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APSTRACT
                To describe the information-seeking behavior of local
administrators, teacher educators, state directors, and state
supervisors of vocational education, data from four previous studies
were examined and user profiles were prepared for each of the four
groups. The profiles contained information describing these eight
dimensions of information utilization: (1) the work setting, (2)
personal characteristics, (3) major professional problem areas, (4)
decision-making mode, (5) information services used, (6) information
sources or products used, (7) characteristics or criteria of products
used, and (8) personal information sources. Guidelines for planning
and improving information dissemination systems and information
utilization processes were developed by project staff after examining
the user profiles and the reactions, suggestions, and criticisms
offered by a jury of vocational and technical educators. The
guidelines are grouped into the eight dimensions describing
information utilization. (SB)

Research and Development Series No. 90

# Information Utilization
# by Vocational Educators

THE CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION

THE OHIO STATE UNIVERSITY
1960 Kenny Rd., Columbus, Ohio 43210

# MISSION OF THE CENTER

The Center for Vocational and Technical Education is an independent unit on The Ohio State University campus. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The Center's mission is to strengthen the capacity of state educational systems to provide effective occupational education programs consistent with individual needs and manpower requirements by:

- Conducting research and development to fill voids in existing knowledge and to develop methods for applying knowledge

- Programmatic focus on state leadership development, vocational teacher education, curriculum, and vocational choice and adjustment

- Stimulating and strengthening the capacity of other agencies and institutions to create durable solutions to significant problems

- Providing a national information storage, retrieval, and dissemination system for vocational and technical education through the affiliated ERIC Clearinghouse

# INFORMATION  UTILIZATION

# BY  VOCATIONAL  EDUCATORS

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March 1973

A FINAL REPORT
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# FOREWORD

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More effective communications are needed among the various groups in vocational and technical education. Of special interest to The Center is the flow of information from research to practice. A series of studies have been conducted to examine information needs to further develop information dissemination systems in vocational and technical education. This summary report presents findings of four prior research studies and forwards guidelines for planning and improving information dissemination systems and information utilization processes. It was designed to serve those persons, agencies, and organizations interested in dissemination of information to selected audiences in vocational and technical education.

The profession is indebted to J. David McCracken and Wilma B. Gillespie for the preparation of this report. Recognition is also due to the following individuals who assisted in the development of the user profiles and guidelines: Neal Andrews, chief of vocational and technical education, New Hampshire; Lloyd H. Blanton, teacher educator, Clemson University; Robert Ford, chief of elementary and secondary career education, Iowa State Department of Education; James E. Wall, director, Mississippi RCU for Vocational-Technical Education, Mississippi State University; Benjamin Whitten, area superintendent, Baltimore City Schools; Edwin G. York, coordinator, New Jersey Occupational Research and Development Resource Center; Norman Ehresman, director of educational research, Western Kentucky University; William L. Hull, program director, The Center; and Daniel E. Koble, Jr., research and development specialist, The Center.

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Robert E. Taylor
Director
The Center for Vocational
and Technical Education

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# INTRODUCTION

The generally accepted fact that research findings are seldom utilized soon enough or in sufficient quantity in the process of improving vocational and technical education programs, leads to the conclusion that more knowledge is needed concerning the ways major groups in vocational and technical education get and use information. This knowledge may then influence the design of more effective information dissemination systems and programs.

The need for knowledge about major audiences in vocational and technical education and how they seek and use information resulted in a series of studies conducted at The Ohio State University. The Center for Vocational and Technical Education at The Ohio State University has exhibited a continuing interest in improving the flow of information from research to practice.

McCracken (1970) conducted an investigation of "The Utilization of Information by State Supervisory and Teacher Education Personnel in Vocational and Technical Education." Objectives were to identify differences between teacher educators and state supervisors in their utilization of information; to identify relationships between frequency of literature source utilization and perceived accessibility, ease of use, and technical content of and degree of experience with literature sources; and to identify major sources of information used in solving work-related problems.

Taylor and Magisos (1971) developed a Guide for State Vocational-Technical Education Information Dissemination Systems in cooperation with an ad hoc committee of research coordination unit personnel from six states. Its general purpose was to guide initial efforts in development of an information dissemination system in vocational and technical education.

Magisos (1971) worked with seven state research coordination units in conducting a study to interpret needs of various groups of educators. These identified needs were to serve as a basis for improvement of information dissemination systems in vocational and technical education. Two major objectives were to describe the organizational levels, subject-matter field affiliation, and personal educational activities of target audience

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categories; and to determine target audience awareness, use perception of usefulness, and needs for information sources, products, and services, especially concerning form, time, and spatial relationships. Target audiences were administrators, counselors, local directors, researchers, supervisors, teacher educators, and teachers.

McCracken (1972) identified the critical problems of state directors of vocational education and the information sources they utilized. Objectives were identification of problems for which little substantive information was available, description of methods used in seeking information, identification of information sources normally used, and identification of criteria employed in selection of information sources. A study of local administrators of vocational and technical education was conducted with similar objectives by McCracken and Gillespie (1973).

Examination of the data collected to fulfill the objectives of these studies indicated sufficient information existed to describe the information-seeking behavior of local administrators, teacher educators, state directors, and state supervisors of vocational and technical education. It was the purpose of this summary report to organize this knowledge about information-seeking behavior so user profiles could be developed for four key groups in vocational and technical education. User profiles include variables influencing the utilization of information and findings concerning each variable.

Objectives were to: prepare user profiles for local administrators, teacher educators, state directors, and state supervisors of vocational and technical education; and develop guidelines for information dissemination based on the user profiles.

# PROCEDURES

Procedures were quite different for this study than the normal research project because an existing data base was used to accomplish the objectives. The sample for this study was a composite of the respondents from previous studies. A matrix was used to organize the data into user profiles from which guidelines were developed.

## Sample

The combined data collected by the following briefly described studies were utilized in developing the user profiles for this study.

Information Needs of Local Administrators of Vocational Education (McCracken and Gillespie, 1973) was a study in which data were collected by mail questionnaire and a series of telephone interviews from thirty local administrators who were selected in a stratified random sample. States were stratified into five groups according to expenditures of funds for vocational education. One state was selected randomly from each strata. Four secondary level local administrators and two post-secondary level local administrators were randomly selected within each state. The local administrator was defined as the person who was responsible for organizing and administering a minimum of three program areas in vocational education.

Data were collected for the study of teacher educators and state supervisors (McCracken, 1970) by mail questionnaire. Seven states were selected to optimize geographic representation and to include states with varying size staffs of teacher educators and state supervisors. The sample consisted of the 148 state supervisors and 141 teacher educators in the seven states. Useable responses were obtained from 113 state supervisors and 117 teacher educators.

Information Needs of State Directors of Vocational Education (McCracken, 1972) was a study in which data were collected by mail questionnaire and a series of telephone interviews from fifteen state directors who were selected in a stratified random sample. States were stratified into geographic regions and then the sample was randomly selected by region.

A seven-state project conducted by Magisos (1971), Interpretation of Target Audience Needs in the Design of Information Dissemination Systems for Vocational-Technical Education, yielded mail questionnaire responses from 3,229 educators. Questionnaires were mailed to 5,642 educators selected in a stratified random sample. The samples for the

study were randomly drawn from identified target audience populations in each state. Target audiences were administrators, counselors, local directors, researchers, supervisors, teacher educators, and teachers. Data used in this summary report were from 586 administrators, 219 local directors, 374 supervisors, and 344 teacher educators.

### Design of the Study

The procedure involved evaluating the data base, tabling needed information, developing user profiles, testing the profiles with a jury of experts, developing guidelines for information dissemination, and testing the guidelines with consultants.

The findings from the research on these four target audiences in vocational and technical education were organized into a matrix form with eight dimensions (Figure 1). Dimensions or variables included in the matrix were those for which findings could be summarized from the data base. These were (1) work setting, (2) personal characteristics, (3) major professional problems, (4) decision-making mode, (5) information services used, (6) information sources or products used, (7) characteristics or criteria of products used, and (8) personal information sources used. The findings within these eight dimensions of the matrix were the bases for the development of the user profiles. A jury of vocational and technical educators met in a workshop setting at The Center for Vocational and Technical Education on the campus of The Ohio State University and studied the profiles. Their reactions, suggestions, and criticisms were used in developing information utilization guidelines associated with the eight dimensions of the matrix.

Figure 1

USER PROFILE PLANNING MATRIX

|  | TARGET AUDIENCE | | | |
| --- | --- | --- | --- | --- |
| VARIABLES DESCRIBING INFORMATION UTILIZATION | State Director | State Supervisor | Teacher Educator | Local Administrator |
| Work Setting |  |  |  |  |
| Personal Characteristics |  |  |  |  |
| Major Professional Problems |  |  |  |  |
| Decision-Making Mode |  |  |  |  |
| Information Services Used |  |  |  |  |
| Information Sources or Products Used |  |  |  |  |
| Characteristics or Criteria of Products Used |  |  |  |  |
| Personal Information Sources Used |  |  |  |  |

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# USER PROFILES OF VOCATIONAL EDUCATORS

The user profiles were developed for local administrators, teacher educators, state directors and state supervisors of vocational and technical education. The profiles contain information describing the work setting, personal characteristics, major professional problem areas, decision-making mode, information services used, information sources or products used, characteristics or criteria of products used, and personal information sources used for each of the four groups.

## Local Administrator

| | |
|---|---|
| Work Setting | Responsible for organizing and administering at least three program areas in vocational and technical education. |
| | Serves in a junior or senior high school, secondary vocational school, post-secondary vocational-technical school, and/or community or junior college. |
| | Administers a secondary education program with a median enrollment of 584 students, a post-secondary education program with a median enrollment of 225 students, and/or an adult education program with a median enrollment of 563 students. |
| Personal Characteristics | Median age was 48 years. |
| | Median experience was 14.5 years in vocational and technical education at the local level. |
| | Interested in professional development as evidenced by: |
| |     1)  recent enrollment in graduate or inservice education courses |

| | |
|---|---|
| Personal Characteristics (cont.) | 2) familiarity with the Educational Resources Information Center (ERIC) |
| | 3) willingness to participate in ERIC training sessions |
| | 4) obtaining 6.3 years of post-high school professional preparation |

| | |
|---|---|
| Major Professional Problem Areas | Concerned primarily with instruction including: |
| | 1) student personnel services |
| | 2) curriculum |
| | 3) quality and supply of personnel |
| | 4) evaluation |
| | Also concerned with administrative leadership including: |
| | 1) program planning |
| | 2) decision-making |
| | 3) community and human relationships |
| | Interested in educational change, especially: |
| | 1) organizing for change, and |
| | 2) state and federal influences for change |
| | Responsible for and concerned about obtaining adequate finances. |

| | |
|---|---|
| Decision-Making Mode | Generally made decisions without seeking information beyond what was already at hand. |
| | Obtained information by consulting, visiting, interviewing, or surveying. |

Local Administrator (cont.)

| | |
|---|---|
| Decision-Making Mode (cont.) | Made decisions cooperatively in most cases, although some were made arbitrarily. |
| | Desired information from experienced people for problem resolution. |
| | Needed substantial information for some problems related to instruction, administrative leadership, educational change, and finance. |
| | Resources committed to problem resolution varied considerably among individual problems. |
| Information Services Used | Used to some extent were state research coordination units, The Center for Vocational and Technical Education, ERIC, colleges and universities, and the state department of education research office. |
| | Most useful were telephone or other direct contacts with information specialists, routine mailings of current information and analyses and interpretations of research. |
| | Generally did not use information services for resolving their problems. |
| Information Sources or Products Used | Preferred summarized, synthesized, or evaluated information in some cases; preferred the actual data or document in other cases. |
| | Generally used guides, reports/pamphlets or periodicals for problem resolution. |
| | Often referred to professional journals. |
| | Quantity of information sought varied greatly with individual problems. |
| Characteristics or Criteria of Products Used | Most important characteristics of information were relevance to the problem and speed of obtaining. |

| | |
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| Characteristics or Criteria of Products Used (cont.) | Time required to receive a reply from institutions was the greatest from the ERIC document reproduction service, the ERIC Clearinghouse, and professional organizations.<br><br>Preferred substantive personnel within the district as information sources because of the content quality of the information they could provide.<br><br>Utilized materials as sources of information oecause of their content quality or because of familiarity or degree of experience with the materials. |
| Personal Information Sources Used | Used fellow workers, experts or authorities on the subject, and colleagues in other organizations as individual sources of information.<br><br>Used substantive personnel or administrators at higher level as information sources for major professional problems (instruction, administrative leadership, finance and educational change).<br><br>Interacted with various groups to seek information:<br><br>1) business and industry a median of 3.1 times per month<br><br>2) state supervisors or consultants a median of 3.0 times per month<br><br>3) local or county superintendent or board a median of 2.5 times per month<br><br>4) peer group outside local area a median of 2.5 times per month<br><br>5) peer group in local area a median of 1.2 times per month |

## Teacher Educator

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|---|---|
| Work Setting | Generally located in colleges and universities, but taught both on and off-campus. |
| | Generally had job functions specific to a subject field. |
| | Major job functions were college teaching and program administration. |
| | Normally used the college or university library which was located outside the building in which they worked. |
| | Major groups served were students enrolled in pre-service and inservice education courses. |
| Personal Characteristics | Median age was 47.9 years. |
| | Median years of experience was 11.5 years in teacher education. |
| | Generally had completed a doctoral degree. |
| | Interested in professional development as evidenced by: |
| | 1) familiarity with ERIC |
| | 2) willingness to participate in ERIC training sessions |
| | One-half had enrolled in graduate courses during previous twelve months and one-half had not. |
| | Expressed willingness to travel for information. |
| Major Professional Problem Areas | Concerned primarily with teachers and teacher education. |
| | Also concerned with curriculum and instructional materials. |
| | Interested in research and evaluation. |

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| Decision-Making Mode | Generally conducted their own search for information.<br><br>Utilized information-seeking to solve work problems, browse for general information, and conduct periodic literature searches.<br><br>Utilized information to the greatest extent in determining background information, examining alternatives, and developing solutions. |
| Information Services Used | Agencies used by teacher educators for information (in order of priority):<br><br>1) local library<br><br>2) professional organizations<br><br>3) university or college department<br><br>4) ERIC clearinghouse<br><br>5) state education agency<br><br>6) research coordination unit |
| Information Sources or Products Used | Literature sources used by over one-half of the teacher educators were:<br><br>1) journals and periodicals<br><br>2) conference reports<br><br>3) research reports<br><br>4) indexes<br><br>5) curriculum and teaching guides<br><br>6) state plans<br><br>7) reference books<br><br>Generally read interpretations of research rather than original reports.<br><br>Generally used materials developed by educational institutions as opposed to commercial sources. |

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| Characteristics or Criteria of Products Used | Criteria positively correlated with utilization:<br><br>1) accessibility<br><br>2) degree of experience or familiarity<br><br>3) ease of use<br><br>Technical quality was negatively correlated with utilization.<br><br>Characteristics of information regarded as important:<br><br>1) relevance to the problem<br><br>2) speed of obtaining<br><br>3) currentness<br><br>4) ease in identifying<br><br>5) authenticity<br><br>6) comprehensiveness<br><br>7) cost of obtaining |
| Personal Information Sources Used | Personal information sources used most frequently were:<br><br>1) fellow workers<br><br>2) experts or authorities<br><br>3)) colleagues in other organizations<br><br>4) superiors<br><br>5) subordinates<br><br>6) information service personnel |

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| Work Setting | Chief administrative officer within the state department of education, responsible for the administration, organization and coordination of vocational education programs. |
| | Median state director serves 80,000 secondary students. |
| | Median state director serves 15,000 post-secondary students. |
| | Median state director serves 4,000 adult students. |
| | ERIC microfiche available in 32 state departments of education. |
| | Searches of the ERIC Collection conducted at the request of the state director in 33 states. |
| Personal Characteristics | Median age was 49 years. |
| | Median experience in the state department of education was 9 years. |
| | Has had no formal graduate training in the past 5 years. |
| | Had had 6 years of education following high school. |
| Major Professional Problem Areas | Concerned primarily with administrative leadership including: |

Concerned primarily with administrative leadership including:

1) program planning

2) staff

3) organization

4) decision-making

Also concerned with finance including:

1) legislative control

2) obtaining and disbursing federal aid

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| Major Professional Problem Areas (cont.) | Interested in educational change, especially:<br><br>1)  effecting change<br><br>2)  state and local pressure for change<br><br>3)  problem oriented research<br><br>Responsible for teacher certification and supervision of standards. |
| Decision-Making Mode | Generally required information for problem resolution.<br><br>Generally obtained information by "delegating" the responsibility for information gathering.<br><br>Generally used judgmental process when no information was required for problem resolution.<br><br>Largest amounts of information were needed for problem areas of finance and instruction.<br><br>Quantity of information used varied greatly with individual problems.<br><br>Resources committed to problem-solving varied considerably based upon the substance of the problem. |
| Information Services Used | Information agencies used were The Center for Vocational and Technical Education, ERIC, colleges and universities, U.S. Department of Labor and state planning office or development board.<br><br>Used information services for resolving the majority of their problems. |
| Information Sources and Products Used | Generally required demographic studies (data) to resolve problems. |

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| Information Sources and Products Used (cont.) | In some cases, state directors preferred the actual data or document; however, they generally preferred that the information be summarized, synthesized or evaluated. |
| | Used most often were reports and pamphlets, followed distantly by indexes, books, and guides. |
| | Often referred to <u>The American Vocational Journal</u>, <u>Abstracts of Research Materials in Vocational and Technical Education</u> (ARM) and <u>Abstracts of Instructional Materials in Vocational and Technical Education</u> (AIM). |

| | |
|---|---|
| Characteristics or Criteria of Products Used | Used materials primarily because of the type or form of data included and accessibility. |
| | Used personal information sources primarily because of the job responsibility of the source, the type or form of data they could provide, or because they best understood the problem. |

| | |
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| Personal Information Sources Used | Generally used substantive personnel rather than information specialist, technical-clerical personnel, or superiors. |
| | Primary groups used as personal sources were: |

      1) peer group within state

      2) state superintendent or board

      3) clientele

      4) business and industry

      5) advisory council

| | |
|---|---|
| Work Setting | Located in the state department of education. |
| | Three-fifths had job functions specific to a subject field within vocational education. |
| | Major job functions were program administration, program planning, and teacher supervision. |
| | Library resources were normally located within the building in which they worked. |

| | |
|---|---|
| Personal Characteristics | Median age was 46 years. |
| | Median experience in the state department of education was 7 years. |
| | Generally had completed a master's degree plus additional work. |
| | Interest in professional development evidenced by: |

1) recent graduate or inservice education course enrollment.

2) familiarity with ERIC

3) willingness to participate in ERIC training sessions

Expressed willingness to travel for information.

| | |
|---|---|
| Major Professional Problem Areas | Concerned primarily with curricula and instructional materials. |
| | Also concerned with teachers and teacher education. |
| | Interested in research and evaluation. |
| | Responsible for and concerned about administration and supervision. |

| | |
|---|---|
| Decision Making Mode | Generally conducted own search for information. |
| | Utilized information-seeking to solve work-related problems and to browse for general information. |
| | Utilized information to the greatest extent in determining background information, examining alternatives, and developing solutions. |

| | |
|---|---|
| Information Services Used | Agencies used by state supervisors for information (in order of priority): |
| | 1) local library with the building where working |
| | 2) professional organizations |
| | 3) state education agency |
| | 4) universities or colleges |
| | 5) state research coordination unit |
| | 6) ERIC clearinghouse |

| | |
|---|---|
| Information Sources or Products Used | Literature sources used by over one-half of the state supervisors were: |
| | 1) journals and periodicals |
| | 2) conference reports |
| | 3) research reports |
| | 4) curriculum and teaching guides |
| | 5) indexes |
| | Generally read interpretations of research rather than original reports. |

| Characteristics or Criteria of Products Used | Criteria positively correlated with utilization: |
|---|---|
| | 1) accessibility |
| | 2) degree of experience or familiarity |
| | 3) case of use |
| | Technical quality of products was negatively correlated with utilization. |
| | Characteristics of information regarded as important: |
| | 1) relevance to the problem |
| | 2) speed of obtaining |
| | 3) currentness |
| | 4) brevity |
| | 5) ease in identifying |
| | 6) authenticity |
| | 7) comprehensiveness |
| Personal Information Sources Used | Personal information sources used most frequently were: |
| | 1) fellow workers |
| | 2) supervisors |
| | 3) experts or authorities |
| | 4) colleagues in other organizations |
| | 5) subordinates |

# GUIDELINES FOR IMPROVING INFORMATION UTILIZATION

Guidelines for planning and improving information dissemination systems and information utilization processes were developed by the project staff by examining the findings of the user profiles for local administrators, teacher educators, state directors, and state supervisors of vocational education. Inputs were also obtained from the jury present at the workshop which reviewed the user profiles. The guidelines were then evaluated by consultants involved in information dissemination activities.

These guidelines provide suggestions for information dissemination activities aimed at satisfying the information needs of these four key groups in vocational and technical education. They are grouped into the eight dimensions describing information utilization: work setting, personal characteristics, major professional problem areas, decision-making mode, information services used, information sources or products used, characteristics or criteria of products used, and personal information sources used. An "x" in any of the four target audience columns indicates to which group(s) the particular guideline is applicable.

# Guidelines

|  | Local Administrators | Teacher Educators | State Directors | State Supervisors |
|---|---|---|---|---|
| **Work Setting** | | | | |
| Targeted information concerning major job functions should be provided vocational educators within the building where they work. | x | x | x | x |
| Because educators are often located some physical distance from information resources, information dissemination agencies should provide portable services, such as ERIC microfiche with portable readers and tape cassettes with portable tape players. | x | x | x | x |
| Educators should be informed of the information resources available to assist in their major job functions. | x | x | x | x |
| Information should be available about administrative structure of junior and senior high schools, secondary vocational schools, post secondary vocational-technical schools and about community or junior colleges, secondary, post-secondary and adult education students. | x |  | x |  |
| **Personal Characteristics** | | | | |
| Training should be provided in the use of ERIC and other information dissemination systems. | x | x |  | x |
| Inservice and graduate education courses should incorporate increased utilization of information dissemination systems. | x | x |  | x |
| State directors should be informed of promising innovations in education through direct mailings, personal contacts and/or conferences and workshops. |  |  | x |  |

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| | Local Administrators | Teacher Educators | State Directors | State Supervisors |
|---|:---:|:---:|:---:|:---:|
| **Major Professional Problem Areas** | | | | |
| Problems requiring considerable information should be analyzed in depth and such analyses should be published and made available nationally. | x | x | x | x |
| The problem areas of instruction, administrative leadership, educational change and finance should receive priority emphasis for dissemination of information to local administrators. | x | | | |
| Dissemination efforts targeted toward instructional problems of local administrators should include information on student personnel services, curriculum, quality and supply of personnel and evaluation. | x | | | |
| Information about program planning, decision-making, and community and human relationships should be disseminated to local administrators. | x | | | |
| Information about organizing for change, state and federal influences affecting change, and state and local pressure for change should be targeted for local administrators. | x | | | |
| Information targeted for teacher educators should include information on these problem areas: (1) teachers, (2) curriculum and instructional materials, and (3) research and evaluation. | | x | | |
| The problem areas of administrative leadership, finance, educational change, and certification of teachers should receive priority emphasis for dissemination of information to state directors. | | | x | |

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| | Local Administrators | Teacher Educators | State Directors | State Supervisors |
|---|---|---|---|---|
| **Major Professional Problem Areas (cont.)** | | | | |
| The focus of dissemination efforts on administrative leadership information targeted for state directors should include: (1) program planning, (2) administrative organization and (3) decision-making. | | | x | |
| Information about policies and procedures related to legislative control and obtaining and disbursing federal aid should be included in a management information system designed to serve state directors. | | | x  x | |
| Information about the change process, state and local pressures for change; and problem oriented research should be disseminated to state directors in a form they can use. | | | x | |
| Information targeted for state supervisors should include information on these problem areas: (1) curriculum and instructional materials, (2) teachers and teacher education, (3) research and evaluation, and (4) administration and supervision. | | | | x |
| **Decision-Making Mode** | | | | |
| Information dissemination agencies should make a special attempt to develop partnerships and cooperation with experienced people (opinion leaders) who are consulted by decision-makers. | x | | x | |
| Information resources must be readily available and easily used to facilitate decision-making. | | x | | x |

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| | Local Administrators | Teacher Educators | State Directors | State Supervisors |
|---|---|---|---|---|
| **Decision-Making Mode (cont.)** | | | | |
| The information dissemination system should provide browsing capability and retrospective search capability. | | x | | x |
| Since the local administrator generally makes decisions without seeking information, he should be offered inservice education on utilizing information in the decision-making process. | x | | | |
| Provision should be made for regular contact between the person designated by the state director as an information-seeker and information agency staff. | | | x | |
| **Information Services Used** | | | | |
| Brochures or other communications should be prepared in every state to explain what information services are available from each information agency. | x | x | x | x |
| Information agencies should seek methods to improve the turn-around time for user requests for services. | x | x | x | x |
| Linkages should be established between state department and such agencies as The Center for Vocational and Technical Education, ERIC, and colleges and universities. | | x | x | x |
| Information services should be available in the local library and in the department if possible. | | x | | x |

| | Local Administrators | Teacher Educators | State Directors | State Supervisors |
|---|---|---|---|---|
| **Information Services Used (cont.)** | | | | |
| Linkages between local districts, state RCU's and The Center for Vocational and Technical Education should be established and maintained. | x | | | |
| Means of linkage by direct contact (telephone and visitation), routine mailing of current information and analysis and interpretation of research should be furthered. | x | | | |
| Information dissemination systems should be developed within local districts. | x | | | |
| Adequate resources should be allocated for collection analyses and utilization of information. | | | x | |
| **Information Sources or Products Used** | | | | |
| Vocational educators should be provided with summarized, synthesized or evaluated information. | x | x | x | x |
| Information should be reported in guides, pamphlets, reports and periodicals. | x | x | x | x |
| Vocational educators who do or are willing to do their own searches should receive instruction and/ or assistance in searching indexes and bibliographies. | x | x | | x |
| AIM and ARM, the primary sources of indexed information in vocational and technical education, should continue to be developed and distributed to vocational educators. | x | x | x | x |

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| | Local Administrators | Teacher Educators | State Directors | State Supervisors |
|---|---|---|---|---|
| **Information Sources or Products Used (cont.)** | | | | |
| States should develop a data based information system to provide demographic information for decision-making. | | | x | |
| **Characteristics or Criteria of Products Used** | | | | |
| The lag between the identification of a need for information and obtaining the information from resource and service agencies must be shortened. | x | x | x | x |
| Information to be disseminated need not be of high technical quality, but must be relevant, current, brief, easily identified, authentic, comprehensive, and capable of being obtained quickly. | x | x | x | x |
| **Personal Information Sources Used** | | | | |
| Organizations, through their formal and informal structure, should provide means of sharing information. | x | x | x | x |
| The state information agency should provide methods for sharing of information among groups, individuals, and levels or organizations. | x | x | x | x |
| If information flow is to be transmitted through personal channels rather than through written sources, state supervisors and consultants provide the most direct linkage to local districts. | x | | | |
| State directors should insist that state supervisors maintain a level of expertise so that they may be relied upon as experts in designated areas. | | | x | |

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# SUMMARY

Data concerning information utilization by four key groups in vocational and technical education were organized in user profiles which described work setting, personal characteristics, major professional problem areas, decision-making mode, information services used, information sources or products used, characteristics or criteria of products used, and personal information sources used. User profiles were prepared for local administrators, teacher educators, state directors, and state supervisors of vocational and technical education.

Data from four previous studies were used as the information base for this report. User profiles of vocational educators and guidelines for information utilization were developed and validated by a jury with representation from the four groups of vocational educators, and personnel involved in information dissemination activities.

Local administrators were concerned with the major problem areas of instruction, administrative leadership and educational change. They generally made decisions without seeking information beyond what was already at hand. Information was usually obtained by consulting, visiting, interviewing, or surveying. Information was desired from experienced people for problem resolution. Information agencies were seldom used. Rated most useful were telephone or other direct contacts with information specialists, routine mailings of current information, and analyses and interpretations of research. Materials most used were guides, reports and pamphlets, and periodicals. The most important characteristics of information were relevance to the problem and speed of obtaining. Personal sources used were fellow workers, experts or authorities, and colleagues in other organizations. Local administrators interacted often with business and industry, state supervisors, the local administration, and their peer groups outside and within the district.

Teacher educators were concerned with the major problem areas of teachers and teacher education, curriculum and instructional materials, and research and evaluation. They generally conducted their own search for information. Information was sought to solve work problems, browse for general information, and conduct periodic literature searches. Local libraries, professional organizations, and university or college departments were the agencies most heavily utilized. Literature sources used to the greatest extent were journals and periodicals, conference and research reports, indexes, and curriculum and teaching guides. Interpretations of research were read more often than original reports. Criteria positively associated with information utilization were accessibility, familiarity, and ease of use. Technical quality was negatively associated with utilization. Personal information

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sources used most frequently were fellow workers, experts or authorities, and colleagues in other organizations.

State directors were concerned with the major professional problem areas of administrative leadership, finance, and educational change. They generally required information for problem resolution and delegated the information-gathering responsibility to subordinates. Substantive personnel were usually assigned the responsibility of providing information to resolve problems, rather than information specialists or clerical-technical personnel. Substantive personnel were used as information sources primarily because of their job responsibility, the type or form of data they could provide, or because they best understood the problem. Materials were selected because of the type or form of data included or because of accessibility. Used most often were reports and pamphlets followed distantly by indexes, books, and guides.

State supervisors were concerned with the major professional problem areas of curriculum and instructional materials, teachers and teacher education, research and evaluation, and administration and supervision. They generally conducted their own search for information. Information was sought to solve work-related problems and to browse for general information. Local libraries and professional organizations were the agencies most heavily utilized. Criteria positively associated with utilization of materials were accessibility, familiarity, and ease of use. Technical content was negatively associated with utilization. Personal information sources used most frequently were fellow workers, supervisors, and experts or authorities. Materials used most often were journals and periodicals, conference and research reports, curriculum and teaching guides, and indexes. Interpretations of research were read more often than original reports.

Guidelines for information utilization activities were developed as a result of examining the user profiles. These guidelines were applicable to one, two, three, or all four of the user groups. The guidelines which were found to be applicable to all four groups of vocational educators were:

1) Targeted information concerning major job functions should be provided vocational educators within the building where they work.

2) Because educators are often located some physical distance from information resources, information dissemination agencies should provide portable services, such as ERIC microfiche with portable readers and tape cassettes with portable tape players.

3) Educators should be informed of the information resources available to assist them in their major job functions.

4) Information should be analyzed in depth and such analyses should be published and made available nationally.

5) Brochures, or other communications should be prepared in every state to explain what information services are available from each information agency.

6) Information agencies should seek methods to improve the turn-around time for user requests for services.

7) Vocational educators should be provided with summarized, synthesized or evaluated information.

8) Information should be reported in guides, pamphlets, reports and periodicals.

9) AIM and ARM, the primary sources of indexed information in vocational and technical education, should continue to be developed and distributed to vocational educators.

10) The lag between the identification of a need for information and obtaining the information from resource and service agencies must be shortened.

11) Information to be disseminated need not be of high technical content but must be relevant, current, brief, easily identified, authentic, comprehensive, and capable of being obtained quickly.

12) The state information agency should provide methods for sharing of information among groups, individuals, and levels of organizations.

13) Organizations, through their formal and informal structures, should provide means of sharing information.

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