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ABSTRACT

Designed to obtain information useful in developing state information dissemination systems, this study sought to determine the information gathering practices and needs of vocational educators and administrators. Insight into these practices and needs was accomplished through a questionnaire survey completed by 3,229 vocational-technical educators in seven states, covering items such as: (1) institutions used as sources of information in the past 12 months, (2) usefulness of sources of information, (3) usefulness of information products, (4) most important characteristics of information, (5) time spent each month gathering information to solve problems, (6) familiarity with ERIC, and (7) ERIC materials used. One of the several conclusions and recommendations is that vocational-technical educators at the local level--teachers, counselors, local directors, administrators--are in need of better access to information products and services, especially preceding the beginning of school terms. Means for improving access are recommended. Also, the single hypothesis that vocational-technical educators who were themselves enrolled in courses would show distinctly different patterns of information gathering behavior was rejected. (JS)

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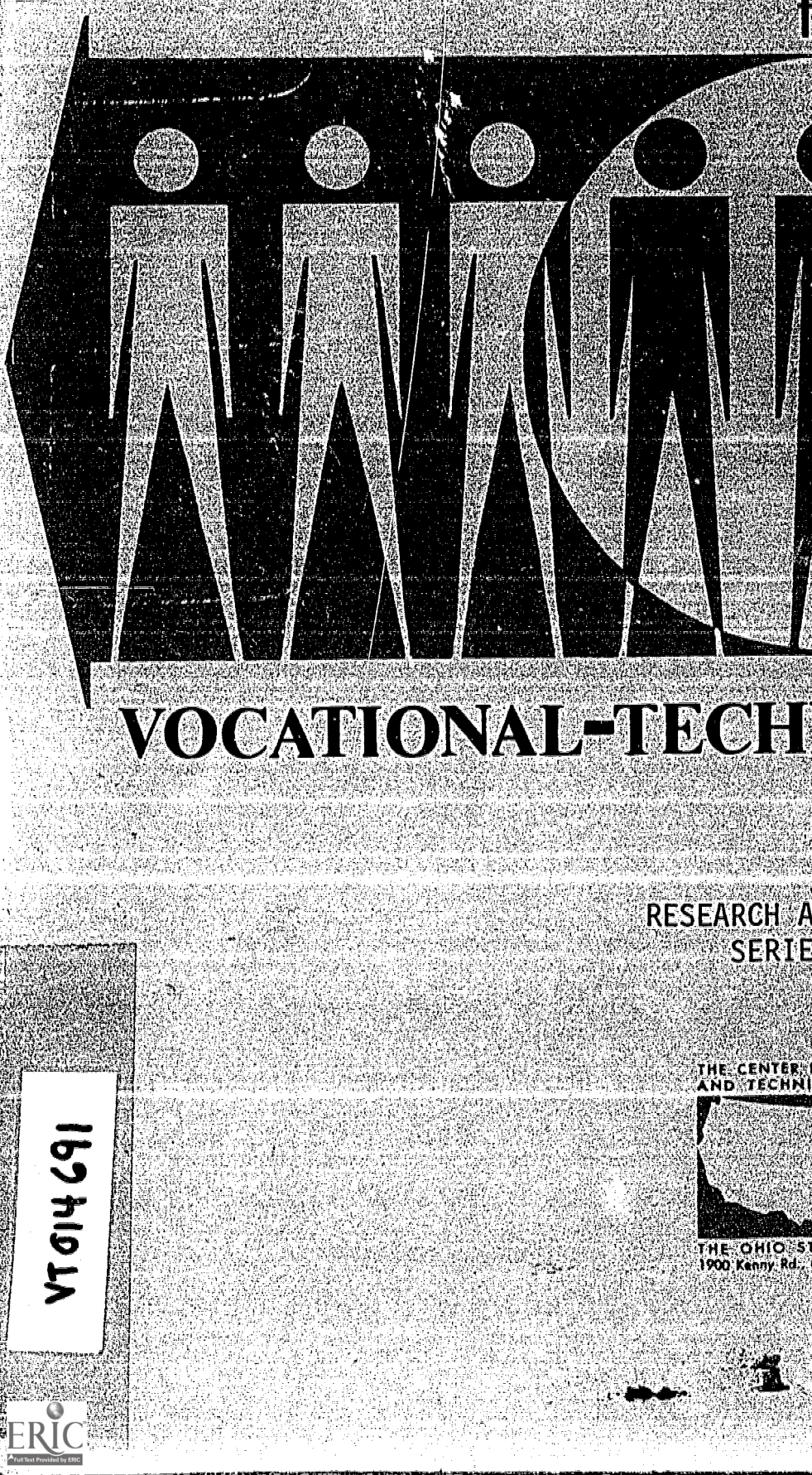

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MISSION OF THE CENTER

The Center for Vocational and Technical Education, an independent unit on The Ohio State University campus, operates under a grant from the National Center for Educational Research and Development, U.S. Office of Education. 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, 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.

RESEARCH AND DEVELOPMENT
SERIES NO. 65

INTERPRETATION OF TARGET AUDIENCE NEEDS IN THE DESIGN OF INFORMATION DISSEMINATION SYSTEMS FOR VOCATIONAL-TECHNICAL EDUCATION

JOEL H. MAGISOS

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U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
National Center for
Educational Research
and Development

PREFACE

The development of an effective information dissemination system is dependent upon a better understanding of the users which the system is to serve. It was appropriate that this study of target audiences be conducted during the early stages of development of vocational-technical education information dissemination systems by State Research Coordination Units (RCU's). The study procedures may serve as a model for replication in other states to test the applicability of the conclusions and recommendations. The findings of this study may serve as norms for comparison to subsequent studies in the same or other states. The conclusions and recommendations, as reported in this publication, may serve as the basis for planning information products and services.

This report was prepared by Joel H. Magisos, coordinator of information services at The Center, who directed the study as part of a pilot program for the development of state information dissemination systems involving Research Coordination Units in seven states. Special recognition should be given to Robert F. Barnes and Kenneth G. Densley, California; J. Clark Davis and Lynn L. Trout, Nevada; Po Yen Koo and Edwin G. York, New Jersey; Louis A. Cohen and Gregory M. Benson, New York; William W. Stevenson and William D. Frazier, Oklahoma; Jay Smink and Carroll A. Curtis, Pennsylvania; and Roland J. Krogstad, Wisconsin. These RCU personnel cooperated in the planning of the study and were essential to its conduct in their respective states. The general support of state directors of vocational education and of the many respondents was appreciated. Special recognition should also be given to Norman D. Ehresman, director of educational research at Western Kentucky University, who served as consultant to the project. Assistance with data processing and statistical analyses was provided by Niyazi Karasar and Wesley E. Budke of The Center staff.

The report was reviewed, prior to its final revision, by personnel in all of the participating Research Coordination Units. A final technical review was conducted by Joseph Becker and Celianna I. Taylor. Joseph Becker is president of Becker and Hayes, Inc., a subsidiary of John Wiley and Sons, Inc. Celianna I. Taylor is senior research associate in the Department of Computer and Information Science at The Ohio State University and formerly coordinator of information services at The Center.

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

TABLE OF CONTENTS

	Page
PREFACE	iii
LIST OF TABLES	vii
Chapter	
I. THE PROBLEM AND ITS SETTING	3
Introduction Definition of the Problem Need for the Study Purpose and Objectives of the Study Methodology	
II. THE FINDINGS OF THE STUDY	17
Description of the Study Respondents Presentation of the Findings Comparison of Target Audience Sub-Sets Based Upon Course Enrollment Summary	
III. CONCLUSIONS AND RECOMMENDATIONS	41
Conclusions Recommendations	
BIBLIOGRAPHY	49
APPENDIX	
A. Cover Letter	51
B. Instrument	55

LIST OF TABLES

TABLE		Page
1.	Target Audience Population Estimates	14
2.	Random Sample of Target Audience Populations	15
3.	Position of Respondents	18
4.	Respondent's Place of Employment	19
5.	Subject-Matter Field Affiliation	20
6.	Enrollment in Courses During Past 12 Months	21
7.	Institutions Used as Sources of Information in Past 12 Months	22
8.	Adequacy of Institutional Information Service	23
9.	Usefulness of Sources of Information	24
10.	Most Frequent Individual Sources of Information Used	25
11.	Information Services Most Useful	26
12.	Usefulness of Information Products	27
13.	Most Important Characteristics of Information	28
14.	Monthly Information Needs	29
15.	Advanced Planning for Information Service from Institutions	30
16.	Actual Time Required to Receive a Reply from Institutions	31
17.	Willingness to Travel for Information	32
18.	Time Spent Each Month Gathering Information to Solve Problems	33
19.	Familiarity with ERIC	34
20.	Systematic Instruction Received on Use of ERIC	35

TABLE

		Page
21.	ERIC Materials Used	36
22.	Sources from Which ERIC Materials Requested or Received	37
23.	Willingness to Participate in an Intensive One-Day Training Session on Use of ERIC	38

INTERPRETATION OF TARGET AUDIENCE NEEDS IN THE DESIGN OF INFORMATION DISSEMINATION SYSTEMS FOR VOCATIONAL-TECHNICAL EDUCATION

CHAPTER I

THE PROBLEM AND ITS SETTING

The problem under investigation in this study and the need for its solution or reduction had antecedents in the nature and mission of the agencies involved, the situational context, and the state of knowledge about the study population. The purpose and objectives of the study arose from this need and led to the methodology employed.

INTRODUCTION

The Center for Vocational and Technical Education engages in programmatic research, development, and diffusion activities directed toward the improvement of vocational and technical education and related fields. One of The Center objectives is:

> To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Resources Information Center located in the U.S. Office of Education.[1]

Toward this end, The Center and its component, the ERIC Clearinghouse on Vocational and Technical Education, engage in a variety of activities designed to shorten the theory-practice gap. The Center and Clearinghouse prepare numerous information products and endeavor to increase the capacity of state-level agencies, especially State Research Coordination Units, to serve information users on an interpersonal basis.

The typical Research Coordination Unit (RCU) exists either in the state department of education or at a state university. Along with its mission to encourage, conduct, and coordinate research, the RCU has the mission of disseminating research findings and other information to practitioners for use in the improvement of educational programs.

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[1] *Abstracts of Research and Related Materials in Vocational and Technical Education, Fall 1970* (Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education, The Center for Vocational and Technical Education, The Ohio State University, 1970).

The dissemination mission of the RCU was delineated at a conference sponsored by The Center in October, 1967. Following the conference, The Center formed an *ad hoc* committee to formulate guidelines for development of state information dissemination systems for vocational-technical education. A major outcome of the committee work was the development of a guide, later published by The Center.[2] Upon recommendation of the *ad hoc* committee, a pilot program was undertaken to test some of the concepts in a preliminary edition of the guide and to provide feedback to The Center and Clearinghouse.

An early realization of Center and RCU personnel was that more information was needed about potential users of an information dissemination system. One of the original objectives of the RCU pilot program was to analyze system users, their problems and information needs.

DEFINITION OF THE PROBLEM

An important problem for information dissemination system designers has been the paucity of reliable information about individuals and groups who are to use the system. Designers could mistakenly develop a system which, while internally consistent, would fail to account for the information needs and practices of users. The problems under investigation in this study were delimited to a description of the target audiences and their information-seeking practices. Later studies may be addressed to the users' problems and information needs.

NEED FOR THE STUDY

The need for the target audience study arose from the complexity of events that occurred after the establishment of the ERIC Clearinghouse on Vocational and Technical Education at The Center for Vocational and Technical Education, and the establishment of State Research Coordination Units in many states. Both organizations had roles in information dissemination and both set about to develop a rational basis for fulfilling their respective roles. The present study was a part of the RCU pilot program explained in the Introduction to this report. The rationale for the pilot program and the target audience study was explained in

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[2]Celianna I. Taylor 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).

a paper read at the American Vocational Association convention in Boston in 1969.[3]

Aside from being part of the total strategy to effect development of state information dissemination systems for vocational-technical education, this target audience study relates to studies in vocational-technical education, general education, and information science. A few of these are described briefly in following sections to provide a context in which this study was conducted.

Although a mass of data and findings have been accumulated in various studies, both related and not related to vocational-technical education, some of the fundamental questions had not been answered, especially for the target audiences in vocational-technical education. Earlier findings, such as those which repeatedly highlighted the inclination of users to utilize convenient and personal sources of information, provided a bench mark against which the present study was to be conducted. That is to say, some of the findings in earlier studies were confirmed in the present study, thus lending some credibility to other findings of this study. Most of the participating RCU personnel were anxious to obtain data for their own state's target audiences, suspecting that these audiences might be different and recognizing that findings to justify operational decisions would carry more weight if generated in the same state.

Another justification for the study was the need to develop methodology and instrumentation which could be used in other states.

STUDIES RELATED TO INFORMATION DISSEMINATION IN VOCATIONAL-TECHNICAL EDUCATION

A few studies have been reported which related closely to information dissemination in vocational-technical education; especially to the role of the RCU and the needs of users.

In 1967, a study of Research Coordination Units was conducted to determine what information services were being provided, should be provided, and the relation to the organizational system.[4] Of

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[3]Joel H. Magisos, *A Pilot Program for the Development of State Vocational-Technical Education Information Dissemination Systems* (a paper delivered to the Research Section of the New and Related Services Division of the American Vocational Association, Boston, December 10, 1969).

[4]Donald E. Elson, *A Survey of RCU Information Services* (Topeka, Kansas: Kansas Vocational Education Research Coordinating Unit, November, 1967), 28 pp.

44 RCU's, 39 responded to a questionnaire. At that time, most were disseminating research information through various media and recognized a need to improve services and capacity.

RCU's have since been credited with a major success in systematic information storage and retrieval.[5] Citing certain deficiencies, Goldhammer recommended further development of techniques, definition of roles, and development of channels of dissemination.[6]

McCracken surveyed 230 vocational-technical supervisors and teacher educators in seven states to investigate factors influencing the utilization of information in problem solving.[7] Differences were found in the kinds and sources of literature used by the two groups. Accessibility appeared to be the most potent variable for prediction of utilization, while technical content was negatively correlated with frequency of use.

Oxley surveyed state departments of education, instructional materials laboratories, and trade and technical education teachers.[8] Among his findings were that demand for instructional materials was increasing and he recommended that annual lists of instructional materials be published.

GENERAL USER STUDIES

The status of general information user studies has been reported regularly in the *Annual Review of Information Science and Technology*. These reviews provide helpful insights to the notable findings of current research on information users and to the methodological inadequacies of many past efforts.

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[5]Keith Goldhammer, *et al.*, *Research Coordinating Unit Program Evaluation* (Corvallis, Oregon: Center for Educational Research and Services, Oregon State University, March, 1969), pp. 59-62.

[6]Goldhammer, *et al.*, *ibid.*, pp. 66-68.

[7]John David McCracken, "The Utilization of Information by State Supervisory and Teacher Education Personnel in Vocational and Technical Education" (unpublished Ph.D. dissertation, Columbus: The Ohio State University, 1970). (ED 039 369)

[8]Vincent Edward Oxley, "Trade and Technical Instructional Materials: Their Status, Preparation, and Use" (unpublished Ed.D. dissertation, Columbus: University of Missouri, 1969).

The end of 1963 was described by Menzel as the "take-off point for empirical research on the information needs and uses of scientists and technologists."[9] Menzel reviewed the studies of information needs and uses during the 1963-1965 period.[10] Herner and Herner paralleled Menzel's review in a subsequent effort the next year.[11] In assembling and reading the literature they were struck by the following:

1. The relatively few techniques used.

2. The diversity of corpora of users to which these few techniques have been applied.

3. The diversity and ambiguity of language in discussing the techniques that have been used and their results.

4. The lack of innovation.

5. The failure to build on past gains.

6. The failure to profit from past mistakes.

7. The frequent absence of rigorous experimental designs.[12]

They concluded that many of the answers were already in the literature and that the information field itself needed to amalgamate its own information, especially as related to information. In 1968, Paisley concluded that:

1. There is an increased recognition of the need for use studies.

2. The study of information needs and uses is at the point of classification of types resulting in guidelines for information system design and evaluation.

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[9]Herbert Menzel, "Information Needs and Uses in Science and Technology," *Annual Review of Information Science and Technology* (C. A. Cuadra, ed.), Volume 1 (New York: Inter Science Publishers, 1966), p. 41 (pp. 41-69).

[10]Menzel, *ibid.*, pp. 41-69.

[11]Saul Herner and Mary Herner, "Information Needs and Uses in Science and Technology," *Annual Review of Information Science and Technology* (C. A. Cuadra, ed.), Volume 2 (New York: Inter Science Publishers, 1967), p. 34.

[12]Saul Herner and Mary Herner, *ibid.*, p. 2.

3. The theory is developing from eclectic methodologies which will eventually be tested more scientifically.[13]

Allen found user studies improved in 1969 and cautioned that there is "the tendency on the part of many who are untrained in social science methodology to assume that the art of questionnaire design and administration is a very simple one that anyone with intelligence can master in a single attempt."[14] This latter observation proved insightful for the present study; in fact, questionnaire design and administration was especially difficult because of the varied background of participating personnel.

Lipetz views the study of information needs and uses as rational when viewed as a means to an end.[15] He believes that the objectives of such studies may be explanation, prediction, control, description, definition, and theorizing. The first three must be preceded by the latter, and it is the latter (i.e., description, definition, and theorizing) to which the present study is directed. Later it may be possible to explain, predict, and control; in fact, the inferences drawn in the conclusions and recommendations are an attempt to do this.

PROGRAMMATIC EFFORT TO UNDERSTAND INFORMATION NEEDS AND DECISION PROCESSES IN LOCAL SCHOOL DISTRICTS

Reports by the Far West Laboratory for Educational Research and Development provide the results of a programmatic effort to understand the information needs and decision processes in local school districts. A literature survey by Chorness, *et al.* of the Stanford Research Institute examined study findings on the process of innovation, individual roles in change, and decision-making.[16]

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[13]William J. Paisley, "Information Needs and Uses," *Annual Review of Information Science and Technology*, Third Yearbook of American Society for Information Science (Chicago: Encyclopaedia Britannica, Inc., 1968), pp. 1-30.

[14]Thomas J. Allen, "Information Needs and Uses," *Annual Review of Information Science and Technology*, Volume 4 (Chicago: Encyclopaedia Britannica, Inc., 1969), p. 3.

[15]Ben-Ami Lipetz, "Information Needs and Uses," *Annual Review of Information Science and Technology*, Volume 5 (Chicago: Encyclopaedia Britannica, Inc., 1970), p. 3.

[16]M. H. Chorness, *Use of Resource Material and Decision Processes Associated with Educational Innovation: A Literature Survey* (Berkeley: Far West Laboratory for Educational Research and Development, February, 1969), p. 161.

The annotated citations of literature in the report provide information useful to system planners.

Chorness, *et al.* also conducted a field survey of personnel in 63 school districts for the Far West Laboratory for Education Research and Development.[17] School district personnel were reliant upon information sources close to home and depended upon informal varieties of communications, although texts and curriculum materials from outside sources were used as a basis for interaction and information exchange. A substantial number of personnel did not know what sources they had used to obtain new ideas. A study of the literature was also conducted by York.[18] Her report gives the current status of (1) organizational arrangements to facilitate the use of research and development (R & D) information within the school setting and (2) personnel training programs for increasing the use of research and development information by school personnel. An earlier task force had concluded that effective use of R and D information required the cooperation of many levels, that administrators had the largest impact upon decisions to adopt improved practices, that present information networks provided great masses of information, that informal subsystems serve researchers and administrators only moderately well, and that practical constraints prevent the ideal system from achieving its potential.[19]

THE CURRENT STUDY

The present study was designed to obtain information about groups which Research Coordination Unit personnel regarded as their target audiences. Personnel who were responsible for design and operation of the system were closely involved in formulation of the objectives of the study, enumeration of the population, selection of the sample, design of the instrument, and interpretation of the findings. The sampling plan was designed to provide comparison across categories and states and as a consequence,

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[17] M. H. Chorness, *et al.*, *Decision Process and Information Needs in Education: A Field Survey* (Berkeley: Far West Laboratory for Educational Research and Development, n.d.), 208 pp.

[18] Linda J. York, *Arrangements and Training for Effective Use of Educational R & D Information: A Literature Survey* (Berkeley: Far West Laboratory for Education Research and Development, February, 1969), 118 pp. (ED 026 746)

[19] Robert Coney, *et al.*, *Educational R & D Information System Requirements* (Berkeley: Far West Laboratory for Educational Research and Development, March, 1968).

provided some substantiation of result. The sampling provided a basis for inferring generalization to other similar groups.

Although the foregoing methodology does not overcome all of the shortcomings of previous studies, it does alleviate some of the most severe of these, particularly the lack of objectives, designer involvement, and sampling techniques.

PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this study was to obtain information about potential target audiences (i.e., user groups) so that developers could design state information dissemination systems to effectively serve them. Two major objectives, formulated to guide sample selection, instrument development, data analysis, and interpretation, were established.

Objective One: Description of the organizational levels, subject-matter field affiliation, and personal educational activities of target audience categories.

Information about the organizational levels, subject-matter field affiliations, and personal educational activities of administrators, counselors, local directors, researchers, supervisors, teacher educators, and teachers was essential to interpretation of findings. Collection of data on these factors provided knowledge of the nature of the respondents and permitted separate analysis of specific sub-populations when desired.

Objective Two: Determination of target audience awareness, use, perception of usefulness, and needs for information sources, products, and services, especially concerning form, time, and spatial relationships.

The system under development would be comprised of information sources, products, and services. To provide for more orderly development of the system, designers needed information about the user's needs, but also about his awareness, present use, and perception of usefulness of present system configurations. The form that these sources, products, and services take and the time and distances involved were also important questions in the minds of the investigators.

Hypothesis: Vocational-technical educators who themselves were enrolled in courses would show distinctly different patterns of information gathering behavior.

The system designers involved in this study suspected that members of the target audiences who were engaged in their own educational development would have distinctly different information gathering behavior. It was believed likely that those enrolled in courses themselves would seek information more frequently and from different sources than would those not enrolled in courses.

METHODOLOGY

Accomplishment of the target audience study objectives required close cooperation between RCU and Center personnel in population identification, instrument development, instrument administration, data analysis, and interpretation. The methodology, herein described, was applied during the period between July, 1969 and December, 1970.

OBTAINING THE COOPERATION OF THE STATE RESEARCH COORDINATION UNITS

Research Coordination Units in seven states (i.e., California, Nevada, New Jersey, New York, Oklahoma, Pennsylvania, and Wisconsin) were cooperating with The Center for Vocational and Technical Education in a pilot program for the development of state information dissemination systems. The pilot program was a part of The Center's research and development program and also related to objectives of the ERIC Clearinghouse on Vocational and Technical Education. One of the objectives of the pilot program was:

> To analyze vocational-technical education information dissemination systems' users, their problems, and needs.

To this end, RCU and Center personnel began consideration of possible methodology at the initial meeting of the pilot program group in July, 1969. Delimitation of the study was an initial concern of the group and resulted in consensus that the study concern itself principally with the important target audiences for vocational-technical education information dissemination systems, especially as related to their information seeking practices. At a meeting in September of 1969, RCU and Center personnel finally agreed upon seven target audiences for state information dissemination systems, as follows:

Administrators
Counselors
Local Directors
Researchers
Supervisors
Teacher Educators
Teachers

It was decided that it was most appropriate to enumerate populations of these target audiences in each of the cooperating states, draw samples which would represent the target audience population in each state, and interpret findings upon this basis.

In effect, the plan was to conduct the study in each cooperating state and consolidate findings in a single report. Pennsylvania was to serve as a field test site for the instrument.

Research Coordination Unit personnel agreed to enumerate target audience populations, contribute candidate items for an instrument, participate in instrument refinement, and administer the instrument to appropriate samples in their own state. Center personnel agreed to manage the overall study, develop the instrument, specify the sample, print the instrument, and analyze and interpret the findings. A diversity of opinion about study objectives, instrument items, sampling procedures, and methods of interpretation existed from the beginning, but was resolved through discussion at three meetings (July and September, 1969 in Columbus and December, 1969 in Boston).

INSTRUMENT DEVELOPMENT

Candidate instrument items were submitted by participating RCU personnel. These items were reviewed by Center staff, with consultant help, and new items were written that incorporated many of the ideas found in the submitted items. A tentative instrument was prepared and this was critiqued by the RCU personnel in their Boston workshop. Further clarification of the study objectives led to refinement of instrument items and tentative format.

The Pennsylvania RCU sponsored a field trial of the instrument after it had been cleared for use by the U.S. Office of Education. The trial, on a small purposive sample of each target audience category, resulted in only one small change in item sequence. The excellent response rate (71.1 percent) led to a decision that a follow-up would be unnecessary in the other six states. Response rates were generally good, although only one state (i.e., Wisconsin, 78.3 percent) surpassed the rate experienced in the Pennsylvania field trial. Because the Pennsylvania field trial data were similar and no major changes were made in the instrument, the Pennsylvania data were incorporated in data on all states in this report.

A copy of the instrument, as it was used in California, is in Appendix B. The single difference in the instruments used in the states was in the sponsorship shown on page 1 of the instrument. An example of the cover letter is also given in Appendix A.

DEFINITION OF THE STUDY POPULATION

Each State Research Coordination Unit's director of information specialist was asked to enumerate the population of each target audience category in his state so that samples could be specified. To this end, the following definitions were established.

Administrators -- persons designated by title and/or certification who have over half-time responsibility to (1) administer local or area educational agencies which include vocational or technical education programs (e.g., junior high, comprehensive high school, local school district, community college) or (2) administer vocational education programs in state divisions of vocational education or state departments of education. Examples of titles were directors, program directors, chief supervisors, superintendents, and principals.

Counselors -- persons designated by title and/or certification who have over half-time responsibility in local or area education agencies to integrate student capabilities with vocational education programs and employment opportunities. Examples of titles were counselors, vocational counselors, and occupational counselors.

Local directors -- persons designated by title and/or certification who have more than half-time responsibility to (1) administer local or area vocational and/or technical education agencies or (2) make vocational and/or technical education program and staffing recommendation to the administrators of comprehensive educational institutions. Examples of titles were director, coordinator, or supervisor.

Researchers -- persons who have over one-half time responsibility to lead or conduct research on vocational and technical education in local education agencies, state divisions of vocational education, research coordination units, private agencies, or other institutional or agency settings. Examples of titles in this target audience category were RCU director, teacher educator, professor, research director, and research associate.

Supervisors -- persons designated by title who have half-time responsibility for the improvement of vocational-technical education programs through direct interaction with educational staff at the local or area level, though the supervisor may be employed at state, area, or local level. Excluded are those who have general administrative responsibility. Examples of titles in this category were supervisor, consultant, specialist, and coordinator.

Teacher educators -- persons designated by title and/or certification who have over half-time responsibility to train and/or supervise students who are preparing for entry or are upgrading

their skills as teachers of occupational education subjects in any appropriate setting or at any level (e.g., local education agency, teacher education institution, state divisions of vocational education). Titles in this category included teacher educator, teacher trainer, department chairman, itinerant teacher trainer, and professor. In later self-designation of category, it is believed that many supervising teachers may have designated themselves as teacher educators.

Teachers -- persons designated by title and certification who have more than half-time responsibility to teach vocational, technical and/or related subject at junior high, secondary, and post-secondary levels. Titles in the teacher category included teacher, instructor, coordinator, and teacher-coordinator.

ENUMERATION OF THE POPULATIONS AND SELECTION OF THE SAMPLES

The samples for the study were randomly drawn from identified target audience category populations in each state. Target audience category populations had been identified by RCU personnel from lists available in respective State Departments of Education. Each participating RCU was responsible for selecting these lists or devising means of identifying relevant populations from which to sample. Some variations in technique were unavoidable, but the usual practice was to rely upon published directories and computer printouts of stored data. These target audience populations are enumerated in Table 1.

Table 1

TARGET AUDIENCE POPULATION ESTIMATES

TARGET AUDIENCE CATEGORY	STATES						CATEGORY TOTALS
	CALIF.	N.J.	N.Y.	NEV.	OKLA.	WISC.	
Administrators	941	655	4,603	61	881	625	7,766
Counselors	398	1,959	920	74	481	990	4,822
Local Directors	145	110	461	11	42	130	899
Researchers	397	13	100	3	23	20	556
Supervisors	369	647	31	3	34	310	1,394
Teacher Educators	71	130	306	1	25	805	1,338
Teachers	18,311	6,862	12,828	150	1,432	2,850	42,433
State Totals	20,632	10,376	19,249	303	2,918	5,730	59,208

It was decided by Center and RCU personnel that the random samples in Table 2 should be drawn from each population. Sample sizes were based upon information in an NEA handbook on sampling and statistics for surveys in education.[20]

The size of the samples and the rate of response provide a basis for cautious generalization of conclusions to the target audience populations.

Table 2

RANDOM SAMPLE OF TARGET AUDIENCE POPULATIONS

TARGET AUDIENCE CATEGORY	STATES						CATEGORY SAMPLE
	CALIF.	N.J.	N.Y.	NEV.	OKLA.	WISC.	
Administrators	210	190	250	61	206	188	1,110
Counselors	161	237	210	74	170	212	1,064
Local Directors	145	110	170	11	42	130	608
Researchers	161	13	100	3	23	20	320
Supervisors	155	190	31	3	34	143	556
Teacher Educators	71	130	143	1	25	202	572
Teachers	267	265	265	150	225	245	1,412
State Totals	1,170	1,130	1,174	303	725	1,140	5,642

ANALYSIS AND INTERPRETATION OF THE DATA

The number of statistical manipulations that could be effected on such a large mass of data was great. Only one *a priori* hypothesis had been advanced and this was tested with Chi Square. The remaining study objectives were primarily descriptive in nature; therefore, it was determined that the analysis task was to arrive at statistics that were sufficiently descriptive and summary.

Two sets of data cards were prepared for each instrument by states. These were tabulated and summarized by computer and reported in tables similar to those in this report. State data were made available to RCU personnel in data card and table form. Data from all states were consolidated into tables which reported the

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[20]National Education Association, *Appendix to Sampling and Statistics Handbook for Surveys in Education, Preliminary Edition* (Washington, D.C.: National Education Association, 1965), p. 131.

total data as percentages or means, with emphasis upon target audience categories. Although important state differences are reported in the narrative, these data are not shown in this report because of their sheer bulk. The data for states may be available in reports by individual state RCU's.

Participating RCU personnel were encouraged to develop individual reports for their own states after they had an opportunity to study and react to the report on the total study. This review of report findings was to provide a verification of important state differences reported and of conclusions drawn by the principal investigator.

Findings reported in Chapter II are in the form of percentages or means and narrative summary. These summary descriptions led to conclusions reported in Chapter III. The criteria for formulation of the conclusions included (1) existence of empirical evidence, (2) importance to study objectives, and (3) utility for development of information dissemination systems.

CHAPTER II

THE FINDINGS OF THE STUDY

The findings are reported in three sections of this chapter. In the first section, "Description of the Study Respondents," the respondents to the study questionnaire are described with data on their position, place of employment, subject-matter field, and course enrollment. The second section, "Presentation of the Findings," provides a summarization of the useful responses to questionnaire items which had been directed toward determination of users' information gathering practices. A third section, "Comparison of Target Audience Sub-Sets Based Upon Course Enrollment," reports the results of a statistical comparison of those respondents enrolled in courses and those who were not enrolled. There were 3,229 respondents; however, 47 indicated positions other than in the target audience categories. Therefore, most tables report 3,182 respondents.

Data are presented in tables as frequencies, percentage, or mean responses to corresponding items in the questionnaire (Appendix B) which was administered to the stratified, random sample of the study population in the seven cooperating states. The accompanying narrative description highlights specific findings evident in the tables. Interpretation of the findings as conclusions, implications, and recommendations is found in Chapter III.

DESCRIPTION OF THE STUDY RESPONDENTS

Teachers, counselors, and administrators are shown in Table 3 as the largest respondent categories in the study. Teacher, supervisor, and teacher educator categories had the highest percent of response when comparisons were made to original samples; however, some changes were made in sampling by individual states. Some subjects, believed to be members of specific categories, designated themselves in another target audience category. No effort was made to compare original categorization with self designation of positions. Self designation of position was presumed correct and was reported.

Table 3

POSITION OF RESPONDENTS

Position	Number	Percentage
Teachers	1072	32.2
Counselors	507	15.7
Administrators	586	18.1
Local Directors	219	6.8
Supervisors	374	11.6
Teacher Educators	344	10.7
Researchers	80	2.5
Others	47	1.4
TOTAL	3229	100.0%

The overall response to the questionnaire was 55 percent with the response ranging from 40.4 percent in one state to 78.3 percent in Wisconsin. In fact, over one-fourth of the response was from Wisconsin because of its large sample and excellent questionnaire return.

The largest response was from persons working at the secondary level, as evidenced by the fact that 63.3 percent reported being employed in junior or senior high schools or in secondary vocational-technical schools. Examination of columns in Table 4 reveal the place of employment for each of the seven target audience categories. For example, supervisors were to be found at secondary, post-secondary, and state agency levels.

Table 4

RESPONDENT'S PLACE OF EMPLOYMENT*

Place of Employment	TOTAL % N = 3182	Teacher % N = 1072	Counselor % N = 507	Administrator % N = 586	Local Director % N = 219	Supervisor % N = 374	Teacher Educator % N = 344	Researcher % N = 80
Jr. or Senior High School	49.9	59.8	78.3	48.1	30.6	24.9	30.8	1.3
Secondary Voc-Tech.	12.4	11.5	9.9	13.8	33.3	13.4	4.9	1.3
Post-Secondary Voc-Tech.	11.9	14.5	3.7	13.3	6.8	25.7	2.9	7.5
College or University	7.8	3.3	0.6	2.9	0.5	2.1	44.8	37.5
Community or Jr. College	6.8	8.1	4.7	7.0	11.0	5.1	4.9	5.0
State Education Agency	4.3	0.3	0.2	4.4	0.5	20.1	1.7	30.0
Inter. District or Agency	2.7	0.2	0.2	4.9	14.6	5.1	----	5.0
Other	2.6	1.3	0.4	3.9	3.2	4.5	3.5	10.0
Elementary School	1.4	0.7	2.0	4.1	----	----	----	2.5

*Non-response is not shown; thus, totals do not equal 100%.

Respondents designated their subject-matter affiliation. As can be seen in Table 5, the largest category was for "all fields" with strongest representation in this category by local directors, researchers, and administrators. Business and office education was the field with the greatest number of affiliates, except those in supervisory or local director roles.

Table 5

SUBJECT-MATTER FIELD AFFILIATION*

Subject-Matter Field Affiliation	TOTAL % N = 3182	Teacher % N = 1072	Counselor % N = 507	Administrator % N = 586	Local Director % N = 219	Supervisor % N = 374	Teacher Educator % N = 344	Researcher % N = 80
Vocational-Technical Education (All Fields)	22.7	5.5	25.6	36.0	64.8	28.6	12.5	38.8
Business and Office	18.5	22.6	27.6	10.1	6.8	9.6	24.7	13.8
Other	8.9	4.9	16.6	11.3	3.2	10.4	6.1	16.3
Home Economics	8.2	13.2	1.0	2.1	4.1	10.2	14.2	6.3
Industrial Arts	7.7	12.3	3.7	4.1	6.8	4.3	10.8	1.3
Trade and Industrial	6.6	8.9	2.0	3.4	12.3	11.8	3.8	2.5
Agriculture	5.4	8.7	1.4	4.3	4.6	4.8	4.9	3.8
Distributive	4.3	5.9	2.0	4.8	4.6	2.9	4.1	1.3
Health Occupations	3.5	3.5	3.7	3.4	3.7	4.5	2.3	3.8
Technical	2.6	3.6	0.4	1.2	3.7	4.0	2.6	2.5

*Non-response is not shown; thus, totals do not equal 100%.

It was judged that the respondents' use of information might vary due to personal involvement in courses. Table 6 provides a summary of enrollment in courses for each target audience category. These data provided a basis for dividing the respondents into two sub-sets which were compared across all other items. The result of this comparison is reported at the end of this chapter.

Table 6

ENROLLMENT IN COURSES DURING PAST 12 MONTHS

Respondents	N	% Yes	% No
Teachers	1072	66.3	32.6
Counselors	507	55.8	43.6
Administrators	586	45.4	52.4
Local Directors	219	59.8	40.2
Supervisors	374	56.7	41.4
Teacher Educators	344	49.1	49.7
Researchers	80	45.0	53.8
TOTAL %*	3182	56.8	42.0

*Non-response is not shown; thus, totals do not equal 100%.

PRESENTATION OF THE FINDINGS

To obtain an indication of the institutions used by all categories of respondents, data summarized in Table 7 were collected. As expected, local institutions were used most frequently by all except local directors, teacher educators, and researchers. In the case of teacher educators and researchers, the "local" institution is obviously the university or college department or library. The surprising finding was that the professional organization was so frequently indicated. It is likely that respondents marked this choice because of their use of professional organization journals, magazines, and other materials. Local or area school libraries were reported as most frequently used in all states except Pennsylvania where respondents in the instrument field trial indicated professional organizations most often. Only about one-third of the researchers reported using the local or area school libraries. This group used the RCU, ERIC Clearinghouses, or EDRS to a greater extent than other groups.

Table 7

INSTITUTIONS USED AS SOURCES OF INFORMATION IN PAST 12 MONTHS*

Institutions Used as Sources of Information	TOTAL % N = 3182	Teachers % N = 1072	Counselors % N = 507	Administrators % N = 586	Local Directors % N = 219	Supervisors % N = 374	Teacher Educators % N = 344	Researchers % N = 80
Local or Area School Library	61.7	70.6	68.4	54.8	50.2	62.0	49.4	32.5
Professional Organization	48.4	39.1	49.9	45.7	59.4	58.0	61.6	50.0
University or College Library	42.3	42.3	34.3	34.8	29.2	37.7	68.9	78.8
University or College Department	32.3	28.6	31.6	28.0	32.9	30.7	49.7	50.0
State Education Agency	28.2	10.6	26.6	45.4	45.2	38.5	29.4	48.8
State Voc-Tech. Educ. Research Coor. Unit	22.1	10.0	20.3	28.7	46.1	29.4	19.2	60.0
ERIC Clearinghouse	13.8	3.4	8.5	16.9	23.3	15.2	32.3	51.3
ERIC Document Reproduction Service	9.4	2.9	4.1	11.6	14.6	11.8	19.5	43.8
Other	9.2	10.6	10.7	5.3	8.7	12.3	6.1	11.3
None of these	6.6	7.9	7.1	6.3	4.6	4.3	7.8	----

*Respondents may have checked more than one item; thus, totals will not equal 100%.

Although the five-point scale did not differentiate fine differences between adequacy of service of institutional sources, some indication of the degree of satisfaction is given in Table 8. The ERIC Document Reproduction Service received the highest rating overall. Of course, it had been used least (Table 7). The adequacy of service was rated highly for university or college departments or libraries and for the ERIC Clearinghouses, but differences existed between categories. The Clearinghouses were rated most highly by teacher educators and researchers. The RCU was rated highly by most categories, but not by teachers and counselors whose weighted opinion had the most effect on the total response reported. The professional organization, though used most heavily, was not rated highly for adequacy of service except by teacher educators which may indicate differences in

the nature and quality of services and products provided by different associations. The local institution was rated lowest by all categories. Pennsylvania respondents rated professional organizations higher than respondents in other states. Oklahoma respondents rated information services by the RCU more highly than respondents in other states. Counselors and local directors gave lower rating to all services than did other respondent categories.

Table 8

ADEQUACY OF INSTITUTIONAL INFORMATION SERVICE
(RATING ON A FIVE POINT SCALE 1-VERY ADEQUATE 5-INADEQUATE)

Institutions	TOTAL N = 3182	Teacher N = 1072	Counselor N = 507	Administrator N = 586	Local Director N = 219	Supervisor N = 374	Teacher Educator N = 344	Researcher N = 80
ERIC Document Reproduction Service	1.9	2.1	2.3	2.2	2.2	2.2	1.9	1.8
University or College Library	2.1	2.0	2.2	2.2	2.4	2.2	2.0	2.1
University or College Department	2.1	2.0	2.2	2.2	2.4	2.1	2.1	2.3
ERIC Clearinghouse	2.1	2.1	2.3	2.2	2.3	2.2	1.8	1.9
RCU	2.2	2.2	2.4	2.1	2.1	2.1	2.2	2.0
State Education Agency	2.2	2.3	2.4	2.1	2.1	2.1	2.2	2.3
Professional Organization	2.3	2.3	2.3	2.4	2.2	2.2	2.1	2.4
Local or Area School Library	2.5	2.6	2.5	2.6	2.8	2.4	2.5	2.4

Data summarized in Table 9 provide evidence that direct and personal contacts are judged by respondents to be most useful. Professional and reference books are the next most useful sources of information. Both of the foregoing are likely to be locally and readily available, along with professional journals and magazines which rated next most highly. Conventions, conferences, and workshops were rated highly also. There was high agreement among respondents in all states concerning the order of usefulness

of various information sources. Teacher educators generally rated usefulness of sources higher than respondents in other categories. Local directors and researchers, on the other hand, tended to rate the sources of information less useful. Mass media was rated particularly low by researchers as a source of information.

Table 9

USEFULNESS OF SOURCES OF INFORMATION
(RATING ON FIVE POINT SCALE 1-VERY ADEQUATE 5-INADEQUATE)

Sources of Information	TOTAL N = 3182	Teacher N = 1072	Counselor N = 507	Administrator N = 586	Local Director N = 219	Supervisor N = 374	Teacher Educator N = 344	Researcher N = 80
Direct Personal Contacts	1.7	1.8	1.7	1.7	1.5	1.6	1.7	1.8
Professional + Reference Books	2.1	2.0	2.3	2.3	2.4	2.2	1.9	2.1
Professional Journals and Magazines	2.3	2.2	2.4	2.4	2.4	2.3	2.0	2.2
Conventions, Conferences, and Workshops	2.3	2.4	2.3	2.3	2.1	2.2	2.3	2.5
Graduate or In-service Courses	2.5	2.4	2.4	2.6	2.6	2.6	2.3	2.6
Research + Development Project Reports	2.6	2.6	2.6	2.6	2.7	2.5	2.3	2.3
Plans, Guides, + Standards	2.7	2.6	3.0	2.7	2.6	2.4	2.7	2.8
Information Analysis Products	2.8	2.8	3.0	2.8	2.8	2.7	2.5	2.7
Mass Media	2.9	2.9	2.8	3.1	3.0	3.0	2.9	3.3

Data summarized in Table 10 indicate support for the findings about data in Table 9. Respondents rely most heavily upon fellow workers, experts, or colleagues in other organizations. This inter-mix of desire for convenience and need for authenticity was also evident in ratings for sources of information. One glaring difference in response by categories was in the case of supervisors

who relied heavily upon superiors. Local directors reported relying heavily upon colleagues in other organizations. Findings were similar among respondents in all states, although Pennsylvania and Oklahoma respondents tended to rely more heavily upon superiors for information. In general, administrators relied to a larger extent upon subordinates for information, a finding which is not surprising in view of the administrator's position as the superior.

Table 10

MOST FREQUENT INDIVIDUAL SOURCES OF INFORMATION USED*

Individual Sources of Information	TOTAL % N = 3182	Teacher % N = 1072	Counselor % N = 507	Administrator % N = 586	Local Director % N = 219	Supervisor % N = 374	Teacher Educator % N = 344	Researcher % N = 80
Fellow Workers	72.2	76.5	80.3	69.5	60.3	70.9	62.2	65.0
Experts or Authorities on the Subject	57.4	59.3	55.6	53.6	59.8	54.8	61.0	62.5
Colleagues in Other Organizations	51.5	45.5	53.3	52.2	63.5	53.7	56.4	50.0
Superiors	46.2	46.6	41.6	43.9	44.3	61.0	43.0	36.3
Subordinates in Your Organization	29.1	19.0	16.0	52.2	40.6	31.8	33.7	15.0
Information Service Personnel	27.9	32.5	38.1	19.3	14.2	20.6	25.6	46.3
Other	3.3	4.2	3.0	1.4	4.6	4.0	2.6	2.5

*Respondents may have checked more than one item; thus, totals do not equal 100%.

Respondents' ratings of information services are arrayed in Table 11. Routine mailing of current information was most frequently reported as useful, especially by teachers and counselors. Administrators, local directors, and supervisors found telephone or other direct contact most useful. Teacher educators preferred analysis and interpretation of the literature. Researchers' responses broke the pattern; they preferred specific searches of literature, direct contacts, and analysis and interpretation.

Table 11

INFORMATION SERVICES MOST USEFUL*

Information Services	TOTAL % N = 3182	Teacher % N = 1072	Counselor % N = 507	Administrator % N = 586	Local Director % N = 219	Supervisor % N = 374	Teacher Educator % N = 344	Researcher % N = 80
Routine Mailing of Current Information	65.8	72.5	73.4	55.5	65.8	64.2	59.6	37.5
Telephone or Other Direct Contacts w/Info. Specialists	64.0	58.2	72.8	61.8	76.3	74.1	54.4	62.5
Analysis + Interpretation of Research	53.5	47.1	53.5	60.2	54.3	53.2	60.5	60.0
Specific Searches of Literature	41.3	38.1	33.7	50.7	31.1	35.6	51.7	72.5
Reproductions of Actual Documents	26.0	28.5	15.4	23.9	28.3	28.9	32.0	30.0
Provision of Microfiche Collection and Reading Equipment	24.6	24.2	26.0	18.3	26.0	25.4	30.5	36.3
Other	6.6	5.1	8.5	8.7	2.7	10.4	4.4	1.3

*Respondents may have checked more than one item; thus, totals do not equal 100%.

All target audience categories rated journals and magazines as relatively useful, as may be seen in Table 12. Newsletters and circulars were also regarded as useful except by respondents in teacher educator and researcher categories, who favored abstracts, summaries, and reviews and syntheses of research Bibliographies and indexes were not rated as high, relatively, by respondents in all categories. Only slight differences in the rating of usefulness were found between respondents from different states. The mean ratings reported did not provide the basis for firm summary conclusions, but did give some indication of ordinal differences.

Table 12

USEFULNESS OF INFORMATION PRODUCTS
(RATING ON A FIVE POINT SCALE 1-VERY ADEQUATE 5-INADEQUATE)

Information Products	TOTAL N = 3182	Teacher N = 1072	Counselor N = 507	Administrator N = 586	Local Director N = 219	Supervisor N = 374	Teacher Educator N = 344	Researcher N = 80
Journals and Magazines	2.2	2.1	2.3	2.3	2.4	2.2	2.0	2.3
News Letters and Circulars	2.4	2.4	2.3	2.4	2.3	2.3	2.4	2.9
Abstracts and Summaries	2.6	2.7	2.6	2.5	2.5	2.5	2.3	2.3
Review and Synthesis of Research	2.6	2.7	2.7	2.6	2.6	2.5	2.3	2.2
Bibliographies and Indexes	2.8	2.7	2.8	2.9	3.1	2.8	2.6	2.5

Relevance to the problem, speed of obtaining, currentness, and brevity were highly regarded as characteristics of information by respondents in nearly all target audience categories as evidenced by data presented in Table 13. Respondents in teacher educator and researcher categories more frequently identified authenticity as a desirable characteristic. Administrators were more interested in brevity and ease of obtaining information. Pennsylvania and Wisconsin respondents placed less emphasis upon authenticity and slightly more emphasis on brevity and ease of obtaining than did respondents in other states. Nevada respondents placed more emphasis upon cost of obtaining than did respondents in other states.

Table 13

MOST IMPORTANT CHARACTERISTICS OF INFORMATION*

Characteristics of Information	TOTAL % N = 3182	Teacher % N = 1072	Counselor % N = 507	Administrator % N = 586	Local Director % N = 219	Supervisor % N = 374	Teacher Educator % N = 344	Researcher % N = 80
Relevance to the Problem	68.4	61.7	63.5	71.7	68.9	74.9	83.7	68.8
Speed of Obtaining	47.8	47.7	46.9	53.3	55.3	47.6	52.3	47.5
Currentness	43.4	47.7	50.5	31.4	42.5	43.3	41.6	40.0
Brevity	31.3	27.1	33.7	40.4	32.4	33.7	25.6	15.0
Ease in Identifying	29.3	29.4	25.0	33.8	26.5	29.1	30.5	26.2
Authenticity	28.7	22.5	33.3	32.4	31.5	28.3	31.7	35.0
Comprehensiveness	22.7	22.6	19.9	21.3	22.4	24.3	25.3	35.0
Cost of Obtaining	18.4	24.1	21.5	13.5	11.9	10.4	18.3	13.8
Detail	6.9	10.7	3.9	4.8	6.8	5.1	4.9	5.0
Physical Form	2.6	3.1	1.4	2.6	4.6	2.1	2.6	2.5
Other	1.3	0.7	1.0	3.1	----	1.3	1.7	1.3

*Respondents may have checked more than one item; thus, totals do not equal 100%.

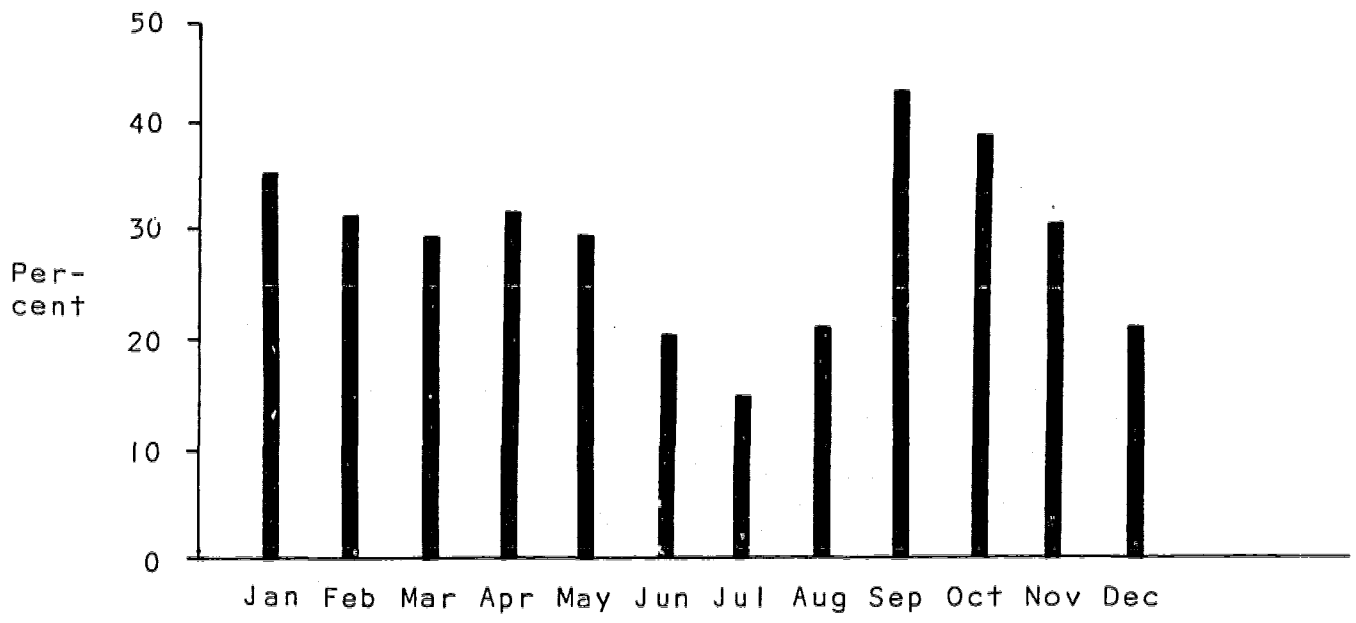
Data presented in Table 14 and illustrated in the figure indicate that heaviest information needs occur in September, October, and January concurrent with the usual beginning dates of school terms. This monthly need is particularly pronounced in the teacher category, while researchers had information needs which were sustained fairly uniformly throughout the year. California respondents identified May as a heavy use month, while Pennsylvania respondents reported August as one of the months of greatest information needs.

Table 14

MONTHLY INFORMATION NEEDS*

Months	TOTAL % N = 3182	Teacher % N = 1072	Counselor % N = 507	Administrator % N = 586	Local Director % N = 219	Supervisor % N = 374	Teacher Educator % N = 344	Researcher % N = 80
January	35.7	41.0	36.1	26.1	27.9	28.9	45.3	43.8
February	33.1	37.4	35.1	25.9	26.0	25.4	39.2	45.0
March	30.5	28.6	36.5	27.6	30.6	26.7	33.1	45.0
April	31.9	28.5	38.9	30.7	33.3	36.1	26.7	42.5
May	29.1	23.1	33.9	28.5	38.4	34.0	26.7	43.8
June	20.4	15.0	14.2	26.5	37.0	23.0	19.4	32.5
July	12.9	9.2	2.4	21.8	19.2	16.3	13.1	30.0
August	19.5	19.3	8.7	25.8	21.9	23.5	15.7	35.0
September	44.4	58.0	34.1	34.0	28.3	38.2	51.5	45.0
October	39.4	43.2	45.8	30.2	24.7	31.8	47.7	55.0
November	30.3	32.5	38.7	21.0	22.4	25.0	34.0	47.5
December	21.0	23.3	22.5	15.0	16.9	16.6	24.7	38.8

*Respondents may have checked more than one item; thus, totals do not equal 100%.



Percentage of Respondents Reporting Information Needs During Month

Study participants were asked how far in advance they usually began to seek information from the several institutional sources shown in Table 15. Local or area school libraries were judged by respondents to require the shortest lead time, the ERIC Clearinghouse the longest. There was considerable difference in the rankings by different target audience categories. For example, researchers anticipated less lead time of the state education agency and the RCU, while local directors expected longer lead times of those agencies. Wisconsin and Nevada respondents estimated more advanced planning needed for service from the RCU. Pennsylvania respondents estimated much more need for advanced planning to obtain information from a local or area school library. Counselors estimated the least lead time, while local directors and researchers estimated the greatest. Conversely, Oklahoma researchers estimated the least lead time and Oklahoma local directors estimated only 6.4 days for services from the state education agency.

Table 15

ADVANCED PLANNING FOR INFORMATION SERVICE FROM INSTITUTIONS
(AVERAGE NUMBER OF DAYS)

Institutions	TOTAL N = 3182	Teachers N = 1072	Counselors N = 507	Administrators N = 586	Local Directors N = 219	Supervisors N = 374	Teacher Educators N = 344	Researchers N = 80
Local or Area School Library	15.1	13.6	10.8	20.9	14.9	15.0	15.9	17.3
University or College Library	24.2	23.7	19.9	27.5	30.5	24.5	21.1	29.7
University or College Department	27.8	27.2	23.8	33.7	30.9	31.2	19.9	26.0
RCU	34.4	36.5	32.3	30.2	41.5	40.4	28.6	25.3
State Education Agency	36.9	39.0	33.5	38.3	41.2	35.5	36.0	17.8
Professional Organization	38.8	40.0	28.5	41.3	36.8	43.2	41.2	45.1
ERIC Document Reproduction Service	40.9	33.9	24.0	49.1	36.9	58.8	44.7	77.8
ERIC Clearinghouse	43.9	43.2	32.3	45.6	40.5	44.5	44.9	99.5

When asked how long it usually took to receive a reply, respondents credited all agencies with considerably more speed than they allowed in their requests. Relative position of the agencies remained about the same as shown in Table 16. New York respondents reported a longer time required to receive a reply from all sources. Teacher educator respondents reported a longer wait from many institutions than did respondents in other categories.

Table 16

ACTUAL TIME REQUIRED TO RECEIVE A REPLY FROM INSTITUTIONS
(AVERAGE NUMBER OF DAYS)

Institutions	TOTAL N = 3182	Teacher N = 1072	Counselor N = 507	Administrator N = 586	Local Director N = 219	Supervisor N = 374	Teacher Educator N = 344	Researcher N = 80
Local or Area School Library	4.4	3.5	6.1	3.4	5.1	5.0	6.1	2.3
University or College Library	8.1	6.7	7.9	8.1	10.2	9.1	9.3	12.6
University or College Department	10.9	9.7	11.1	11.9	11.9	14.0	8.9	12.5
RCU	15.7	16.3	17.9	14.5	15.7	13.2	17.7	6.5
State Education Agency	17.5	16.9	21.4	14.9	19.3	13.0	23.3	9.1
Professional Organization	23.8	23.2	23.7	24.3	20.3	25.0	25.6	24.2
ERIC Clearinghouse	24.9	27.6	15.9	22.1	30.2	26.0	30.8	22.9
ERIC Document Reproduction Service	32.0	34.3	31.1	24.6	35.7	28.3	42.5	25.4

Study participants were asked to indicate, from among several choices, the farthest that they would travel to obtain information to solve an important problem in their work. As shown in Table 17, well over one-third were willing to travel to another town or city in the same state. The latter willingness was more prevalent among researchers and teacher educators. Willingness to travel within the state for information was particularly true in the case of local directors, supervisors, and administrators which tends to indicate a relationship between nature of job function and

willingness. Fewer California respondents expressed willingness to leave the state.

Table 17

WILLINGNESS TO TRAVEL FOR INFORMATION*

Travel Distance	TOTAL % N = 3182	Teachers % N = 1072	Counselors % N = 507	Administrators % N = 586	Local Directors % N = 219	Supervisors % N = 374	Teacher Educators % N = 344	Researchers % N = 80
Another Town or City in the State	38.6	37.3	29.8	44.4	54.8	47.9	29.9	17.5
Another Town or City in Another State	25.6	18.5	23.5	31.6	27.9	27.5	33.7	41.3
Another Location in the Same Town or City	24.3	32.8	31.4	14.0	11.4	15.5	22.7	25.0
Another Building in the Vicinity	5.5	5.0	6.3	6.1	2.3	3.7	8.1	8.8
Same Building	4.0	6.8	4.7	1.7	1.8	1.9	2.0	1.3
Same Office or Room	0.5	0.8	0.4	0.9	----	----	----	1.3

*Non-response is not shown; thus, totals do not equal 100%.

Table 18 shows that researchers spend the most time each month gathering information to solve problems, at 26.1 hours. Local directors, administrators, and teacher educators report spending over 18 hours gathering information each month. Even teachers, with the least apparent time available for such activity, spend an average of 13.3 hours each month for this purpose. The 16.3 hours per month spent by all respondents in all categories is roughly 10 percent of all working hours during a month. When applied to the population of over 58,000 from which the sample was drawn, the 16.3 hour average takes on an astounding significance. Some differences were found between the average time spent by respondents in different states, ranging from 12.5 hours in Nevada to 20.5 hours in Pennsylvania for all target audience categories.

Table 18

TIME SPENT EACH MONTH GATHERING INFORMATION TO SOLVE PROBLEMS

Respondents	N	Average Number of Hours
Teachers	1072	13.3
Counselors	507	14.6
Administrators	586	18.7
Local Directors	219	20.2
Supervisors	374	17.5
Teacher Educators	344	18.7
Researchers	80	26.1
TOTAL	3182	16.3

Less than one-half of all respondents claimed familiarity with ERIC. As shown in Table 19, nearly all researchers were familiar with ERIC. Local directors at 65.3 percent more frequently reported familiarity with ERIC than did teacher educators, supervisors, and administrators. Teachers and counselors were least familiar with the system. More than one-half of the respondents in Pennsylvania, New Jersey, and California reported familiarity with ERIC. Less than 40 percent of the respondents in New York, Oklahoma, and Nevada were familiar with ERIC.

Table 19

FAMILIARITY WITH ERIC

Respondents	N	% Yes	% No
Teachers	1072	21.7	76.9
Counselors	507	32.3	74.7
Administrators	586	57.2	41.1
Local Directors	219	65.3	34.7
Supervisors	374	59.6	38.5
Teacher Educators	344	53.5	43.9
Researchers	80	95.0	5.0
TOTAL %*	3182	43.1	55.7

*Non-response is not shown; thus, totals do not equal 100%.

Only 18.9 percent of all respondents in all categories admitted to having had systematic instruction on the use of ERIC. Researchers most frequently reported instruction (53.8 percent), while few teachers had apparently received instruction (10.2 percent). Reported in Table 20, these data seem to indicate primary targeting of user education at researchers and secondary targeting at educational leaders. Wisconsin and California respondents (at over 21 percent), more frequently reported systematic instruction on the use of ERIC.

Table 20

SYSTEMATIC INSTRUCTION RECEIVED ON USE OF ERIC

Respondents	N	% Yes	% No
Teachers	1072	10.2	85.4
Counselors	507	18.9	75.3
Administrators	586	22.7	71.5
Local Directors	219	24.2	67.6
Supervisors	374	24.1	69.5
Teacher Educators	344	22.1	75.6
Researchers	80	53.8	43.8
TOTAL %*	3182	18.9	76.0

*Non-response is not shown; thus, totals do not equal 100%.

While reported in Table 19 that 55.7 percent of the respondents claimed no familiarity with ERIC, only 47.6 percent claimed that they had used none of the ERIC materials (Table 21). Though this seems contradictory, it is likely that users of the ERIC materials did not regard use of products as equated to familiarity with the system. Teachers least frequently reported using ERIC materials. In fact, less than 10 percent had used any single material in the list of choices. Researchers reported highest use of materials. *Abstracts of Research and Related Materials in Vocational and Technical Education* (ARM) and *Research in Education* (RIE) were reported as used by higher percentages in every target audience category. EDRS hard copy and *Current Index to Journals in Education* (CIJE) were least frequently reported as used. Pennsylvania respondents less frequently reported no use of ERIC materials.

Table 21

ERIC MATERIALS USED*

ERIC Materials	TOTAL % N = 3182	Teachers % N = 1072	Counselors % N = 507	Administrators % N = 586	Local Directors % N = 219	Supervisors % N = 374	Teacher Educators % N = 344	Researchers % N = 80
None of these	47.6	65.8	54.4	29.7	35.2	39.8	34.6	18.8
ARM	19.6	7.0	11.8	21.5	36.5	26.2	38.7	66.3
RIE	17.9	7.3	13.2	26.1	20.1	16.6	30.5	75.0
Other ERIC Material	1.7	1.0	1.6	2.2	----	0.5	2.9	12.5
AIM	16.9	6.3	7.5	19.5	35.6	20.9	34.6	55.0
Review and Synthesis of Research	12.3	4.2	6.7	13.3	15.1	14.2	29.4	57.5
ERIC Microfiche (MF)	12.2	4.1	4.5	16.2	14.6	16.8	24.1	61.3
CIJE	10.3	5.8	7.9	14.1	9.1	7.5	16.9	48.8
ERIC Hard Copy (HC)	8.2	2.1	3.4	11.6	7.3	9.6	18.6	46.3

*Respondents may have checked more than one item; thus, totals do not equal 100%.

The ERIC Clearinghouse and Research Coordination Unit were the most frequently reported sources of ERIC materials. These data, reported in Table 22, also show that 49.2 percent reported receiving ERIC materials from none of the sources listed. This percentage is further support of data reported in Tables 19 and 21 relative to non-familiarity and nonuse of ERIC materials. Data in Table 22 also show more active use of sources by researchers.

Table 22

SOURCES FROM WHICH ERIC MATERIALS REQUESTED OR RECEIVED*

Sources from Which ERIC Materials Requested or Received	TOTAL % N = 3182	Teachers % N = 1072	Counselors % N = 507	Administrators % N = 586	Local Directors % N = 219	Supervisors % N = 374	Teacher Educators % N = 344	Researchers % N = 80
None of these	49.2	66.8	55.8	37.5	34.2	37.4	34.3	17.5
ERIC Clearinghouse	11.2	1.6	7.1	15.2	21.5	12.3	24.4	46.3
RCU	11.0	3.6	6.1	16.4	19.2	19.8	12.2	33.8
University or College Library	10.9	7.6	10.5	8.7	4.1	8.0	27.0	37.5
Local or Area School Library	7.6	5.0	6.5	9.9	7.8	10.2	6.4	23.8
ERIC Document Reproduction Service	7.4	1.2	3.4	9.7	13.2	8.8	16.0	37.5
State Education Agency	4.8	2.4	3.6	7.8	5.5	5.6	5.8	11.3
University or College Department	4.8	3.8	3.0	3.9	3.7	4.0	13.4	7.5
Professional Organization	4.0	2.0	4.1	6.0	1.8	4.8	7.3	3.8
Other Sources of ERIC Material	1.6	0.4	0.6	1.4	1.8	2.9	0.9	21.3

*Respondents may have checked more than one item; thus, totals do not equal 100%.

Nearly 86 percent of all respondents expressed willingness to participate in an intensive one-day training session on the use of ERIC. This willingness was expressed by nearly 79 percent of the researchers, 95 percent of whom already claimed familiarity with ERIC. Willingness to participate was most frequently expressed by local directors and supervisors. Even teachers, the largest respondent category, neared the average of all respondents in their willingness to participate in training. Although there was little variation between respondents in different states, Nevada respondents expressed the greatest willingness to participate in training. Table 23 data support the finding that large numbers of vocational-technical educators desire training.

Table 23

WILLINGNESS TO PARTICIPATE IN AN INTENSIVE ONE-DAY TRAINING SESSION ON USE OF ERIC

Respondents	N	% Yes	% No
Teachers	1072	84.5	9.7
Counselors	507	85.2	8.1
Administrators	586	85.7	9.0
Local Directors	219	91.3	9.7
Supervisors	374	89.6	7.8
Teacher Educators	344	85.8	10.8
Researchers	80	78.8	20.0
TOTAL %*	3182	85.9	9.5

*Non-response is not shown; thus, totals do not equal 100%.

COMPARISON OF TARGET AUDIENCE SUB-SETS BASED UPON COURSE ENROLLMENT

The target audience study was conceived as basically descriptive; however, participating RCU personnel did hypothesize that individuals who currently were enrolled in courses would show a different pattern of information gathering than those not currently enrolled.

Sub-sets were sorted and statistical comparisons were made, utilizing Chi-Square, between the sub-sets.

Patterns or trends were difficult to discern between groups. The only significant differences (i.e., at the .05 level) were found in sources of information. Those enrolled used the university or college library or department more frequently than those who were not enrolled. Further, those who were enrolled used organizational subordinates as a source of information significantly less (i.e., at the .05 level) than those not enrolled.

Both of these findings lend credibility to the comparison because it is so obvious that course enrollees have greater access to university and college libraries and departments. Too, it seems

less likely that course enrollees would have subordinate personnel upon which to rely for information because of their learner status, although analysis of the sub-set's position was not made.

SUMMARY

The data summarized and reported in this chapter provides a description of the organizational levels, subject-matter field affiliation, and personal educational activities of 3,229 respondents in seven target audience categories in seven states. The target audience categories were administrators, counselors, local directors, researchers, supervisors, teacher educators, and teachers. The seven states were California, Nevada, New Jersey, New York, Oklahoma, Pennsylvania, and Wisconsin.

Summarization of response to questionnaire items are reported as frequencies, percentages, or means. These data provide empirical evidence of user-reported needs, usefulness, awareness, and use of certain information sources, products, and services, especially relative to consideration of form, time, and space as specified in Objective Two. Data are reported for the study by target audience category, but not by state. Important differences of specific states are noted in the narrative.

A statistical comparison on all questionnaire items was made between sub-sets of respondents who had or had not been enrolled in courses during the preceding 12 months. No important differences were found between these sub-sets. The only significant differences were in information sources. The enrollees used university or college libraries and departments as information sources more frequently than did non-enrollees.

Certain findings of the study are substantiated by findings in previous studies (e.g., users prefer direct, personal, and convenient sources). Similarity of response between states, where data had been independently collected, and between target audience categories strongly supported confidence in the total findings.

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations in this chapter were based upon findings from a study of 3,229 vocational-technical educators in seven states, who were in a stratified random sample of seven target audience categories. These statements have been framed insofar as possible by the study objectives and hypothesis, but with intent of providing direction for system design.

CONCLUSIONS

The underscored conclusions are followed by subsidiary explanation and support. The conclusions do not follow the order in which findings were reported in Chapter II.

The vast audience of practitioners in vocational-technical education at the local level (i.e., teachers, counselors, local directors, administrators) is in need of better access to information products and services, especially preceding the beginning of school terms.

It was evident that the largest segment of the total target audience is at the local level, that this audience is largely dependent upon local sources for information, and that this audience is neither aware of, nor using, newer information products, especially ERIC materials. The greatest need among this audience is during September, October, and January preceding the beginning of new school terms.

Large amounts of time are used by vocational-technical educators in gathering information for their work.

An average of 16.3 hours each month was reported by vocational-technical educators. This amount ranged from an average of 13.3 hours for teachers to 26.1 hours for researchers. Based upon a 40-hour week, the average exceeds 10 percent of all working time and highlights the potential improvement that is possible by either shortening the time or increasing the useful yield.

Many vocational-technical educators are unfamiliar with ERIC, few have received any systematic instruction on its use, and most would be willing to undergo intensive training in its use.

It was evident that familiarity with ERIC was only widespread among researchers. Few local-level personnel (e.g., counselors, 32.3 percent and teachers, 21.7 percent) were familiar with ERIC. Only 18.9 percent of all vocational-technical educators admitted to any systematic instruction on using ERIC, while 85.9 percent expressed willingness to undergo intensive training in its use.

Sources of information used most were rated lower in adequacy of information by vocational-technical educators.

The ordinal arrangement of institutional sources of information in Tables 7 and 8 suggest that vocational-technical educators tend to rate the most-used sources lower. This implies that "familiarity breeds contempt," but another logical explanation might have to do with more limited resources available to local institutions which are more frequently used because they are convenient and provide faster, if not adequate, service.

Different forms of information are more useful to vocational-technical educators in different target audience categories.

There was some evidence in the data that certain target audiences, by rating certain information products more highly, were putting more emphasis upon certain purposes of information. For example, by rating journals and magazines most highly, teachers seemed to be putting more emphasis upon current awareness (Table 12). This same group found routine mailing of current information most useful as a service (Table 11). On the other hand, researchers seemed to put more emphasis upon more complete information in their high rating of review and syntheses of research (Table 12), their perception of the usefulness of specific searches (Table 11), and their higher rating of original reports (Table 9).

Characteristics of information that are important to vocational-technical educators are relevance to the problem, speed of obtaining, currentness, and brevity, although brevity is less important to teacher educators and researchers than authenticity.

Relevance to the problem was understandably the most important single characteristic of information to potential users. The speed of obtaining and the currentness of information were the next most important characteristics for all categories. Brevity was important to all categories, but authenticity was even more important to teacher educators and researchers.

Regularly distributed abstract journals, such as ARM, RIE, and AIM, are the most frequently used ERIC information products, but many vocational-technical educators have not used any of the ERIC information products.

A great many teachers (65.8 percent) and counselors (54.4 percent) had not used any ERIC information products. About one-third of the administrators, local directors, and teacher educators had not used ERIC information products. ARM was most frequently reported as used, followed closely by RIE and AIM.

The ERIC Clearinghouse and the RCU have been widely distributing ERIC information products, especially among administrators, local directors, supervisors, and researchers, but many vocational-technical educators have never received, requested, or had opportunity to use ERIC materials.

The ERIC Clearinghouse on Vocational and Technical Education and State Research Coordination Units have been active in distributing ERIC materials and this distribution had been targeted at the leadership in vocational-technical education. Others have not had equal accessibility to materials and equipment.

Vocational-technical educators prefer direct, personal contact with familiar and convenient sources of information, but are willing to travel for information needed to solve important problems in their work.

This conclusion is based upon a conglomerate of data collected from study participants relative to their use of information sources, products, and services; their perception of the usefulness of these; and their expressed willingness to travel. The incongruence between desire for convenience and willingness to travel seems to relate to the need, sometimes, for authenticity and direct contact with the source.

Some information services are more useful to vocational-technical educators, with differences existing between target audience categories; for example:

- Teachers and counselors find routine mailing of current information as useful
- Administrators, local directors, and supervisors find telephone and other direct contact with information specialists useful

- Teacher educators find analyses and interpretations of research useful

- Researchers find specific searches of the literature useful

Vocational-technical educators receive faster service from most information sources than they expect, but service is much slower than is desirable.

Faster service was reported received from local sources, as expected. Although service was reported as about 10 days faster than expected, the range of 4.4 days for local or area school libraries to 32 days for the ERIC Document Reproduction Service seems excessive.

Few important differences exist between information users in different states.

In spite of differences in the demographic characteristics of the states in the study, wide geographical distribution throughout the nation, and different sampling techniques actually employed, a surprising similarity in findings existed. There is reason to believe that conclusions and recommendations arising from the findings of this study are broadly applicable throughout the nation.

Vocational-technical educators who themselves are enrolled in courses are not significantly different from those not enrolled.

The hypothesis that course-enrollees would be different in their patterns of information use was rejected. Significant differences were found only in their sources of information. Their more intensive use of university and college libraries and departments as an information source was inherent in their status as students which, in effect, made these local sources. Their lesser reliance on subordinates for information was probably due to their own position.

RECOMMENDATIONS

The recommendations are an outcome of the foregoing conclusions that had been synthesized from data collected. Each underscored recommendation is followed by explanatory or supportive data.

A training unit should be developed which will assist vocational-technical educators gain the knowledge and skill needed to effectively use available information resources; the unit should be used in preservice and in-service teacher education programs, graduate education programs, professional organization workshops, and in state departments of education.

The greatest priority in further system development should be assigned to user education. It was concluded in this study that many users did not know how to use ERIC, had not received any training, and desired training. If ERIC and other information systems are to be used effectively by practitioners in each of several categories, they must have opportunities to learn how to use these systems. Because this need is so widespread it is recommended that this training be given at preservice, in-service, and graduate levels and that the training units be offered through professional organizations, as well.

Local and area school libraries should be given assistance in developing information resources and services for use by teachers and counselors.

Convenience and familiarity were important to users. Local administrators, directors, counselors, and teachers obviously need and would use better information resources made available at the local and area school level. Local and area school libraries are not presently rated as very adequate, relevant to other sources, and it is apparent that these libraries need assistance in developing better resources and service techniques. Such a program could be part of a general state scheme to decentralize its information system. Funds should be identified and allocated to development of local resources.

Information products should be designed for the intended users, with special attention to the functional role of the target audience and the intended use for the product.

It was concluded that differences existed between target audience categories in their use of various kinds of information products, and in their rating of various kinds of information services. These differences indicated some fundamental differences in intended use of products. Further analysis of this use and preference may eventually provide guidelines for design of more appropriate information products for different target audiences. At this time it is apparent that teachers and counselors have current awareness needs and prefer routine dissemination, while researchers need in-depth information.

Journals, magazines, newsletters, and circulars, especially those distributed by professional organizations, should be regarded as a viable vehicle for the dissemination of information.

Professional organizations were the second most used class of instructional sources, yet they were rated very low for their adequacy of service. Professional journals and magazines were rated relatively high as a useful source of information, as were newsletters and circulars. This led to conclusion that they were actually useful and that effort should be made to use these as vehicles for dissemination of information in the system.

A brief, targeted version of a regularly-distributed abstract journal should be tested in use with local school personnel.

The most frequently used ERIC materials were *Abstracts of Research and Related Materials in Vocational and Technical Education* (ARM), *Research in Education* (RIE), and *Abstracts of Instructional Materials in Vocational and Technical Education* (AIM). Most local personnel valued brevity. Therefore, it is recommended that targeted versions of ARM or AIM be produced and distributed. For example, one version might be entitled *Abstracts of Instructional Materials in Distributive Education*. Such an abstract compilation would provide distributive education teacher-coordinators with brief descriptions (resumes) and full-text back-up (microfiche) of instructional materials in their own field. Computer-generation of such a publication is now feasible.

A wide range of information services should be developed in state, area, and local information dissemination programs.

Teachers and counselors may be served effectively by routine mailing of current information, but other target audience categories frequently need search and interpretation services. Any information dissemination system should provide differentiated services based upon user needs and priorities assigned to categories of users.

The time required to respond to user needs must be decreased by improved practices at all levels in the system and by improved capacity to meet information needs at the local and area school level.

The time to obtain response to information request has been, at best, excessive. Even services by organizations which are deemed most adequate are, nevertheless, inadequate in this respect. It is apparent that adequacy of service must be improved at local and area school levels and speeded up at all levels.

Target audience studies should be conducted on a limited scale in all states to verify the applicability of these findings, conclusions, and recommendations from the standpoint of geographical differences and longitudinal stability of the findings.

Although few important differences were found between users in the study states, most information dissemination system planners will want to verify findings in their own states. It is probable that small samples will adequately demonstrate the applicability of findings of this report to most states. However, as information dissemination systems develop and users get experience with these systems, it is likely that new trends will emerge which may have implications for system change.

Future studies should focus upon users' problems and system variations which will satisfy user needs; a variety of methodology should be used to build upon existent knowledge.

The present study focused upon a description of information users' perceptions of information sources, products, and services, especially as related to form, time, and space. Future study should probably focus upon explanation of the phenomena, prediction of the results of system variations, and control of some of the variables involved in system sources, products, and services.

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APPENDIX A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF EDUCATION
BOX 911, HARRISBURG, PA. 17126

January 26, 1970

Dear Educator:

The Pennsylvania Research Coordinating Unit for Vocational Education, in cooperation with The Center for Vocational and Technical Education at The Ohio State University, and six other states are involved in a cooperative venture examining the use of vocational-technical education research information materials by educators.

Because of your apparent interest and experience in vocational-technical education, you have been selected to receive the enclosed questionnaire concerning research information materials. You can help us greatly by answering the enclosed questionnaire and returning it to our office by February 11. We in turn hope to better serve you as a result of the information gathered from this study.

A prepaid self-addressed envelope has been enclosed for your convenience in returning the questionnaire which should take approximately 15 minutes to complete.

Thank you for your attention to this request.

Sincerely,

Jay Smink, Director
Pennsylvania RCU

JS/jf

Enclosures

APPENDIX B

INFORMATION DISSEMINATION SYSTEM TARGET AUDIENCE STUDY

SPONSORS

The Center for Vocational and
Technical Education
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

California Research Coordinating Unit
Vocational Education Section
State Department of Education
721 Capitol Mall
Sacramento, California 95814

INSTRUCTIONS

Your response to this questionnaire will help in the design of an information dissemination system for vocational-technical education. Please read each item and respond based upon your present role in vocational-technical education.

QUESTIONNAIRE

1. Check the designation below which best identifies your major responsibilities in vocational-technical education.

___ Teacher (e.g., teacher, instructor, teacher-coordinator)
___ Counselor (e.g., counselor, vocational counselor)
___ Administrator (e.g., superintendent, principal, president, dean, state program director)
___ Local Director of Vocational Education
___ Supervisor (e.g., supervisor, assistant supervisor, consultant, specialist, coordinator)
___ Teacher Educator (e.g., teacher educator, teacher trainer, department chairman, professor)
___ Researcher (e.g., RCU director, professor, research associate, research director)
___ Other (specify) _____

2. In what type of organization are you employed? (Check one or more)

____ Elementary school
____ Junior or senior high school
____ Secondary vocational-technical school
____ Post-secondary vocational-technical school
____ Intermediate district or agency
____ Community or junior college (2 year)
____ College or university
____ State education agency (i.e., SDE, SDVE)
____ Other (specify)_____

3. What is your present vocational-technical education or other subject-matter field affiliation? (Check one or more)

____ Agriculture
____ Business and office
____ Distributive
____ Health occupations
____ Home economics
____ Industrial arts
____ Technical
____ Trade and industrial
____ Vocational-technical education (all fields)
____ Other (specify)_____

4. Have you been enrolled in any graduate, undergraduate, or inservice courses during the past 12 months?

____ Yes
____ No

5. Which of the following institutions have you used as sources of information in the past 12 months in solving problems in your work? (Check one or more)

____ Local or area school library
____ State vocational-technical education research coordinating unit (RCU)
____ State education agency (SDE, SDVE)
____ University or college library
____ University or college department
____ Professional organization (e.g., AVA, NEA)
____ ERIC clearinghouse (e.g., VT, JC, AC)
____ ERIC Document Reproduction Service (EDRS)
____ Other (specify)_____
____ None of the above

6. If you have requested or received information from any of the following sources, how would you rate the adequacy of service? (Check one response for each item in A or B)

	A. Check if never used	B. Circle your rating if ever used Very adequate — Inadequate				
Local or area school library.	☐	1	2	3	4	5
State vocational-technical education research coordinating unit (RCU).	☐	1	2	3	4	5
State education agency (i.e.; SDE, SDVE).	☐	1	2	3	4	5
University or college library.	☐	1	2	3	4	5
University or college department	☐	1	2	3	4	5
Professional organization (e.g., AVA, NEA)	☐	1	2	3	4	5
ERIC clearinghouse (e.g., VT, JC, AC)	☐	1	2	3	4	5
ERIC Document Reproduction Service (EDRS)	☐	1	2	3	4	5

7. Please rate the usefulness of each of the following sources of information in solving problems in your work. (Check one response for each item in A or B)

	A. Check if never used	B. Circle your rating if ever used Very adequate — Inadequate				
Professional and reference books.	☐	1	2	3	4	5
Direct personal contacts	☐	1	2	3	4	5
Research and development project reports.	☐	1	2	3	4	5
Professional journals and magazines.	☐	1	2	3	4	5
Graduate or inservice courses.	☐	1	2	3	4	5
Conventions, conferences, and workshops.	☐	1	2	3	4	5
Mass media (e.g., newspapers, television).	☐	1	2	3	4	5
Plans, guides, and standards.	☐	1	2	3	4	5
Information Analysis Products (e.g., review and synthesis, interpretative papers, etc.) .	☐	1	2	3	4	5

8. Please check the three most frequent individual sources of information used for solving problems in your work.

____ Subordinates in your organization
____ Fellow workers in your organization
____ Superiors in your organization
____ Colleagues in other organizations
____ Experts or authorities on the subject
____ Information service personnel (e.g., librarians, information specialists)
____ Other (specify)_____

9. Please check the three information services which would be most useful, if available, for solving problems in your work.

____ Specific searches of the literature
____ Analysis and interpretation of research
____ Routine mailing of current information
____ Provision of microfiche collection and reading equipment
____ Reproductions of actual documents
____ Telephone or other direct contacts with information specialists
____ Other (specify)_____

10. How useful do you find each of the following information products in solving problems in your work? (Check one response for each item in A or B)

	A. Check if never used	B. Circle your rating if ever used Very adequate ... Inadequate
Bibliographies and indexes	☐	1 2 3 4 5
Abstracts and summaries	☐	1 2 3 4 5
Journals and magazines	☐	1 2 3 4 5
Newsletters and circulars	☐	1 2 3 4 5
Review and synthesis of research	☐	1 2 3 4 5

11. Check three characteristics of information you regard as the most important in solving problems in your work.

____ Brevity
____ Ease in identifying
____ Speed of obtaining
____ Detail
____ Cost of obtaining
____ Physical form
____ Authenticity
____ Relevance to your problem
____ Currentness
____ Comprehensiveness
____ Other (specify)_____

12. During which months of the year are your information needs greatest?

Circle one or more months

Jan.	Apr.	Jul.	Oct.
Feb.	May	Aug.	Nov.
Mar.	June	Sept.	Dec.

13. When you need information to solve an important problem in your work, how far in advance do you usually begin to seek it from each of the following sources? (Check one response for each source)

	Never used	check one			
		1 day	1 week	1 mo.	6 mo.
Local or area school library					
State vocational-technical education research coordinating unit (RCU)					
State education agency (SDE, SDVE)					
University or college library					
University or college department					
Professional organization (e.g., AVA, NEA)					
ERIC clearinghouse (e.g., VT, JC, AC)					
ERIC Document Reproduction Service (EDRS)					

14. If you have requested information from any of the following sources, how long did it usually take to receive a reply? (Check one response for each source)

	Never used	check one			
		1 day	1 week	1 mo.	6 mo.
Local or area school library					
State vocational-technical education research coordinating unit (RCU).					
State education agency (SDE, SDVE)					
University or college library.					
University or college department					
Professional organization (e.g., AVA, NEA)					
ERIC clearinghouse (e.g., VT, JC, AC)					
ERIC Document Reproduction Service (EDRS)					

15. When you need information to solve an important problem in your work, what is the farthest that you would be willing to go to examine it? (Check one)

____ Same office or room
____ Same building
____ Another building in the vicinity
____ Another location in the same town or city
____ Another town or city in the state
____ Another town or city in another state

16. In a typical month, how many hours do you spend in gathering information to solve problems in your work? _____

17. Are you familiar with the Educational Resources Information Center (ERIC) system?

____ Yes
____ No

18. Have you ever received any systematic instruction on use of the ERIC system?

____ Yes
____ No

19. Which of the following ERIC materials have you used? (Check one or more)

____ *Research in Education* (RIE)
____ *Current Index to Journals in Education* (CIJE)
____ *Abstracts of Research and Related Materials in Vocational and Technical Education* (ARM)
____ *Abstracts of Instructional Materials in Vocational and Technical Education* (AIM)
____ *Review and Synthesis of Research in . . .* (e.g., Technical Education, Health Occupations, Economics of Vocational Education)
____ ERIC microfiche (MF)
____ ERIC hardcopy (HC)
____ Other ERIC materials (specify) _____
____ None of the above

20. From what sources have you requested or received ERIC materials?

____ Local or area school library
____ State Vocational-technical education research coordinating unit (RCU)
____ State education agency (e.g., SDE, SDVE)
____ University or college library
____ University or college department
____ Professional organization (e.g., AVA, NEA)
____ ERIC clearinghouse (e.g., VT, JC, AC)
____ ERIC Document Reproduction Service (EDRS)
____ Other sources of ERIC materials (specify) _____
____ None of the above

21. Would you be willing to participate in an intensive one-day training session on use of the ERIC system if offered within 20 miles of your work?

____ Yes
____ No

22. Any suggestions for improving information dissemination in vocational-technical education will be appreciated.

_____
_____
_____
_____