEN SPACE CONCEPT, AS WELL AS THE KIND OF PLANNING NECESSARY FOR THE SUCCESSFUL UTILIZATION OF OPEN SPACE SCHOOLS. THE CONCLUDING SECTION DISCUSSES PLANNING PROCEDURES FOR A LIVE ENVIRONMENT. (PHOTOGRAPHS MAY REPRODUCE POORLY.) (AUTHOR/MLF)

ED- EJ051790
YR- 72
CH- EA502390
AU- STRUMPF, MANNY
TI- MAXIMUM SECURITY AT MINIMUM COST
PD- FEB 72
IS- CIJMAY72
PR-
CG- 0
JC- SCHOOL MANAGEMENT; 16; 2; 28-29
DE- ADMINISTRATIVE PERSONNEL
DE- BUILDING OPERATION
DE- COSTS
DE- ELECTRICAL SYSTEMS
DE- SCHOOL VANDALISM
DE- SECURITY

ED- EJ050373
YR- 72
CH- EA502251
AU- GARDNER, JOHN C.
TI- SPOTLIGHTING SCHOOL VANDALISM
PD- JAN 72
IS- CIJAPR72
PR-
CG- 0
JC- AMERICAN SCHOOL AND UNIVERSITY; 44; 5; 12
DE- CRIME
DE- ILLUMINATION LEVELS
DE- OUTDOOR LIGHTING
DE- SCHOOL MAINTENANCE
DE- SCHOOL VANDALISM
DE- SECURITY

ED- EJ050287
YR- 72
CH- EA502224
TI- HOW TO (JUST ABOUT) VANDAL-PROOF EVERY SCHOOL IN YOUR DISTRICT
PD- JAN 72
IS- CIJAPR72
PR-
CG- 0
JC- AMERICAN SCHOOL BOARD JOURNAL; 159; 7; 27-31
DE- BOARDS OF EDUCATION
DE- BUILDING DESIGN
DE- BUILDING EQUIPMENT
DE- ELECTRONIC EQUIPMENT
DE- EQUIPMENT UTILIZATION
DE- FIRE PROTECTION
DE- SCHOOL VANDALISM

ED- EJ049807
YR- 72
CH- EA50L223
AU- JUILLERAT, ERNEST E., JR.
TI- FIRES AND VANDALS: HOW TO MAKE THEM BOTH UNWELCOME IN YOUR SCHOOLS
PD- JAN 72
IS- CIJAPR72
PR-
CG-
JC- AMERICAN SCHOOL BOARD JOURNAL; 159; 7; 23-26
DE- BOARD OF EDUCATION POLICY
DE- BOARDS OF EDUCATION
DE- BUILDING DESIGN
DE- BUILDING IMPROVEMENT
DE- BUILDING MATERIALS
DE- COSTS
DE- DESIGN NEEDS
DE- FIRE PROTECTION
DE- FIRE SCIENCE EDUCATION
DE- INTERIORS
DE- PREVENTION
DE- SCHOOL VANDALISM

ED- EL059800
YR- 71
CH- [illegible]5054
AU- CLARK, ROGER N.
AU- AND OTHERS
TI- DEPRECIATIVE BEHAVIOR IN FOREST CAMPGROUNDS: AN EXPLORATORY STUDY.
PD- AUG 71
IS- RIEJUN72
IC- [illegible]
IN- FOREST SERVICE (DOA), PORTLAND, OREG. PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT STATION.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- [illegible]-71-[illegible]17(057)
NO- 12P.
DE- AGE DIFFERENCES
DE- CAMPING
DE- CRIME
DE- LAW ENFORCEMENT
DE- MISBEHAVIOR
DE- PARKS
DE- RECREATIONAL ACTIVITIES
DE- REGULATIONS
DE- SOCIALLY DEVIANT BEHAVIOR
DE- SOCIOLOGY
DE- SURVEYS
DE- VANDALISM
ID- WASHINGTON STATE

AB- "VANDALISM, THEFT, RULE VIOLATION, AND NUISANCE BEHAVIOR [illegible] WERE [illegible] IN [illegible] CAMPGROUNDS DURING 1968 USING PARTICIPANT OBSERVATION TECHNIQUES. INFORMATION WAS GATHERED ON THE EXTENT AND CHARACTER OF SUCH BEHAVIORS AND FACTORS ASSOCIATED WITH THEIR OCCURRENCE." NUISANCE ACTS WERE MOST COMMON (50%) FOLLOWED BY LEGAL VIOLATIONS (17%) AND VANDALISTIC ACTS (13%). EMPIRICAL DATA BASED ON STRUCTURAL OBSERVATION SCHEDULES INDICATED A NUMBER OF FACTORS (ENTERTAINMENT, CONVENIENCE, DISREGARD, IGNORANCE, AND RULES INTERFERING WITH GOALS) ASSOCIATED WITH DEPRECIATIVE BEHAVIOR AND POSSIBLE METHODS OF CONTROL (COMMUNICATION OF RULES, EDUCATIONAL PROGRAMS, AND STRICTER ENFORCEMENT OF REGULATIONS). INCLUDED ARE 7 TABLES AND A 5-ITEM REFERENCE LIST. (MJB)

ED- ED058672
YR- 71
CH- EA004056
*AU- WELLS, ELMER
TI- VANDALISM AND VIOLENCE: INNOVATIVE STRATEGIES REDUCE COST TO SCHOOLS. EDUCATION U.S.A. SPECIAL REPORT.
PD- 71
IS- [illegible]MAY72
IC- [illegible]57272
IN- NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION, WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC NOT AVAIL
CG- [illegible]
AV- NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION, 1201 SIXTEENTH STREET, N.W., WASHINGTON, D.C. 20036. (STOCK NO. 411-1[illegible]794, $4.00,
NO- [illegible]P.
DE- ADMINISTRATOR RESPONSIBILITY
DE- [illegible] EDUCATION POLICY
DE- COMMUNITY INVOLVEMENT
DE- COSTS
DE- EQUIPMENT
DE- INSURANCE PROGRAMS
DE- POLICE SCHOOL RELATIONSHIP
DE- SCHOOL CONSTRUCTION
DE- STAFF ROLE
DE- VANDALISM
DE- VIOLENCE
AB- THIS REPORT IDENTIFIES THE CAUSES OF DISRUPTION, VIOLENCE, AND VANDALISM; DESCRIBES VARIOUS DEVICES AND TECHNIQUES USED TO IMPROVE SECURITY; OUTLINES THE ROLE OF SECURITY PERSONNEL IN PREVENTING VANDALISM; AND DISCUSSES VANDALISM-RELATED INSURANCE PROBLEMS. STUDENT PARTICIPATION AND COMMUNITY INVOLVEMENT ARE PRESENTED AS TWO POSSIBLE METHODS OF DISCOURAGING VANDALISM. (JF)

ED- ED058646
YR- 71
CH- EA003[illegible]
AU- NIELSEN, [illegible], ED.
TI- VANDALISM IN SCHOOLS. A $[illegible] MILLION DOLLAR PROBLEM.
PD- DEC 71
IS- [illegible]MAY72
IC- [illegible]
IN- [illegible] SCHOOL STUDY COUNCIL, EUGENE.
PR- [illegible] MF-[illegible] HC-$3.29
CO- [illegible]-C-0-8-[illegible]353-3514
AV- [illegible] SCHOOL STUDY COUNCIL, UNIVERSITY OF OREGON, EUGENE 97403
($2.00)
NO- [illegible]P.; [illegible] BULLETIN, V15 N4
DE- ADMINISTRATOR RESPONSIBILITY
DE- BOARD OF EDUCATION POLICY
DE- COMMUNITY INVOLVEMENT
DE- COSTS
DE- GUIDELINES
DE- PLANNING
DE- POLICE [illegible] RELATIONSHIP
DE- PREVENTION
DE- SCHOOL CONSTRUCTION
DE- VANDALISM
AB- THIS REPORT IS A COMPILATION OF STRATEGIES AND PREVENTIVE DEVICES THAT HAVE [illegible] BY SCHOOL ADMINISTRATORS AND FOUND [illegible] EFFECTIVE IN THE PREVENTION OF VANDALISM. THE REPORT DISCUSSES [illegible] WHICH PERSONNEL SHOULD BE RESPONSIBLE FOR CONTROLLING VANDALISM, [illegible] CONSTRUCTION MATERIALS, AND OUTLINES POLICIES FOR CONTROLLING AND DETERRING VANDALISM. (AUTHOR/JF)

ED- EJ051407
YR- 71
CH- [illegible]
TI- [illegible] A LOOP
PD- [illegible] 71
IS- CIJMAY7[illegible]
PR-
CC- [illegible]
JC- [illegible] +7
DE- BUILDING [illegible]
DE- CORRIDORS
DE- ELEMENTARY SCHOOLS
DE- LIGHTING DESIGN
DE- SCHOOL ARCHITECTURE
DE- SCHOOL DESIGN
DE- SCHOOL VANDALISM

ED- [illegible]
YR- 71
CH- [illegible]01474
AU- STALLING, THOMAS L.
TI- DOOR HARDWARE TO CHECK VANDALISM
PD- [illegible] 71
IS- CIJE1971
PR-
CG- [illegible]
JC- SCHOOL MANAGEMENT; [illegible]-31
DE- BUILDING MATERIALS
DE- DOORS
DE- EQUIPMENT STANDARDS
DE- SCHOOL CONSTRUCTION
DE- SCHOOL VANDALISM
ID- HARDWARE

ED- EJ044209
YR- 71
CH- EA501...
AU- SENTELLE, SAM P.
TI- THE KEEPING OF THE KEYS
PD- SEP 71
IS- CIJE1971
PR-
CG- [illegible]
JC- AMERICAN SCHOOL AND UNIVERSITY; 44, 1; 40-41
DE- BUILDING OPERATION
DE- FACILITY INVENTORY
DE- PROPERTY ACCOUNTING
DE- SCHOOL BUILDINGS
DE- SCHOOL VANDALISM
DE- SECURITY

ED- [illegible]
YR- 71
CH- EA501957
AU- [illegible]
AU- [illegible]
TI- [illegible] DAY. [illegible] HIGH SCHOOLS
PD- OCT 71
IS- CIJE1971
PR-
CG- [illegible]
JC- PHI DELTA KAPPAN; [illegible]; 111-112
DE- CONTRACTS
DE- DISCIPLINE PROBLEMS
DE- EDUCATIONAL CHANGE
DE- EDUCATIONAL IMPROVEMENT
DE- EDUCATIONAL INNOVATION
DE- SCHOOL VANDALISM
DE- SECONDARY SCHOOL STUDENTS
DE- STUDENT PARTICIPATION
DE- SUBURBAN SCHOOLS
ID- EDUCATIONAL REFORM

ED- EJ043123
YR- 71
CH- [illegible]C5005
AU- CLARK, [illegible] N.
AU- AND OTHERS
TI- VALUES, BEHAVIOR, AND CONFLICT IN [illegible] CAMPING CULTURE
PD- SUM 71
IS- CIJE1971
PR-
CG-
JC- JOURNAL OF LEISURE RESEARCH; [illegible]; [illegible]; 1[illegible]-[illegible]
DE- ADMINISTRATIVE PERSONNEL
DE- ATTITUDES
DE- BEHAVIOR PROBLEMS
DE- CAMPING
DE- COMPARATIVE ANALYSIS
DE- RECREATIONAL FACILITIES
DE- TABLES (DATA)
DE- VALUES
DE- VANDALISM
ID- RECREATIONISTS

ED- EJ04[illegible]
YR- 71
CH- [illegible]E0256
AU- ZAIDEN, DENNIS J.
TI- [illegible] SAFETY [illegible] FINAL [illegible]
PD- AUG 71
IS- CIJE1971
PR-
CG-
JC- COLLEGE AND UNIVERSITY BUSINESS; 51; 2; 37-41
DE- ACCIDENT PREVENTION
DE- CAMPUSES
DE- EQUIPMENT MAINTENANCE
DE- HIGHER EDUCATION
DE- POLICE
DE- SAFETY
DE- SAFETY EDUCATION
DE- SCHOOL SAFETY
DE- SCHOOL VANDALISM
DE- SECURITY

ED- EJ042525
YR- 71
CH- [illegible]
AU- Y[illegible]UN[illegible], JAM[illegible]
AU- SMITH, [illegible]
TI- [illegible] STRIKES? WITH CONTINGENCY [illegible], YOU
ALREADY K[illegible]W
PD- A[illegible] 71
IS- [illegible]
PR-
CG- [illegible]
JC- [illegible] AN[illegible] UNIV[illegible]TY [illegible]S; [illegible]1; 2: [illegible]-7
DE- [illegible] [illegible]EVENTION
DE- [illegible]CTIVISM
DE- [illegible]ME[illegible]NCY [illegible]
DE- [illegible] [illegible]CATION
DE- [illegible]
DE- [illegible]
DE- SAF[illegible]TY [illegible]
DE- SC[illegible] [illegible]TY
DE- [illegible] VAN[illegible]AL[illegible]
DE- VIOLENCE

3. From a High School Teacher: I would like any and all information dealing with Self Concept and its relationship with Academic Achievement. I need information showing a relationship between these two factors. (For Jr./Sr. High School)

Special Instructions to Trainees: Develop at least two search formulations to show the junior-senior level: one with an ANDed statement, the second, with an AND NOT statement.

Comments:

DISCUSSION GUIDE FOR TRAINER:

As the attached on-line printout illustrates, there are 216 citations that meet the statement of ACADEMIC ACHIEVEMENT AND SELF CONCEPT. This search helps to illustrate one of the more difficult problems in limiting searches in the ERIC file, that is, by level. There are two major facets of the problem:

- The selection of terms to represent any given level is a problem that levels may be expressed in specific grades (e.g., Grade 7), in student groups (e.g., Junior High School Students), or educational levels (e.g., Secondary Grades);

- The searcher must decide whether to use AND statement with the appropriate level terms, or to use an AND NOT statement with those terms that represent the levels of no interest. (See Search Formulations 1 and 2.)

For the first problem, the Trainer should discuss with the trainees the usefulness of preparing in advance some ORed statements rep-representing the different levels of education. For each level, the Retrieval Specialist may wish to develop several statements, some of which cover only the broadest areas (e.g., universities, colleges), others covering the student populations (e.g., Secondary School Students), and others covering the more specific terms within a level (e.g., State Colleges, Teacher Colleges). Samples of several such searches are included in the trainees packets, to help them adapt and develop their own.

Search Formulation 1.

```
SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?
USER:
SELF CONCEPT AND ACADEMIC ACHIEVEMENT
PROG:
PSTG---NUMBER POSTINGS (216)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?
USER:
SECONDARY GRADES OR JUNIOR HIGH SCHOOL STUDENTS OR HIGH SCHOOL STUDENTS
PROG:
PSTG---NUMBER POSTINGS (4111)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?
USER:
1 AND 2
PROG:
PSTG---NUMBER POSTINGS (31)
```

Search Formulation 2.

```
SS 1/C---SEARCH STATEMENT 1 OR COMMAND?
USER:
SELF CONCEPT AND ACADEMIC ACHIEVEMENT
PROG:
PSTG---NUMBER POSTINGS (216)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND
USER:
COLLEGE STUDENTS OR JUNIOR COLLEGE STUDENTS OR ELEMENTARY SCHOOL STUDENTS
PROG:
PSTG---NUMBER POSTINGS (6101)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?
USER:
1 AND NOT 2
PROG:
PSTG---NUMBER POSTINGS (170)
```

A decision in the second problem area must be made in full recognition of the fact that a level-related descriptor may not have been used by the indexer, and that an AND statement may therefore exclude some materials--without level inductors--that are potentially of interest to the client. (In recent years, this has been an important issue within the ERIC system, and clearinghouses are now encouraged to include the level within the set of descriptors for a given document.)

The Trainer should take some time with the group to make sure they understand the difference between using the ANDed statement and the AND NOT statement. (See attached on-line printout.) The AND search formulation establishes particularly restrictive specifications for the search, in that the specific level terms given <u>must</u> be included among the descriptor set of a document before it is retrieved. However, it is important to note that this search formulation will not retrieve documents that are indexed by other secondary-level terms (e.g., GRADE 7), nor will it retrieve on documents in which no level is included, but deals, instead, with a special student population, e.g., disadvantaged youth.

The AND NOT statement is more restrictive than the ANDed statement in one sense, for it will not only exclude document citations that are indexed by college- and elementary-level terms, but those that are indexed by college or elementary <u>and</u> secondary-level terms. However, as shown by the differences in postings, the AND NOT approach is much less restrictive; it will draw those document citations with no level-related index terms that were thrown out in the AND search.

It is important that the trainees understand what will be included or excluded in each of these two search approaches, but it is equally important that they realize that the differences in postings resulting from the two different approaches will vary per search problem. Given evenly distributed postings in the file, AND NOT is technically the complement of AND. In this particular search, it would appear that there are more materials relative to the secondary school population than to the other levels; this may not always be the case. Thus, the decision to use AND or AND NOT should be made on factors other than the postings yield, such as the weighing of what might be lost in an ANDed statement.

This search also lends itself to further refinement, but would depend on the searcher having more information from the client. We might imagine that the search could be narrowed by:

- Educational Research or Statistical Studies
- Prediction or Expectation
- Motivation or Intervention or Changing Attitudes or Motivation Techniques or Teacher Role or Curriculum Design
- Curriculum Design or Teacher Role

(These searches are displayed in the attached on-line printout sample and illustrate in their postings levels the narrowness of the searches.) The key questions to the client might have been one of seeking to clarify the kind of relationship between the two factors that he was interested in, or learning more about how the client intended to use the information.

Search Formulation 3.

```
SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?
USER:
SELF CONCEPT AND ACADEMIC ACHIEVEMENT
PROG:
PSTG---NUMBER POSTINGS (216)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?
USER:
COLLEGE STUDENTS OR
    JUNIOR COLLEGE STUDENTS OR ELEMENTARY SCHOOL STUDENTS
PROG:
PSTG---NUMBER POSTINGS (6101)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?
USER:
1 AND NOT 2
PROG:
PSTG---NUMBER POSTINGS (170)
SS 4/C?---SEARCH STATEMENT 4 OR COMMAND?
USER:
EDUCATIONAL RESEARCH OR STATISTICAL STUDIES
PROG:
PSTG---NUMBER POSTINGS (3456)
SS 5/C?---SEARCH STATEMENT 5 OR COMMAND?
USER:
3 AND 4
PROG:
PSTG---NUMBER POSTINGS (14)
```

Search Formulation 4.

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:
SELF CONCEPT AND ACADEMIC ACHIEVEMENT
PROG:

PSTG---NUMBER POSTINGS (216)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?

USER:
COLLEGE STUDENTS OR JUNIOR COLLEGE STUDENTS OR ELEMENTARY SCHOOL STUDENTS
PROG:

PSTG---NUMBER POSTINGS (6101)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?

USER:
1 AND NOT 2
PROG:

PSTG---NUMBER POSTINGS (31)

SS 4/C?---SEARCH STATEMENT 4 OR COMMAND?

USER:
PREDICTION OR EXPECTATION
PROG:

PSTG--- NUMBER POSTINGS (853)
SS 5/C?---SEARCH STATEMENT 5 OR COMMAND?

USER:
3 AND 4
PROG:

PSTG---NUMBER POSTINGS (8)

Search Formulation 5.

```
SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:
ACADEMIC ACHIEVEMENT AND SELF CONCEPT
PROG:

PSTG---NUMBER POSTINGS (216)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?

USER:
COLLEGE STUDENTS OR JUNIOR COLLEGE STUDENTS OR ELEMENTARY SCHOOL STUDENTS
PROG:

PSTG---NUMBER POSTINGS (6101)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?

USER:
1 AND NOT 2
PROG:

PSTG---NUMBER POSTINGS (31)
SS 4/C?---SEARCH STATEMENT 4 OR COMMAND?

USER:
MOTIVATION OR MOTIVATION OR INTERVENTION OR CHANGING ATTITUDES OR
PROG:

CNT 4---CONTINUE SS 4

USER:
TEACHER ROLE OR CURRICULUM DESIGN
PROG:

PSTG---NUMBER POSTINGS (6027)
SS 1/C?---SEARCH STATEMENT OR COMMAND?

USER:
3 AND 4
PROG:

PSTG---NUMBER POSTINGS (29)
```

SELECTED CITATIONS

FROM

EXERCISE 3 SEARCH RESULTS

ED- ED063219
YR- 72
CH- SE(C3040
AU- OLSEN, HENRY D.
TI- CHANGES IN ACADEMIC ROLES OF BLACK AND WHITE COMPENSATORY EDUCATION STUDENTS AND ITS EFFECTS ON SELF-CONCEPT-OF-ACADEMIC-ABILITY.
PD- 72
TS- RIESEP72
SC- RMQ56000
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEC-0-70-2717: OEC-1
NO- 1.1.; PAPER PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION
DE- ACADEMIC ABILITY
DE- ACADEMIC ACHIEVEMENT
DE- AFFECTIVE OBJECTIVES
DE- BEHAVIORAL OBJECTIVES
DE- COMPENSATORY EDUCATION
DE- EDUCATIONALLY DISADVANTAGED
DE- EDUCATIONAL RESEARCH
DE- EDUCATIONAL TESTING
DE- HIGHER EDUCATION
DE- SELF ACTUALIZATION
DE- SELF CONCEPT
DE- SELF CONCEPT TESTS
DE- SELF CONGRUENCE
DE- SELF ESTEEM
AB- A RELATIONSHIP EXISTS BETWEEN AN INDIVIDUALS' PERCEPTION OF HIS ABILITY TO LEARN AND HIS ACADEMIC ACHIEVEMENT. THIS PAPER REPORTS THE FINDINGS OF A STUDY DESIGNED TO IDENTIFY THE LEVEL OF SELF-CONCEPT OF ACADEMIC ABILITY OF 121 STUDENTS, COMPRISED OF 108 BLACKS (64 MALES AND 44 FEMALES) AND 13 WHITES (7MALES AND 6 FEMALES), UPON ENROLLMENT IN AND COMPLETION OF A PRE-COLLEGE COMPENSATORY EDUCATION PROGRAM IN NEW YORK STATE DURING 1968-1969. ENROLLMENT IN COMPENSATORY EDUCATION CONSTITUTES ONE ACADEMIC ROLE, WHILE COMPLETION CONSTITUTES ANOTHER ROLE. THE BROOKOVER SELF-CONCEPT-OF-ACADEMIC-ABILITY SCALE WAS ADMINISTERED TO SUBJECTS UPON ENTERING AND AGAIN UPON COMPLETING THE PROGRAM. IT WAS THEORIZED THAT THERE WOULD BE A POSITIVE CHANGE IN SELF-CONCEPT OF ACADEMIC ABILITY OF 1) EACH SUBJECT AS A RESULT OF MOVING FROM ONE ROLE TO ANOTHER; 2) BLACK AND WHITE SUBJECTS FROM TEST 1 TO TEST 2; AND, 3) BOTH MALE AND FEMALE SUBJECTS FROM TEST 1 TO TEST 2. IT WAS CONCLUDED THAT CHANGES IN ACADEMIC ROLES HAD A POSITIVE EFFECT ON THE SELF-CONCEPT OF ACADEMIC ABILITY OF MALE AND FEMALE BLACK SUBJECTS; BUT ONLY FOR WHITE MALE SUBJECTS. THE RESEARCH INDICATES THAT COMPENSATORY EDUCATION PROGRAMS COULD POSITIVELY AFFECT SELF-CONCEPT IMPROVEMENT CONTRIBUTING TO ACADEMIC ACHIEVEMENT. (AUTHOR/SJM)

ED- ED062484
YR- 72
CH- UD012362
AU- MARTIN, DOROTHY WOHLNA
TI- THE INNER-CITY BLACK MALE HIGH SCHOOL STUDENT: HIS SELF CONCEPT, ACADEMIC ACHIEVEMENT, AND OCCUPATIONAL ASPIRATIONS.
PD- 7 APR 72
IS- RIEAUG72
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEC-0-9-27001-3417
NO- 12P.; PAPER PRESENTED AT THE AMERICAN EDUCATIONAL ASSOCIATION ANNUAL MEETING, CHICAGO, ILL., APRIL 28, 1972
DE- ACADEMIC ACHIEVEMENT
DE- DEFACTO SEGREGATION
DE- EDUCATIONAL DIAGNOSIS
DE- HIGH SCHOOL STUDENTS
DE- INNER CITY
DE- INTEGRATION EFFECTS
DE- NEGRO STUDENTS
DE- OCCUPATIONAL ASPIRATION
DE- SCHOOL INTEGRATION
DE- SELF CONCEPT
DE- SELF ESTEEM
DE- SURVEYS
DE- URBAN YOUTH
ID- CRARY AMERICAN HISTORY TEST
ID- SELF CONCEPT AS A LEARNER SCALE
AB- THE PURPOSE OF THIS STUDY WAS TO COMPARE THE SELF CONCEPT, ACADEMIC ACHIEVEMENT, AND OCCUPATIONAL ASPIRATIONS OF TWO SAMPLES OF ELEVENTH AND TWELFTH GRADE BLACK MALE STUDENTS, WHO LIVE IN THE INNER CITY OF A LARGE METROPOLITAN AREA AND ATTEND SCHOOLS OF RACIALLY DIFFERENT COMPOSITION. THE SAMPLE IN THE SEGREGATED BLACK SCHOOL CONSISTED OF 56 MALE PUPILS IN SEVERAL CLASSES WHICH WERE ASSIGNED BY THE PRINCIPAL TO PARTICIPATE. THE SAMPLE IN THE INTERRACIAL SCHOOLS CONSISTED OF 45 VOLUNTEERS FROM THE 92 POTENTIAL SUBJECTS. BOTH GROUPS INCLUDED STUDENTS TAKING COLLEGE PREPARATORY, BUSINESS, VOCATIONAL, AND GENERAL EDUCATION COURSES. ALL DATA WERE COLLECTED DURING MAY, 1970. THE ACADEMIC ACHIEVEMENT OF THE SUBJECTS WAS MEASURED BY THE CRARY AMERICAN HISTORY TEST. WHEN THE RAW SCORES OF THIS TEST WERE ANALYZED HOLDING AGE AND IQ CONSTANT, THE DIFFERENCE BETWEEN THE GROUPS WAS SIGNIFICANT WITH THE SUBJECTS IN THE INTERRACIAL SCHOOLS HAVING THE HIGHER MEAN SCORE. THE TOTAL SCORE MADE BY EACH SUBJECT ON THE SELF CONCEPT AS A LEARNER SCALE WAS CONSIDERED INDICATIVE OF HIS FEELING OF COMPETENCE IN THE CLASSROOM. THE MEAN OF THE SEGREGATED, INNER-CITY SCHOOL SAMPLE WAS SIGNIFICANTLY HIGHER THAN THE MEAN OF THE SAMPLE IN THE INTERRACIAL SCHOOLS. (AUTHOR/JM)

ED- ED062396
YR- 72
CH- TM001335
AU- TOCCO, T. SALVATORE
AU- BRIDGES, CHARLES M., JR.
TI- A REPLICATION AND AN EXAMPLE OF SERENDIPITY IN EDUCATIONAL RESEARCH.
PD- APR 72
IS- RIEAUG72
SC- RMQ66000
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-8-522394-3991(
NO- 21P.; PAPER PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN
EDUCATIONAL RESEARCH ASSOCIATION (CHICAGO, ILLINOIS, APRIL 1972)
DE- ACADEMIC ACHIEVEMENT
DE- CORRELATION
DE- DISADVANTAGED ENVIRONMENT
DE- DISADVANTAGED YOUTH
DE- EDUCATIONAL RESEARCH
DE- GROWTH PATTERNS
DE- IDENTIFICATION (PSYCHOLOGICAL)
DE- MODELS
DE- MOTHER ATTITUDES
DE- MOTHERS
DE- SELF CONCEPT
DE- SELF CONCEPT TESTS
DE- SELF ESTEEM
DE- STATISTICAL ANALYSIS
DE- TEST RELIABILITY
DE- TESTS
ID- CHILDRENS SELF SOCIAL CONSTRUCTS TEST
ID- CSSCT
ID- HISM
ID- HOW I SEE MYSELF SCALE
ID- SOCIAL REACTION INVENTORY
ID- SRI
AB- THE RELATIONSHIP BETWEEN SELF-CONCEPT MEASURES OF DEPRIVED MOTHERS
AND SELF-CONCEPT MEASURES OF THEIR CHILDREN IS RE-EXAMINED
EMPIRICALLY. AN ACCIDENTAL DISCOVERY WAS MADE CORRELATING MOTHERS'
PRE MEASURES OF SELF-CONCEPT TO THEIR CHILDRENS' POST MEASURES OF
SELF-CONCEPT. (CK)

ED- ED062392
YR- 72
CH- TM001330
AU- LANDIS, H. JOHN
TI- A VALIDITY STUDY OF THE SELF-ESTEEM INVENTORY.
PD- APR 72
IS- RIEAUG72
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-71-4558
NO- 25P.; PAPER PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (CHICAGO, ILLINOIS, APRIL 1972)
DE- ABILITY GROUPING
DE- ACADEMIC ACHIEVEMENT
DE- CHECK LISTS
DE- CORRELATION
DE- FACTOR STRUCTURE
DE- GRADE 7
DE- HYPOTHESIS TESTING
DE- PERSONALITY ASSESSMENT
DE- RATING SCALES
DE- SELF CONCEPT
DE- SELF ESTEEM
DE- STATISTICAL ANALYSIS
DE- TEST VALIDITY
ID- SELF CONCEPT AS A LEARNER SCALE
ID- SELF ESTEEM INVENTORY
AB- RESULTS OF THIS VALIDATION STUDY OF A SLIGHTLY MODIFIED VERSION OF THE COPPERSMITH SELF-ESTEEM INVENTORY SUBSTANTIATE ITS USE WITH SEVENTH GRADERS TO ASSESS GOAL I (CONCERNING SELF-UNDERSTANDING AND APPRECIATION OF SELF-WORTH) OF THE EDUCATIONAL QUALITY ASSESSMENT PROGRAM IN PENNSYLVANIA. APPENDIXES INCLUDE THE DEFINITION AND RATIONALE FOR GOAL I, COPIES OF THE SELF-ESTEEM INVENTORY AND THE SELF-CONCEPT AS A LEARNER SCALE, AND AN EXPANDED BIBLIOGRAPHY. (MS)

ED- EJ053846
YR- 72
CH- AA511992
AU- HALL, LINCOLN H.
TI- PERSONALITY VARIABLES OF ACHIEVING AND NON-ACHIEVING MEXICAN-AMERICAN AND OTHER COMMUNITY COLLEGE FRESHMEN
PD- JAN 72
IS- CIJJUN72
PR-
CG- 0
JC- JOURNAL OF EDUCATIONAL RESEARCH; 65; 5; 224-8
DE- ACADEMIC ACHIEVEMENT
DE- COLLEGE FRESHMEN
DE- COMMUNITY COLLEGES
DE- MEXICAN AMERICANS
DE- PERSONALITY STUDIES
DE- SELF CONCEPT
DE- SOCIOECONOMIC BACKGROUND
DE- SOCIOECONOMIC INFLUENCES

ED- FJ049656
YR- 72
CH- PS501484
AU- HERZOG, ELIZABETH
AU- SUDIA, CECELIA E.
TI- FAMILIES WITHOUT FATHERS
PD- JAN 72
IS- CIJL1972
PR-
CG- U U
JC- CHILDHOOD EDUCATION; 48; 4; 175-181
DE- ACADEMIC ACHIEVEMENT
DE- DELINQUENCY
DE- FATHERLESS FAMILY
DE- MALES
DE- MOTHER ATTITUDES
DE- ONE PARENT FAMILY
DE- PARENT CHILD RELATIONSHIP
DE- PARENT ROLE
DE- SELF CONCEPT

ED- EJ054380
YR- 71
CH- PS501731
AU- BUTLER, ANNIE L.
TI- AREAS OF RECENT RESEARCH IN EARLY CHILDHOOD EDUCATION
PD- DEC 71
IS- CIJJUL72
PR-
CG- 6 & & &
JC- CHILDHOOD EDUCATION; 48; 3; 143-7
DE- ACADEMIC ACHIEVEMENT
DE- EARLY CHILDHOOD EDUCATION
DE- EDUCATIONAL RESEARCH
DE- INTELLIGENCE QUOTIENT
DE- INTERPERSONAL RELATIONSHIP
DE- MOTIVATION
DE- PARENT PARTICIPATION
DE- PLAY
DE- SELF CONCEPT
DE- TEACHER ROLE

ED- ED060958
YR- 71
CH- PS005496
TI- NORTH CAROLINA STATE SUPPORTED EARLY CHILDHOOD DEMONSTRATION CENTERS. SECOND ANNUAL EVALUATION: 1970-1971.
PD- DEC 71
IS- RIEJUL72
IC- BPF00155
IN- LEARNING INST. OF NORTH CAROLINA, DURHAM.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-522422-4433(10
NO- 8FP.
DE- ACADEMIC ACHIEVEMENT
DE- BEHAVIOR CHANGE
DE- CHILD DEVELOPMENT
DE- COGNITIVE PROCESSES
DE- COMPARATIVE ANALYSIS
DE- CONTROL GROUPS
DE- DEMONSTRATION CENTERS
DE- EARLY CHILDHOOD EDUCATION
DE- EDUCATIONAL PROGRAMS
DE- EXPERIMENTAL GROUPS
DE- FINANCIAL SUPPORT
DE- INTELLECTUAL DEVELOPMENT
DE- KINDERGARTEN CHILDREN
DE- LEARNING ACTIVITIES
DE- MEASUREMENT INSTRUMENTS
DE- PRESCHOOL CHILDREN
DE- PROGRAM EVALUATION
DE- SELF CONCEPT
DE- STATE PROGRAMS
DE- TEST RESULTS
ID- CLASSROOM BEHAVIOR INVENTORY
ID- EARLY CHILDHOOD ASSESSMENT BATTERY
ID- NORTH CAROLINA
AB- THE SECOND YEAR OF A STATE SUPPORTED EARLY CHILDHOOD EDUCATION PROGRAM WAS EVALUATED, USING A PRE-POST EVALUATION DESIGN INVOLVING EXPERIMENTAL AND CONTROL GROUPS. AN EARLY CHILDHOOD ASSESSMENT BATTERY WAS ADMINISTERED TO 720 FIVE-YEAR-OLDS ENROLLED IN THE KINDERGARTEN PROGRAM BY THEIR TEACHERS. THE CONTROL GROUP (178) WERE TESTED LOCALLY. RESULTS INCLUDE: (1) THE STEADINESS OF THE TRENDS IN NON-COGNITIVE AREAS FROM THE BEGINNING TO THE END OF THE YEAR, AND FROM ONE YEAR TO THE NEXT, GIVES CONFIDENCE THAT THE CLASSROOM BEHAVIOR INVENTORY IS A MEANS FOR MEASURING NON-COGNITIVE ASPECTS OF CHILDREN'S SCHOOL EXPERIENCES; (2) HELPING INCREASE CHILDREN'S BEHAVIOR IN THE AREAS OF THE POSITIVE BEHAVIOR TRAITS--AND DECREASE THE NEGATIVE--HAS A POSITIVE EFFECT UPON COGNITIVE PERFORMANCES; (3) IN COGNITIVE CHANGES, THE EXPERIMENTAL GROUP EXCEEDED THE CONTROL GROUP IN ABSOLUTE SCORES ON EVERY TEST; (4) ALL CHILDREN WHO ATTENDED KINDERGARTEN THE YEAR BEFORE ARE MAINTAINING A REASONABLE AVERAGE WITH RESPECT TO NATIONAL NORMS; AND (5) THE CHILDREN WHO HAD ATTENDED KINDERGARTEN THE YEAR BEFORE CONTINUED TO MAKE SUBSTANTIAL GAINS BETWEEN THE BEGINNING AND ENDING OF FIRST GRADE ON ALL MEASURES. (AUTHOR/CK)

ED- ED060950
YR- 71
CH- PS005477
AU- ADKINS, DOROTHY C.
AU- BALLIF, BONNIE L.
TT- MOTIVATION CURRICULUM. A CURRICULAR MODULE DESIGNED TO PROMOTE
MOTIVATION FOR SCHOOL ACHIEVEMENT.
PD- AUG 71
IS- RIEJUL72
IC- JT13157F
IN- HAWAII UNIV., HONOLULU.
SC- FGK65995
SN- OFFICE OF ECONOMIC OPPORTUNITY, WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-922422-4433(10
NO- 92P.
DE- ACADEMIC ACHIEVEMENT
DE- AFFECTIVE OBJECTIVES
DE- CHILD DEVELOPMENT
DE- CLASS ACTIVITIES
DE- CONCEPTUAL SCHEMES
DE- COURSE CONTENT
DE- CURRICULUM DESIGN
DE- DISCOVERY LEARNING
DE- EDUCATIONAL OBJECTIVES
DE- GOAL ORIENTATION
DE- INSTRUCTIONAL MATERIALS
DE- INTERACTION
DE- LEARNING EXPERIENCE
DE- MODELS
DE- MOTIVATION TECHNIQUES
DE- ORGANIZATION
DE- RESPONSE MODE
DE- SELF CONCEPT
DE- STUDENT EVALUATION
DE- TEACHER ROLE
DE- THOUGHT PROCESSES
AB- THE CLASSROOM INTERACTIONS AND ACTIVITIES DESCRIBED IN THIS DOCUMENT ARE INTENDED TO PROVIDE EXPERIENCES THAT WILL INCREASE THE PROBABILITY OF THE OCCURRENCE OF EACH OF THE RESPONSE CONSTITUENTS OF MOTIVATION TO ACHIEVE IN LEARNING IN SCHOOL. THESE MATERIALS HAVE BEEN ORGANIZED INTO FIVE UNITS; EACH UNIT EMPHASIZES ONE OF THE FIVE CONSTITUENTS: AFFECTIVE, CONCEPTUAL, PURPOSIVE, INSTRUMENTAL, AND EVALUATIVE. THE PURPOSE OF SUCH AN ORGANIZATION IS TO ENABLE THE TEACHER TO FOCUS HER ATTENTION ON AND INCREASE HER ABILITY TO PERCEIVE THE UNIQUE NATURE OF EACH OF THE RESPONSES. WITHIN EACH UNIT, ONE CONSTITUENT OF MOTIVATION IS MAGNIFIED AT ONE TIME, AND ANOTHER AT ANOTHER TIME. IN UNIT II IT IS SUGGESTED THAT THE TEACHER SET UP SOME GOALS FOR EACH CHILD IN ORDER TO GIVE HIM AN OPPORTUNITY TO DO SOMETHING THAT HE WILL BE ABLE TO DO AND THUS TO HELP HIM INCREASE HIS SELF-CONFIDENCE, WHEREAS IN UNIT III IT IS SUGGESTED THAT THE CHILD BE ENCOURAGED TO SET UP HIS OWN GOALS. THE PRIMARY FOCUS OF ALL THE EXPERIENCES SUGGESTED IS TO DEVELOP A CHILD'S ABILITY TO FUNCTION IN PROCESSES, I.E., WAYS OF THINKING. (CK)

ED- ED060001
YR- 71
CH- TE002616
AU- BRANDES, PAUL D.
TI- THE EFFECT OF ROLE PLAYING BY THE CULTURALLY DISADVANTAGED ON ATTITUDES TOWARD BIDIALECTALISM. FINAL REPORT.
PD- NOV 71
IS- RIEJUN72
IC- EXM63900
IN- NORTH CAROLINA UNIV., CHAPEL HILL.
SC- BBB02778
SN- NATIONAL CENTER FOR EDUCATIONAL RESEARCH AND DEVELOPMENT (DHEW/OE), WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEC-3-70-002(010)
BN- BR-9-C-057
NO- 62P.
DE- ACADEMIC ACHIEVEMENT
DE- CHANGING ATTITUDES
DE- CULTURALLY DISADVANTAGED
DE- ENGLISH INSTRUCTION
DE- INSTRUCTIONAL PROGRAM DIVISIONS
DE- MEASUREMENT INSTRUMENTS
DE- MOTIVATION TECHNIQUES
DE- NEGROES
DE- NONSTANDARD DIALECTS
DE- ROLE PLAYING
DE- SELF CONCEPT
DE- SEX DIFFERENCES
DE- STANDARDS
DE- TESTS
AB- IN AN EFFORT TO MOTIVATE CULTURALLY DIFFERENT STUDENTS TO LEARN STANDARD ENGLISH WHILE THEY REMAIN PROUD OF THEIR DIALECT AND RETAIN IT AS THEIR INFORMAL MANNER OF SPEAKING, 120 BLACKS AT THREE GRADE LEVELS ROLE PLAYED FROM SCRIPTS THE PARTS OF EMPLOYERS, COLLEGE ADMISSIONS OFFICERS, AND APPLICANTS. THE SCRIPTS REWARDED APPLICANTS WHO COULD AND WERE PROUD OF SPEAKING TWO DIALECTS, AND PENALIZED APPLICANTS WHO COULD SPEAK ONLY ONE DIALECT, EVEN IF THAT DIALECT WAS STANDARD ENGLISH. A CONTROL GROUP OF 120 BLACKS COMPLETED SS FOR TWO THREE-DIMENSIONAL DESIGNS, ONE FEATURING SEX, GRADE LEVEL AND ROLE PLAYING, THE SECOND FEATURING ACHIEVEMENT, GRADE LEVEL AND ROLE PLAYING. CRITERION MEASURES WERE (1) A SEMANTIC DIFFERENTIAL DESIGNED BY THIS STUDY TO MEASURE THE ATTITUDES OF BLACKS TOWARD BIDIALECTALISM, AND (2) A SERIES OF LIKERT-LIKE ITEMS TESTING A VARIETY OF ATTITUDES. THE SEMANTIC DIFFERENTIAL WAS PARTIALLY SUCCESSFUL IN MEASURING THE ATTITUDES OF BLACKS TOWARD BIDIALECTALISM BUT NEEDS FURTHER REFINEMENT. BLACKS WERE FAVORABLE TOWARD BIDIALECTALS, AND ROLE PLAYING COULD MOTIVATE THEM TO BE EVEN MORE FAVORABLE. SEX, ACHIEVEMENT, AND GRADE LEVEL WERE NOT CONSISTENT FACTORS IN INFLUENCING RESULTS, ALTHOUGH THERE WERE INDICATIONS THAT ACHIEVERS RESPONDED MORE FAVORABLY THAN NON-ACHIEVERS. (AUTHOR)

ED- ED059254
YR- 71
CH- TM001069
TI- DISTRIBUTION OF EDUCATIONAL PERFORMANCE AND RELATED FACTORS IN
    MICHIGAN: A SUPPLEMENT.
PD- 71
IS- RIEMAY72
IC- ?PP00223
IN- MICHIGAN STATE DEPT. OF EDUCATION, LANSING.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEC-?-10-106
NO- 64P.
DE- ACADEMIC ACHIEVEMENT
DE- ACADEMIC PERFORMANCE
DE- BASIC SKILLS
DE- EDUCATIONAL ACCOUNTABILITY
DE- EDUCATIONAL FINANCE
DE- EDUCATIONAL PROGRAMS
DE- EDUCATIONAL RESOURCES
DE- GOAL ORIENTATION
DE- GRADE 4
DE- GRADE 7
DE- RESEARCH PROBLEMS
DE- SCHOOLS
DE- SCHOOL SYSTEMS
DE- SELF CONCEPT
DE- SOCIAL BACKGROUND
DE- SOCIOECONOMIC STATUS
DE- STUDENT ATTITUDES
DE- TABLES (DATA)
DE- TESTING PROBLEMS
ID- MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM
AB- EDUCATIONAL DISTRIBUTION TABLES WERE CONSTRUCTED WHICH INDICATE
    THAT, GENERALLY, SCHOOLS AND SCHOOL DISTRICTS THAT SCORED IN THE
    UPPER (OR MIDDLE, OR LOWER) THIRD OF A RANKING OF MICHIGAN DISTRICTS
    ON COMPOSITE ACHIEVEMENT ALSO RAN HIGH (OR MIDDLE, OR LOW) ON OTHER
    ASSESSMENT MEASURES. THE SAME TYPE OF RELATIONSHIP WAS GENERALLY
    FOUND BETWEEN RANKINGS OF SCHOOLS ON SOCIOECONOMIC STATUS AND OTHER
    ASSESSMENT MEASURES. (MS)

ED- ED056134
YR- 71
CH- UD011615
AU- SOARES, ANTHONY T.
AU- SOARES, LOUISE M.
TI- EXPECTANCY, ACHIEVEMENT, AND SELF-CONCEPT CORRELATES IN
    DISADVANTAGED AND ADVANTAGED YOUTHS.
PD- SEP 71
IS- RIEFEB72
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-9-000341-(036)
NO- 9P.; PAPER PRESENTED AT THE AMERICAN PSYCHOLOGICAL ASSOCIATION
    ANNUAL CONVENTION, WASHINGTON, D.C., SEPTEMBER 1971
NO- 64P.; THESIS SUBMITTED TO UNIVERSITY OF NEBRASKA, OMAHA NEBRASKA.
DE- ACADEMIC ACHIEVEMENT
DE- ANGLO AMERICANS
DE- COMPARATIVE TESTING
DE- CORRELATION
DE- EQUAL EDUCATION
DE- EXPECTATION
DE- GRADE POINT AVERAGE
DE- INTELLIGENCE QUOTIENT
DE- NORM REFERENCED TESTS
DE- SECONDARY SCHOOL STUDENTS
DE- SELF CONCEPT
DE- SOCIOECONOMIC STATUS
DE- SPANISH AMERICANS
DE- STATISTICAL STUDIES
ID- NEBRASKA
AB- THE PURPOSE OF THIS 1971 STUDY WAS TO SEE IF THERE WAS SUFFICIENT EVIDENCE AT SOUTH HIGH SCHOOL OF THE OMAHA PUBLIC SCHOOL DISTRICT TO SUPPORT ANY OF THE FOLLOWING HYPOTHESES: (1) CONTROLLING FOR INTELLIGENCE QUOTIENT (IQ) AND SOCIOECONOMIC STATUS (SES), SPANISH AMERICAN CHILDREN HAVE A SIGNIFICANTLY LOWER SELF-CONCEPT THAN ANGLO CHILDREN; ( ) CONTROLLING FOR IQ AND SES, SPANISH AMERICAN CHILDREN HAVE A SIGNIFICANTLY LOWER GRADE POINT AVERAGE (GPA) THAN ANGLO CHILDREN; (3) SELF-CONCEPT IS RELATED IN A POSITIVE AND SIGNIFICANT WAY WITH IQ AND SES; AND (4) SELF-CONCEPT IS POSITIVELY AND SIGNIFICANTLY CORRELATED WITH GPA. SELF-CONCEPT WAS MEASURED BY THE TENNESSEE SELF-CONCEPT SCALES; SES WAS ASSESSED VIA THE INDEX OF STATUS CHARACTERISTICS; GPA WAS TAKEN FROM THE LAST 2 CONSECUTIVE SEMESTERS FOR EACH STUDENT; AND IQ WAS TAKEN FROM SCHOOL RECORDS. SPANISH AMERICAN AND ANGLO 10TH, 11TH, AND 12TH GRADERS (N=40) WERE MATCHED FOR HIGH OR LOW SES AS WELL AS FOR HIGH OR LOW IQ, AND 5 CHILDREN FROM EACH ETHNIC GROUP WERE DRAWN FROM EACH OF THE 4 RESULTING CLASSIFICATIONS: HIGH SES, HIGH IQ; HIGH SES, LOW IQ; LOW SES, HIGH IQ; AND LOW SES, LOW IQ. TO DETERMINE THE SIGNIFICANCE OF THE DIFFERENCE BETWEEN THE SPANISH AMERICAN AND ANGLO GROUPS (HYPOTHESES 1 AND 2 ABOVE), THE T-TEST WAS USED; THE INDEX OF CORRELATION BETWEEN VARIABLES (HYPOTHESES 3 AND 4 ABOVE) WAS ESTABLISHED BY THE PEARSON PRODUCT-MOMENT. NONE OF THE 4 HYPOTHESES WAS ADEQUATELY SUSTAINED TO CONCLUDE THAT ANY OF THEM HELD. (BO)

ED- EJ044681
YR- 71
CH- AA510495
AU- HARRIS, CHARLES M.
TI- SCHOLASTIC SELF-CONCEPT IN EARLY AND MIDDLE ADOLESCENTS
PD- F 71
IS- CIJE1971
PR-
CG- U U
JC- ADOLESCENCE; 6; 23; 269-79
DE- ACADEMIC ACHIEVEMENT
DE- ADOLESCENCE
DE- DATA ANALYSIS
DE- SECONDARY SCHOOLS
DE- SELF CONCEPT

ED- EJ041029
YR- 71
CH- TM500276
AU- SWEET, PHYLLIS F.
AU- NUTTALL, RONALD L.
TI- THE EFFECTS OF A TRACKING SYSTEM ON STUDENT SATISFACTION AND ACHIEVEMENT
PD- MAY 71
IS- CIJE1971
PR-
CG- C C
JC- AMERICAN EDUCATIONAL RESEARCH JOURNAL; 8; 3; 511-20
DE- ABILITY GROUPING
DE- ACADEMIC ACHIEVEMENT
DE- HIGH SCHOOL STUDENTS
DE- HOMOGENEOUS GROUPING
DE- MATHEMATICAL MODELS
DE- PARTICIPANT SATISFACTION
DE- QUESTIONNAIRES
DE- SELF CONCEPT
DE- SEX DIFFERENCES

ED- EJ040178
YR- 71
PR-
CG- U U
JC- JOURNAL OF EDUCATIONAL MEASUREMENT; 8; 4; 317-19
DE- ACADEMIC ACHIEVEMENT
DE- ACADEMIC PERFORMANCE
DE- CHANGING ATTITUDES
DE- GRADE POINT AVERAGE
DE- GRADES (SCHOLASTIC)
DE- HIGH SCHOOL STUDENTS
DE- LONGITUDINAL STUDIES
DE- SELF CONCEPT
DE- SEX DIFFERENCES

ED- EJ045071
YR- 71
CH- UD5C1127
AU- ST. JOHN, NANCY
TI- THE ELEMENTARY CLASSROOM AS A FROG POND: SELF CONCEPT, SENSE OF CONTROL AND SOCIAL CONTEXT
PD- JUN 71
IS- CIJE1971
PR-
CG- J
JC- SOCIAL FORCES, 49; 4; 581-595
DE- ACADEMIC ACHIEVEMENT
DE- CAUCASIAN STUDENTS
DE- ELEMENTARY SCHOOLS
DE- INDIVIDUAL POWER
DE- NEGRO STUDENTS
DE- RACIAL BALANCE
DE- SELF CONCEPT
DE- SELF ESTEEM
DE- URBAN SCHOOLS
ID- MASSACHUSETTS

FD- EJ045056
YR- 71
CH- RE5C3103
AU- ABRAMSON, EDWARD E.
TI- LEVELS OF ASPIRATION OF NEGRO 9TH GRADE MALES IN INTEGRATED AND SEGREGATED SCHOOLS
PD- AUG 71
IS- CIJE1971
PR-
CG- U C
JC- PSYCHOLOGICAL REPORTS; 29; 1; 258
DE- ACADEMIC ACHIEVEMENT
DE- ASPIRATION
DE- GRADE 9
DE- INTEGRATION EFFECTS
DE- MALES
DE- NEGROES
DE- PERFORMANCE FACTORS
DE- RACIAL INTEGRATION
DE- SELF CONCEPT
DE- SELF ESTEEM

ED- EJ052313
YR- 71
CH- RE503701
AU- WHITE, WILLIAM F.
AU- [illegible]HAW, W. L.
TI- HIGH SELF-ESTEEM AND IDENTIFICATION WITH ADULT MODELS AMONG ECONOMICALLY DEPRIVED CHILDREN
PD- DEC 71
IS- CIJMAY 2
PR-
CG- C
JC- PERCEPTUAL AND MOTOR SKILLS; 33; 2 PT2; 1127-30
DE- ACADEMIC ACHIEVEMENT
DE- DISADVANTAGED YOUTH
DE- ECONOMICALLY DISADVANTAGED
DE- GRADE 1
DE- IDENTIFICATION (PSYCHOLOGICAL)
DE- KINDERGARTEN CHILDREN
DE- MATURATION
DE- RESPONSE MODE
DE- SELF CONCEPT
DE- SELF ESTEEM

ED- ED058369
YR- 71
CH- UD012051
TI- CONFERENCE ON BUILDING BLOCKS TO SUCCESS.
PD- DEC 71
IS- RIEAPR72
IC- EUE67030
IN- OHIO STATE BOARD OF EDUCATION, COLUMBUS.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEC-1-7-062...-3963
NO- 57P.
DE- ACADEMIC ACHIEVEMENT
DE- CHANGING ATTITUDES
DE- COMPENSATORY EDUCATION
DE- COMPENSATORY EDUCATION PROGRAMS
DE- DISADVANTAGED YOUTH
DE- EDUCATIONAL ACCOUNTABILITY
DE- EDUCATIONAL ADMINISTRATION
DE- EDUCATIONALLY DISADVANTAGED
DE- FEDERAL AID
DE- PARENT PARTICIPATION
DE- SCHOOL ATTITUDES
DE- SELF CONCEPT
ID- ELEMENTARY SECONDARY EDUCATION ACT TITLE I
ID- ESEA TITLE I
ID- OHIO
AB- THIS DOCUMENT REPRODUCES SEVERAL PAPERS THAT WERE DELIVERED AT THE OHIO DEPARTMENT OF EDUCATION'S STATEWIDE ESEA TITLE I CONFERENCE 1971, THE THEME OF WHICH WAS "BUILDING BLOCKS TO SUCCESS"; THIS TYPIFIES HOW OHIO SCHOOL ADMINISTRATORS AND TEACHERS HAVE DESIGNED TITLE I PROGRAMS TO HELP EDUCATIONALLY DISADVANTAGED CHILDREN EXPERIENCE SUCCESS IN ACADEMIC AND BEHAVIORAL GROWTH. THE PAPERS INCLUDE: "THROUGH THE EYES OF CHILDREN," ROBERT L. SINCLAIR; "PARENT-ADVISORY COUNCILS: LINK OR THREAT TO SCHOOLS," RICHARD A. HUSTON; "CATCH A SKYLARK WHILE HE SINGS," BILL MARTIN, JR., "INVOLVING PARENTS IN THE LEARNING PROCESS," MILDRED B. SMITH; "ACCOUNTABILITY--TITLE I, E.S.E.A.," RICHARD L. FAIRLEY; "THE NATIONAL SCENE," HON. JOHN BRADEMAS; "ADMINISTRATOR'S ROLE IN TITLE I," HAROLD H. EIBLING; AND "COMPENSATORY EDUCATION--ITS INFLUENCE ON EDUCATION GENERALLY," RUBEN A. BURTON. (AUTHOR/JM)

ED- EJ050311
YR- 71
CH- CG503991
AU- MEICHENBAUM, DONALD H.
AU- SMART, IAN
TI- USE OF DIRECT EXPECTANCY TO MODIFY ACADEMIC PERFORMANCE AND ATTITUDES OF COLLEGE STUDENTS
PD- NOV 71
IS- CIJAPR72
PR-
CG-
JC- JOURNAL OF COUNSELING PSYCHOLOGY; 18; 6; 531-535
DE- ACADEMIC ACHIEVEMENT
DE- ACADEMIC PERFORMANCE
DE- ATTITUDES
DE- COLLEGE FRESHMEN
DE- COUNSELOR ROLE
DE- EXPECTATION
DE- PREDICTION
DE- SELF CONCEPT

ED- EJ049795
YR- 71
CH- UD501377
AU- COFFIN, BRENDA S.
AU- AND OTHERS
TI- ACADEMIC ACHIEVEMENT IN A POVERTY AREA HIGH SCHOOL: IMPLICATIONS FOR COUNSELING
PD- F 71
IS- CIJAPR72
PR-
CG- C
JC- JOURNAL OF NEGRO EDUCATION; 40; 4; 365-368
DE- ACADEMIC ACHIEVEMENT
DE- BEHAVIOR DEVELOPMENT
DE- COUNSELING
DE- DISADVANTAGED SCHOOLS
DE- ENVIRONMENTAL INFLUENCES
DE- HIGH SCHOOL STUDENTS
DE- INDIVIDUALIZED INSTRUCTION
DE- NEGRO STUDENTS
DE- SELF CONCEPT

ED- ED057401
YR- 71
CH- E0006957
AU- FELDMAN, HAROLD
AU- AND OTHERS
TI- DIFFERENTIAL ACADEMIC COPYING BEHAVIOR OF SIBLINGS FROM THREE GEOGRAPHIC AREAS. FINAL REPORT.
PD- NOV 71
IS- RIEAPR72
IC- ?RP04734
IN- CORNELL UNIV., ITHACA, N.Y. DEPT OF HUMAN DEVELOPMENT AND FAMILY STUDIES.
SC- ?RP02778
SN- NATIONAL CENTER FOR EDUCATIONAL RESEARCH AND DEVELOPMENT (DHEW/OE), WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$13.16
CG- OEG-0-9-420444-3717
BN- BR-8-0444
NO- 307P.
DE- ACADEMIC ACHIEVEMENT
DE- FAMILY BACKGROUND
DE- FAMILY INFLUENCE
DE- FAMILY RELATIONSHIP
DE- FAMILY ROLE
DE- MOTIVATION
DE- SELF CONCEPT
DE- SIBLINGS

THIS STUDY EXPLORED THE RELATIONSHIP BETWEEN FAMILY BACKGROUND, FAMILY RELATIONSHIPS, SELF CONCEPT AND SCHOOL ATTITUDE VARIABLES, AS THEY WERE RELATED TO THE ABILITY OF ONE CHILD IN THE FAMILY TO COPE MORE EFFECTIVELY WITH THE SAME JUNIOR HIGH SCHOOL THAN DID THE SIBLING. HALF OF THE FAMILIES HAD NO FATHER IN THE HOME. DATA WERE GATHERED BY PERSONAL INTERVIEWS WITH 846 CHILDREN FROM 3 GEOGRAPHIC AREAS, RURAL WEST VIRGINIA, RURBAN TOWNS IN UPSTATE NEW YORK, AND URBAN CENTER-CITY SYRACUSE. RESULTS FROM PARTITIONING OF VARIANCE TECHNIQUE SUPPORTED A DIFFERENTIATED INTERACTIVE MODEL. FAMILY FACTORS NOT ONLY PREDICTED DIFFERENCES IN ACHIEVEMENT, BUT MODIFIED THE SELF CONCEPT AND SCHOOL ATTITUDES WHICH, IN TURN, WERE RELATED TO DIFFERENCES IN ACHIEVEMENT BETWEEN SIBLINGS. SUPPORT WAS FOUND FOR A THEORY OF COUNTERVAILING FORCES. URBAN CHILDREN NEEDED A STRONG, STRICT MOTHER AND WARM TEACHERS. RURAL CHILDREN NEEDED SEPARATION FROM HOME, AND SCHOOLS WHICH REWARDED CREATIVITY AND ENFORCED LESS CONFORMITY. RURBAN CHILDREN NEEDED A NON-HOSTILE HOME, INTELLECTUAL CHALLENGE AND AFFILIATION WITH SOCIAL NORMS. PEER RELATIONSHIPS WERE NEGATIVE EXCEPT IN THE RURAL AREA. (AUTHOR)

ED- EJ040047
YR- 71
CH- SP500415
AU- ZIRKEL, PERRY A.
TI- SELF-CONCEPT AND THE DISADVANTAGE OF ETHNIC GROUP MEMBERSHIP AND MIXTURE
PD- JUN 71
IS- CIJE1971
PR-
CG- U J
JC- REVIEW OF EDUCATIONAL RESEARCH; 41; 3; 211-225
DE- ACADEMIC ACHIEVEMENT
DE- DISADVANTAGED GROUPS
DE- EDUCATIONAL RESEARCH
DE- ETHNIC GROUPS
DE- GROUP MEMBERSHIP
DE- MEXICAN AMERICANS
DE- NEGROES
DE- SELF CONCEPT
DE- SOCIOECONOMIC STATUS

ED- ED053587
YR- 71
CH- FL002259
AU- LEVENSON, STANLEY
TI- PLANNING CURRICULUM FOR BILINGUAL EDUCATION PROGRAMS: KINDERGARTEN THROUGH GRADE 12.
PD- 5 MAY 71
IS- RIEDEC71
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-2-700015(509)
NO- 15P.; PAPER PRESENTED AT THE FIFTH ANNUAL TESOL CONVENTION, NEW ORLEANS, LA., MARCH 5, 1971
DE- ACADEMIC ACHIEVEMENT
DE- BICULTURALISM
DE- BILINGUAL EDUCATION
DE- BILINGUAL TEACHER AIDES
DE- CURRICULUM DEVELOPMENT
DE- CURRICULUM PLANNING
DE- EDUCATIONAL OBJECTIVES
DE- ELEMENTARY SCHOOLS
DE- EXPERIMENTAL CURRICULUM
DE- FEDERAL AID
DE- INTERCULTURAL PROGRAMS
DE- LANGUAGE DEVELOPMENT
DE- LANGUAGE SKILLS
DE- MEXICAN AMERICANS
DE- RESOURCE TEACHERS
DE- SECONDARY SCHOOLS
DE- SELF CONCEPT
DE- SPANISH SPEAKING
DE- SPEECHES
ID- PROJECT FRONTIER
ID- SAN DIEGO COUNTY

AB- THIS SPEECH PROVIDES AN OUTLINE OF THE PLANNING PROCEDURE AND FRAMEWORK FOR THE CURRICULUM USED IN THE BILINGUAL EDUCATION PROGRAM, PROJECT FRONTIER, AT CHULA VISTA, CALIFORNIA. IT EXPLAINS THE GOALS OF THE PROJECT WHICH IS GRADUALLY BEING EXPANDED TO ALL GRADE LEVELS, AND IT DESCRIBES HOW THE GOALS ARE INTERWOVEN INTO A FRAMEWORK MADE UP OF UNITS OF LEARNING AT ANY ONE LEVEL. A DIAGRAM SHOWING THE FRAMEWORK IS INCLUDED ALONG WITH A CHART SHOWING THE STEPS FOLLOWED IN THE CURRICULUM DEVELOPMENT. A BIBLIOGRAPHY IS INCLUDED. (VM)

ED- ED052860
YR- 71
CH- RC005445
AU- HEPNER, ETHEL M.
TI- THE AMERICAN ELEMENTARY SCHOOL VERSUS THE VALUES AND NEEDS OF MEXICAN-AMERICAN BOYS. FINAL REPORT.
PD- MAY 71
IS- RIENOV71
IC- ERP03857
IN- LYNWOOD UNIFIED SCHOOL DISTRICT, CALIF.
SC- BBL66004
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. BUREAU OF RESEARCH.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-9-70-0032(057)
BN- BR-0-I-062
NO- 53P.
DE- ACADEMIC ACHIEVEMENT
DE- CLASSROOM ENVIRONMENT
DE- CULTURAL FACTORS
DE- CULTURE CONFLICT
DE- ELEMENTARY GRADES
DE- GROUP RELATIONS
DE- MEXICAN AMERICANS
DE- MOTIVATION
DE- READING SKILLS
DE- ROLE PERCEPTION
DE- SELF CONCEPT
DE- VALUES
AB- THE INVESTIGATION EXAMINED 2 ISSUES: (1) HOW THE VALUES OF THE SUBCULTURE INFLUENCE THE UNDERACHIEVEMENT OF THE MEXICAN AMERICAN BOY AND (2) WHAT HAPPENS TO HIM IF HE IS PLACED INTO A NEW EDUCATIONAL STRATEGY. THE OVERALL PURPOSE OF THE RESEARCH WAS TO ASCERTAIN PROMISING INSTRUCTIONAL PROCEDURES FOR UNDERACHIEVING (AS MEASURED BY STANDARDIZED ACHIEVEMENT TESTS) MEXICAN AMERICAN BOYS IN GRADES 4-6. HYPOTHESIZING THAT DIFFERENCES EXIST IN QUALITATIVE CHARACTERISTICS OF SELF-IMAGE IN RELATION TO ETHNIC CLASSIFICATIONS AND IN READING LEVEL ACHIEVEMENT, AND THAT READING ACHIEVEMENT OF CULTURALLY DIFFERENT CHILDREN IS DIRECTLY RELATED TO DIFFERENCES IN TEACHING TECHNIQUES USED TO ACCOMPLISH READING SKILLS, 50 LOW-ACHIEVING AND 50 ACHIEVING BOYS OF MEXICAN AMERICAN DESCENT AND 50 ACHIEVING BOYS OF ANGLO AMERICAN HERITAGE FROM 3 "DISADVANTAGED" LOS ANGELES SCHOOLS WERE STUDIED. FINDINGS TENDED TO SUPPORT HYPOTHESIS I WHILE NEGATING HYPOTHESIS 2. IT APPEARS THAT THERE ARE

4. From a Special Education Teacher: The staff at our school for TMRs feels that teaching of time and the clock is inefficient and lacks impact. We would like to know improvements in methods, materials, and procedures (for chronological age up to 20-25 years).

Comments:

TRAINER DISCUSSION GUIDE

The major problem faced by the searcher in this example is one of deciding how broadly to search. The teaching of time and the clock may be included in materials dealing with the broader topics CONCEPT FORMATION, ELEMENTARY SCHOOL MATHEMATICS, or MATHEMATICAL CONCEPTS. There is also a question as to how the TRAINABLE MENTALLY RETARDED should be searched, since technically there is a difference between Trainable Mentally Handiapped and Educable Mentally Handicapped. The possibilities include TRAINABLE MENTALLY HANDICAPPED, EDUCABLE MENTALLY HANDICAPPED, LEARNING DISABILITIES, EXCEPTIONAL CHILD EDUCATION, MENTALLY HANDICAPPED.

Sample searches, using only two combinations of the possibilities are shown in the attached sample on-line printout. The second search, a broader one, yields 48 postings of document citations, in contrast to only 5 in the first search. Also attached is a sample printout of citations selected from both search formulations.

This is, perhaps, an example of a client's needs being met best by checking the complete documents on the most likely citations, particularly since the group is most interested in methods and materials.

Search Formulation 1:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:
TIME
PROG:

PSTG---NUMBER POSTINGS (137)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?

USER:
EDUCABLE MENTALLY HANDICAPPED OR TRAINABLE MENTALLY HANDICAPPED OR
PROG:

CNT 2--CONTINUE SS 2

USER:
MENTALLY HANDICAPPED OR EXCEPTIONAL CHILD EDUCATION
PROG:

PSTG---NUMBER POSTINGS (3509)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?

USER:
1 AND 2
PROG:

PSTG---NUMBER POSTINGS (5)

Search Formulation 2:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:
TIME OR TIME PERSPECTIVE OR MATHEMATICAL CONCEPTS OR CONCEPT FORMATION
PROG:

PSTG---NUMBER POSINTGS (1991)
SS 2/C?---SEARCH STATEMENT 2 OR COMMAND

USER:
MENTALLY HANDICAPPED OR EXCEPTIONAL CHILD EDUCATION OR
PROG:

CNT 2---CONTINUE SS 2

USER:
EDUCA LE MENTALLY HANDICAPPED C TRAINABLE MENTALLY HANDICAPPED
PROG:

PSTG---NUMBER POSTINGS (3509)
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?

USER:
1 AND 2
PROG:

PSTG---NUMBER POSTINGS (48)

SELECTED CITATIONS

FROM

EXERCISE 4 SEARCH RESULTS

FD- ED056681
YR- 72
CH- EC040991
AU- VANNARI, BRUCE
AU- PENNIMAN, TERRY L.
TI- QUALITY MATH EXPERIENCES.
PD- JAN 72
IS- RIEMAY72
IC- EREOO992
IN- IOWA UNIV., IOWA CITY. SPECIAL EDUCATION CURRICULUM DEVELOPMENT CENTER.
SC- JXK38625
SN- IOWA STATE DEPT. OF PUBLIC INSTRUCTION, DES MOINES.
PR- EDRS PRICE MF-$0.65 HC-$3.29
CG- OEG-0-70-2467(607)
NO- 88P.
DE- EXCEPTIONAL CHILD EDUCATION
DE- GUIDELINES
DE- MATHEMATICS
DE- MEASUREMENT
DE- MENTALLY HANDICAPPED
DE- MONEY MANAGEMENT
DE- TEACHING METHODS
DE- TIME
AB- PRESENTED ARE TEACHING METHODS FOR THE INSTRUCTION OF MATHEMATICS TO MENTALLY RETARDED CHILDREN. ALTHOUGH THE IDEAS ARE DEVELOPED FROM SIMPLE TO COMPLEX, THERE IS NO ATTEMPT TO CORRELATE MATHEMATICAL IDEAS WITH GRADE LEVELS. THE GENERAL STATED PHILOSOPHY IS THAT THE RETARDED CHILD LEARNS BEST BY EXPERIENCING AND FINDS SATISFACTION AND REINFORCEMENT IN SUCCESSFUL ENDEAVORS. GUIDELINES FOR THE INSTRUCTION OF FUNDAMENTAL OPERATIONS IN MATHEMATICS COVER ADDITION, MULTIPLICATION, SUBTRACTION, AND DIVISION. THE USE OF A NUMBER LINE IN ADDITION AND THE TEACHING OF MULTIPLICATION AFTER ADDITION AND BEFORE SUBTRACTION ARE ADVOCATED. THE NUMBER LINE IS ALSO ADVOCATED IN THE TEACHING OF SUBTRACTION AND DIVISION. THE SECTION ON THE TEACHING OF TIME INCLUDES MANY SAMPLE WORK SHEETS THAT MAY BE HELPFUL IN THE SEQUENTIAL PRESENTATION OF TIME-RELATED CONCEPTS. THE CHAPTER ON TEACHING OF MEASUREMENT EMPHASIZES THAT THE TEACHING OF MEASUREMENT WILL BE AUGMENTED IF MANY PLAY ACTIVITIES REQUIRING USE OF MEASUREMENT TECHNIQUES ACCOMPANY THE INSTRUCTION. THE LAST INSTRUCTIONAL SECTION CONCERNS MONEY AND EMPHASIZES THAT CHILDREN NEED TO HAVE MANY EXPERIENCES HANDLING REAL MONEY UNDER SUPERVISION. SUGGESTED LEARNING SEQUENCES, ACTIVITIES, AND REINFORCEMENTS ACCOMPANY THE SECTIONS ON MEASUREMENT, TIME, AND MONEY. (CB)

ED- EJ042000
YR- 71
CH- RE502987
AU- SPITZ, HERMAN H.
AU- WEBRECK, CINDY A.
TI- EFFECTS OF AGE AND MENTAL RETARDATION ON TEMPORAL INTEGRATION OF
VISUAL STIMULI
PD- AUG 71
IS- CIJE1971
PR-
CG- " "
JC- PERCEPTUAL AND MOTOR SKILLS; 33; 1; 3-10
DE- AGE DIFFERENCES
DE- COGNITIVE PROCESSES
DE- MENTALLY HANDICAPPED
DE- PERFORMANCE FACTORS
DE- PREDICTIVE VALIDITY
DE- RESPONSE MODE
DE- SENSORY EXPERIENCE
DE- STIMULUS BEHAVIOR
DE- TIME
DE- VISUAL PERCEPTION

ED- ED030992
YR- 68
CH- EC003264
TI- PLANNING AN ARITHMETIC CURRICULUM FOR THE EDUCABLE MENTALLY RETARDED. SPECIAL EDUCATION CURRICULUM DEVELOPMENT CENTER; AN IN-SERVICE TRAINING PROGRAM.
PD- NOV 68
IS- RIEDEC69
IC- 5EBEC992
IN- IOWA UNIV., IOWA CITY. SPECIAL EDUCATION CURRICULUM DEVELOPMENT CENTER.
SC- JXQ33625
SC- RMQ66000
SN- IOWA STATE DEPT. OF PUBLIC INSTRUCTION, DES MOINES.; OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$6.58
CG- OEG-3-7-002883-0499
BN- BR-6-2883-7
NO- 144P.
DE- CURRICULUM
DE- CURRICULUM GUIDES
DE- EDUCABLE MENTALLY HANDICAPPED
DE- ELEMENTARY SCHOOL STUDENTS
DE- EXCEPTIONAL CHILD EDUCATION
DE- MATHEMATICAL APPLICATIONS
DE- MATHEMATICAL CONCEPTS
DE- MATHEMATICAL MODELS
DE- MATHEMATICS
DE- MENTALLY HANDICAPPED
DE- MONEY MANAGEMENT
DE- PRACTICAL MATHEMATICS
DE- SECONDARY SCHOOL STUDENTS
DE- SEQUENTIAL LEARNING
DE- TEACHING METHODS
DE- TIME
AB- THE GUIDE, INTENDED AS A MODEL FOR TEACHERS WHO WILL DEVELOP THEIR OWN ARITHMETIC CURRICULAR MATERIALS, INTRODUCES CONCEPTS SEQUENTIALLY FROM SIMPLE TO COMPLEX AND CONTINUES THEM FROM ONE LEVEL TO THE NEXT AT INCREASINGLY MORE DIFFICULT AND ABSTRACT LEVELS. THE PROGRAM IS ARBITRARILY CUT INTO FOUR LEVELS TO CORRESPOND TO SCHOOL DIVISIONS: PRIMARY (AGES 6 TO 9), INTERMEDIATE (AGES 9 TO 12), JUNIOR HIGH (AGES 12 TO 14), AND SENIOR HIGH (AGES 14 TO ADULTHOOD) WHICH IS ORIENTED TO JOB REQUIREMENTS AND MONEY MANAGEMENT. IT PRESENTS CONCEPTS OR SKILLS TO BE DEVELOPED, SUGGESTS TEACHING METHODS AND AIDS, AND INDICATES PRACTICAL WAYS FOR STUDENTS TO USE THESE CONCEPTS AND SKILLS. THREE SAMPLE UNITS PRESENT 10 TO 14 LESSONS ON THE PERSONAL APPROACH TO NUMBERS (PRIMARY LEVEL), TIME (INTERMEDIATE LEVEL), AND CHECKING ACCOUNT PROCEDURES (SENIOR HIGH LEVEL). (LE)

ED- ED022301
YR- 68
CH- EC002625
AU- BATEMAN, BARBARA D.
TI- TEMPORAL LEARNING. DIMENSIONS IN EARLY LEARNING SERIES.
PD- 68
IS- RIEFEB69
PR- DOCUMENT NOT AVAILABLE FROM EDRS
CG- OEG-4-6-061308-0571
AV- DIMENSIONS PUBLISHING COMPANY, SAN RAFAEL, CALIFORNIA 94901.
NO- 96P.
DE- CHILD DEVELOPMENT
DE- COGNITIVE DEVELOPMENT
DE- CONCEPT FORMATION
DE- ELEMENTARY GRADES
DE- EVALUATION METHODS
DE- EXCEPTIONAL CHILD EDUCATION
DE- HOME INSTRUCTION
DE- INSTRUCTIONAL MATERIALS
DE- LEARNING DISABILITIES
DE- PRESCHOOL EDUCATION
DE- PRIMARY GRADES
DE- STUDENT EVALUATION
DE- TEACHING GUIDES
DE- TEACHING METHODS
DE- TIME
DE- TIME PERSPECTIVE
AB- DESIGNED TO MINIMIZE TIME AND COST TO TEACHERS AND PARENTS, THE PAPERBACK EMPHASIZES BOTH IDEAS AND PRACTICAL TOOLS FOR TEACHING TEMPORAL CONCEPTS. THE CONCEPT OF TIME IS PRESENTED; THE MAJOR STUDIES OF NORMAL CHILD DEVELOPMENT AND HOW CHILDREN COME TO UNDERSTAND TIME WORDS AND CONCEPTS ARE REVIEWED. TEMPORAL DISABILITIES (DIFFICULTIES IN LEARNING THE SIGNIFICANCE OF SEQUENCE AND TIME) ARE CONSIDERED; AND THE EVALUATION OF DEVELOPMENT IS DISCUSSED IN TERMS OF TESTS. SPECIFIC SUGGESTIONS ARE OFFERED FOR TEACHING HOME, PRESCHOOL, PRIMARY, AND ELEMENTARY SCHOOL CHILDREN. A BIBLIOGRAPHY ANNOTATES 61 ENTRIES; AND A LIST GIVES SOURCES AND DESCRIPTIONS OF 53 MANIPULATIVE MATERIALS, TWO SETS OF PROGRAMED MATERIALS, 10 FILMSTRIPS AND TRANSPARENCIES, AND 12 CHILDREN'S BOOKS. (DF)

ED- ED026121
YR- 65
CH- PS001422
AU- WALLACE, J. G.
TI- CONCEPT GROWTH AND THE EDUCATION OF THE CHILD: A SURVEY OF RESEARCH ON CONCEPTUALIZATION. NATIONAL FOUNDATION FOR EDUCATIONAL RESEARCH IN ENGLAND AND WALES OCCASIONAL PUBLICATION SERIES NO. 12.
PD- 65
TS- RIEJUN69
IC- F3700742
IN- NATIONAL FOUNDATION FOR EDUCATIONAL RESEARCH IN ENGLAND AND WALES, LONDON.
PR- DOCUMENT NOT AVAILABLE FROM EDRS
CG- OEC-3-7-068562-2928
AV- NEW YORK UNIVERSITY PRESS, WASHINGTON SQUARE, NEW YORK, NEW YORK 10003 ($6.00).
NO- 273P.
DE- BEHAVIORAL SCIENCE RESEARCH
DE- CHILD DEVELOPMENT
DE- COGNITIVE DEVELOPMENT
DE- CONCEPT FORMATION
DE- CONCEPTUAL SCHEMES
DE- CONSERVATION (CONCEPT)
DE- HANDICAPPED CHILDREN
DE- LOGICAL THINKING
DE- MATHEMATICAL CONCEPTS
DE- MENTALLY HANDICAPPED
DE- NUMBER CONCEPTS
DE- PERCEPTION
DE- PERCEPTUAL DEVELOPMENT
DE- PHYSICALLY HANDICAPPED
DE- RESEARCH REVIEWS (PUBLICATIONS)
DE- SCIENTIFIC CONCEPTS
DE- SELF CONCEPT
DE- SPACE
DE- TIME
ID- CONCEPTUALIZATION
ID- PIAGET
AB- TWO SECTIONS IN THIS SURVEY OF RESEARCH ON CONCEPTUALIZATION ARE DEVOTED TO "RECENT CONCEPTUAL STUDIES IN THE BEHAVIOURIST MOULD" AND "MAIN STREAM OF ONTOGENETIC STUDIES OF CONCEPTUALIZATION." UNDER SECTION I, TOPICS INVESTIGATED ARE BEHAVIOURIST APPROACHES TO THE CONCEPTUAL PROCESS, CONCEPTUAL PROBLEMS, AND DEVELOPMENTAL STUDIES. IN SECTION II, SUBJECTS INCLUDE INTRODUCTION TO PIAGET'S WORK, MATHEMATICAL AND SCIENTIFIC CONCEPTS (NUMBER, QUANTITY, WEIGHT, AREA, VOLUME, SPACE, TIME, VELOCITY, CAUSALITY, AND LOGICAL THINKING), CONCEPTUALIZATION IN THE MENTALLY AND PHYSICALLY HANDICAPPED, EDUCATIONAL ASPECTS, AND SOCIAL, SELF, AND CLASS CONCEPTS. A CONCLUDING CHAPTER DEALS WITH GENERAL ASPECTS OF CONCEPTUALIZATION. A LENGTHY BIBLIOGRAPHY IS ALSO INCLUDED. (DO)

ED- ED048683
YR- 70
CH- EC031737
AU- BLOUNT, WILLIAM R.
TI- RETARDATE AND NON-RETARDATE CONCEPT USAGE PERFORMANCE: ABSTRACTION ABILITY, NUMBER OF REFERENTS AND ITEM FAMILIARITY. PAPERS AND REPORTS, VOLUME I, NUMBER 5.
PD- 70
IS- [illegible]JUL71
IC- [illegible]
IN- UNIVERSITY OF SOUTH FLORIDA, TAMPA. INSTITUTE III: EXCEPTIONAL CHILDREN AND ADULTS.
PR- EDRS PRICE MF-$0.65 HC-$[illegible]
CG- [illegible]-0-[illegible]-080353-3514
NU- 18P.
DE- ABSTRACTION LEVELS
DE- COMPREHENSION
DE- CONCEPT FORMATION
DE- EDUCABLE MENTALLY HANDICAPPED
DE- EXCEPTIONAL CHILD RESEARCH
DE- MENTALLY HANDICAPPED
DE- THOUGHT PROCESSES
ID- FLORIDA

AB- TO [illegible] CONCEPT USAGE PERFORMANCE OF THE MENTALLY HANDICAPPED WHEN CONFRONTED WITH FAMILIAR ITEMS USED IN THE CONCEPT USAGE TASKS, 32 COMMON CONCEPTS WERE PRESENTED TO 23 EDUCABLE MENTALLY HANDICAPPED AND 22 NON-RETARDED SUBJECTS. FROM THE RESPONSES TO THIS NUMBER OF REFERENTS TASK, A CONCEPT USAGE TASK WAS CONSTRUCTED WHICH REQUIRED CHOOSING THE THREE, OF FIVE, PICTURES THAT WENT TOGETHER ON A [illegible] CARD (ONE CARD PER CONCEPT) AS WELL AS GIVING A VERBAL LABEL FOR THE CONCEPT. RESULTS INDICATED THAT THERE WERE NO SIGNIFICANT DIFFERENCES BETWEEN THE GROUPS ON ABSTRACTION ABILITY, ON ANY OF THE [illegible] ASURES FROM THE NUMBER OR REFERENTS TASK, OR IN THE NUMBER OF ITEMS CORRECTLY CHOSEN IN THE CONCEPT USAGE TASK. IT WAS NOTED THAT NON-RETARDED SUBJECTS DID, HOWEVER, APPROPRIATELY LABEL SIGNIFICANTLY MORE OF THE CONCEPTS IN THE CONCEPT USAGE TASK. THE REPORT IS VOLUME 1, NUMBER 5 OF PAPERS AND REPORTS FROM INSTITUTE III: EXCEPTIONAL CHILDREN AND ADULTS, UNIVERSITY OF SOUTH FLORIDA. (AUTHOR/CD)

ED- ED045638
YR- 70
CH- TE00.12
AU- DEVITO, JOSEPH A.
TI- SPEECH AND LANGUAGE: DEVELOPMENT AND ACQUISITION, A BIBLIOGRAPHY.
PD- [70]
IS- RIEAPR71
IC- BBB04046
IN- SPEECH COMMUNICATION ASSOCIATION, NEW YORK, N.Y.
PR- EDRS PRICE MF-$0.65 HC NOT AVAIL
CG- OEG-4-8-070646-0021-
NO- 337.
DE- BIBLIOGRAPHIES
DE- CHILD LANGUAGE
DE- CONCEPT FORMATION
DE- KINDERGARTEN
DE- LANGUAGE DEVELOPMENT
DE- LINGUISTICS
DE- PRESCHOOL EDUCATION
DE- PRIMARY EDUCATION
DE- PSYCHOLINGUISTICS
DE- SOCIOLINGUISTICS
DE- SPEECH
DE- VERBAL COMMUNICATION
DE- VERBAL DEVELOPMENT
AB- THIS BIBLIOGRAPHY ON THE ACQUISITION AND DEVELOPMENT OF SPEECH AND LANGUAGE LISTS, IN ALPHABETICAL ORDER BY AUTHOR, 423 BOOKS AND JOURNAL ARTICLES PUBLISHED BETWEEN 1937 AND 1970. [NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT.] (DB)

ED- ED038824
YR- 70
CH- FL001700
AU- [illegible]
AU- AND OTHERS
TI- SPANISH GUIDE. KINDERGARTEN. MICHIGAN ORAL LANGUAGE SERIES.
PD- 70
IS- RIEOCT70
FC- [illegible]
IC- [illegible]
IN- AMERICAN COUNCIL ON THE TEACHING OF FOREIGN LANGUAGES, NEW YORK, N.Y.; MICHIGAN STATE DEPT. OF EDUCATION, LANSING.
SC- [illegible]
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PR- [illegible] -$0.65 HC-$9.87
CG- OEG-[illegible]-0016-
AV- ACTFL MATERIALS CENTER, 62 FIFTH AVE., NEW YORK, NEW YORK 10011 ([illegible], $5.50)
NO- [illegible]P.
DE- ACTIVITY LEARNING
DE- BILINGUAL EDUCATION
DE- BILINGUAL STUDENTS
DE- CONCEPT FORMATION
DE- CROSS CULTURAL TRAINING
DE- INSTRUCTIONAL MATERIALS
DE- KINDERGARTEN
DE- LANGUAGE ENRICHMENT
DE- LANGUAGE INSTRUCTION
DE- LESSON PLANS
DE- MINORITY GROUP CHILDREN
DE- MODERN LANGUAGES
DE- NONSTANDARD DIALECTS
DE- PATTERN DRILLS (LANGUAGE)
DE- PRESCHOOL EDUCATION
DE- SECOND LANGUAGE LEARNING
DE- SPANISH
DE- STANDARD SPOKEN USAGE
ID- FLICS
ID- FOREIGN LANGUAGE INNOVATIVE CURRICULA STUDIES
AB- THIS GUIDE, DESIGNED FOR USE BY KINDERGARTEN TEACHERS, TO TEACH SPANISH TO SPEAKERS OF OTHER LANGUAGES AND TO TEACH STANDARD SPANISH TO SPEAKERS OF NON-STANDARD SPANISH, CONTAINS 136 HALF HOUR LESSONS, COVERING THE SCHOOL YEAR. THE COMPLETELY ORAL PROGRAM PRESENTS A STRUCTURED SEQUENCE OF LANGUAGE LEARNING EXPERIENCES GEARED TO THE CHILDREN'S CONCEPTUAL AND PHYSICAL NEEDS. TYPICAL LATIN AMERICAN SCHOOL GAMES AND ACTIVITIES INTRODUCE AND PERMIT PRACTICE OF BASIC SPANISH LANGUAGE PATTERNS. EACH LESSON CONTAINS A HEADING, BRIEF DESCRIPTION PARAGRAPH, AND AN EXAMPLE DIALOGUE. ENGLISH TRANSLATIONS OF THE SPANISH LESSONS ARE INCLUDED. THE LINGUISTIC OBJECTIVE OF EACH LESSON AND REQUIRED AUDIO-VISUAL MATERIALS ARE NOTED. (RL)

ED- ED039818
YR- 70
CH- FL001774
TI- MICHIGAN CONCEPTUAL DEVELOPMENT GUIDE-PRESCHOOL. MICHIGAN ORAL LANGUAGE UNITS.
PD- 70
IS- RIEOCT70
IC- GHD00L25
IC- NYL02274
IN- AMERICAN COUNCIL ON THE TEACHING OF FOREIGN LANGUAGES, NEW YORK, N.Y.; MICHIGAN STATE DEPT. OF EDUCATION, LANSING.
SC- BR[illegible]
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$13.16
CG- OEC-[illegible]-072-0015-
AV- ACTFL MATERIALS CENTER, 62 FIFTH AVE., NEW YORK, NEW YORK 10011 (0591, $7.50)
NO- 328P.
DE- BICULTURALISM
DE- BILINGUAL EDUCATION
DE- BILINGUAL STUDENTS
DE- CONCEPT FORMATION
DE- CONCEPT TEACHING
DE- EDUCATIONAL STRATEGIES
DE- ENGLISH
DE- INSTRUCTIONAL MATERIALS
DE- LANGUAGE DEVELOPMENT
DE- LESSON PLANS
DE- PRESCHOOL EDUCATION
DE- PRESCHOOL PROGRAMS
DE- SECOND LANGUAGE LEARNING
DE- SPANISH
DE- STUDENT EVALUATION
DE- STUDENT TESTING
ID- FLICS
ID- FOREIGN LANGUAGE INNOVATIVE CURRICULA STUDIES
AB- THIS GUIDE FOR TEACHERS OF PRE-SCHOOL, SPANISH-SPEAKING CHILDREN PROVIDES MATERIALS FOR CONCEPTUAL DEVELOPMENT IN THE TARGET LANGUAGES. SOME 120 STRUCTURAL ORAL LANGUAGE CIRCLE LESSONS IN SPANISH AND IN ENGLISH, EACH APPROXIMATELY 15 MINUTES IN DURATION, REPRESENT THE HEART OF THIS PACKAGE. USED TOGETHER, THEY DEVELOP IN THE CHILD LANGUAGE AND CONCEPTUAL SKILLS NEEDED TO BENEFIT FROM A STANDARD SCHOOL SETTING. UNIT TOPICS INCLUDE: (1) NAMING, (2) DESCRIBING, (3) LOCATING, (4) COUNTING, (5 AND 6) GROUPING, (7) SEQUENCING, AND (8) REVIEW. THE INTRODUCTION CONTAINS A DESCRIPTION OF THE PROGRAM, ANSWERS TO COMMON QUESTIONS, SEQUENCE OF LANGUAGE AND CONCEPTUAL DEVELOPMENT, EQUIPMENT GUIDE, AND A SUGGESTED DAILY SCHEDULE. NUMEROUS CUTOUTS FOR SPECIFIC CIRCLE LESSONS ARE FOUND IN THE ART MATERIALS SUPPLEMENT. (RL)

ED- ED039817
YR- 70
CH- FL001774
AU- P T INI, ALMA MARIA
TI- ESOL-SESD GUIDE: KINDERGARTEN. MICHIGAN ORAL LANGUAGE SERIES.
PD- 70
IS- RIE OCT70
IC- [illegible]
IC- [illegible]
IN- AMERICAN COUNCIL ON THE TEACHING OF FOREIGN LANGUAGES, NEW YORK, N.Y.; MICHIGAN STATE DEPT. OF EDUCATION, LANSING.
SC- [illegible]
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PR- EDRS PRICE MF-$0.65 HC-$6.58
CG- [illegible]
AV- [illegible] MATERIALS CENTER, 62 FIFTH AVE., NEW YORK, NEW YORK 10011 ([illegible])
NO- 129P.
DE- ACTIVITY LEARNING
DE- BILINGUAL EDUCATION
DE- BILINGUAL STUDENTS
DE- [illegible] EDUCATION
DE- CROSS CULTURAL TRAINING
DE- ENGLISH (SECOND LANGUAGE)
DE- ENGLISH INSTRUCTION
DE- INSTRUCTIONAL MATERIALS
DE- KINDERGARTEN
DE- LANGUAGE [illegible]
DE- LANGUAGE DEVELOPMENT
DE- LESSON PLANS
DE- MINORITY GROUP CHILDREN
DE- NONSTANDARD DIALECTS
DE- PATTERN DRILLS (LANGUAGE)
DE- PRESCHOOL EDUCATION
DE- SECOND LANGUAGE LEARNING
DE- SPANISH
DE- STANDARD SPOKEN USAGE
ID- ELTIC
ID- ENGLISH LANGUAGE INNOVATIVE CURRICULA STUDIES
AB- THIS GUIDE, DESIGNED TO SUPPORT LANGUAGE ARTS PROGRAMS IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES AND IN TEACHING STANDARD ENGLISH AS A SECOND DIALECT, IS FOR USE BY TEACHERS OF LANGUAGE-HANDICAPPED CHILDREN AT THE KINDERGARTEN LEVEL. THE [illegible] HALF [illegible] LESSONS, COVERING ONE YEAR'S WORK, MAY BE USED WITH MIXED GROUPS SINCE THE BASIC SENTENCE STRUCTURES ARE PRESENTED THROUGH KINDERGARTEN-LIKE ACTIVITIES AND GEARED TO THE CHILDREN'S CONCEPTUAL AND PHYSICAL NEEDS. SENTENCE PATTERNS AND VOCABULARY TO BE INTRODUCED OR REVIEWED IN EACH LESSON ARE LISTED AT THE TOP OF EACH LESSON. THE LESSONS CONTAIN A HEADING, BRIEF DESCRIPTION PARAGRAPH, EXAMPLE DIALOGUES, AND A LISTING OF REQUIRED AUDIO-VISUAL MATERIALS. A SPANISH INTERFERENCE AND DIALECT INTERFERENCE SHEET AND A TECHNIQUE FOR TEACHING PATTERN PRACTICE ARE INCLUDED. (RL)

ED- ED038821
YR- 70
CH- EC005 [illegible]
AU- [illegible]
AU- AND OTHERS
TI- A CURRICULUM FOR THE RESIDENTIAL TRAINABLE CHILD. EIGHTH EDITION.
PD- [illegible] 70
IS- RIE [illegible]
IC- [illegible]
IN- SOUTHERN WISCONSIN COLONY AND TRAINING SCHOOL, UNION GROVE.
SC- [illegible]
SN- WISCONSIN STATE DEPT. OF HEALTH AND SOCIAL SERVICES, MADISON.
PR- EDRS PRICE MF-$0.50 HC-$3.20
CG- [illegible]
NO- 7? P.
DE- ADMISSION CRITERIA
DE- ART
DE- COMMUNICATION SKILLS
DE- CONCEPT FORMATION
DE- CURRICULUM GUIDES
DE- EXCEPTIONAL CHILD EDUCATION
DE- HOMEMAKING EDUCATION
DE- MENTALLY HANDICAPPED
DE- MUSIC
DE- PSYCHOMOTOR SKILLS
DE- RESIDENTIAL PROGRAMS
DE- SELF CARE SKILLS
DE- SOCIAL DEVELOPMENT
DE- TRAINABLE MENTALLY HANDICAPPED
DE- VOCATIONAL EDUCATION
DE- WORK EXPERIENCE PROGRAMS
AB- THE TRAINABLE CHILD'S NEEDS AND ABILITIES ARE CONSIDERED; CRITERIA FOR ADMISSION TO AND EXCLUSION FROM THE TRAINING SCHOOL PROGRAM ARE DISCUSSED. CURRICULA FOR CHILDREN AGED 5 TO 8, 7 TO 12, AND 12 TO 17 ARE THEN REVIEWED; ALL ARE GROUPED AROUND EXPRESSIVE ACTIVITIES AND SELF CARE, SOCIAL, MOTOR, ACADEMIC, AND VOCATIONAL SKILLS. ALSO PRESENTED ARE THE WORK ORIENTATION PROGRAM, PROVIDING ADVANCED CLASSROOM AND INTEGRATED WORK EXPERIENCE FOR AGES 17 TO 20, AND THE VOCATIONAL AND HOMELIVING PROGRAMS. APPENDIXES TREAT CONCURRENT WORK EXPERIENCES, INDUSTRIAL THERAPY, MUSIC, ART, SPEECH AND HEARING, AND FIELD TRIPS. (JD)

ED- ED038196
YR- 70
CH- RC004421
TI- DIAGNOSTICALLY BASED CURRICULUM, BLOOMINGTON, INDIANA. PRESCHOOL PROGRAM IN COMPENSATORY EDUCATION 1.
PD- FEB 70
IS- RIE 0670
IC- CI7A.0N
IN- AMERICAN INST. FOR RESEARCH IN BEHAVIORAL SCIENCES, PALO ALTO, CALIF.
SC- BBB04077
SC- ...
SN- OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. BUREAU OF ELEMENTARY AND SECONDARY EDUCATION.; OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. DIV. OF COMPENSATORY EDUCATION.
PR- EDRS PRICE MF-$0.65 HC NOT AVAIL
CG- OEC-0-8-08Z... -1574
AV- SUPERINTENDENT OF DOCUMENTS, U. S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402 (HE5.237:37024; $0.45)
NO- 59P.
DE- ADJUSTMENT (TO ENVIRONMENT)
DE- COGNITIVE DEVELOPMENT
DE- COMPENSATORY EDUCATION PROGRAMS
DE- CONCEPT FORMATION
DE- CURRICULUM DEVELOPMENT
DE- DIAGNOSTIC TEACHING
DE- DISADVANTAGED YOUTH
DE- EDUCATIONAL INNOVATION
DE- EVALUATION
DE- INTERPERSONAL RELATIONSHIP
DE- LANGUAGE SKILLS
DE- MOTOR DEVELOPMENT
DE- PRESCHOOL EDUCATION
DE- PSYCHOMOTOR OBJECTIVES
DE- STATISTICAL DATA
DE- TESTING
ID- APPALACHIAN YOUTH
ID- INDIANA

AB- THREE STUDIES WERE CONDUCTED TO DEVELOP AND EVALUATE A DIAGNOSTICALLY BASED CURRICULUM FOR DISADVANTAGED PRESCHOOL CHILDREN. THE POPULATION CONSISTED OF 139 WHITE AND 4 NEGRO APPALACHIAN 5-YEAR-OLDS FROM THE LOWEST SOCIOECONOMIC CLASS, WHO SCORED FROM 50 TO 85 ON THE 1960 STANFORD-BINET L-M INTELLIGENCE SCALE. ONE OF THE 3 GROUPS ORGANIZED RECEIVED DIAGNOSTIC TREATMENT; THE SECOND GROUP RECEIVED TRADITIONAL KINDERGARTEN TREATMENT; THE THIRD GROUP RECEIVED NO TREATMENT. A BATTERY OF 17 TESTS AND TEACHER AND PROJECT-STAFF EVALUATIONS WERE USED FOR SCREENING, PRETEST OR POSTTEST MEASUREMENT, DIAGNOSIS, OR FOLLOW-UP. THE RESULTS INDICATED THAT THE DIAGNOSTIC CURRICULUM WAS SUPERIOR IN THE AREAS OF INTELLIGENCE, LANGUAGE, AND PERSONAL-SOCIAL ADJUSTMENT AND WAS EQUAL TO THE TRADITIONAL KINDERGARTEN APPROACH FOR MOTOR DEVELOPMENT. A TEST SCHEDULE, A LIST OF INSTRUMENTS USED, AND THE STATISTICAL DATA ARE ALSO PRESENTED. [NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT.] (BD)

ED- EJ011149
YR- 69
CH- [illegible]
AU- [illegible]
TI- [illegible] PRESCHOOL CURRICULUM
PD- [illegible]
IS- [illegible]
PR- [illegible]
CG- [illegible]
JC- [illegible]; 61; [illegible]; 703-706
DE- CHILD DEVELOPMENT
DE- [illegible]
DE- [illegible] READINESS
DE- PRESCHOOL CURRICULUM
DE- [illegible]
DE- [illegible] LEARNING
DE- [illegible] READINESS
DE- [illegible] SKILLS

ED- [illegible]
YR- [illegible]
CH- [illegible]
AU- [illegible]
AU- [illegible]
TI- [illegible] CRITERIA IN THE SELECTION OF MATERIALS FOR MENTALLY RETARDED PUPILS
PD- [illegible]
IS- [illegible]
PR-
CG- [illegible]
JC- TEACHING EXCEPTIONAL CHILDREN; 2; 1; 13-9
DE- AUDIOVISUAL AIDS
DE- CONCEPT FORMATION
DE- EVALUATION
DE- EXCEPTIONAL CHILD EDUCATION
DE- INSTRUCTIONAL MATERIALS
DE- MATERIAL DEVELOPMENT
DE- MENTALLY HANDICAPPED
DE- REALIA

SESSION NO. 20

SELECTING EQUIPMENT

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide an awareness of the various kinds of microform and reproduction equipment currently available and to provide some guidelines for equipment selection and acquisition.

Upon completion of this module, trainees should:

Be aware of the various types of microform and reproduction equipment on the market.

Know what kinds of equipment are most useful for the operation of an educational resources center.

B. Participants

Trainers: 1 Instructor

Trainees: All

C. Summary of Module Activities

This is a lecture, with time for questions and discussion at the end of the presentation.

D. Duration

1 hour

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

None

B. Trainee Preparatory Reading

None

C. Aids and Equipment

None

III. SCHEDULE OF ACTIVITIES

| | TOPIC | ACTIVITY | MINUTES |
|---|---|---|---|
| Step 1 | Accessing | Lecture | 17 |
| Step 2 | Storage | Lecture | 3 |
| Step 3 | Retrieval | Lecture | 12 |
| Step 4 | Dissemination | Lecture | 13 |
| Step 5 | Publication | Lecture | 5 |
| Step 6 | Network Communication | Lecture | 5 |
| Step 7 | Summary and Comments | Discussion | 5 |

IV. SPECIAL CONSIDERATIONS

This module is designd to provide a very hard-nosed, opinionated presentation by someone who has considerable experience in the area. In the pretest training session, it was conducted by Frank Mattis, and a similar type individual is suggested for any subsequent training sessions.

V. CONDUCT OF THE SESSION.

Step 1. Accessing (17 minutes)
- A. inquiries
  - 1. MCST and MTST
- B. cataloging
  - 1. MCST and MTST
- C. microfiche manufacture
  - 1. planetary camera
  - 2. stuffer
  - 3. reproduction system

Step 2. Storage (3 minutes)
- A hard copy
- B. microfiche

Step 3. Retrieval (12 minutes)
- A. mechanical
  - 1. lazy susan
  - 2. REMCARD system
- B. computer
  - 1. on-line systems
  - 2. batch systems

Step 4. Dissemination (13 minutes)
- A. microfiche readers
  - 1. hand readers
  - 2. portable readers
  - 3. non-portable readers
- B. microfiche reportduction
  - 1. microfiche
  - 2. hard copy
- C. photocpoy machines

Step 5. Publication (5 minutes)
- A. copy preparation
- b reproduction

Step 6. Network Communication (5 minutes)
- a. MCST modem
- b. WATS lines

Step 7. Summary and Comments (5 minutes)
- a. buy, rent or lease?
- b. equipment power requirements.

SESSION NO. 21

EDUCATIONAL INNOVATIONS: THE SUBSTANCE OF CHANGE

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To provide an awareness of the context of educational innovations and the tools for accessing information about innovations.

Upon completion of this module, trainees should:

1. Understand who produces innova
2. Understand various types of innovations.
3. Understand how innovations are disseminated.
4. Understand use of resource materials about innovations.
5. Understand potential users of innovations.
6. Understand inhibitors in the adoption process.

B. Participants

Trainers: 1 Instructor

Trainees: All

C. Summary of module Activities

All trainees are to read the enclosed background paper. The actual session will be a discussion of the paper. Resource materials will be available during the session.

D. Duration

1 hour

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

1. Attached background paper

B. Trainee Preparatory Reading

1. Attached background paper

C. Aids and Equipment

For the discussion of where to find out about innovations, the trainer needs to have at least one copy of the following:

Council for Educational Development and Research, Inc. CEDaR Catalog of Selected Educational Research and Development Programs and Products. Denver: Council for Educational Development and Research, Inc. Volumes 1 and 2., 1972.

Henrie, S.N. (Editor) ALERT: A Sourcebook of Elementary Curricula Programs and Projects. San Francisco: Far West Laboratory for Educational Research and Develoment., 1972.

National Center for Educational Communication. Educational Products Mini-Kit. Washington, D.C.: Office of Education., 1972.

PREP-29 -- New Products in Education. Washington, D.C.: Government Printing Office., 1972.

Smith, M. Peck, R. amd Weber, G. A Consumer's Guide to Educational Innovations. Washington, D.C.: Council for Basic Education., 1972.

For the Educational Products Mini-Kit, the trainer needs a cassette player and a filmstrip projector. The trainer should have chosen one filmstrip to show and have it set up before the session.

## III. SCHEDULE OF ACTIVITIES

| | TOPIC | ACTIVITY | MINUTES |
|---|---|---|---|
| Step 1 | Innovations: Where do They Start? | Discussion | 10 |
| Step 2 | Innovations: What Forms Do They Take? | Discussion | 5 |
| Step 3 | Innovations: How are They Disseminated? | Discussion | 5 |
| Step 4 | Innovations: Where Can They Be Found? | Discussion/ Examination of Materials | 20 |
| Step 5 | Innovations: Who Are The Potential Users? | Discussion | 5 |
| Step 6 | Innovations: What Affects Adoption? | Discussion | 15 |

## IV. SPECIAL CONSIDERATIONS

The trainees should have read the background paper before coming to this session. The discussion will focus on the paper, making sure the trainees understand the concepts concerning innovations.

The trainer should spend some time in Step 4 showing the resource materials available -- ALERT, CEDaR, etc. These materials should then be passed around so trainees have a chance to become familiar with them.

## V. CONDUCT OF THE SESSION

Step 1 Innovations: Where Do They Start? ( 10 minutes)

This module has the theme of innovations -- the substance of change. I assume that each of you has read the background paper for this session. Let's start by discussing where innovations start. By that, I mean, who develops innovations?

(Trainer then calls on someone in the group. These ten minutes of discussion grow out of points raised by the trainees. The trainer should make sure that trainees with questions about the materials be allowed to raise them).

<u>Step 2</u> Innovations: What Forms Do They Take? ( 5 minutes)

Moving on to the forms that innovations take, let's see what types of innovations we can name?

(Trainer gets each trainee to name at least one kind of innovation).

<u>Step 3</u> Innovations: How Are They Disseminated? ( 5 minutes)

Some of the innovations we have just been discussing require very different dissemination techniques. Let's take several of these innovations and discuss how they might best be disseminated.

(Trainer again gets trainees to discuss dissemination procedures for the various types of innovations that were mentioned in the precious step).

<u>Step 4</u> Innovations: Where Can They Be Found? ( 20 minutes)

Since most of the innovations are poorly disseminated, it is important to know where descriptions of them can be found. Of course sometimes, we will have seen an innovation already working in a school. Othertimes, we will have heard about it from our colleagues or from reading in the newspaper. However, there are several systematic collections of resource materials. I have copies of some of the best of these here today.

(Trainer then illustrates how to use the resource materials -- ALERT, CEDaR, PREP-29, Educational Products Mini-Kit, and Consumer's Guide to Educational Products).

<u>Step 5</u> Innovations: Who Are The Potential Users? ( 5 minutes)

Although we need to know about innovations, we really are not the target audience of the innovations.

Who are the potential users?

(Trainer asks trainees to discuss who might use some of the innovations that have been discussed in previous steps).

Step 6 Innovations: What Affetcs Adoption? ( 15 minutes)

Perhaps the hardest point to understand is why educators resist innovations. The background paper you have read list some of the kinds of resistance. Let us discuss the point raised in the paper.

(The trainer may want to use Figures 1 and 2 to help trainees focus on the subsystems that lead to resistance).

# INNOVATION: THE SUBSTANCE OF CHANGE

Educators and observers of the educational scene all testify to the changes taking place in schools. Such ideas as accountability, alternative schools, black studies, flexible scheduling, computer-assisted instruction, year round schools, open classrooms, and team teaching are being talked about and being tried in many schools throughout this nation. Some of those who write about these changes lament the slow pace of change. Others feel there are many changes, but few that significantly affect education. And still others want teachers to just teach "reading, 'riting, and 'rithmetic" like they did in the good old days. But whatever the perspective, the conversations and the writings repeat the same theme of a change process. A process that brings new ideas, new materials, and new methods into the school. This paper focuses on the change process as it helps us to understand innovations -- the substance of change.

Two literatures are important in a discussion of innovations. These are the diffusion research literature and communication research literature. The diffusion literature is well represented in A GUIDE TO INNOVATION IN EDUCATION (Havelock, 1969) and COMMUNICATION OF INNOVATIONS (Rogers and Shoemaker, 1972). Both books review and synthesize much of the early research as well as develop new ideas. These books are also important because they go beyond single aspects such as adopters and rates of adoption into the context of innovation.

The communication research literature has recently been summarized and synthesized in THE PROCESS AND EFFECTS OF MASS COMMUNICATION (edited by Schramm and Roberts, 1971). Diffusion and communication literatures share many of the same ideas and models. The diffusion literature developed from the traditions of anthropology, rural sociology, medical sociology, and education, But our present understanding of the two fields shows considerable overlap. An illustration of the extent of mutual concerns is found in Schramm and Roberts. The authors devote almost 150 pages in a 1000 page book to articles on innovation and change.

The overlap is again illustrated by Rogers and Shoemaker who refer to communication models when describing the diffusion process. They tell us that in the 1930's and 1940's communication researchers subscribed to the "hypodermic needle" model that emphasized the immediate the powerful effects of mass media on the audience. This was the one-step flow model of communication. They point out how the 1940 Presidential election simultaneously destroyed the hypodermic needle model and created the two-step flow model. In studying this election, Lazarsfeld and his colleagues found little evidence of direct influence of the mass media. Few voters altered their vote intentions directly on the basis of information presented in the media. Rather "opinion leaders" got information from the media, and in turn influenced their friends and neighbors. Menzel and Katz (1955), used this two-step flow communication model in their study of the diffusion of a pharmaceutical, and expanded it to a multi-step flow of communications. Rogers and Shoemaker explain the current understanding of the multi-step flow model:

> It does not call for any particular number of steps nor does it specify that the message must emanate from a source by mass media channels. This model suggests that there are a variable number of relays in the communication flow from a source to a large audience. Some members will obtain the message directly through channels from the source, while others may be several times removed from the message origin. The exact number of steps in this process depends on the intent of the source, the availability of mass media and the extent of audience exposure, the nature of the message, and salience of the message to the receiving audience.

One concept that is particularly useful in describing both the diffusion and communication processes is Harold Lasswell's well-known description of a communication act. Lasswell phrased it:

Who  Says What  In Which Channel  To Whom  With What Effect?

If we break this sentence into the five steps it implies about the communication process, we find it also describes the diffusion process. Of course, by the time we are talking about diffusion we have different words for the steps. Now they are called:

Source Message Medium Audience Impact.

To discuss the process of innovations, we need to modify the words again. We translate the original statement from:

| | | |
|---|---|---|
| Who | | Producers |
| Says What | | Products |
| In Which Channel | to: | Dissemination Medium |
| To Whom | | Users |
| With What Effect | | Adoption. |

Although the translation is not as elegant as the original, it provides us with the organizing principle of this paper. Each step helps us understand an aspect of innovations. We can discuss innovations in the context of where they come from, what forms they take, how they are disseminated, who are the potential users, and what are the conditions for adoption.

INNOVATIONS: WHERE DO THEY START?

Although there is no single classificatory scheme of the producers of educational innovations, we see the range by looking at individuals and groups who produce innovations INSIDE THE SCHOOL, ACROSS SCHOOLS, and OUTSIDE THE SCHOOL. In the first category we have classroom teachers, principals, and curriculum committees. In the secondary category we have superintendents and specialists/consultants in the State Department of of Education. In the third category we have researchers in academic settings, researchers in non-profit, non-academic research and development labs, and developers in educational publishing companies.

There probably are others who are responsible for producing innovations. Yet even within this list we see the likelihood of developing and disseminating innovations increases as we move from inside the school to outside the school. Those in the school have many functions to perform. Their days are filled with teaching, meetings, preparation for class, administration, etc. And when they do produce, there is neither motivation nor incentive to let others know about the innovation. Studies have shown that the teacher who creates new materials is unlikely to share these ideas even with others in her building. The curriculum committee who works out a new science unit for fifth graders will probably never try to disseminate these materials.

At the other extreme we find the researchers in an educational publishing company. A great deal of time is devoted to developing and field testing new materials and to publicizing the new products. Here, as well as in R and D centers, the reward system favors innovative thinkers who produce new materials, new ideas, or new methods of instruction.

A corollary question to 'Who produces?' is 'Who stimulates production?' Our list here includes administrators such as principals who encourage teachers to develop new materials; state superintendents who see to it that there is sufficient money in state or local research units; and the federal government that funds both academic researchers and non-academic R & D center researchers through agencies like NSF, USOE, and NIE.

INNOVATIONS: WHAT FORMS DO THEY TAKE?

There are many types of innovations. The range includes new textbooks, new audiovisuals, new curricula materials, new technologies, new methods, and new structures. Some of these products are tangible. Schools can purchase or rent new films, new filmstrips, new textbooks, computer terminals for CAI, etc. Other products are intangible. These include methods of teaching like team teaching, methods for organizing classroom lessons like behavioral objectives, and new physical structures like open plan schools. This second category requires more in the way of new attitudes than new materials.

INNOVATIONS: HOW ARE THEY DISSEMINATED?

Once the producers of innovations have finished products, their job is not over. Or at least it should not be. Somehow the new materials, ideas, methods, etc. need to be disseminated to the schools. How is this done? As we said earlier, the one-time or occasional producer rarely disseminates the product. Ronald Lippitt (1965) says, in writing about this problem:

> In education, a great proportion of the

> significant new inventions in our field remain quite invisible, undocumented, inaccessible for consideration by potential adopters. There is a high level of inhibition to communicating. There is a lack of articulateness about what has been invented and a lack of documentation.

Pellegrin (1966) adds his own comments to those of Lippitt:

> There are grave weaknesses of channels and procedures for dissemination. Unlike many academic disciplines, education cannot rely almost exclusively on the printed media for disseminating information. ...there is a great deal of suspicion of sources of knowledge which are not known personally to the practitioner.

But some innovations do get into the schools. How are these innovations disseminated? Conventions are gathering places of both academicians and practitioners. Papers, symposiums, exhibits, etc. all serve to spread the word about new developments in the field of education. Closely related to the convention is the journal article. Academicians, researchers, and practitioners subscribe to journals. A great deal about current knowledge is published in these journals. A third dissemination mechanism is advertising. Commercial publishers use direct mail and journal ads to promote their products. And fourth, several states have education extension agents who work with schools to disseminate innovations as they apply to specific needs or problems.

INNOVATIONS: WHERE CAN THEY BE "FOUND"?

Since many innovations are not actively disseminated, the interested educator needs to know where to locate these resources. Fortunately, there are several good sources. PREP-29 "New Products in Education" describes the 13 "winners' of an OE-sponsored assessment of the validity and usefulness of new products. Included are: Home-Oriented Early Childhood Education from the Appalachia Educational Laboratory; MATCH (Materials and Activities for Teachers and Children) Box from The Children's Museum, Boston; Parent/Child Toy Lending Library from Far West Laboratory for Educational Research and Development; Patterns in Arithmetic from Wisconsin Research and Development Center for Cognitive Learning; etc. Most of the innovations described in PREP-29 are also available in a USOE produced "Educational Products Mini-Kit." The kit contains 12 filmstrips plus audio cassettes.

A second useful report is "Consumer's Guide to Educational Innovation" produced by Council for Basic Education in Washington. It covers a few dozen of the most discussed innovations, including non-curricular innovations in staffing, use of space, etc.

Two directories worth noting are "ALERT: A Sourcebook of Elementary Curricula Programs and Projects" and "CEDaR Catalog of Selected Educational Research and Development Programs and

Products." ALERT is produced by Far West Laboratory. It covers all the noteworthy elementary level products. It carefully addresses the hard questions of cost, staffing requirements, inservice training requirements, etc. CEDaR is produced by the Council for Educational Research and Development in Denver. Volume 1 covers existing products from ten national educational laboraties and nine university-based research and development centers. Volume 2 covers forthcoming products now under development. Each product is summarized in one page of information including product name, producer, target audience, product characteristics, product evaluation and price.

Some producers have filmed materials that describe their innovations. After locating an innovation through ALERT or CEDaR, one can contact the producer to see what descriptive materials are available.

One access point to commercial producers is the Westinghouse Learning Directory. It differs from the previously mentioned sources in two ways. First, it is not limited to innovations. It is a list of all available educational materials. Second, it provides no evaluation of products.

A final source of innovations is ERIC, the national information system that is responsible for reports of innovative programs and significant efforts in educational research. Abstracts of all ERIC documents are published in "Research in Education" a monthly list of newly accessioned materials. All abstracts are also stored on magnetic tape that can be computer searched by using descripter terms specifying the topic of interest. Full text of documents is available in microfiche or papercopy.

INNOVATIONS: WHO ARE THE POTENTIAL USERS?

Users range from individuals to an entire school system. For instance, a teacher might decide to add a new workbook to his course. A committee might decide to adopt the new NSF science curriculum. A school district might decide to go on the 45-15 plan for year round school.

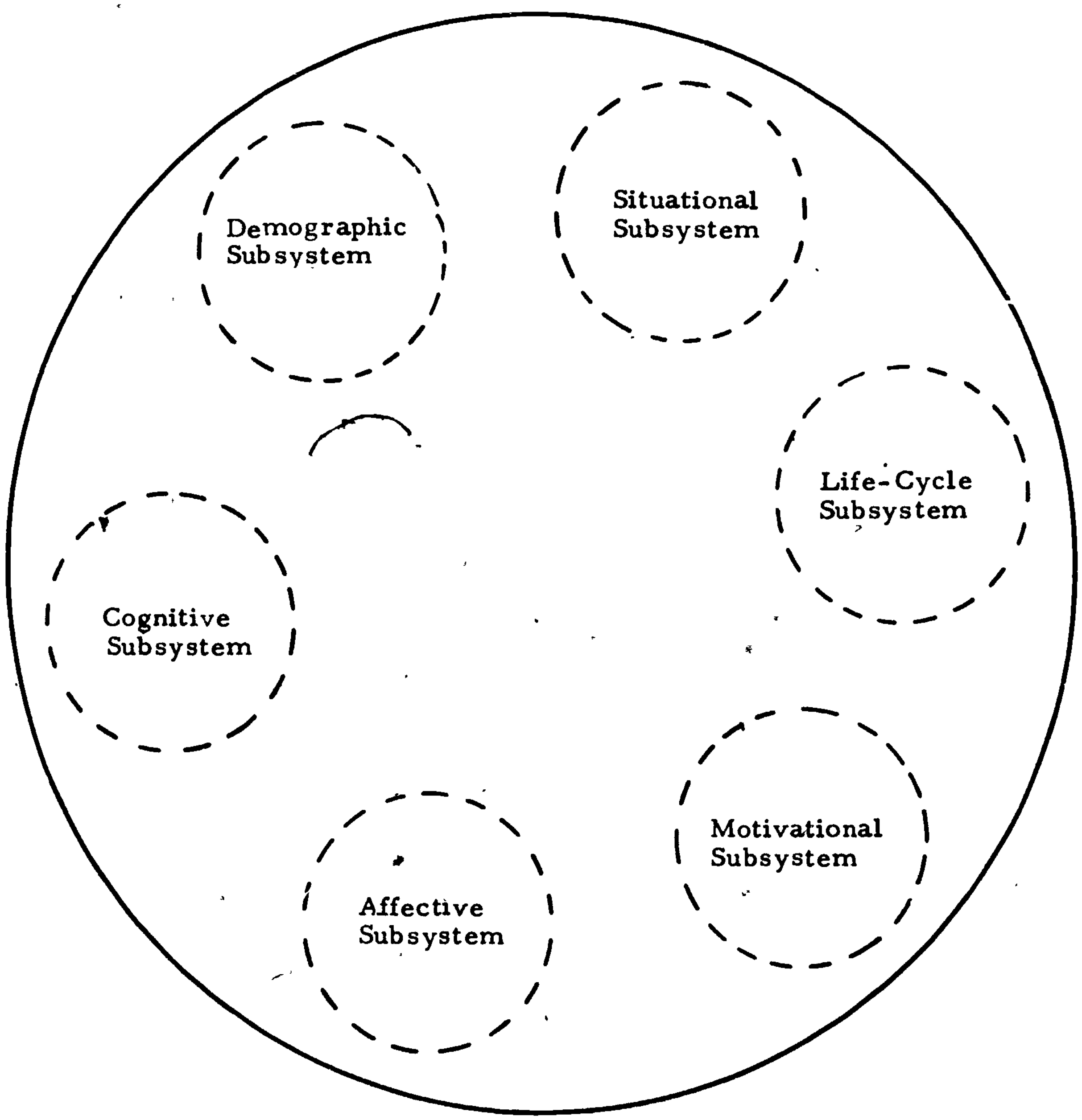
Potential adopters, when considering a particular innovation, need to be aware of the types of people who might be affected by a change. Those affected include pupils, parents, teachers, and administrators.

INNOVATIONS: WHAT AFFECTS ADOPTION?

To understand the adoption process we need to examine both the factoring influencing the adopter and the characteristics of the innovation.

First, let's look at the individual as potential adopter. We know he has intra-personal subsystems that affect his level of innovativeness. As illustrated in Figure 1, there are demographic, cognitive, affective, motivational, life-cycle, and situational subsystems. The function of these subsystems is better understood

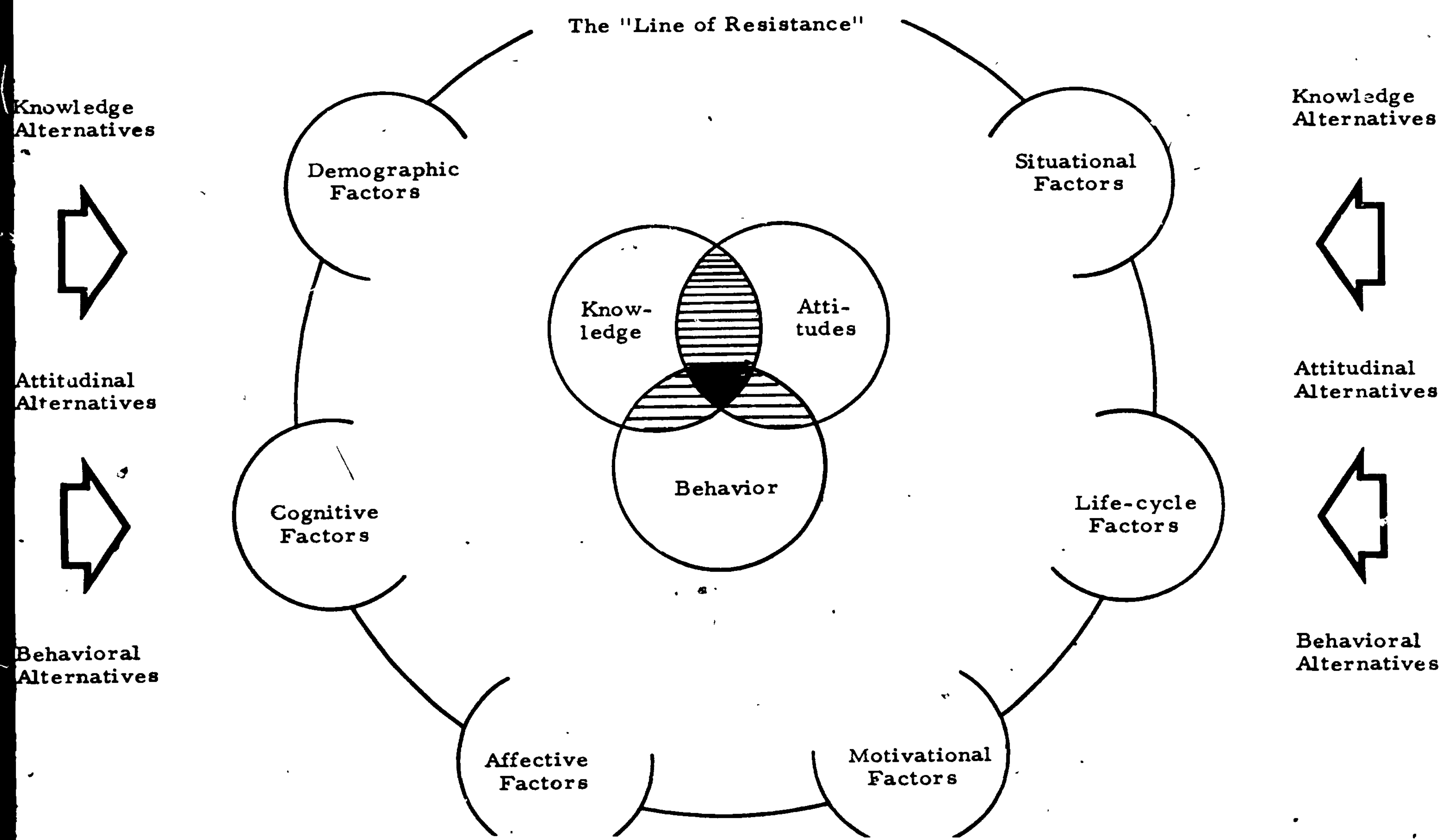
Figure 1: INTRA-PERSONAL SUBSYSTEMS AFFECTING INNOVATIVENESS



if we think of the three phases necessary for adoption. Rogers, Carlson and others talk about the knowledge phase, the favorable attitude phase, and the behavioral adoption phase. These three phases and their relationship to the subsystems are shown in Figure 2. Each of these phases is blocked by a line of resistance created by the subsystems. Only under certain conditions will the subsystems allow the person to accept the new knowledge, or to develop a favorable attitude, or to adopt the innovation. For instance, a teacher who never goes to conventions, who subscribes to no educational journals, who is 'closed minded', who has been teaching for 15 years, and whose principal does not tolerate changes in the classroom, is extremely unlikely to ever have her knowledge, attitudes, or behavior changed by innovations. The line of resistance is firm. On the other hand, a principal who goes to one national convention, two regional meetings, who subscribes to two educational journals, who is willing to tolerate a certain amount of risk, and who is 'open minded' is likely to allow new knowledge, attitudes, and even behaviors to cross the line of resistance.

However, we see in the center of the figure that even when knowledge, attitudes, and behaviors have crossed the line, they may only partially overlap. In Figure 2 overlap between any two of the three is represented by straight lines. Overlap of the three phases that results in adoption of new innovations is represented by solid black.

Figure 2: INTERRELATIONSHIPS OF KNOWLEDGE, ATTITUDES, AND BEHAVIOR

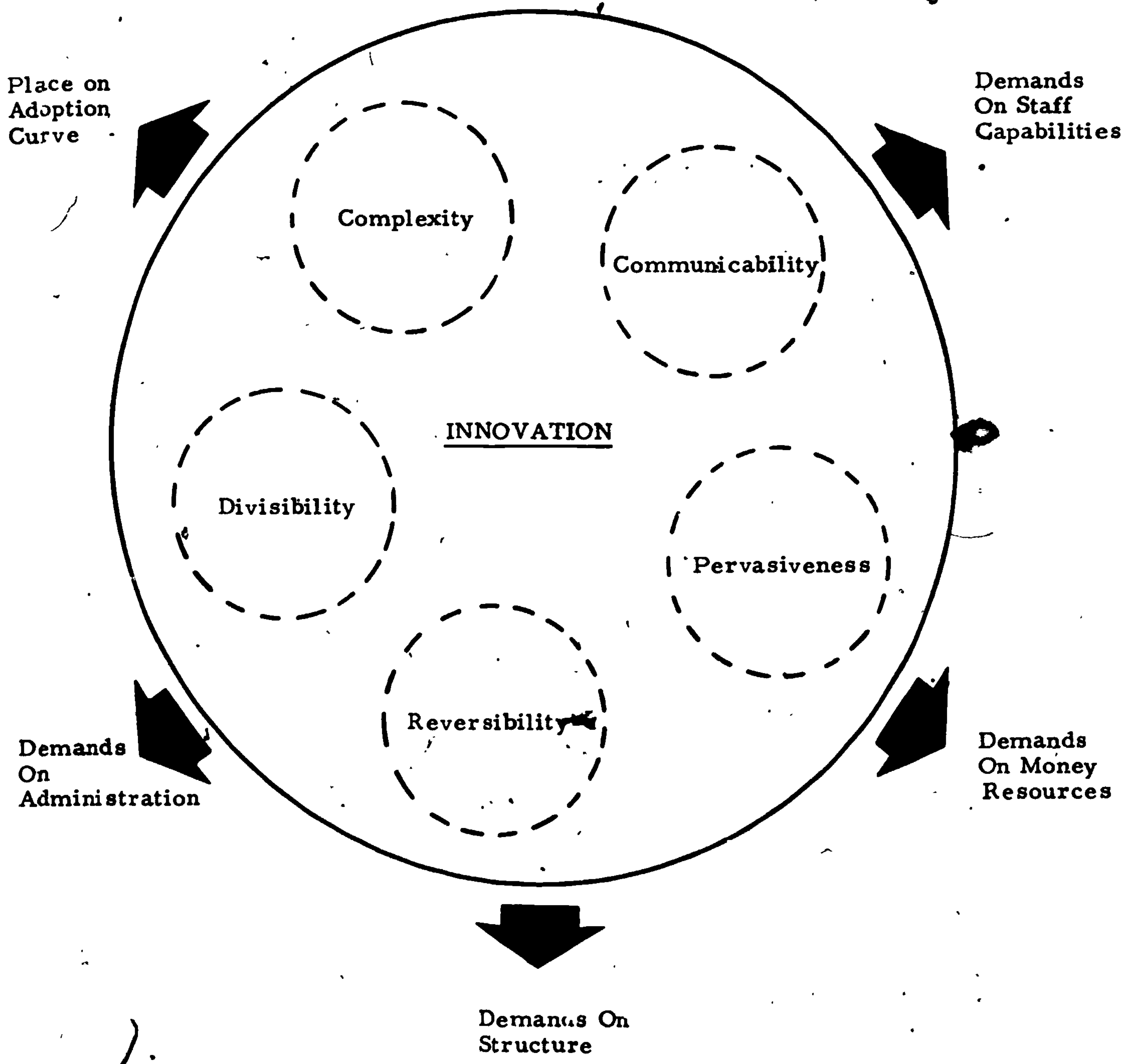


When a group, rather than an individual is the adoption unit, there are multiple individual systems operating, plus a group system. The group system, like the individual system, is also made up of subsystems. However, they have the added dimension of being strongly influenced by group dynamics.

The innovation also has certain subsystems or properties that help determine the likelihood of its acceptance in a school. These These properties are shown in Figure 3. The internal subsystems include complexity, divisibility, communicability (Rogers, 1962), pervasiveness, and reversibility (Katz, 1965). The external subsystems of the innovation include its place on the adoption curve, the demands it makes on staff capabilities, the demands on money resources, the depends on the school structure, and the demands on administration of education. If these demands are particularly heavy, then adoption is unlikely. If they are light, then adoption is much more likely.

Of course it is possible to intervene in this process. Personal linkage systems or media-mediated linkage may provide the answer. There are well documented innovations such as those listed in ALERT or CEDaR that are unable to cross the personal line of resistance or that make heavy demands on a school. Educational extension agents have often been able to build bridges across the lines of resistance. In states where personal linkage is too expensive, it may be possible to develop effective media campaigns that rely on print and two way audio/video. Educational television

Figure 3: PROPERTIES OF INNOVATIONS THAT INFLUENCE ACCEPTANCE IN SCHOOLS



plus telephone hook-ups, information hotlines, and two way cable all hold promise for the media-mediated dissemination systems.

Unfortunately, the innovation process has been tied to our early understanding of the communication and dissemination processes. In general, the innovation process is still considered to be a one-way street that starts at the producer and ends with adoption. It is time to understand the needed feedback loops that are now recognized in the communication process. These feedback loops, applied to innovations mean the practitions have direct access to the producer. Direct acess both in inputing needs and in reacting to products. At present, the producer is not really concerned with the user. And although one never would argue that the producer be limited to the stated needs of practitioners, one should argue that producers be responsive to these needs. A linkage system connecting producer and user may eventually be more significant than the linkage system connecting innovation to user. Products that grow out of an open, participatory, responsive system will already have bridges to cross that will carry them over the lines of resistance.

## CONCLUSION

Everyone involved in the educational process is also involved in educational change. We may try to ignore it and to resist it. But change, at least at the micro level, happens anyway. What is needed is a better understanding of the innovation process so we can become actors rather than reactors in the process. Then as actors we can begin working toward a more open and participatory process that provides feedback at many points in our five phases of producer, product, dissemination, user and adoption.

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SESSION NO. 22

RETRIEVING ERIC INFORMATION--B

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To help Field Agent and Project Manager trainees acquire both a deeper understanding of, and some basic skill in selecting descriptors and formulating search strategies for computer searching--particularly using Boolean logic--through problem solving with the Thesaurus and use of on-line retrieval systems.

Upon completion of this module, trainees should be able to:

1. Describe the importance of query negotiation process--and the summary problem statement--in developing a search strategy and handling decision points in the retrieval process.

2. Develop search statements, using the Boolean operators AND, OR, and AND NOT.

3. Apply different search strategies to broaden searches (for low-yield search results) or to limit searches (for high-yield search results).

B. Participants

Trainers: One instructor and at least one assistant, per terminal, who is familiar with the particular on-line system being used.

Trainees: Field Agents and Project Managers

C. Summary of Module Activities

The instructor introduces the concept of Boolean logic and its application in formulating searches. This 15-minute introduction is followed by an exercise period in which each trainee is asked to select terms from the Thesaurus and prepare Boolean searches for several problem statements. The trainees are then divided into small groups to submit their search strategies to search specialists working with an on-line system. After this demonstration, the groups are convened to discuss the variations in search results produced by alternative search strategies. This section concludes with a brief summary presentation and discussion on the relation of Field Agent activities to the retrieval process.

D. Duration

Two hours

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Mathies, M. L. and Peter G. Watson. Computer-Based Reference Service (to be published by American Library Association, Spring 1973). [Part Two]

2. SDC. User Manual for SDC/ERIC, January 1973. [Chapter VII]

3. Lockheed. User Manual for DIALOG.

4. Resource Information Center, Grand Forks, North Dakota. An Alternative to Query.

5. MacMillan Information. Myriad-ERIC Search System: Instruction Manual.

### B. Trainee Preparatory Reading

1. Mathies, M. L. and Peter G. Watson. Computer-Based Reference Service (to be published by American Library Association, Spring 1973). [Part Two]

2. Sample Search Statements for Level-Related Terms

3. Sample On-Line Search Printouts

4. Sample Coding Sheets for Batch Systems

### C. Aids and Equipment

1. At the beginning of Step 2, the instructor should distribute copies of the Thesaurus of ERIC Descriptors.

2. "Retrieval Exercises--B," to be completed during the session, are included in the trainees' packages.

3. A terminal should be available for each of three or four trainees involved in the session, with a telephone and table for each terminal.

### D. Other

The trainer should work with the terminal operators before the session, reviewing the search exercises and discussing the kinds of search experiences the trainees should observe. The trainer and the terminal operators should be prepared to initiate activities at the terminal to demonstrate principles that are not necessarily illustrated by the trainees' suggested search formulations.

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to Boolean Logic | Presentation/Discussion | 15 |
| Step 2 | Developing Search Statements using Boolean Operators | Completion of "Retrieval Exercises--B" by Individual Trainees | 20 |
| Step 3 | Demonstration of Search Results for "Retrieval Exercises--B" | On-Line Demonstration | 45 |
| Step 4 | Review of Search Results | Discussion | 20 |
| Step 5 | Summary of Searching Strategies and Field Agent Activities | Presentation/Discussion | 10 |

## IV. SPECIAL CONSIDERATIONS

Although this session could be conducted without the on-line system segment (Step 3), trainers are strongly encouraged to provide for its inclusion, so that trainees can "see" retrieval occurring and receive immediate feedback on the impact of their decisions during the training session. If access to an on-line system cannot be obtained, this session should include more discussion time on the review of the paper/pencil printouts to illustrate some of the searches and variations in search results.

This module is essentially the same as Number 19. However, the instruction should focus more discussion time at Steps 4 and 5 on the relation of searching decisions to the Field Agent tasks of query negotiation and follow-up communication.

## V. CONDUCT OF THE SESSION

Step 1 Introduction to Boolean Logic (15 minutes)

Boolean logic, named after the English mathematician George Boole, is one way in which a file of bibliographic information can be searched by computers. I think you can gain some degree of expertise and reduce some of the confusion associated with the application of Boolean logic to search formulations if we examine a few essential principles that are involved and note some of the more common problems that occur in practice.

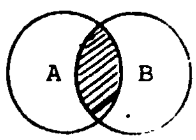
[The trainer should illustrate the concepts introduced in this section on a chalkboard.]

Point 1: Boolean logic employs the most basic form of logic: something is either present or absent; it is there or not there. Thus, in specifying one term in relation to another, the computer checks for the presence or absence of these specifications in the file.

Point 2: Your specifications are stated in terms of one of three conditions: AND, OR, or NOT (perhaps more easily thought of as AND NOT).

[Place three Venn diagrams on the board and ask the trainees to indicate which parts of the circles would be retrieved by each logical operator.]

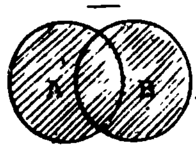
AND




A AND B

[When two or more terms are linked by AND, the computer retrieves only those document citations that have been indexed by all the ANDed terms in the search statement.]

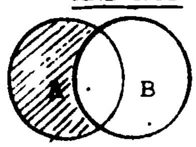
OR




A OR B

[When two or more terms are linked by OR, the computer retrieves all document citations that have been indexed by either one or more of the ORed terms in the search statement.]

AND NOT




A AND NOT B

[When terms are linked by an AND NOT, the computer rejects any document citations that have been indexed by those terms.

Stated another way, the computer retrieves only those document citations that meet the positively stated specifications, and excludes the negated term(s).]

Point 3: A common source of confusion lies in the difference between our natural-language meaning of "and" (little a-n-d) and the Boolean logic operators. In stating requirements of an ORed statement--TERM A OR TERM B--in plain English, we might say, for example, "I want all the documents that are indexed by either Term A or Term B, and those indexed by both terms." However, a client will not state his requirements in those explicit terms; most likely he would say I want information on A and B. However, it is the responsibility of the field agent or the retrieval specialist who is working with the client to find out what the "and" means during the query-negotiation process.

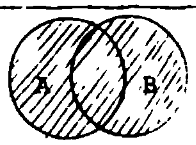
BOOLEAN "OR"

A OR B =

A only

+B only

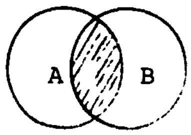
+A AND B

Total: 


BOOLEAN "AND"

A AND B =

A AND B only

Total: 


As you can see, the Boolean OR will yield a far greater number of document citations than the Boolean AND. To distinguish between the two, it is often useful to think of AND as being restrictive and OR as being comprehensive. This kind of thinking must be in the back of the query negotiator's mind when he or she is talking to the client, to insure that the natural language statement of the problem can later be translated into the most appropriate Boolean statement, or that the latitude in developing Boolean statements is clearly understood.

Point 4: And this brings us to Point 4, that is: the use of OR broadens a search; AND limits or narrows a search.

Before we continue to Point 5, let's work through one problem together. Imagine that we are working with a superintendent who wishes to obtain planning information on year-round schools, and is particularly interested in cost-related information.

[The trainer should ask the group to suggest some Thesaurus terms for each concept in the search problem, and then show how each of the terms would be ORed in several statements to start broadly, and how the ANDing of groups or "sets" of descriptors then restricts the search. (Since systems vary in how they handle combinations of Boolean operators, the trainer can use both parentheses and sets to illustrate on the board the search logic.) For example, one formulation for this particular search problem is:

((YEAR ROUND SCHOOLS OR EXTENDED SCHOOL YEAR OR
TRIMESTER SCHEDULES)
AND
(EDUCATIONAL FINANCE OR COST EFFECTIVENESS OR OPERATING
EXPENSES OR BUDGETING)
AND
(EDUCATIONAL PLANNING OR SCHOOL PLANNING))

Another way to think of the relationships is in sets:

| | Set 1 | | | Set 2 | | | Set 3 |
|---|---|---|---|---|---|---|---|
| | YEAR ROUND SCHOOLS | AND | | EDUCATIONAL FINANCE | | | EDUCATIONAL PLANNING |
| OR | EXTENDED SCHOOL YEAR | | OR | COST EFFECTIVENESS | AND | OR | SCHOOL PLANNING |
| OR | TRIMESTER SCHEDULES | | | OPERATING EXPENSES | | | |
| | | | | BUDGETING | | | |
| | POSTINGS = 135 | | | POSTINGS = 3265 | | | POSTINGS = 2230 |

A search on several combination of sets results in different postings levels, i.e., the number of documents in the file that meets the particular specifications:

1 AND 2 = 29 postings

1 AND 3 = 4 postings

1 AND 2 AND 3 = 0 postings

Because the combination of all sets of terms produces a "no-hit" situation, the searcher might choose to use the following search combination:

1 AND 2 OR 1 AND 3 = 3 postings

In this case. the main concept (YEAR ROUND SCHOOLS) is matched with both secondary concepts, and then ORed to approach a more comprehensive search stragegy than the combination of the main concept with only one secondary concept.

Point 5: Although you may decide to coordinate only two terms (A AND B), you frequently run two risks: (1) you may not retrieve comprehensively on your search, and (2) you may not get any "hits," i.e., there may not be any document citations indexed by both of the particular terms. This element of surprise becomes more acute in batch-mode searching, and the overly comprehensive search formulation is a safeguard against lost time in discovering this "no hit" situation only after a run has been made. The first risk takes us back to the first Retrieval Module in our discussion of the ERIC indexing and the need to select several appropriate terms. The second risk is directly related to file size and the number of postings (i.e., frequency with which any given term has been used to index documents). As of June 1971, three-fourths of the some 7000 ERIC descriptors were indexed to fewer than 100 documents, although, some terms had postings as high as 1500 and over. You can see that the probabilities for finding a match or hit for only two terms (e.g., if TERM A has 25 postings and TERM B has only 6 postings) are much lower than if you had said:

( ( A OR H OR K) AND (B OR G OR Z) )

Postings = 150 Postings ≐ 80

Step 2 Developing Search Statements Using Boolean Operators (20 minutes)

For the remainder of this session, we will be working on and discussing several exercises, which have been drawn primarily from the request files of the San Mareo center. The first step in preparing for a search is to review the problem statement and select the resources that are going to be used. For some of the problems we have given you, you may not believe that a search of ERIC will entirely satisfy the request, or in other cases, that ERIC is even the appropriate resource. We would like for you to note the other resources you might wish to check as a supplement to, or substitute for, an ERIC search, but we are primarily interested in your working at this time with the ERIC Thesaurus in selecting terms and developing search statements--using the Boolean operators--for computer searching, whether batch or on-line.

After you have completed preliminary work with the Thesaurus and have formulated your searches, we will work through your formulations at the terminal, on-line, so that you can see the results and understand how some of your decisions impacted on these results.

In your packet you will see Retrieval Exercises--B, both the problem statements and worksheets, which may be used in completing your search formulations. The worksheet format is one kind of convenient form for developing a strategy of ORed and ANDed statements. Sample searches are provided on the first exercise sheet to illustrate how you can use the form.

[The trainer should distribute copies of the Thesaurus to trainees, and should be available through this period, to answer questions and help trainees who may have difficulties in using the Thesaurus.]

Step 3 Demonstration of Search Results for "Retrieval Exercises--B" (45 minutes)

[After the trainees have completed the paper/pencil exercises, they should bring their search formulations to the terminal area. The terminal operator should ask one of the trainees in his or her group to volunteer a search formulation for Exercise 1, and proceed to insert it into the system. The operator should explain to the trainees what he or she is doing with regard to particular features of the system being used, but the teaching of the on-line system should be only incidental to arriving at the search results, showing sample displays of citations and abstracts of the search results, and exploring different results with different search formulations. The trainees should be asked to volunteer any different search formulations--different terms or sets of terms or different uses of Boolean operators--that they have prepared for the search problem.

This segment will be most instructive if the terminal operators are able to take the lead provided by the search strategies recommended by the trainees, but are also able to supplement the demonstration with approaches that are not recommended by the trainees. Illustrative searches and variations in strategies contained in the RETRIEVAL EXERCISES--B (FOR TRAINER) can be used as background for developing this part of the session.]

Step 4 Review of Search Strategies and Results (20 minutes)

[The trainer should convene the group and direct a discussion of each search problem--the search strategies that were devised and their observations of the on-line applications. Although trainees' questions may serve as a guide to this session, the trainer can use the background on the RETRIEVAL EXERCISES--B (TRAINER) to direct the discussion on each search problem.]

Step 5 Summary of Searching Strategies (10 minutes)

The exercises that you have completed illustrate some important decision points in the retrieval process, two of which I'd like to review, and perhaps you will add some of your own.

Point 1. One of the most important points to be made is that a searcher will almost always be working with insufficient information--even if the query negotiation process has been an excellent one. I am reminded of Dr. Fairthorne's vivid and telling definition quoted in your retrieval packets:

The purpose of searching is "the recovery from a given collection of documents, with stated probability, a set of documents that includes, possibly with some irrelevant ones, all documents of specified content; or, a set of documents that includes nothing but documents of specified contents, but possibly not all of them."

A search will often reveal complexities that cannot possibly be anticipated until the search is well under way. These complexities result from one, or a combination of several factors including:

- The multiplicity of terms in the educational language, as we saw in the tutoring problem, where there were at least four different tutoring programs (cross-age, peer, programmed, and after-school). And the possibilities even increased with the non-tutoring elements, reflecting the persons to be involved in the tutoring (e.g., teachers, parents, volunteers, paraprofessionals).
- The subtleties or focus of a document's contents that are reflected in a wide variety of combined descriptors, such as we saw in the academic achievement and self concept problem. The combinations of descriptors focussed on one or several elements of the relationship, in the use of test instruments, reports of educational research, the effect of home elements (e.g., one parent children, mother's attitudes).
- The potential of "hidden contents" not covered by the indexing terms. Is teaching time perhaps a secondary topic in many of those mathematical concepts or concept-formation-indexed documents?
- The search process itself, with the powerful capability of a machine search, on one hand, to coordinate the likeliest terms we can select and produce a masterful listing, but the

limitations of the machine search, on the other hand, to deal with some of the intellectual elements I have just enumerated.

Because the searcher will not always have the information from the client--who perhaps would not know himself--on which to base certain decisions, he or she must understand what is involved in the alternatives available to him and this brings me to Point 2.

Point 2. There are several alternatives available to the searcher, and to the center as a whole, in making the retrieval decisions. Some of these alternatives concern the search strategy itself, but others relate to the screening of printouts, the use of substitute resources, and the packaging and communication of search results. We will address packaging and communications in a later session, but it is certainly relevant to mention it at this time.

Some of the alternatives are:

- Conduct a slightly more comprehensive search, one that will contain the peripheral and seemingly unrelated items, so that the client can then pick out the items of relevance to him.
- A variation on this theme, to conduct the comprehensive search and make notes on the printout to point out the variations

in search results (e.g., the variations in student populations or in terminology for a given topic) for the client.

- Select the most on-target search strategy possible, to identify a few items for the client to "get started".

These alternatives can be varied even more with the addition of steps in which complete documents are checked for their relevance, or printouts are organized according to some principle or classes of information. We will be addressing these possibilities later, but the basic decision for selecting among the variety of alternatives is based on at least two key elements:

- The available resources (staff time, relative to volume of activity; search/retrieval resources, in terms of machines and materials).
- The best knowledge of what is <u>most</u> likely to meet the client's needs given his position, his apparent level of sophistication in the subject of the search, and the use which is planned for the information.

The first element will be a fairly fixed constraint for any center, but the second element is one that can be dealt with in the query negotiation process through the insights gained by the field agent in talking to the client, which should be transmitted to the searcher.

[The trainer might wish the trainees to volunteer their thoughts on the important decision points that they believed were raised through the exercises--whether they relate to the retrieval process or to the query negotiation or communications activities.]

Although we are operating on a limited amount of information, why don't we think through the client's "best interest" in each of the searches we have performed, and discuss the course that we believe would have most likely met the client's needs, if only initially.

[The trainer may wish to start off with one example, and then ask the trainees to state their preferences, based on their understanding of the time, expectations, and typical uses of information by school personnel.]

For example, on the teaching of time to TMRs. I read this request as a very specific one, for the TMR teachers have many responsibilities, and teaching time is only a part of this responsibility. I would search only on TIME and not go into the mathematical concepts or concept formation materials, where we can assume that the finding of relevant materials would take some digging and reading by the teachers. I might supplement my findings by talking to my special education consultants in the SEA to see if they know of any materials, or by checking the Curriculum Laboratory personnel or my curriculum materials collection. I would also check my project/people file, to see if there were any Special Education Instruction Materials Centers in my area with whom I could check.

Agreements? Disagreements?

[Trainer should let the trainees discuss their preferences for the remainder of searches as well as the kinds of further interactions between the Retrieval Specialist and field agent or field agent and client they would recommend.]

SESSION NO. 22

RETRIEVING ERIC INFORMATION--B

Retrieval Exercises--B  Trainer Discussion Guide

[See SESSION NO. 19]

SESSION NO. 23

THE QUERY NEGOTIATION PROCESS--B

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

The purpose of this session is to provide retrieval specialist trainees with an opportunity to acquire experience in query-negotiation through their participation in role-playing exercises that demonstrate the five basic negotiation ingredients identified in the Introduction to Negotiation Process--A

Upon completion of this session, each trainee should be able to:

1. Understand the concerns of the field agent in one of his major roles

2. Describe the kinds of situations in which the retrieval specialist assumes major responsibility for the query-negotiation function

3. Prepare for the application of the major concepts in this module to their own query-negotiation activities

B. Participants

Trainers: A session moderator and two experienced center staff personnel (field agents and/or retrieval specialists) to conduct the role-playing exercises

Trainees: Retrieval specialists

C. Summary of Module Activities

This session should be conducted by a panel of three trainers: one to serve as the moderator and two to conduct the role-playing exercises.

The session moderator will be responsible for the Introductory Statement and presentation of the Session Summary (Steps 1 and 7). The other two trainers, in addition to providing the moderator with additional technical expertise, will be responsible for the presentation of the five key session concepts (Steps 2 through 6). Before each role-playing exercise, a trainer will provide a definitive description of the session concept, and set the stage for the retrieval specialist/client negotiation. He will then be aided by two trainees for each of the two exercises. Following the role-playing exercises, the trainer will moderate a brief discussion period.

After all five concepts have been described, demonstrated, and discussed, the session moderator will present the Session Summary.

D. Duration

Two hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

Review discussion points for role-playing exercises in Session No. 18

B. Trainee Preparatory Reading

The set the stage scripts for the ten role-playing exercises

C. Aids and Equipment

None

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Session Introduction | Presentation | 10 |
| Step 2 | Key Concept No. 1: "Asking the Right Questions" | Presentation/ Exercise/Discussion | 20 |
| Step 3 | Key Concept No. 2: "Guiding the Discussion" | Presentation/ Exercise/Discussion | 20 |
| Step 4 | Key Concept No. 3: "Analyzing the Client's Real Concerns and Motivations" | Presentation/ Exercise/Discussion | 20 |
| Step 5 | Key Concept No. 4: "Learning to Listen" | Presentation/ Exercise/Discussion | 20 |
| Step 6 | Key Concept No. 5: "Establishing Rapport with the Client" | Presentation/ Exercise/Discussion | 20 |
| Step 7 | Session Summary | Presentation | 10 |

IV. SPECIAL CONSIDERATIONS

While it is recommended that practical experience in enacting a query-negotiation situation be a part of this session's objective for each trainee, discretion should be used in attempting to achieve this goal. Consideration should be given to optional approaches such as having the two trainers demonstrate the first exercise, or using a trainer in the client role to encourage and assist the trainee if the interview begins to falter. Also, observation of the trainees would be most comfortable in a role-playing situation. Role-playing is not equally suited to all individuals in any group. Many individuals who are capable of conducting a successful negotiation interview are unable to cope with the theatrical aspects of a role-playing exercise. The best guideline to follow, therefore, is to plan options in advance of the session and be ready to employ them if the situation indicates a need to do so.

For each concept, two exercises are provided: a field agent situation and a retrieval specialist situation. Trainers may wish to select only one situation per concept, depending upon the time allotted.

V. CONDUCT OF THE SESSION

Step 1 Introduction to the Retrieval Specialist and the Query Negotiation Process (10 minutes)

The major distinction that is made in defining roles for Center personnel is usually one of ascribing the interpersonal contacts--the initial contact, the query negotiation activity, and follow-up communications activities--to the field agent, and the reference and retrieval functions to the retrieval specialist. In fact, we know that this neat division of labor is not that distinct. Although we have tried to focus on the major responsibilities of each personnel role, we believe that is important for the retrieval specialists to have this additional training in the query negotiation process, for two reasons:

- We hope that this session will help you to develop an appreciation for the difficulties that the field agent encounters in tackling his major job--out in the field. It is easy for all of us, when we are removed from the firing lines, to forget the complete picture of activities that another person is facing; otherwise, we might sit in our central office, wishing for more information on the request form that is received from the field agent. We might also try to remember that he is likely faced with a heavy load and is moving from office to office or school building to school building, perhaps performing the role in a parttime capacity; when he finally sits down with the client, he may be needed more at that time as a sympathetic listener to the woes and dilemmas of the moment and day than as a participant in a businesslike and efficient dialog about the client's specific information requirements. It is for similar reasons that we have tried to provide for the field agent's developing the capacity to imagine himself in another role, by having him involved in some depth with the Thesaurus and the actual retrieval process. We cannot hope to have everyone be an expert in every Center function, but we should expect that each person has somewhat more than a superficial understanding of other roles.

- We would like to break down the query negotiation process into several components or concepts, so that you may begin to develop your own philosophy and approach to a task that you will be performing--in verying degrees. You will have walk-in visitors (from within the SEA, for example, or elsewhere), you will receive telephone and letter requests directly, and on occasion you will be following up on clients on recommendations from the field agent in that area. Therefore, the retrieval process may be your major responsibility, but following closely behind is some interaction with clients--particularly the query negotiation interaction.

There are at least 5 basic ingredients or concepts in the query negotiation process:

- Asking the right questions
- Guiding the discussion
- Analyzing the client's real concerns and motivations
- Being sensitive to the client's needs through the art of listening
- Establishing personnel rapport with the client

We have developed several exercises to illustrate each of these ingredients. Some exercises are more typical, perhaps, of the field agent's "out in the field" contacts; others are more representative of the contacts a retrieval specialist might encounter directly.

We hope you will feel comfortable in joining us as we enact several of these situations and discuss some of the possible approaches and considerations involved in each situation.

<u>Step 2</u> Key Concept No. 1: Asking the Right Questions (20 minutes)

<u>Definitive Description of the Concept</u>

The portion of the interview process that deals most directly with information gathering on the part of the field agent or retrieval specialist is that of "asking the right questions."

No interview can be considered successful if the information required for proceeding to the next step in the retrieval specialist/client relationship is not acquired. Of the five key concepts to be covered in this session, the questioning process is perhaps the most basic, the most structured, and quite likely the most mechanical. It is <u>basic</u>, in the sense that questions lead to the answers that are needed to continue the interview or assist the retrieval specialist in his task of satisfying the informational requirements of the client; <u>structured</u> from the standpoint that questions can be viewed as the building blocks that make up a complete interview; <u>mechanical</u> because the questions asked during an interview can be listed under the rather standard headings of what, where, when, who, why, how, etc. Do not make the mistake of concluding that something that is basic, structured, and mechanical is also simple. Remember, the title of this concept is not "Asking Questions," but is "Asking the Right Questions." And--I might add--"at the right time and in the right way."

If a question is to be more than just a question--a "right question," it must have a purpose. This is where your interview questions begin to interleave with the other four key concepts. What is the purpose of your question? Are you attempting to guide the discussion in a direction that you believe will be more productive? If you are, you should be fairly certain that the new direction you have chosen is the proper way to go. Are you asking a specific question that will allow you to evaluate the client's response and thereby analyze his real concerns and motivations? If so, you must first analyze your own feelings about the client's problem. If you do not, you might very well read your own concerns and motivations into the client's response and miss his point of view entirely. Are you asking a question that you hope will draw out the client? If that is your purpose, remember that gaining insight to a problem is a two-way street. Both you and the client can benefit from this kind of question. You should be ready to act as a sounding board as well as a sponge. If, during the listening process, you are able to interject brief but pertinent comments, the client may provide you with a major portion of your informational needs. Finally, are you asking a question to help you establish rapport with the client? If so, you should be ready to comment on the client's response. For example, a very commonplace question might be "How are you today?" How do you answer if the client's response is "I feel terrible," rather than the usual response of "Fine."? In other words, if you are using a question in an attempt to establish rapport, be certain you are ready to respond intelligently to the unexpected as well as the expected answer to your question.

Asking questions at the right time and in the right way is a subjective decision the retrieval specialist must make every time he conducts an interview. All standard interpersonal interviewing techniques come into play. The retrieval specialist needs not only to know the interviewing techniques that best fit his own personality, but should also attempt to use an approach that will put the client at ease.

The exercise we have prepared for you is intended to emphasize the importance of "Asking the Right Questions."

Exercise No. 1 (Field Agent Situation)

The field agent is attending a meeting of guidance counselors from schools in his district. During a coffee break he is engaged in casual conversation by one of the counselors.

The counselor is new to the district and unaware of the service provided by the field agent. The field agent briefly explains his position and role in the district. Just as the counselor begins to tell about a problem in his school concerning underachieving students, the meeting is called back to order. The field agent quickly suggests they get together immediately after the meeting in a coffee shop nearby. The counselor agrees. The field agent and counselor are now at the coffee shop. The field agent is the first to speak.

Exercise No. 2 (Retrieval Specialist Situation)

The retrieval specialist has received a memo from the state superintendent asking "what was the lowest cost of mutton in Australia during the last 10 years." The retrieval specialist reads the memo twice, then approaches her project manager for a discussion of her concerns: (1) such a request is not typically handled by the Center since it is a general reference question and appears not to relate to the educational process; (2) the requester is the superintendent; (3) how she should handle it. She approaches her manager, and says "You'll never believe the request that I just received..."

[The trainers may wish to take this exercise one step farther, with the retrieval specialist calling the superintendent's secretary for more specific information. However, the point of the exercise might be simply to note that "asking the right questions" sometimes can mean "doing the right thing." If the query negotiation part of the exercise is continued, one of the right questions might be to find out if the superintendent wants to know the price of sheep from the farmer or the cost of mutton products (e.g., leg of mutton, mutton leg chops, etc.) in the market. The retrieval specialist who had to deal with this problem finally called the Australian Embassy in San Francisco to learn that at one time last year, you could get a whole sheep for 10 cents (during the drought); she also found the market prices for leg of mutton, mutton loin chops, mutton leg chops, and forequarter chops!]

Discussion Period (Conducted by trainer)

Step 3 Key Concept No. 2: Guiding the Discussion (20 minutes)

Definitive Description of the Concept

The importance of "guiding the discussion" should not be overlooked in any description of the interview process. Simply stated, it means that you, the retrieval specialist, control the format and direction of the interview.

This key concept carries with it a certain degree of responsibility. As in any other form of interpersonal relationship, when you are in charge you are also responsible for the final results. Do not associate this concept with any one approach to interviewing. The concept is that the retrieval specialist should establish an interview format that he believes will best serve the needs of the client. The format may vary from one that allows the free association of ideas related to the client's stated problem to a highly structured and formal interview. In many cases the approach may change during the interview or over a period of several interviews from free association to a more structured format. In any event--whether the interview be formal or informal, structured or free--the retrieval specialist should attempt to establish and maintain control of the interview.

Another aspect of guiding the discussion is that of either directing a client down a certain path or redirecting the client who begins to wander off the subject. In either case the retrieval specialist should use discretion. For example, while on a vacation trip many of you have probably realized your greatest enjoyment and satisfaction through an unplanned excursion down a side road. Of course, you probably have run out of gas also or been stuck in the mud on similar side trips. The retrieval specialist needs to use good judgment about when "side trips" should be taken and how long he should allow the client to stay off the main road.

In brief, the retrieval specialist is responsible for assessing the situation and establishing an interview format best suited to the client's position, personality, and stated problem.

The retrieval specialist should be flexible in his approach but should remain in control of the interview. Finally, he should remember that because he is in control, he is also responsible for the results.

Let's go ahead with our next exercise and see what develops.

Exercise No. 1 (Field Agent Situation).

The field agent is discussing a plan that a local high school principal has for involving the students in a drug education program.

While the principal says he is convinced that "The kids need to participate actively in the development of the program if it is to be a success," he is also hesitant about allowing them too much freedom in the selection of guest speakers, films, and drug abuse literature.

The field agent, sensing the conflict between the principal's goal of student involvement and his lack of confidence in the students' judgment, is faced with the need to redirect the discussion and reassure the principal. The field agent comments...

Exercise No. 2 (Retrieval Specialist Situation)

The retrieval specialist has been asked to attend a meeting of media specialists in the SEA who are planning to build a list of multimedia materials appropriate for bilingual programs, K-6. The chairman of the meeting has asked the retrieval specialist to talk a little about the Center's services and to find out from the group, which has just begun to work in small committees, what kinds of help it needs to complete its work

[In this instance the retrieval specialist has been placed somewhat on the spot, but with the advance warning she might have prepared for the encounter with a suggested structure of materials and major resources, or might have prepared some leading questions that would help to direct the discussion toward what classes of materials the group was interested in, and what resources they had already checked out.]

Discussion Period (Conducted by trainer)

Step 4 Key Concept No. 3: Analyzing the Client's Real Concerns and Motivations (20 minutes)

Definitive Description of the Concept

Analysis of a client's real concerns and motivations is very possibly the most difficult of the five key concepts to achieve. Very often the retrieval specialist must read between the lines and look behind the statements of a client to assess his true needs.

For example, while many requests for information are simple and straightforward, others will require the retrieval specialist's assistance in the formulation of the problem statement as well as the information request. The overgeneralization of a problem can result in too much information being requested which in turn may discourage the client from using any of the information that is provided. Conversely, if the information acquired from the client is too sketchy or if the problem statement is drafted with too much specificity, important supporting concepts underlying the problem may be overlooked.

Misinformation also might be provided to a client if his real concerns and motivations are not surfaced by retrieval specialist. For example, many problems facing educators today stem from Supreme Court decision concerning the violation of individual rights. Requests for information regarding religious courses, dress codes, moral conduct, extracurricular activities, off-campus clubs, etc., may not be identified initially by the client as legal problems. The requests may ask only for information as to what other schools are doing. Two obvious problems associated with responding to this type of request without checking possible legal aspects are: (1) the practices of other schools may never have been legal and (2) the information provided may reference school practices that were legal when adopted in the past, but need to be changed because of recent court rulings.

Very often the real concerns and motivation of a client can be discovered by finding out how he plans to use the information provided.

In summary, retrieval specialists should attempt to develop a sensitivity to their clients' real concerns and motivations. Many unspoken concerns can be uncovered through a definitive development of the problem statement and a more complete description of the information use.

Exercise No. 1 (Field Agent Situation)

The field agent received a telephone request from an elementary teacher for information regarding different forms of student grading systems in use within her state. The field agent complied with her request, and made an appointment to deliver the material to her in person.

During his explanation of the contents of the package, she casually mentioned that this was her first year of teaching and that "parent conferences scare me to death." This clue led the field agent to discuss in more detail the real concern she neglected to reveal in her telephone conversation (the conduct of parent-teacher conferences).

The field agent is the first to speak.

Exercise No. 2 (Retrieval Specialist Situation)

A field agent is visiting the central office, and in chatting with the retrieval specialist, indicates that he might be interested in having a search performed on recently published materials in the field of evaluation and dissemination which would be useful as professional reading. The field agent begins the conversation with "I know that there is not too much written on the role of the field agent per se--that much of the material is on the general role of change agents--but I'm wondering if you might find a few fairly relevant things in the file..."

[This exercise might best be handled between an experienced field agent and a retrieval specialist trainee. The retrieval specialist probably should direct his or her questions mostly toward finding out which areas of the job are of greatest concern to the field agent (e.g., the interpersonal aspects; the follow-up activities in which he becomes involved in planning meetings; the relations of his query negotiations process to the retrieval process) so that he or she can narrow the search to materials on topics more specific than dissemination, evaluation, and change agents.]

Discussion Period (Conducted by trainer)

Step 5 Key Concept No. 4: Learning to Listen (20 minutes)

Definitive Description of the Concept

The "art of listening" cannot be overstressed. The retrieval specialist who is an "active" listener will find that he is also enhancing his ability to do well with the other four key concepts we are discussing today. In contrasting an "active" listener with a "passive" listener, an active listener's mind is wide awake and alert...fully focused on the attitude and unspoken intent of the client's words as well as his verbalization of the problem. A passive listener is one who, while the client is speaking, is thinking about what he wants to say next, and is not too interested in the client's statements. Perhaps he feels he has the problem figured out already. Or, worse yet, he may be saying "Yes, I see, uh-huh...", but is not fully listening to or comprehending the client's viewpoint.

With reference to the other four key concepts, an active listener will be better prepared to "ask the right question" at the "right time" and in the "right way." He will also be able to use better judgment in his attempt to "guide the discussion" because the "real concerns and motivations" of the client will be more discernible. Finally, the retrieval specialist who wishes to "develop better rapport" with his client should not overlook the advantages of being a good listener. Clients are people, and being a "people" yourself should convince you of the importance of letting the client know that you believe his problem is important enough to merit your undivided and active interpersonal attention.

The exercise we have prepared for today regarding the "art of listening" should not be viewed as a one-sided conversation. The trainee who is role-playing the retrieval specialist should attempt, in addition to being an active listener, to ask the right question, guide the discussion, uncover the client's real concerns and motivations, and establish rapport with the client.

Exercise No. 1 (Field Agent Situation)

The field agent is working very hard on a program that is intended to evaluate the results of a new method of teaching history.

During a visit to one of the high schools in his district that is participating in the design of the program, he is confronted by a history teacher who has some very negative comments to make about the value of the program.

The teacher speaks first.

Exercise No. 2 (Retrieval Specialist Situation)

The retrieval specialist has received a telephone call from a teacher in the field who is not happy with the search results she has received, and is blaming the field agent for not listening to her request in the first place and the retrieval specialist for sending it out. The teacher is saying "...I feel that there is little reason for us to support your service if there isn't some way for us to get materials that really relate to our concerns."

[This exercise might also belong to the "establishing rapport" group, for the retrieval specialist must listen to the harangue and be prepared to smooth some ruffled feathers. The point of placing this exercise in the listening group is to allow the trainees to try to find out why she is unhappy, and try to read into the tirade any underlying problems or concerns.]

Discussion Period (Conducted by trainer)

Step 6 Key Concept No. 5: Establishing Rapport with the Client (20 minutes)

Definitive Description of the Concept

The establishment of good rapport is primarily the responsibility of the retrieval specialist. A good working relationship between the retrieval specialist and client is an absolute requirement if the full potential of the negotiation process is to be realized.

Interpersonal interviewing techniques may vary, but the retrieval specialist who relies totally on personal flattery to establish rapport may find that his relationship with the client is deteriorating after a time. While a sincere form of flattery may help to break the ice with a client, any lasting relationship must be based on mutual respect and the client's confidence in the retrieval specialist's professional competency.

The exercise that follows will probably include examples of sincere flattery; it should also demonstrate the retrieval specialist's attempt to build mutual respect between him and the client, and instill confidence on the part of the client in his professional competency.

Exercise No. 1 (Field Agent Situation)

The field agent was contacted by the secretary of a high school principal who was new to the area. The secretary indicated an interest on the part of the principal in becoming acquainted with the field agent. Furthermore, she mentioned the name of a field agent in a city nearby that the principal had worked with in the past. The field agent expressed his interest in meeting the principal and a meeting date was set.

Before the meeting, the field agent contacted the field agent in a city nearby and obtained the following information:

- The principal is in his late forties; he is cordial but businesslike.
- He is a graduate of USC, and holds a master's degree in Business Administration. His major area of interest is educational research.
- He has been president of the principals' association in his former area.

- He is a sports enthusiast, and actively participates in sports such as golf, hand ball, and swimming.
- Most of the services the field agent in the city nearby had provided him were related to his interest in educational research; especially curriculum development and new teaching methods.
- He was well respected by his colleages, but was known for his "take charge" personality. Projects he was associated with had a way of "getting done."

The initial meeting between the field agent and the principal takes place with the secretary ushering the field agent into the principal's office and the principal saying "Good morning. I've been looking forward to meeting you."

Exercise No. 2 (Retrieval Specialist Situation)

The head reference librarian from a university nearby call the retrieval specialist to ask for help on a computer search of ERIC that has been requested by the dean of the College of Education. She comes across fairly pleasantly, but the retrieval specialist senses that the librarian feels insecure and uncomfortable in using a resource once-removed.

[There are, of course, several ways in which the retrieval specialist can begin to establish rapport with this person; one consideration in her approach might be using this situation to develop a sense of cooperation between the two so that the retrieval specialist can call upon the reference librarian for help occasionally on searches for which the project does not really have the resources.]

Discussion Period (Conducted by trainer)

Step 7 Session Summary (10 minutes)

The session moderator should critique the session by emphasizing the major points that were made regarding each of the five key session concepts.

SESSION NO. 24

## PACKAGING AND COMMUNICATING SEARCH RESULTS

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To acquaint trainees with the kinds of decisions that should be made and the kinds of activities that are involved in the processing and delivery of search results.

Upon completion of this module, trainees should be able to:

1. Explain the importance of packaging and communication in the filling of an information request

2. Discriminate between alternative formats and styles for presenting retrieved materials

3. Select resources and products particularly suited to a client's request

4. Describe some of the critical elements of a written or verbal communication

B. Participants

Trainers: An instructor

Trainees: All

C. Summary of Module Activities

After the instructor introduces the session and its objectives, the trainees discuss their reading on packaging and how the reading relates to their own operations. Following this discussion, the trainees attempt to apply the guidelines from the reading in planning an information package. This exercise is followed by a discussion of the decisions made in packaging. The group then concludes the module with a discussion of the communication of the information package.

D. Duration

Two hours

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Far West Laboratory for Educational Research and Development. The Educational Information Consultant (EIC): Skills in Disseminating Educational Information. Berkeley, Calif.: Far West Laboratory for Educational Research and Development, 1972. ["Transformation Guidelines" and "Guidelines for Conveying Information to Client"]

2. Sieber, Sam D. et al. The Use of Educational Knowledge. Evaluation of the Pilot State Dissemination Program: Final Report. New York: Bureau of Applied Research, Columbia University, 1972. [Chapter 4 "The Output Interaction Phase--Delivering and Assisting"]

### B. Trainee Preparatory Reading

1. Far West Laboratory for Educational Research and Development. The Educational Information Consultant (EIC): Skills in Disseminating Educational Information. Berkeley, Calif.: Far West Laboratory for Educational Research and Development, 1972. ["Transformation Guidelines" and "Guidelines for Conveying Information to Client"]

### C. Aids and Equipment

1. Client Feedback Forms

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introductory Remarks | Presentation | 5 |
| Step 2 | Transformation Guidelines | Large Group Discussion | 25 |
| Step 3 | Packaging Exercise | Small Group Exercise | 45 |
| Step 4 | Discussion of Exercise Results | Large Group Discussion | 15 |
| Step 5 | Communication of Search Results | Large Group Discussion | 30 |

## IV. SPECIAL CONSIDERATIONS

None

V. CONDUCT OF THE SESSION

Step 1 Introductory Remarks (5 minutes)

In this session we are dealing with the processing of search results and the communication of the packaged materials to the client.

The first of these operations, processing, can mean a number of things and be called a number of names. As you know from your reading, the EIC training materials call the process "transformation". In the title of this session, we have called it "packaging". But regardless of what the process is called, it involves, basically, suiting the information that was retrieved to the needs, purposes, and requirements of the client.

The planning and processing of the client's package may take place in more than one step in the sequence of activities. In a sense, it begins with the client's statement of his own requirements in terms of time, format, complexity, etc. It continues with the field agent's articulation of the client's requirements on the search request form. The retrieval specialist may enter certain restrictions and limitations into the search, both at the beginning of the search and as it takes shape. And, finally, when the retrieval process is completed, either the retrieval specialist or the field agent, or both, attempts to assure the suitability of the search results to the client and his request.

I would like to begin this session with a group discussion of the transformation or packaging process.

Step 2 Transformation Guidelines (25 minutes)

Conduct a discussion of all trainees on the transformation or packaging process. Based on the reading of the "Transformation Guidelines" from the EIC materials, the following questions might be addressed in the discussion:

(1) What is the purpose of "transformation" or "packaging"?

(2) What are some of the considerations in planning the package (e.g., client's background, specific problem, type of information needed)?

(3) Who do you think should perform the screening of materials? The field agent? The retrieval specialist? Both? Neither?

(4) What are some of the possible formats that might be used to present materials to the client?

(5) How do you decide the appropriate format to use in relation to the client and the retrieved materials?

(6) How should you handle computer-retrieved material (i.e., how does screening of this material differ from that of other materials)?

(7) Since no one is an expert on all topics, how should you approach the processing of material when you are not well-versed in the subject in question?

Step 3 Packaging Exercise (45 minutes)

The purpose of this exercise is to give you an opportunity to apply some of the principles of information processing that we have discussed in planning an information package.

Divide trainees into groups of two or three and refer them to the "Packaging Exercise" in their packets. Ask trainees to study the problem statement carefully, decide on the materials to be included in the package and the appropriate format, and note the rationale for their choices.

Step 4 Discussion of Exercise Results (15 minutes)

Ask trainees to compare their plans for packaging the material. Give special emphasis to the kinds of decisions that were made in planning the package as well as the implications the plans have for actual preparation of the package.

Step 5 Communication of Search Results (30 minutes)

The second area to be covered in this session is that of communicating the information package to the client. Here again, there are a number of operational alternatives. For example, in many cases, the package will be communicated in person by the field agent. In other cases, the retrieval specialist will mail the package directly to the client and will communicate by telephone or letter. In still other cases, the retrieval specialist will send the package to the field agent for review and the field agent will then send the package to the client.

The Sieber evaluation has identified some factors for consideration in deciding on the mode of delivery and communication. [Write these points on the chalkboard.]

(1) The client's desire to have the material delivered personally

(2) The nature of the client's request:

a. Specificity (if the client knows exactly what he wants, he probably does not need help from the field agent in interpretation)

b. Scope of need or problem (requests of small scope may be very important, but present fewer problems in decision-making and implementation)

(3) Characteristics of the client and his organization

(4) Characteristics of the material

(5) Field agent familiarity with the topic

Good communication, as you know, is not one way. So, part of the process of communicating the information package to the client must involve feedback by the client. In verbal communication, the feedback is a natural part of the conversational interaction. The client will be able to tell the field agent or retrieval specialist directly whether or not the package is what he expected and whether or not he understands how to use it.

Written communication, then, should have a built-in mechanism for client feedback. It is not safe to assume that the client will volunteer his feelings about the Center's performance in filling his request. Some clients may feel that they are being ungrateful to volunteer critical opinions. Others may feel that the Center is not particularly interested in whether or not they use the material.

Included in your packets you will find five examples of forms that have been developed to help facilitate and promote client feedback. Forms such as these might be useful in surveying client satisfaction regardless of the type of delivery and communication. But, they are especially important in situations where communication has been in written form.

Open a large group discussion on the communication process, based on the reading of "Guidelines for Conveying Information to Client" from the EIC materials. Some of the following questions might be addressed in this session:

(1) What are the relative merits of face-to-face communication vs written communication?

(2) In situations where the request was for materials to be used in plans for "action" (e.g., implementing new practices or programs) what level of involvement by the field agent seems appropriate? What are some of the factors that might be considered here?

(3) Is it the responsibility of the Center to solve problems for clients or should the Center stop at providing the information and tools for solving the problem? What are some of the intermediate points in this spectrum?

(4) If time demands that a choice must be made, what priority should be given to the communication process (i.e., is it more important, for example, to spend time gathering information requests than delivering results)?

At the conclusion of the discussion, the instructor summarizes briefly some of the major points of the session.

SESSION NO. 25

# FINDING AND USING HUMAN RESOURCES

## I. SUMMARY DESCRIPTION OF MODULE

### A. Objective

To provide information on potential non-print sources which may be useful for request fulfillment by both field agents and retrieval specialists.

Upon completion of this module, trainees should:

1. Understand the use of human resources, both as an alternative to print sources and as a supplement to documents.
2. Understand ways of finding human resources (such as SEA consultants, college professors, etc.), particularly low cost resources that the client can afford.
3. Know how to build a human resources file that is fully cross referenced.
4. Know how to evaluate the services of human resources.

### B. Participants

Trainers: 1 Retrieval Specialist

Trainees: All

### C. Summary of Module Activities

This is a presentation, illustrated with hand-outs of sample forms. After each major point is presented, there is time for group dicussion. Group generated ideas can easily be added to individual copies of the outline.

### D. Duration

2 hours

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Havelock, R.G. "Dissemination and translation roles" in Eidell, T.L. and Kitchel, J.M. (editors), Knowledge production and utilization in educational administration. Oregon: University of Oregon Press, 1968, 64-119.

2. Sieber, S.D., et. al. The use of educational knowledge; evaluation of the pilot state dissemination program. New York: Columbia University, 1972, 267, 420-439, 605-620.

### B. Trainee Preparatory Reading

None

### C. Aids and Equipment

Trainees have certain materials in their packets that will be explained during the session. The trainer can also supply any forms or resources that are specific to the program.

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction | Presentation | 5 |
| Step 2 | Where are your human resources? | Mini-case study/ presentation/ discussion | 20 |
| Step 3 | How can you identify human resources? | Presentation/ discussion | 15 |
| Step 4 | How can you catalog human resources for easy access? | Presentation/ discussion | 20 |
| Step 5 | How will you inform potential clients of your capabilities? | Presentation/ discussion | 15 |
| Step 6 | How can you give the client and extension agent some alternatives? | Presentation/ discussion | 15 |
| Step 7 | How can you evaluate the performance of your human resources -- follow up? | Presentation/ discussion | 20 |
| Step 8 | Thought provokers | Presentation/ discussion | 20 |
| Step 9 | Review of major points | Presentation | 5 |

IV. SPECIAL CONSIDERATIONS

This session can either be conducted by an experienced retrieval specialist from outside the program or by the program's retrieval specialist. The outline is designed so that points relevant to the particular situation, or trainee generated points can easily be added.

V. CONDUCT OF THE SESSION

Step 1 Introduction (5 minutes)

The trainer says:

The business of negotiating, linking, retrieving, delivering and following up an educational information query is a very exciting adventure. In most cases it is a rewarding and satisfying experience for extension agents and retrieval specialists alike. It is rewarding if all parties are ready, willing and able to serve clients in a sincere, professional manner. As you are aware, there are a multitude of print materials at your fingertips which, upon proper delivery, will impress your clients. However, many classroom teachers, principals superintendents and even school board members must have face-to-face communication with the experienced consultant in order to sort out the ideas presented in written forms. Often the decision-making process necessary to bring about change must be accompanied by an interchange of ideas with a real live person. As extension agents and retrieval specialists, your human resource data banks must be full and up to date. The following outline leads us through some steps in finding and using human resources.

Step 2 Where are your human resources? (20 minutes)

The trainer reads the following case study:

Marsha Thompson is a 5th grade teacher in Union City. The school system is known as "less than progressive." However, Marsha has heard about team teaching and would like to know enough about it that she can convince her principal to let her try it out. She has requested a computer search from the extension agent. However, she now realizes the research papers will never be read or believed by the principal. He is a "show me" man who wants to see or hear about new ideas. He does not want to spend several hours looking over documents. Marsha has asked the extension agent to provide her with some "people-help."

DISCUSSION QUESTIONS:

1. Where would the agent find needed human resources? Which one would he send to see Marsha?
2. Where would the retrieval specialist find needed human resources? Which <u>one</u> would he send to see Mrasha?
3. If Marsha had to choose between the agent's consultant and the retrieval specialists's consultant, which one would she choose? Why?

Some of the possible human resources in the following outline will have been mentioned in the discussion. Be sure to bring out any others at the end of the group discussion. Before moving on to Step 3, ask the trainees for other ideas that are not on the outline. The trainees have a one page checklist taken from Havelock's A Workbook of Checklists to Accompany A Guide to Innovation. It helps focus the trainee's thinking on ways of using human resources in fulfilling requests.

1.0 Where Are Your Human Resources?

1.1 In the school building working as teachers, councelours, principals, etc.

1.2 Working as specialists in your State Education agency.

1.3 Teaching or administering on college and university campuses.

1.4 Relaxing in regional educational laboratories.

1.5 Making very little money in private consultant service offices.

1.6 Accomplishing three jobs at once in Intermediate Education offices.

1.7 Making more money in private enterprise than they can spend.

1.8 Education extension agents helping people at the school district, city, county, or state level.

1.9

1.10

Step 3 How can you identify human resources? (15 minutes)

Trainer goes over points on the following outline. An example of a letter is in the trainee packet. At the end, there is time for discussion of points.

2.0 How Can You Identify Human Resources?

2.1 By personal, prior experience.

2.2 Word of mouth recommendations.

2.3 Written communication and canvas.

2.4 Telephone

2.5 Local, state, and national directories.

2.6

2.7

Step 4 How can you catalog human resources for easy access? (20 minutes)

Although a working outline is provided, the trainer may wish to substitute materials about the cataloguing procedures the trainee will be expected to use. An example of one consultant file is included in the trainee packet. There are two parts to it. The first page shows the consultants organized by topic. The rest of the example is a complete listing of all topics for which the Oregon Retrieval-Dissemination Center has at least one consultant. The topics illustrate one way to organize a consultant catalog.

3.0 How Can You Catalog Human Resources For Easy Access?

3.1 Rotary File

3.2 Printed Indices

3.3 y-Sort Systems

3.4 Computer-Based File

3.5 In your head

3.6 Catalogs

3.7

3.8

Step 5 How will you inform potential clients of your capabilities? (15 minutes)

Discuss the following outline of points.

4.0 How Will You Inform Potential Clients Of Your Capability?

4.1 Through Extension Agents

4.2 Printed Brochures

4.3 Educational Radio-Television

4.4 Letters of Introduction

4.5 Audio-Visual Presentations

4.6.

4.7

Step 6 How can you give the client and agent some alternatives? (15 minutes)

Present and discuss the following outline:

5.0 How Can You Give The Client And Extension Agent Some Alternatives?

5.1 A big enough file will supply some choices.

5.2 Give them more than one choice if possible.

5.3. Can the extension agent indicate human needs on the request form?

5.4 Can the client afford to pay?

5.5 Is the client suspicious of S.E.A. personnel?

5.6.

5.7.

Step 7 How can you evaluate the performance of your human resources -- follow up? (20 minutes)

The trainer may again wish at this point in the session to bring in materials specific to the center where the trainees will be working. If not, the following outline and humorous evaluation guide, serve as a framework for discussion

6.0 How Can You Evaluate The Performance Of Your Human Resources-- Follow Up?

6.1 Written performance -- criteria forms

6.2 Telephone

6.3 Through the Extension Agent

6.4 Project summary -- case study

6.5 Has any change taken place?

6.6 Is anyone turned on?

6.7 Is it a better place to teach and learn?

6.8

6.9

<u>Step 8</u> Thought provokers (20 minutes)

This part of the session allows diverse ideas and opinions to be brought out.

7.0 <u>Thought Provokers (Grab Bag)</u>

7.1 Does your S.E.A. specialist know about your client and the problem? They might follow up.

7.2 Are your S.E.A. specialists looked upon as regulatory or service oriented?

7.3 The cost factor for consultant service can mean the difference of change versus no change.

7.4 Can you trade your service for consultant service? Be careful.

7.5 How much communication must take place between the extension agent and the consultant? There had better be some.

7.6 The longer you are in business, the greater number of consultant service requests you will have.

7.7 Extension agents demand references to people, places, and things. (50% of the time)

7.8 Your variety of requests will have a tendency to spread out the consultant work.

7.9 Match the client, consultant, and extension agent.

7.10 Sometimes people just need to talk on the phone.

7.11

7.12

Step 9 Review of major points ( 5 minutes)

The trainer restates the major themes of this session:

1. Locating human resources
2. Identifying human resources
3. Cataloguing human resources
4. Informing clients about human resources
5. Developing multiple resources per topic
6. Evaluating performance or human resources

Checklist #6

| | List: | Not aware of any source of this type | This type of source not relevant | This type of source not accessible | This type of [illegible] is accessible: Not Used Yet | Used |
|---|---|---|---|---|---|---|
| **PERSON SOURCE TYPES** | | | | | | |
| Consulting Organizations | | | | | | |
| Individual Consultants | | | | | | |
| Academic Institutions | | | | | | |
| Individual Professors, Scholars, & Researchers | | | | | | |
| Federal Government Agencies | | | | | | |
| Professional Associations | | | | | | |
| Other School Systems | | | | | | |
| Other Individuals in my School System | | | | | | |

7. Have you used an adequate variety of resources? ________

8. Have you spent enough time searching for resources? ________

9. Have you spent enough time reading, listening to, or observing the resources you have acquired? ________

From: Havelock, R.G. A Workbook of Checklists to Accompany <u>A Guide to Innovation</u>. Ann Arbor: Institute for Social Research.

25-11

# OREGON BOARD OF EDUCATION

942 LANCASTER DRIVE NE • SALEM, OREGON • 97310 • Ph. (503) 364-2171 Ext 1602



October 29, 1970

TO: College and University Education Departments and other Consultant Firms

FROM: Oregon Board of Education Retrieval-Dissemination Center

SUBJECT: Inventory of Faculty Consultant Expertise

The Oregon Board of Education has established a Retrieval-Dissemination Center at its Salem offices. The center will be working closely with field agents in Lane and Umatilla counties as well as serving information requests from other school districts in the state. One of the primary purposes of the center is to close the communication gap between research and practices in schools and classrooms. In many cases we will be able to furnish information through microfiche or research abstracts. However, in addition to fulfilling requests for research information, we anticipate the need for consultant services from higher education and related institutions.

We are asking all faculty members interested in responding to consultant requests to indicate such interest and to list their area of expertise. Your department may have such a list compiled now. If so, we would appreciate a copy, in order to complete our resource files quickly. Enclosed you will find a form on which names and expertise areas may be listed.

The Retrieval-Dissemination Center is designed to function in a coordinating and service role. If a request for information or assistance is referred to you, you are free to act as an independent agent and to establish your own relationship with the inquiring school district.

Please complete and mail to Mr. Jack K. Bech, Retrieval Specialist, Oregon Board of Education, 942 Lancaster Drive, Salem, Oregon 97310.

Sincerely,

George Katagiri

George Katagiri
Director
Instructional Technology

GK:rm
Enclosure

School or Firm Name ____________________ Department ____________________ Date ____________

| Faculty Consultant Name | Address | Phone No. | Area(s) of Expertise |
|---|---|---|---|
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Please complete and return to:

Jack K. Bech
Retrieval Specialist
Oregon Board of Education
942 Lancaster Drive NE
Salem, Oregon 97310

OREGON BOARD OF EDUCATION
RETRIEVAL - DISSEMINATION CENTER
942 Lancaster Drive NE
Salem, Oregon 97310

TOPICS FOR CONSULTANT FILE

| TOPIC | INSTITUTION |
|---|---|
| Administration | |
| Max Abbott | U. of Oregon |
| Arthur Hearn | U. of Oregon |
| A.A. Sandin | U. of Oregon |
| Francis Thiemann | U. of Oregon |
| Willard Bear | OBE |
| Milt Baum | OBE |
| Administrative Attitudes | |
| Ray Talbert | Educ. Coordinates |
| Les Wolfe | Educ. Coordinates |
| Administrative Personnel | |
| George Brain | W.S.U. |
| Adult Education | |
| Isabella McQuisten | O.S.U. |
| Cliff Norris | OBE |
| Art, Ceramics | |
| Bruce Wild | Lane C. C. |
| Rosco Wright | Lane C. C |
| Art Education | |
| Nancy Conrath | Mt. Hood C. C., |
| Josephine Cooke | O.S.U. |
| Leo J. Kirk | O.C.E. |
| Ron Wigginton | Mt. Hood C. C. |
| Art, Jewelry | |
| Morgan Hall | Lane C. C. |
| Art, Painting | |
| Tom Llodgett | Lane C. C. |
| Bruce Dean | Lane C. C. |
| Harold Hoy | Lane C. C. |
| Ron Tore Janson | Lane C. C. |
| Edwin Koch | Lane C. C. |
| Art, Sculpture | |
| Weltzin Blix | Lane C. C. |
| Harold Hoy | Lane C. C. |

| TOPIC | INSTITUTION |
|---|---|
| Audiovisual | |
| Paul Ferguson | Moore Audiovisual (Portland) |
| Behavior | |
| Elizabeth Brunette | U. of Portland |
| Ray Stinnet | E.O.C. |
| James Weems | E.O.C. |
| Boards of Education | |
| W.W. Charters | U. of Oregon |
| Milt Baum | OBE |
| Business Education | |
| Larry Murray | Lane C. C. |
| Fred Winger | O.S.U. |
| Jesse Kaufman | OBE |
| Change Agents | |
| Ray Talbert | Educ. Coordinates |
| Les Wolfe | Educ. Coordinates |
| Class Organization | |
| Delmer F. Howell | E.O.C. |
| Clinical Supervision | |
| Sister ..n Myra Seaver | Marylhurst Coll. |
| E.F. Gottlieb | Marylhurst Coll |
| Co-Curricular Activities | |
| Grace Graham | U. of Oregon |
| Kenneth Hills | OBE |
| Communications | |
| George Carver | Mt. Hood C. C. |
| Tom Holmes | Mt. Hood C. C. |
| Ralph Rogers | Mt. Hood C. C. |
| Milt Baum | OBE |
| Communication Skills | |
| Carol A. Cole | O.S.U. |
| Margaret Rogers | U. of Oregon |

# TOPICS FOR CONSULTANT FILE

TOPIC

Administration
Administrative Attitudes
Administrative Personnel
Adult Education
Art, Ceramics
Art, Education
Art, Jewelry
Art, Painting
Art, Sculpture
Audiovisual
Behavior
Boards of Education
Business Education
Change Agents
Class Organization
Co-Curricular Activities
Communications
Communication Skills
Community College
Computers
Computer Instruction
Consultant Firms
Cooperative Education
Counseling
Curriculum
Curriculum Development
Curriculum, Elementary
Curriculum Evaluation
Curriculum, P.E.
Curriculum, Secondary
Data, Census
Data Processing
Delinquency
Disadvantaged, Edu.
Disadvantaged Youth
Drug Abuse
Early Childhood Educ.
Education, Community
Evaluation
Evaluation of Program
Evaluation, Plant
Evaluation, Staff
Facilities, School
Follow-up Studies

TOPIC

Guidance & Counseling
Guidance Services
Individual Differences
Individual Instruction
Industrial Education
Information Centers
Information Systems
Inservice
Instructional Materials
Instructional Media
Instructional Strategies
Instruction
Interaction Analysis
Job - Youth Market
Kindergarten
Language Arts
Language Instruction
Law, Education
Learning Center
Learning
Learning Disabilities
Learning, Programmed
Learning Systems
Library
Management
Management, Personnel
Management Systems
Math Education
Math, Elementary
Math, Secondary
Microteaching
Migrant Education
Motivation
Music
Objectives, Behavioral
Objectives, Testing Criteria
Objectives, Typing
Occupational Programs
Organization, Adm.
Paraprofessionals
Philosophy
Physical Education
Planning
Prep Kits

TOPIC

Problem Solving
Program Development
Psychology
Psychology, Developmental
Reading
Reading, Primary
Reading, Secondary
Relationships
Relationships, Staff
Remedial Education
Research
Research, Consumer
Research, Design
School Activities
Science, Biology
Science, Chemistry
Science, Education
Science, Elementary
Science, Environmental
Science, Forestry
Science, General
Science, Geology
Science, Instruction
Science, Physical
Science, Physics
Social Studies
Sociology, Educ.
Special Educ.
Speech and Hearing
Staff Utilization
Student Participation
Student Personnel
Supervision
Teaching Strategies
Television, Teaching
Theater Arts
Vocational Education

GUIDE TO CONSULTANT PERFORMANCE APPRAISAL

| PERFORMANCE FACTORS | FAR EXCEEDS REQUIREMENTS | EXCEEDS REQUIREMENTS | MEETS REQUIREMENTS | NEEDS SOME IMPROVEMENT | DOES NOT MEET MINIMUM REQUIREMENTS |
|---|---|---|---|---|---|
| QUALITY | Leaps tall buildings with a single bound | Must take running start to leap over tall buildings. | Can only leap over short building or medium with no spires. | Crashes into buildings when attempting to jump over them | Cannot recognize buildings at all, much less jump over them. |
| TIMELINESS | Is faster than a speeding bullet. | Is as fast as a speeding bullet. | Not quite as fast as a speeding bullet. | Would you believe a slow bullet? | Wounds self with bullets when attempting to fire gun. |
| INITIATIVE | Is tronger than a locomotive. | Is tronger than an elephant. | Is stronger than a bull. | Shoots the bull. | Smells like a bull. |
| ADAPTABILITY | Walks on water consistently. | Walks on water in emergency. | Washes with water. | Drinks water. | Passes water in emergencies. |
| COMMUNICATION | Talks with God. | Talks with the Angels | Talks to himself. | Argues with himself. | Loses those arguments. |

SESSION NO. 26

THE TEAM EFFORT

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To allow trainees to work as a team in planning the flow of activities for handling a client's information needs and in participating in several key steps (including retrieval, and the communication of search results).

Upon completion of this module, trainees should be able to:

1. Identify both the independent and interdependent actions of each member of the team in contributing to the different activities in the handling of a client's request

2. Demonstrate ability to plan a total service approach for handling both client contact and supporting activities (e.g., in finding materials, preparing documentation)

3. Identify basic issues and alternative procedures and communication links that must be considered in establishing their own projects or centers.

B. Participants

Trainers: Two instructors (familiar with client-interaction and retrieval process)

Trainees: All

C. Summary of Module Activities

The instructor briefly introduces the purpose of the module and the procedures to be followed in the group exercise. Trainees are divided into two teams, each of which is given a separate client problem to work on. Each group is asked to prepare a presentation for the trainees in the other group. The presentation should include a description of the sequence of steps for receiving and handling the problem, which personnel roles would most likely be responsible for the various steps and the kinds of interactions among staff members that they might expect to occur.

The group's presentation may be followed by a prepared query-negotiation interview, a discussion of alternative search strategies that they have prepared, and/or a simulated communications interview with the client.

Trainees are encouraged to include in their presentations--through discussions or "asides" to the audience in role-playing situations--the issues that are raised by the particular problem, client situation, or staff interaction. Each group is given 90 minutes to prepare for their presentations, and 45 minutes to conduct them.

D. Duration

Four hours

II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

None

B. Trainee Preparatory Reading

None

C. Aids and Equipment

Problems 1 and 2 (in trainee packets)

Selected Citations from Computer Search for Problems 1 and 2 (to be distributed if there are no facilities for performing a search, see SPECIAL CONSIDERATIONS)

Props and aids such as telephones, computer terminals, fugitive materials, etc.

III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to the Session | Presentation | 5 |
| Step 2 | Preparation of Presentations | Group Exercise | 90 |
| Step 3 | Presentation of Problem 1 | Group Presentation | 45 |
| Step 4 | Discussion of Problem 1 | Discussion | 20 |
| Step 5 | Presentation of Problem 2 | Group Presentation | 45 |
| Step 6 | Discussion of Problem 2 | Discussion | 20 |
| Step 7 | General Discussion of Problems | Discussion | 15 |

IV. SPECIAL CONSIDERATIONS

This session will be most effective if it is conducted in an educational information center, where the full resources for handling an information request are available. If a center is not available, it is desirable to provide as many props as possible for use in the presentations. Some aids for this purpose are listed in paragraph II.C. above.

V. CONDUCT OF THE SESSION

Step 1 Introduction to the Session (5 minutes)

The purpose of this session is to bring together the individual skills and functions that we have been working with during the week and deal with them as parts of a continuous flow of activities. The emphasis of this session is on teamwork and the importance not only of individual actions but also of interactions between members of the team.

Divide trainees into two groups, each having an even balance of personnel in the three major roles of project director, retrieval specialist and field agent. Refer the trainees to the problem statements in their packets. Assign one problem to each group.

Step 2 Preparation of Presentations (90 minutes)

Instruct the trainees to read their problem statements carefully, consider how the problem should be handled, and then prepare a presentation that will illustrate some of the major steps that were involved in the handling of the problem. The presentation might emphasize interpersonal contacts between client and field agent, field agent and retrieval specialist, staff and project director, etc.; or it might stress the technical retrieval aspects of handling the problem and creating a usable package for the client. These are decisions to be made by the groups.

If the exercise is held in an information center, the trainees should be advised to use as many of the facilities as they require to handle the problem realistically. If a center is not available, the trainees should be shown the props and aids that are available.

Step 3 Presentation of Problem 1 (45 minutes)

Step 4 Discussion of Problem 1 (20 minutes)

The trainer leads a discussion of the presentation of Problem 1. In this discussion, the group making the presentation may introduce considerations that did not fit into the presentation. The other trainees may critique the presentation or raise questions about the decisions that were involved in handling the problem.

Step 5 Presentation of Problem 2 (45 minutes)

Step 6 Discussion of Problem 2 (20 minutes)

The trainer leads a discussion of the presentation of Problem 2 as in Step 4.

Step 7 General Discussion of Problems (15 minutes)

The trainer leads a discussion of the handling of the problems emphasizing similarities and differences in the approaches of the two trainee groups. The trainees are asked to discuss both presentations specifically in terms of the team effort.

SESSION NO. 27

## DOCUMENTING AND EVALUATING SERVICE ACTIVITIES

### I. SUMMARY DESCRIPTION OF MODULE

#### A. Objective

To provide an understanding of the need for service evaluation and a basic knowledge of how to devise appropriate forms and how to keep records that provide useful data.

Upon completion of this module, trainees should:

1. Understand documentation procedures
2. Understand ways of filing records
3. Understand ways documentation can be used for evaluation of services

#### B. Participants

Trainers: 1 Instructor

Trainees: All

#### C. Summary of Module Activities

This is a presentation illustrated by hand-outs of record keeping forms. After the initial presentation there is time for discussion.

#### D. Duration

2 hours

## II. REQUIRED MATERIALS AND AIDS

### A. Trainer Preparatory Reading

1. Sieber, S.D., et. al. The use of educational knowledge; evaluation of the pilot state dissemination program. New York : Columbia University, 1972, 98-102, 255-263, Appendix F.

### B. Trainee Preparatory Reading

None

### C. Aids and Equipment

Trainees have documentation forms in their packets that are explained during the session. The trainer can supply others if the needs of the center require use of substantially different forms.

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Introduction to documentation | Presentation | 5 |
| Step 2 | Description of Documentation forms | Illustrated presentation | 10 |
| Step 3 | Recording information on forms | Illustrated presentation | 15 |
| Step 4 | Keypunching data from forms | Illustrated presentation | 15 |
| Step 5 | Use of forms | Illustrated presentation | 15 |
| Step 6 | Introduction to evaluation | Presentation | 5 |
| Step 7 | Description of evaluation form | Illustrated presentation | 15 |
| Step 8 | Description of variables | Presentation | 15 |
| Step 9 | Keypunching information from forms | Illustrated Presentation | 10 |
| Step 10 | Use of data | Presentation | 15 |

## IV. SPECIAL CONSIDERATIONS

The trainer needs to determine how much research background the trainees have had. If some trainees feel uncomfortable with use of terms like original data, non-parametric statistics, and chi square, the trainer may want to recommend some reading assignments in a statistic book. However, it is important to explain that the group consists of field agents, retrieval staff and project managers. The field agents need to understand the forms and the use made of the information that is collected, but will probably never manipulate the data themselves and consequently should not let these statistical terms 'throw' them.

The documentation and evaluation forms are used in PROJECT COMMUNICATE in Kansas. The system is flexible and can easily be adapted to fit the needs of the individual center.

The module is designed with enough time for trainees to ask questions at the end of each step. Although this is not specifically designated in the following script, the trainer should make sure each step is understood before going on to the next step.

## V. CONDUCT OF THE SESSION

Step 1. Introduction to documentation ( 5 minutes)

It is all too often true that organizations use forms and keep records in excess. Most of the staff does not know why the forms are kept or what good they do. Sometimes filing systems are so elaborate that they generate a lot of papers that take up a great deal of space.

The documentation and evaluation systems that I am going to discuss have been designed to deal with these potential problems. The first section on documentation will help you understand what information is gathered, how to record it efficiently, and how to finish the job with all information on only one sheet of paper and one IBM card.

At this point in the session, the trainer should make sure each person gets out of his packet the request forms A, B, C, D, E, document request form, and log sheet.

Step 2 Description of documentation forms (10 minutes)

Request form A is the original or rough form. Sometimes it is filled in by the requestor, sometimes it is filled in by the field agent, and sometimes the secretary fills it in when requests come in on the telephone.

Request form B is actually page 1 of a four part NCR (carbonless) form. For today's discussion, we will look at these four parts as forms B,C,D, and E. Much of the information that is recorded on these forms is only recorded once. Notice that this form shows numbers in parentheses. These numbers correspond to the columns on an 80 column IBM card.

Look also now at forms C, D, and E. Although identical to form B, they serve different purposes and are actually different colors.

The document request form is send out to the client with his abstracts. By putting the ED or EJ number on the form, the client can easily request microfiche copy of the document. This is a three-part NCR (carbonless) form.

And finally, let's look at the log sheet form. This is one page from a loose leaf book where all requests are logged.

Step 3 Recording information on forms (15 minutes)

Now that you have had a chance to look briefly at each form, let's go back and see what information is recorded on each.

Whoever fills in form A completes NAME of requestor; DATE of request; SCHOOL of requestor, if relevant; DISTRICT number; ADDRESS; PROFESSIONAL LEVEL such as teacher, board member, counselor, etc., INFORMATION TOPIC; REASON FOR REQUEST; and LEVEL OF TOPIC such as kindergarten, elementary, secondary, adults, etc.

This same information is then typed onto the four-part NCR Form B-C-D-E. Several additional pieces of information are added to the form. These are DATE REQUEST RECEIVED, DESCRIPTIORS which are filled in by the retrieval specialist, and SOURCES for the search such as a computer search. A stamping machine puts a 6 digit code number on the request form. This accession number is also stamped on the log sheet, on the three-part document order form, and on a 3 x 5 index card. Once all this is done, the rough draft, Form A is thrown away.

Next, the last sheet of the four-part form, called here, Form E, is given to the retrieval specialist who writes in the logic for the search. There is adequate room to write the logic in the section labeled 'Follow-up comments.' The logic for the search is also printed on the 3 x 5 index card, which is filed by major descriptor. This file is checked when new requests come in. Sometimes this saves reformulating the logic.

<u>Step 4</u> Keypunching data from forms (15 minutes)

Trainer: Make sure trainees get sample IBM card out of packet.

The keypuncher is given Form E. She keypunches the logic onto the IBM card. She makes a duplicate of the card so the search can be done on both the RIE and CIJE tapes. She also keypunches two information cards. In columns 1-6 she puts the accession number; in 7-26 she puts the requestors name, last name first; in 27 she puts the professional level; in 29-31 she puts the school district number, in 33-34 she puts a two-digit code for the month in which the request was received; and in 38-77, she puts the major descriptors. Later additional information will be keypunched on this card. However, that information is not available until the evaluation form is sent back by the client.

The keypuncher also makes a duplicate of this card. One is filed by requestors last name and one by school district number.

Step 5 Use of forms (15 minutes)

By now you are probably wondering why we need each of these forms. Let me explain the use of each. As you remember, I have already said that Form A is only used to record the request. Once that information is typed on the four-part Form B-C-D-E, Form A is discarded.

You also know something about the use of Form E. The retrieval specialist writes the computer logic on it. Then the keypuncher used it to punch four IBM cards. Two are duplicates of the logic, one for the RIE and one for the CIJE tape. Two other IBM cards are duplicates containing a coded version of the information that was originally typed on the four-part form. At this stage these cards are incomplete. Evaluation information is later punched on them and becomes the basis for evaluation of services provided. However, the cards are also useful in their present form. If you want to know how many requests were initiated during March, you can use a counter/sorter, sort on columns 33-34, take out those with a 03, and count them. If you want to know how many requests over the past year have come in from a particular school district, you can sort on the columns containing the school district number. You could also sort on major descriptors, professional level, etc.

Once the computer search is complete and the abstracts have been printed, Form E is discarded. By now we have 'used up' the usefulness of two of our forms.

Forms C and D, abstracts from the computer search, and a document ordering form are packaged and sent to the field agent. Form B stays in the central office and is filed by accession number. The field agent delivers the package, but keeps Forms C and D. Under the section for 'Follow-up comments', the secretary in the field office records the date when the materials were delivered, the date that microfiche were ordered, and any additional activities that take place. This form helps the field agent keep track of individual requests. He can look through the file to see which clients need to be called about order requests, etc.

Although the evaluation form has not been discussed, let me say that it is back from the client, the secretary types certain information from it onto Forms C and D. For instance, she types what actions developed from the materials that were delivered. In the example on the forms you have, the Boys Career Education Course was adopted for the 72-73 school year. The secretary also types specific actions of the field agent, such as his suggestion of a field trip to the Kansas Employment Service and the suggestion of the purchase of a microfiche reader.

Form C stays in the field office. Form D is sent back to the central office. Form D has additional information typed on it from the evaluation sheet. The new information is key-punched on the IBM cards. Then, Form D relpaces Form B in the file. Form B is now discarded.

<u>Step 6</u> Introduction to evaluation ( 5 minutes)

All of the forms and procedures that we have been discussing are the documentation phase of the project. Certain information was needed to properly complete a search of information for the client. To do this, we needed to know who requested the information (so we could get the information back to the person who requested it), the client's perspective on the problem, the school level, etc. We also had to record major descriptors, sources of information, and the logic for the search.

Now we want to know what addition[illegible] [illegible]ation can be combined with what we alre[illegible] have, so we can evaluate the services we perform.

Look now at form F. This is the evaluation form that is sent to each client. It is returned to the field agent who records some information from it on Forms C and D. The agent then sends Forms D and F to the central office.

When the client receives the form it already has the accession number, title of search, client's name and school written in. The client then answers four questions; 1. How well did the material fulfill your request for information? 2. How will this information be utilized? 3. How many other people have used this information? 4. When do you plan to use the information obtained from this search? It is this last question that provides one of the keys to the evaluation.

Step 8 Description of variables (15 minutes)

Let us assume now that forms D and F are back in the central office. We now turn our focus to the three evaluation variables. These are 1. complexity; 2. innovativeness; 3. adoption.

Complexity refers to how complex is the request. Let me give you some examples. A student from the university calls in to request some material for a research project for one of her classes. Use of the information does not involve anyone else; there is no cost to using the information. The decision to use or not use the information lies entirely with the student. This request would receive a 1. A 1., that is, on a five point scale ranging from 1. very simple to 5. very complex. A request for information about team teaching at the district level would require new expenditures, retaining of teachers, new attitudes on the part of administrators, parents, and children. This request would be given a 5. very complex. A teacher asks the field agent to help her get supplemental materials for her classroom. this request would be given a 1. But let's say that same teacher called, not for supplemental materials, but for materials for a new cource. Since the new course would require approval from the principal and a certain amount of money, the request would be given a 2. A request for information about open education in the elementary school would be given a 3 since it requires changes in attitueds, and requires a committee to work with the information.

By now you may be wondering how to arrive at a decision about the complexity of the request. One possible way is to have a group of educators classify a group of requests. Many topics are requested again and again. Soon a classification scheme is worked out.

Our second evaluation variable is innovativeness. Innovativeness is well documented in the literature. Rogers, Carlson, and Lyonberger have all written extensively about it. The five point classification scale is: 1. Innovator, 2. Early Adoptor, 3. Early Majority, 4. Late Majority, 5. Laggard. These terms, of course, can refer to either a school, a school system, or an individual. When the request involves a school or school district, we can use it's history to decide where it belongs on the innovativeness scale. Whenever the requestor is an individual, we need a way to classify the person. Herlig, at the University of Missouri has written an article called "Identifying Latent Innovators in Education." This article, based on his research, documents his LAIN Scale of personal innovativeness. It is easy to use and gives us the necessary code for the individual requestor.

The third variable is adoption. This five point scale is represented by: 1. Awareness, 2. Interest, 3. Evaluation, 4. Trial, and 5. Adoption. We get some of this information from the evaluation sheet, we find out more from the field agent. For instance, if the person requests information, but never orders a document, never asks for more information, and never makes any use of the information, we give him a 1. He is aware or he would not have made the request. If the person requests information and then decides to order one or more documents, then he is coded as a 2. He has shown interest. If he moves as far as actually adopting and regularly using the information, then he is given a 5. If the information is used, perhaps a committee is formed and the new materials are discussed, but it is rejected because of inappropriateness, then the requestor is given a 3 or 4. At a minimum the information has been evaluated, and he gets a 3. Sometimes it may have been given a trial in one or more classrooms, and he gets a 4. Although adoption gets the highest score, rational rejection of material can also get a high score.

The codes for complexity, innovativeness, and adoption that we have been discussing are written onto the evaluation form. From here the information is typed on Form D. If you would get that form out again and look at the upper right hand box, you will see where the information is put. The order of the information, from top to bottom is: individual innovativeness (LAIN), school district innovativeness, complexity, and adoption. Below these four values is a total of the complexity score times the innovativeness score (either individual or school, whichever is appropriate) times the adoption score.

Once this information is taken from the evaluation form we throw it away. We now have thrown away Form A, Form B, Form E, and the evaluation form. Form C is kept in the field agent's office, and Form D is kept in the central office.

Step 9 Keypunching information from form (10 minutes)

Remember the IBM card that we talked about? Remember it had documentation information coded on it. This information included name of requestor, date of request, descriptors, etc. The keypuncher is given form D. From it she keypunches onto the information IBM card, the individual innovativeness score into column 28, the school district innovativeness score into column 32, the complexity score into column 35, the adoption score into 36, and the product of complexity by innovativeness by adoption into columns 78-80. When she is through with Form D, she refiles it in the master file by accession number.

Step 10 Use of data (15 minutes)

Now, having collected this information, what can we do with it. We can use each scale by itself as a way of creating comparisons. For instance, we can see if different professional groups (teacher, administrator, etc.) make requests that on the average differ in complexity. Or we can see if more complex requests are made across the months of the school year. If we assume we have ordinal data, and if we use non-parametric statistics, we can even test the significance of the difference between groups. There are two appropriate statistics -- chi square and the Mann-Whitney U.

We can use the adoption scale by itself as another way of creating comparisons that help us evaluate our services. For instance, we can see if requests handled by a field agent have a higher adoption scale value than requests that come directly from the requestor to the center. Or, we can see if the adoption scores become higher over time.

And finally, we can use the innovativeness scale by itself. We can see if people in different professional roles differ in innovativeness. This example, as well as all the others are simply ways of demonstrating what types of people use our services and what kinds of impact our services make. This kind of demonstration can be used internally. By that I mean, we can let the data inform us when we begin to slack off -- when more follow-up is needed. It is a way of monitoring ourselves so we can correct any problems. The data can also be used to demonstrate to the State Department of Education, or to a governmental funding agency, how our services are creating change in the schools. We are documenting not only the case studies of change, but also the dimensions of change.

Although we can use each of the scales individually, we can also combine certain scales. By multiplying a requestor's complexity score by his innovativeness score, we have a persuasion index.

Persuasion Index (PI) = Complexity (C) x Innovativeness (I).

If the requestor has a fairly complex information need but is not particularly innovative, his persuasion index score would be calculated this way:

PI = C x I

PI = 5 x 4

PI = 20

The maximum possible PI is 25. The minimum is 1. Twenty persuasion units mean it will take a lot of persuasion before there will be adoption. It also indicates a lot of 'push' is needed from the field agent.

Let's take another example. Suppose a teacher wants information about traffic safety. She is going to make a new brochure for her third graders. This teacher has used the service often and scores high on individual innovativeness. Her persuasion index score would look like this:

PI = C x I

PI = 1 x1

PI = 1

The field agent will not have much work to do here. In fact this kind of request can probably be handled just as successfully by a telephone call to the central office.

There is a scale that combines all information we have gathered about complexity, innovativeness, and adoption. This is called the utilization index. This score is calculated by multiplying the three scores. As you may remember, this score is already keypunched on our information card. It is in columns 78-80. The utilization index can be written:

Utilization Index (UI) = Complexity (C) x Innovativeness (I) x Adoption (A)

The index has a range from 1 to 125. Scores in the low range indicate changes that were fairly easy to create. We would hope that the utilization index would be fairly low in the early phases of a project, but would gradually become higher over time. This index can also be tabulated against professional level, against school district, etc.

The documentation of this center's activities is kept to a minimum of paperwork. When we are through, all information in our files for a single request is kept on one $8\frac{1}{2}$ x 11 page and one IBM card. All information is used either in fulfilling the request or in evaluating our services.

PROJECT COMMUNICATE 27-19 **Request Form A**

Name Elizabeth Blue Date 3/29/72

School McLouth High School District 342

Address McLouth, Ks. 66054
street city zip

Check all terms that apply: Phone 796-3400

(X) teacher ( ) board member ( ) patron ( ) paraprofessional

( ) administrator ( ) KSDE staff ( ) student ( ) non-certified

( ) counselor ( ) other

Describe the topic about which you are seeking information:

A new course in career education for boys including consumer economics and the world of work. Interested in how to obtain and hold a job.

Reason for request:

There is no occupational education in this small rural community.

Which of the following levels apply to your topic? (Check more than one if necessary)

| | | | |
|---|---|---|---|
| ( ) Pre-Primary | ( ) Elementary | ( ) Junior College | ( ) Adults |
| ( ) Kindergarten | ( ) Junior High | ( ) College | ( ) Professional |
| ( ) Primary | ( ) Senior High | ( ) Graduate | ( ) No Level |
| ( ) Intermediate | (X) Secondary | ( ) Higher. Ed. | ( ) Other (Please Define) |

SUBMIT ONLY ONE REQUEST PER FORM

PROJECT COMMUNICATE 27-20 Request Form B

(28) (32) (35) (36) (78)

720075

Name Elizabeth Blue (7-26) Date 3/29/72

School McLouth High School District 342 (29-31)

Address McLouth, Kansas 66054
street city zip

Check all terms that apply: (27) Phone 796-3400

(X) teacher ( ) board member ( ) patron ( ) paraprofessional

( ) administrator ( ) KSDE staff ( ) student ( ) non-certified

( ) counselor ( ) other

date received 3/30/72

date requested

date filled 4/11/72

Describe the topic about which you are seeking information:

A new course in career education for boys--including consumer economics and the world of work. Interested in how to obtain and hold a job.

Secondary level --9-12

Descriptors: (38-77)

CAREER EDUCATION

JOB APPLICATION

Reason for request:

There is no occupational education in this small rural community.

Follow-up comments

Sources:

Computer

Field Consultant Angell

Form 50-06-100-1M

SAMPLE LOG SHEET

3

27-24

| ACCESSION NUMBER | NEGOTIATED | DESCRIPTORS | SEARCH TYPE | SEARCH INITIATED | SEARCH COMPLETE | KEY PUNCH | PKG. TO FIELD AGT. | DOCUMENTS REQUESTED | DOCUMENTS RECEIVED | FINAL PACKAGE | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible]55 | | [illegible] | [illegible] | [illegible] | 4/7 | | | | | | |
| [illegible]56 | | [illegible] | [illegible] | [illegible] | 4/7 | | | | | | |
| 720057 | | 3/2[illegible] | C | [illegible] | 4/7 | | | | | | |
| 720058 | | 3/[illegible] | [illegible] | [illegible] | 4/7 | | | | | | |
| 720059 | | | [illegible] | [illegible] | 4/6 | | | | | | |
| 720060 | | 3/[illegible] | [illegible] | [illegible] | | | | | | | |
| 720061 | | 3/[illegible] | C | [illegible] | 4/6 | | | | | | |
| 720062 | 3/[illegible] | 3/[illegible] | C | 3/[illegible] | 4/7 | | | | | | |
| 720063 | 3/29 | 3/29 | C | 3/29 | 5/[illegible] | | | | | | |
| 720064 | 3/[illegible] | 3/[illegible] | C | 3/30 | [illegible] | | | | | | |
| 720065 | 3/[illegible] | 3/[illegible] | C | [illegible] | - | | | | | | |
| 720066 | 3/[illegible] | 3/[illegible] | [illegible] | [illegible] | 4/25 | | | | | | |
| 720067 | 3/30 | 3/31 | M/C | 3/31 | 4/7 | | | | | | |
| 720068 | 3/30 | | [illegible] | | --- | | | | | | |
| 720069 | 3/30 | 3/31 | C | [illegible]/31 | 4/17 | | | | | | |
| 720070 | 3/30 | 3/31 | M/C | [illegible]/31 | 4/24 | | | | | | |
| 720071 | 3/30 | 3/31 | M/C | [illegible] | 4/25 | | | | | | |
| 720072 | 3/30 | 3/31 | M/C | 3/31 | 4/7 | | | | | | |
| 720073 | 3/30 | 3/31 | M/C | 3/31 | 4/17 | | | | | | |
| 720074 | 3/30 | 3/31 | M/C | 3/31 | 4/17 | | | | | | |
| 720075 | 3/30 | 3/31 | M/C | 3/31 | 4/17 | | | | | | |
| 720076 | 3/30 | 3/31 | [illegible] | | 4/17 | | | | | | |
| 720077 | 3/30 | 3/31 | | | 4/25 | | | | | | |
| 720078 | 3/30 | 3/31 | [illegible] | | 4/17 | | | | | | |
| 720079 | 3/30 | 3/31 | M/C | 3/31 | 4/17 | | | | | | |
| 720080 | 3/30 | 3/31 | M/C | 3/31 | 4/17 | | | | | | |
| 720081 | 3/30 | 3/31 | M/C | 3/31 | 4/7 | | | | | | |
| | [illegible] | | | | 3-5 | 1-6 | | | | | |

PROJECT COMMUNICATE 27-23 Request Form E

720075

Name Elizabeth Blue (7-26) Date 3/29/72 (28) (32)

School McLouth High School District 342 (29-31) (35) (36)

Address McLouth, Kansas 66054 (78)
street city zip

date received 3/30/72

Check all terms that apply: (27) Phone 796-3400

date requested

(X) teacher ( ) board member ( ) patron ( ) paraprofessional

( ) administrator ( ) KSDE staff ( ) student ( ) non-certified

date filled 4/17/72

( ) counselor ( ) other

Descriptors: (38-77)

Career Education

Job Application

Describe the topic about which you are seeking information:

A new course in career education for boys--including consumer economics and the world of work. Interested in how to obtain and hold a job.

Secondary level --9-12

Reason for request:

There is no occupational education in this small rural community.

Follow-up comments

(Career education.OR.
Career planning.OR.
careers.OR.
occupational guidance.OR.
occupations.OR.
occupational information.OR.
job application.OR.
job applicants)
.AND.
(Secondary grades.OR.
Secondary education.OR.
Secondary schools.OR.
Secondary school students.OR.
High Schools.OR.
High School STUDENTS)$

Sources:

Computer

Field Consultant Angell

Form 50-06-100-1M

PROJECT COMMUNICATE 27-22 Request Form D

Name Elizabeth Blue (7-26) Date 3/29/72

School McLouth High School District 342 (29-31)

Address McLouth, Kansas 66054
street city zip

Check all terms that apply: Phone 796-3400

(X) teacher ( ) board member ( ) patron ( ) paraprofessional

( ) administrator ( ) KSDE staff ( ) student ( ) non-certified

( ) counselor ( ) other

Describe the topic about which you are seeking information:

A new course in career education for boys--including consumer economics and the world of work. Interested in how to obtain and hold a job.

Secondary level --9-12

Reason for request:

There is no occupational education in this small rural community.

Follow-up comments

4/21/72 delivered 5/2/72 MF ordered
5/16/72 delivered MF & reader 5/26/72 picked up reader
10/11/72 delivered Employment Security Information
1/22/73 ED 058 447 delivered 2/8/73 delivered PREP-32

The Boys' Career Education Course was adopted for the 72-73 school year.

K-VIEW occupations project and microfiche reader and reader-printer were obtained by the district. Angell coordinated the district effort to obtain matching funds for this equipment thru Vocational Education.

Angell suggested a field trip to the Kansas Employment Service and delivered employment service brochures and job bank microfiche.

Angell suggested the district purchase a 45x lens for the reader and subsequently job bank microfiche and K-VIEW are used daily with students in individualized portions of the career education course.

Field Consultant Angell

4
2
5
11

date received 3/30/72

date requested

date filled 4/17/72

Descriptors

CAREER EDUCATION

JOB APPLICATION

Sources

Computer

PREP #32

Form 50-06-100-1M

PROJECT COMMUNICATE 27-21 Request Form C

Name Elizabeth Blue (7–26) Date 3/29/72

School McLouth High School District 342 (29–31)

Address _____ McLouth, Kansas 66054
street city zip

Check all terms that apply: (27) Phone 796-3400

(X) teacher ( ) board member ( ) patron ( ) paraprofessional

( ) administrator ( ) KSDE staff ( ) student ( ) non-certified

( ) counselor ( ) other

Describe the topic about which you are seeking information:

A new course in career education for boys-- including consumer economics and the world of work. Interested in how to obtain and hold a job.

Secondary level --9-12

Reason for request:

There is no occupational education in this small rural community.

Follow-up comments

4/21/72 delivered 5/2/72 MF ordered
5/16/72 delivered MF & reader 5/26/72 picked up reader
10/11/72 delivered Employment Security Information
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Angell suggested the district purchase a 45x lens for the reader and subsequently job bank microfiche and K-VIEW are used daily with students in individualized portions of the career education course.

Field Consultant Angell

(1–6) 720075

(28)
(32)
(35)
(36)
(78)

date received 3/30/72
date requested
date filled 4/17/72

Descriptors: (38–77)

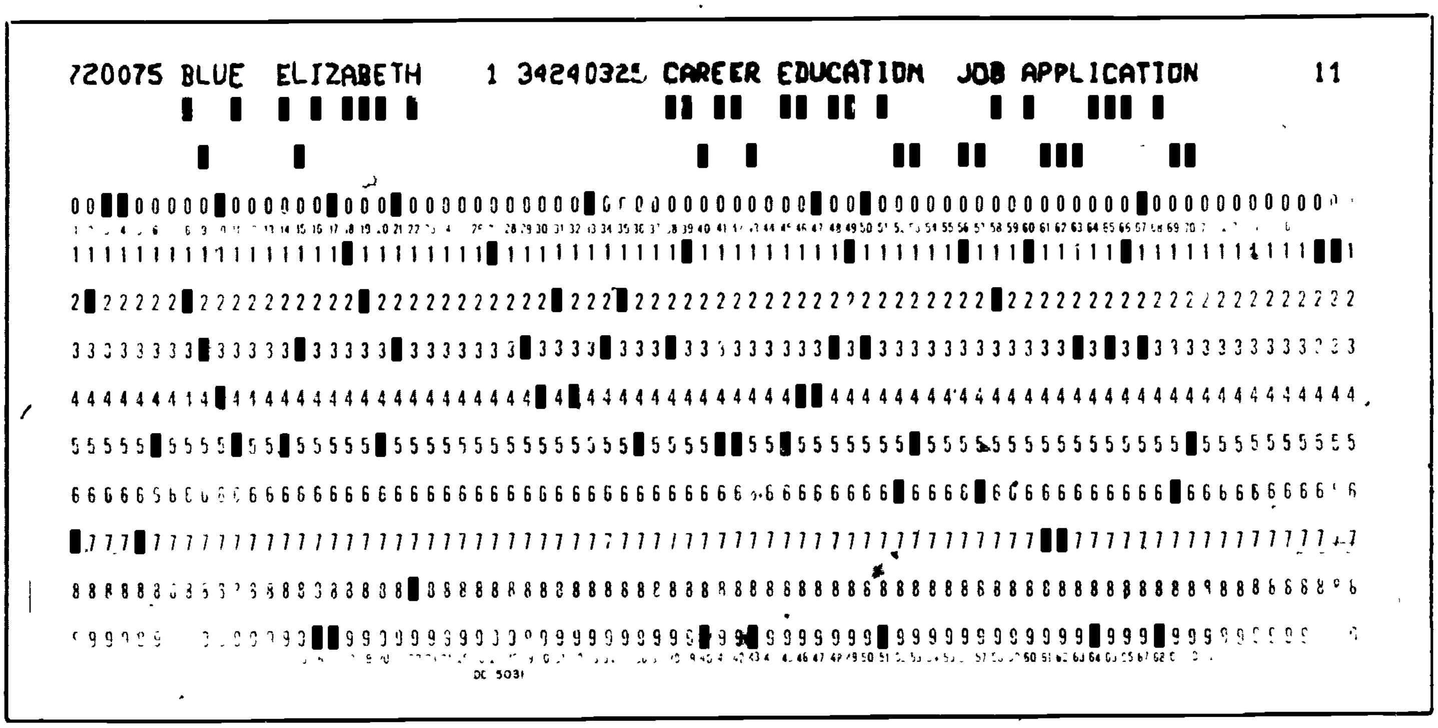
CAREER EDUCATION

JOB APPLICATION

Sources:

Computer

PREP #32


720075 BLUE ELIZABETH 1 34240325 CAREER EDUCATION JOB APPLICATION 11

27-26

PROJECT COMMUNICATE

DOCUMENT REQUEST FORM name ______________________________

Should you desire a document, please list the number found in the upper left hand corner of the abstract.

ED ___ ___ ED ___ ___ ED ___ ___

ED ___ ___ ED ___ ___ ED ___ ___

ED ___ ___ ED ___ ___ ED ___ ___

ED ___ ___ ED ___ ___ ED ___ ___

ED ___ ___ ED ___ ___ ED ___ ___

Should you desire a journal article, please list the number found beside each bibliographic entry

EJ ___ ___ EJ ___ ___ EJ ___ ___

EJ ___ ___ EJ ___ ___ EJ ___ ___

EJ ___ ___ EJ ___ ___ EJ ___ ___

EJ ___ ___ EJ ___ ___ EJ ___ ___

EJ ___ ___ EJ ___ ___ EJ ___ ___

PLEASE RETURN ALL COPIES TO PROJECT COMMUNICATE OFFICE

Form 05-03-102-2m

**EVALUATION FORM**

720075 Title Career Education

Name Elizabeth Blue

School McSmith

How well did the material fulfill your request for information?

___ excellent
___ very good
X good
___ fair
___ poor

comments -

How will this information be utilized?

X classroom units
X curricular revision
___ administrative decision making
___ professional growth
___ other

comments -

How many other people have used this information?

0

When do you plan to use the information obtained from this search?

X have already used the information
___ in the near future
___ in 3 months
___ months
___ do not plan to use

comments -

5 ORDER
2 COMPLEXITY
2 LAIN
4 SYSTEM
11 TOTAL

Planning, Research and Evaluation
Kansas State Department of Education
120 East Tenth Street
Topeka, Kansas 66612

Form 05-02 100

SESSION NO. 28

REVIEW AND EVALUATION

I. SUMMARY DESCRIPTION OF MODULE

A. Objective

To review the major training activities and relate them to each other and to the work experience of trainees.

To allow trainees to self-assess their achievement in knowledge and skills areas.

To evaluate the effectiveness of the training modules.

B. Participants

Trainers: All

Trainees: All

C. Summary of Module Activities

The self-assessment and module evaluation forms are completed first. These provide part of the stimulus for follow-on discussion of the week's activities. Finally, the trainer initiates a discussion of continuing inservice training needs and how these needs can be met.

D. Duration

Two hours

## II. REQUIRED MATERIALS AND AIDS

A. Trainer Preparatory Reading

None

B. Trainee Preparatory Reading

None

C. Aids and Equipment

1. Self-assessment form in Trainees' Book

2. Module evaluation form in Trainees' Book

## III. SCHEDULE OF ACTIVITIES

| | Topic | Activity | Minutes |
|---|---|---|---|
| Step 1 | Explanation of Self Assessment and Its Rationale | Presentation | 5 |
| Step 2 | Completion of Self Assessment by Trainees | Individual Written Work | 15 |
| Step 3 | Explanation of Module Evaluation and Its Rationale | Presentation | 5 |
| Step 4 | Completion of Module Evaluation by Trainees | Individual Written Work | 30 |
| Step 5 | Review of Week's Activities by Training Director | Presentation | 10 |
| Step 6 | Discussion of Week's Activities by All | Group Discussion | 40 |
| Step 7 | Suggestions for Continuing In-service Training | Presentation | 10 |

## IV. SPECIAL CONSIDERATIONS

None

## V. CONDUCT OF THE SESSION

<u>Step 1 through Step 6</u> These steps can be left unstructured, as long as the trainers stay within time allocations. Remarks about the self-assessment and the module evaluations should stress that the trainees themselves are not being judged.

<u>Step 7</u> Planning for follow-up training should have been an integral part of planning the week of training activities. Provision should have been made for obtaining other training resources for trainees to use independently or in groups convened at a later time. Examples of training resources appropriate for follow-up training include those of communication skills, leadership skills, group dynamics, information processing technology, developments in educational research and development, etc.

The list of institutions providing such training resources is long and ever-changing. In compiling a list of resources that is current for the time period in which this module is being used, it would be well to contact: Far West Laboratory for Educational Research and Development, San Francisco; Northwest Regional Laboratory, Portland; Center for Research on the Utilization of Scientific Knowledge, Univ. of Michigan, Ann Arbor; Research for Better Schools, Pittsburgh.

Availability of follow-up training resources should be discussed, as well as steps that the training sponsors are willing to undertake to provide these resources to trainees individually or in groups.

The content of these <u>Step 7</u> remarks depends on the arrangements that the training staff have been able to make for follow-up training.