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ABSTRACT

This handbook was designed as a tool to assist school and agency staff in management and in-service training needed in implementing a comprehensive Career Information System (CIS). The background, goals, and organization of CIS are given briefly. An explanation of the System which is computer-based yet also employs a manual needle-sort system is presented. System components (such as the QUEST questionnaire, the QUEST List, occupational descriptions, occupational dumps, localized information, occupational books, VISIT, education and training information, and occupational interview cassettes) are discussed along with some background and validation information. Considerations mentioned in starting the System are selection and role of the coordinator, publicity, orientation to staff, and pre-service for the guidance staff which includes such practical information as location of the System and responsibility of counselors. Points to consider in implementing the System and in troubleshooting technical and personal problems are discussed. Abstracts of evaluative research are presented. Appendixes include copies of the evaluation questionnaires, the user agreement, and standards for use of the System. (SC)

GETTING IT GOING--KEEPING IT RUNNING

a handbook for career information system coordinators

"GETTING IT GOING--
KEEPING IT RUNNING"

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by

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TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

NEED FOR HANDBOOK

New programs don't implement themselves; they need explanation; they require physical facilities; they involve orientation and training of staff; and they need management and evaluation. A comprehensive career information system is a new idea in most schools and agencies; consequently, a management and in-service training system is needed. This handbook has been designed as a tool to assist school and agency staff in these management endeavors. This text will attempt to reflect what is known about the System and what has "worked" in various educational and agency settings.

BACKGROUND OF CIS

Although the concept of an occupational information system that could effectively serve students and clients in a variety of Oregon settings was held by several educational and agency personnel previous to 1969, it was not until that time that representatives from the Oregon Employment Division, the State Department of Education, Oregon State University, the University of Oregon, and the Lane Intermediate Education District took concrete steps to "get it together." They studied information systems developed in many parts of the country. Their research and discussion led to a thorough review of system components and the feasibility of a career information system including such factors as information development, delivery devices, in-service training, location, staffing and resources for funding.

By the spring of 1970, the group was determined to establish a Career Information System for the state. They proposed that the Career Information System be a model inter-agency consortium which would provide practical means of direct access to current career and labor market information. The following goals were articulated:

Goals of CIS.

1. Finance the formation of an inter-agency Career Information System for the collection, packaging, and dissemination of career information.

2. Develop information in an array of media and formats reflecting differing needs of individuals and resources of agencies.

3. Manage various information access systems.

4. Provide systems engineering services to schools and social agencies throughout the state. Such services would help individual schools and agencies select appropriate information and delivery components for a functioning system.

5. Provide consultant services to help individual schools and agency staff members integrate occupational information into ongoing instructional, planning and counseling functions.

6. Provide pre-service and in-service training opportunities for present and potential schools and agency staff.

7. Field test organizational and financial arrangements of the CIS program prior to exposure throughout the state.

8. Evaluate the efficiency of the CIS operations and the effectiveness of the disseminated information in improving student and client career decisions.

This group of representatives recognized that new and attractive delivery vehicles would be used, but that valid information content should be the real heart of the System, and effective implementation would be essential.

Board of Directors. Initial funding for the Career Information System was provided in the fall of 1971 by the Manpower Administration of the U.S. Department of Labor. A Board of Directors was formed. Membership in this consortium is by formal invitation and is extended to representatives from secondary and higher educational institutions, social service agencies, CIS user agencies or other

persons designated by the Board. Current CIS members include: Oregon Employment Division, Oregon State Department of Education, community colleges, intermediate education districts, local school districts and the Oregon State System of Higher Education. This Board establishes CIS policy, represents member institutions, and fosters statewide cooperation and program development.

CIS Staff

CIS Staff. The CIS maintains a core staff, housed at the University of Oregon, for the purpose of maintaining and fostering use of the System. For both basic data collection and contact with clients, CIS relies on existing institutions. It has working agreements for these purposes with various federal, state, and local data producing agencies and with local schools and social service agencies.

Continued operation of the System depends on these agreements and the financial support of user institutions.

CHAPTER II

THE SYSTEM

HOW THE SYSTEM WORKS

Mechanically, the CIS is an information system designed to rapidly and efficiently disseminate career information. CIS makes extensive use of computerized data that can be easily delivered on command from a teletypewriter terminal. Anyone with the ability to follow a set of simple instructions can use the teletypewriter to converse with the computer and obtain desired information about occupational areas. At the time of writing, the System included extensive labor market and educational information about 224 carefully selected occupational areas defined to represent 90 percent of Oregon's labor market.

In addition to the computer-based system, there is a manual needle-sort system utilizing a traditional card sorting process. Information files are supplied in book form as computer "dumps," thus the Occupational Needle-Sort System closely duplicates the process and function of the computerized version, Occupational Information Access System.

A user (student or client) can begin at any point in the System. He or she can first request a description of any occupation by typing DESC and the four-digit code number for the occupation. The description includes aptitudes, attributes, and abilities needed, as well as the number of persons currently employed locally in the occupation, types of employers, employment prospects locally and nationally, and sources of training.

For specific operating instructions, titles of occupations, and the QUEST questionnaire, see the CIS User's Handbook.

Most users begin with an exploratory questionnaire (QUEST) where they self-report their abilities, interests, and other preferences related to occupational requirements. The teletypewriter then prints out a list of the occupational titles that correspond to his/her particular preferences. The user has a number of important options for using the list. He/she can ask WHY NOT--why a certain occupation wasn't listed. The answer might be that the minimum wage that the user had stated as his preference on QUEST was too high so the occupation in question is not a likely prospect for further exploration. If he chooses, he can CHANGE answers and get new lists. Or the user can ask for DESC (occupational description) of one or several of the occupations listed. Another option is to consult one of the reference books (e.g., Occupational Outlook Handbook) that are a component of both the computerized and needle-sort systems. In some areas, he can type in VISIT and the occupational number to get the name of a person in the local community who has volunteered to talk with users of CIS about his field.

For the first time, the System includes a listing of occupational preparatory programs under the code EDUC.

One of the most satisfactory features of the System is its non-coercive nature. The user himself provides the information on the sorts of jobs that he is interested in and the criteria which he has set as important to him. The System merely uses those criteria in determining the jobs which might be most appropriate. Clearly, such a system does not replace the need for counseling and aptitude testing, but it does make available at a very low price information which can be extremely useful to individuals in the process of examining occupational and educational opportunities. Moreover, it puts modern technology in the heads of students and clients, thus reducing some of the hesitance that some people feel about new technological systems.

SYSTEM COMPONENTS

QUEST. The introductory statement of QUEST contains the instructions necessary for a person to complete the questionnaire, and enter his or her responses via a teletype terminal or manually sort a deck of cards. The mechanics of QUEST are such that most students or clients can operate it without much outside instruction or assistance, freeing counseling time for interpretation and planning.

The QUEST LIST of occupational titles is the product of the individual user's configuration of responses to the 25 QUEST questions which include the factors of physical limitations, regional location and city size preferences, amount of educational preparation attainable, working conditions, aptitudes, interests, and minimum acceptable salary. Questions pertaining to physical limitations, working conditions and aptitudes are based directly on the classification and relationships between worker trait factors and occupations contained in the Dictionary of Occupational Titles. The rationale of the interest questions is based on the relationships between data-people-things and specific occupations as expressed in the D.O.T. occupational classification system. Standard labor market data sources are used for the factors of regional location, city size, amount of education, and salary.

Processing logic retains all the occupations contained in the System except when a user's response is inconsistent with a critical factor to a particular occupation. If a person gives a consistent response, the occupation is retained. The user can respond to any question with "no preference" or "I don't know," thus effectively bypassing the question and eliminating no occupations. Occupations are eliminated from a user's list only when he has responded to a question with a definitely inconsistent response, and then only when that factor is critical to an occupation, as determined from the D.O.T. worker trait and data-people-things relationships and standard labor market sources.

Validity and Readability of QUEST. The validity of the questionnaire is a function of its readability and the ability of the user to self-report. QUEST is not a test, "but an instrument for recording information which is presumed to be known to the individual. Its validity, therefore, depends upon its readability, upon the user's ability and willingness to answer the questions, and upon the validity of the labor market and worker trait factors on which the individual questions are based."[1] The real criterion for evaluating QUEST is not whether it predicts or measures, but whether it identifies some new pertinent occupations.

Extensive field testing in schools and social agencies has established the readability of the questionnaire for both disadvantaged and non-disadvantaged clients. "Over 90% of the counselors and

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[1]Bruce McKinlay, Validity and Readability of the Occupational Information "QUEST" Questionnaire, University of Oregon, Eugene, Oregon, 1971, pp. 27-28.

clients in various schools and social agencies who tested the System rated it easy or very easy to use."[2] In a major test of OIAS in three state Employment Service offices in Portland involving 267 clients, 94% of the disadvantaged and 96% of the non-disadvantaged clients rated the questionnaire easy to read.[3]

In testing the ability and willingness of the user to self-report, there was 80% concurrence between the Employment Service client's responses and counselor or GATB assessment of him.[4]

From field tests, it is clear that QUEST does identify new, pertinent occupations. In the Churchill High School study, 70% of the students who used the System reported that the list of occupational titles gave them some new occupations that they would seriously consider for future work.[5] A study in on junior high school, where students in a vocational exploration class who used the System were compared to a matched group of students who received no vocational instruction, showed a statistically significant increase in the number of occupations students were able to list. Students in the class using the System were able to list 34 occupations, on the average, while students not in the class were able to list only 21.[6]

QUEST LIST. The relevance of the occupations on the QUEST LIST and the length of the lists has been evaluated specifically in tests in schools and social agencies. The number of occupations remaining on user's lists averages approximately 30. About two-thirds of user lists range between 5 and 40 occupations. Evaluation indicated

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[2]Validity and Readability, p. 1-2.

[3]Jerry Weick, Occupational Information for Employment Service Counseling: An Evaluation of Occupational Information Access System Pilot Use in Three Portland Employment Division Offices, University of Oregon, Eugene, Oregon, 1972, p. 16.

[4]Validity and Readability, p. 34.

[5]Bruce McKinlay and Daniel Adams, Evaluation of the Occupational Information Access System as Used at Churchill High School, Bureau of Governmental Research and Service, University of Oregon, Eugene, Oregon, 1971, p. 3.

[6]Leonard D. Adams and Lawrence K. Fowler, Vocational Counseling at the Junior High School Level, A Case Study at Shasta Junior High School, Eugene, University of Oregon, Eugene, Oregon, 1971, p. 3-6.

that when a person's list was substantially shorter or longer, it often stimulated the user to re-evaluate his preferences reported on the questionnaire.

Two features of the System are definite aids in this process. The computer program encourages the user to ask WHY NOT for a given occupation which was not on his list. It also allows the user to CHANGE his or her responses to previous questions. The first results in listing the client's response which eliminates a specific occupation, and the second allows a changed response to a prior question.

This tendency of users to re-evaluate their preferences points to a very important conclusion of the Portland Study; namely, that "QUEST was creatively manipulated as a tool by the client rather than used in a rigidly mechanical fashion."[7] There was also evidence that clients generally understand QUEST in the content of the occupational decision-making process. "There was no evidence in the responses of clients to indicate that the list was restrictive or taken too seriously."[8] Evaluation indicates that usage of the questionnaire and list have an educative function which increased user awareness of the occupational decision-making process, apart from the occupational information it provides. The user becomes aware of how his responses to questions affect the range of occupations appearing on his list for exploration and consideration.

Savings in counselor time are relatively small when QUEST use is completely monitored by a counselor. However, complete counselor monitoring is not required. Moreover, since it has been shown that System usage expands and enhances the occupational exploratory and decision-making processes, there are quality increases as well as time savings. Counselors tended to take advantage of the increased information available through the System which they would otherwise have foregone or obtained only by spending more time in information collection than they usually spend.[9] In a study comparing the System and the conventional, verbal delivery of information in the Lane Community College Counseling Center, results indicated OIAS was at least as effective and definitely

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[7]Portland, p. 17.

[8]Portland, p. 18.

[9]Portland, p. 6.

more efficient as an information delivery system. Additionally, the System was a much less expersive way to obtain and deliver occupational information.[10] "OIAS delivers occupational information of at least equal quality to the counseling center in approximately one-half the time per use, and at a cost of one-tenth or less of the counseling center."[11] Utilizing the System for information delivery provides a factual basis for personal decision-making and frees counselors to help that process.

Range of Effectiveness

Range of Effectiveness. In the various tests of the System, QUEST and LIST have been used both independently and in conjunction with a counselor as part of the counseling process. It has been demonstrated to be effective under both conditions, and with widely varying types of clients--youth and adults, disadvantaged and non-disadvantaged, the unmotivated and the highly motivated, bright and articulate college students and slow high school students, as well as people with some idea of their goals and those with no idea what they want to do.[12] In the Portland test, counselors reported that it was not effective with severely disadvantaged clients with little or no reading skills and with clients who were not interested in making an occupational choice. It also appears that persons with very low abilities tend to become discouraged and probably need additional guidance to make a sound and satisfactory choice. These limitations help delineate the areas of this component's effectiveness and provide guidelines as to which clients should use the System.[13]

As a result of extensive field testing and evaluation, numerous modifications of the QUEST questionnaire have been made and the development of revised questions is underway. Because the System is new and dynamic, continued research and development is necessary even though implementation into schools and social agencies in the state is proceeding. Undoubtedly some of the possibilities for refinement lie in the development of additional selection criteria and

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[10]Larry Lynn Ross, The Effectiveness of Two Systems for Delivering Occupational Information: A Comparative Analysis, Master's Thesis, University of Oregon, Eugene, Oregon, 1971, pp. 83-84.

[11]LCC, p. 80.

[12]Bruce McKinlay and Larry L. Ross, Evaluation of Occupational Information Access System Use in Six Pilot Agencies, University of Oregon, Eugene, Oregon, 1970. p. 4.

[13]Portland, p. 11.

operational formats. Alternatives to the data-people-things questions in the present questionnaire are being studied. Aptitude and physical demand factors may be expanded to include all those of the D.O.T. Lastly, certain items may be developed as strategy questions. Such questions could be designed to make explicit the high degree of choice on such factors as location, salary and amount of education a person is willing to obtain. Since, in an actual job choice situation, most people are willing to make trade-offs between such factors.

Occupational Descriptions
Occupational Dumps
Attractiveness of Descriptions

Occupational Descriptions. Of the five information components contained in the System, the OCCUPATIONAL DESCRIPTIONS have proved to be the most popular and valuable to most users. These concise, 300-word descriptions are available in the form of computer printouts for each of the occupations presently in the System. They describe the function of the occupation, related occupations, types of employing establishments, working conditions, hiring requirements, licensing requirements, training opportunities, pay, and employment outlook.

The user determines the occupational title and its numerical code from his QUEST LIST or from the alphabetical listing of occupations contained in his user handbook. When using the teletype terminal, the user enters DESC followed by the occupational code number. The terminal responds by printing out the description.

Occupational Dumps. For the needle-sort system, the user locates the descriptions he wants by their code numbers in a bound copy of the descriptions. Approximately every three or four months, CIS dumps out the descriptions for each occupation; these descriptions are then reproduced and bound in numerical order by occupational code number.

Attractiveness of Descriptions. The attractiveness of these descriptions to students is borne out by the Churchill High School study. "Virtually all users said the descriptions were fun to use, easy to understand, accurate and up-to-date. Substantial majorities also said they related jobs to their personal interests, values, and abilities, and were complete."[14] The great attractiveness of the System "seems to be a reflection of the computer terminal's attractiveness as an information display device that presents only the information requested and provides a copy for the user to take

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[14] Churchill, p. 13.

with him. The amount of time required for a description to print out (about three minutes) has been criticized by some computer personnel and vocational educators as boring. Students to not agree."[15] Both high school students and a range of agency clients are widely satisfied with the content and format of the occupational descriptions.

224 Occupations Presently Included. Generally, CIS has attempted to provide occupational information at a level of detail that is useful from a counseling standpoint as well as feasible from the standpoint of data collection. The D.O.T. lists over 20,000 entries, but a broader grouping is more useful for occupational exploration and more consistent with the CIS's present research capability. Therefore, as a result of grouping, a much smaller number of occupational titles, 224 presently, can reasonably account for nearly all employment in Oregon.

224 Occupations Presently Included
Information Development
Localized Information

Information Development. Accuracy of information is hard to measure; however, the CIS information development staff makes every attempt to reflect quality. In most instances, and especially when information is highly variable and difficult to validate, more than one source is used to develop the information. Sources include standard publications from the Oregon Employment Division and national manpower data producing agencies, unprocessed data from a variety of state and national organizations and from knowledgeable persons. This latter source includes review panels composed of five to seven persons for the examination and validating of each occupational description.

The information is continuously updated as new data become available. The result is that each occupation is examined systematically twice each year.

Localized Information. Localization of information is accomplished through separation of the information items into two groups: information that varies between geographic areas of the state (area specific information) and that which doesn't (common information). Currently, localized information is available for the two largest labor markets in Oregon, the Portland and Eugene metropolitan areas, Coos/Curry counties on the southwest coast, and statewide information. Information for the state will be used provisionally in areas new to CIS until localized information can be developed. The cost of developing localized information prohibits CIS from

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[15] Churchill, p. 13.

building such a file until financial support develops in that local area. Generally, this means a minimum 4,000 to 5,000 persons using the System in an area before the information is localized.

Occupational Books. Users are referred to selected OCCUPATIONAL BOOKS which have additional information concerning particular occupations by entering BIB and the occupational code number. These occupational books should be kept near the computer terminal or needle-sort deck.

Seventeen percent of the clients using the Bibliography of Occupational Books rated it the most helpful part of the System in the Portland test.[16] In the test at Churchill High School, 6 percent of System users rated it as the most valuable information component.[17] Although only a small proportion of clients used this information component, client rating and counselor comments indicate that it is a worthwhile component, and should remain available to that select portion of clients who find it helpful and are able to use it.[18]

CIS expects that use of these books will be increased by the computerization of the bibliography.

Selected books for 1973-74 include:

Occupational Outlook Handbook, 1972-73 Edition
Careers, a Directory of Vocational and Technical Training Resources in Oregon
Occupational Manpower and Training Needs, Bulletin 1701
Careers in the Logging Industry
Effects of Technological Change on Employment in the Lumber Industry
Licensed Occupations in Oregon
Directory of Oregon Manufacturers, 1972 Edition
Careers for Women in the 70's
Mapping Your Education, 1973-74 Edition

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[16] Portland, p. 31.

[17] Churchill, p. 18.

[18] Portland, p. 31.

VISIT. The primary function of the VISIT component is to provide personal contact between the System user and a person who is working in a particular occupation; thus giving the user the opportunity for personal discussion with someone in the occupation and observation of his work site. There often is more than one name per occupation, giving the user some variety of location, firm, and occupational specialty.

By entering VISIT and the occupational code number, the user can get the name and pertinent information of the person to visit. Users working with the occupational needle-sort system may find the name and pertinent information of persons to visit on the card referring to the particular occupation. In Portland, visits can be arranged by the school work experience coordinator using the resources of IPAR. CIS will assist other areas in the state with the development of VISIT files.

Only twelve percent of the users in the Churchill evaluation made use of the VISIT component. However, one third of the students who used the VISIT file rated it the most valuable information component.[19] Terminal records and observations indicate that users access this information far more often than they actually make a visit. It may take counselor or teacher encouragement to motivate students and clients to utilize this resource.

At the time of writing, a VISIT file has been developed only in the Eugene-Springfield metropolitan area. Such information must be localized. The Eugene Rotary Club, with the help of the Lane Intermediate Education District, undertook as a club-wide project to expand and maintain names for users to visit in the area. The Eugene VISIT file currently contains names of 267 individuals representing 182 of the 224 occupations in the System. This same method could be easily duplicated in almost any part of the state.

Education and Training. After the user selects the occupational title about which he wants EDUCATION and TRAINING information, he or she enters EDUC followed by the occupational code number into the teletype terminal. The terminal responds by printing an initial statement on the relative importance of formal education, apprenticeship training, and on-the-job training as a hiring requirement for the particular occupation. That statement is followed by a list of training institutions, colleges, as well as technical vocational

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[19] Churchill, p. 18.

schools. For the needle-sort system, the users are referred to a bound volume of the same educational statements that are printed from the computer system.

Although this component has only recently been operational, it has been developed following many requests from teachers, counselors, and students. And, extensive revision of both the component's content and format will take place during the 1973-74 school year. Interest in the System and particularly this component by the Oregon High School-College Relations Office and the U.S. Office of Education promises to offer both financial and professional support to expand the kinds and amounts of training opportunity information.

Occupational Interview Cassettes

Occupational Interview Cassettes. Although the occupational interview cassettes will be officially discontinued as a system component during the 1973-74 school year, they do offer considerable potential as a motivation device to provide brief introductions to specific occupations. Reports from counselors suggest that tapes provide information for persons not equipped to handle more abstract information (i.e. written descriptions, data, etc.) and in presenting occupational information to groups.

Testing of this information component has been somewhat limited and results mixed. Initially a significant number of commercially produced occupational cassettes were used, but they proved distinctly inferior and lacked the credibility of those developed by the CIS staff. The limited number of occupations presented by taped interview has been another source of dissatisfaction and is the primary reason why CIS will temporarily discontinue this component from the System in order to concentrate on others. In the meantime, schools and agencies are encouraged to develop their own interview tapes, preferably taped by students in the local setting for occupations in the System.

CHAPTER III

STARTING OF SYSTEM

SELECTION AND ROLE OF COORDINATOR

A very important part to the activation of any new program or system is the selection of a key person to handle the necessary coordination tasks. Starting either CIS's Occupational Information Access System or the Occupational Needle-Sort System requires coordination by someone in a school or agency whose interest and training complements career guidance. Most often, this person is one of the school's or agency's counseling staff or has been assigned responsibilities in career planning.

Although the degree of responsibility may vary with each of the following activities, each is important to the System's proper start and to its successful continuation. The role of the local CIS coordinator should include the following:

1. Develop a thorough familiarity of the System's (computer and/or needle-sort version) components;

2. Acquire an understanding of how these components work together as a system and how they can be used in various combinations for various purposes (see Standards For Use, Appendix C);

3. Develop a plan whereby the System can be made available most effectively to serve the guidance needs of all students or clients for whom it is intended;

4. Acquire an understanding of the System's Standards For Use;

5. Become familiar with the System's materials (i.e., user handbooks, occupational books, etc.) and how to obtain adequate supplies;

6. Develop the capacity and set aside the time to provide both technical and professional assistance to staff and students on System use;

7. Schedule and lead orientation to staff and students;

8. Communicate with CIS staff on problems encountered in the use of the System and suggest improvements;

9. Assist with the necessary budgetary and invoicing procedures to financially support CIS.

PRE-SERVICE FOR GUIDANCE STAFF

"Standards For Use," adopted by the CIS Board, (See Appendix C) states: "Training of staff is a prerequisite to the use of the System. Effective use of the System requires an understanding of: System components, sources and use of information, mechanics of System use, and discussion of System applications within the particular setting. Staff who will use or be responsible for the use of the System in individual schools and agency offices must attend a training program which has been approved by CIS."

The following topics should be adequately discussed by CIS staff at all pre-service meetings with the guidance staff of all schools and agencies new to the System.

Why a System? There are many weak points in the delivery of occupational labor market information to individuals planning their careers but perhaps the most severe weakness is the almost total lack of efficient, functional, attractive systems by which unsophisticated users can access comprehensible information in forms, places, and times that are appropriate for them. It is an often neglected fact that information is of no effect unless it reaches decision makers, yet an individual currently has limited options for obtaining occupational information. He can try to see a counselor, if he is fortunate enough to have such services available to him at all; he can write to a professional or trade association for promotional literature; he can try to choose a current and factual source from an ill-stocked library; or he can forget the whole information gathering exercise

as more trouble than it is worth and simply "ask around." The latter option may in fact be the rational choice; in any case, it is the predominant pattern, as many studies testify. In attempting to systematize the delivery of information, CIS has given explicit attention to both the information itself and the vehicles by which it is delivered. The necessary features of an information delivery system for career planning are:

1. Make information easily accessible to persons of varying ability and experience.

2. Provide a means for integrating occupational information with clients' interests, values, aptitudes, and abilities.

3. Display and/or deliver information in an attractive manner.

4. Provide accurate and current information, including capacity for updating.

5. Supply local as well as national data.

6. Provide information concerning a wide variety of occupational groups.

7. Include such specific information as:

   a. job duties
   b. work environment
   c. hiring and training requirements
   d. terms of employment
   e. hours
   f. current labor market condition
   g. long range outlook

8. Function efficiently.

System Components. Chapter II, System Components, provides an adequate description of the components and brings out some of the substantive research findings about each. Reference to this chapter should be used extensively in conducting pre-service training of school and agency guidance staffs.

Chapter IV, Effective Usage of the System, may also be utilized as an informational resource for pre-service training.

Location of System. The placement of the computer terminal or the Occupational Needle-Sort System has proven to be one of the important factors affecting System use. Although the most appropriate location of the System must be determined by the school's or agency's staff, the following considerations should prove helpful:

1. Students and clients should have easy access to the terminal or needle-sort. The most successfully used systems have been out where students can watch others accessing them, hear the noise from the computer terminals, and generally observe that the experience is both enjoyable and informational.

2. The location should be convenient for assistance from the staff. A user may need some assistance to get started using the System and when he/she is finished. Several schools have trained students as aides to assist users, thus freeing staff for counseling and other professional activities.

3. Computer terminals are often used to access other computer programs besides OIAS. Some schools utilize one terminal for math problem solving, simulation games, students scheduling, as well as OIAS. Consequently, the terminal's location may require a joint decision by several departments in a school.

4. Several schools have allowed students to take the Occupational Needle-Sort System home overnight, thus providing an opportunity for the entire family to engage in career exploration. This requires a "check-out" procedure.

Standards for Use. Any system has strengths and weaknesses, ways it can be effectively used and ways it can be abused. The CIS Board of Directors has established Standards For Use (see Appendix C) outlining the best uses of OIAS and the Occupational Needle-Sort System. This set of "Standards" is intended to help user schools and agencies understand the System and to plan uses of the systems that will complement other guidance and institutional activities.

Service Agreements. A set of "Standards" accompanies each written agreement (see Appendix B) that is established between the user institutions or agency and the CIS. This written agreement clarifies both the responsibilities of the CIS and those incurred by the user institution. Agreements are re-established each year and have served to increase the staff's understanding of financial

commitment, in-service training dates, and evaluation methods. It is recommended that the school's or agency's staff who are directly working with the System be familiar with both the "Standards" and the agreement.

Technical Assistance. In the use of both the Occupational Needle-Sort System and OIAS, the User's Handbook serves as the most available and reliable technical resource. The Handbook contains the QUEST questionnaire, a complete list of the occupations found in the System, occupational interview questions, and all necessary instructions for use of the System.

The needle-sort handbook outlines on the top of page 2 what the System's user must do in working his way through the needle-sort process. Students generally acquire the necessary skills needed to sort the cards very quickly. In group settings, two or three students can work with the needle-sort at one time. The person who has answered the questionnaire will be inserting the needle through the appropriate holes while another is picking up discarded occupations, studying them, and putting them back into the card box. CIS has found that students often talk about the questions, call one another's attention to the discarded occupations, and discuss the process. This interaction among the people working with the needle-sort appears to provide a good learning environment. After the student has selected several occupations which interest him, the occupational cards direct him to read the appropriate occupational and educational descriptions. Many schools have also added to the cards names of resource speakers, leaders of explorer posts and other occupational exploration resources available in their local area.

The handbook used with the computer provides more technical detail on the use of the computer. Students and clients are given detailed instructions on page 8 on how to use the computer terminal. Experience has shown that most students are perfectly capable of following these computer terminal "login" methods correctly and quickly. After they are into the System, the computer is programmed to give the necessary instructions for use. The instructions on page 9 provide an additional listing of special messages or options open to the user. It is helpful if he/she becomes familiar with these special messages in the handbook so that he can use them while on the terminal.

Responsibility of Counselors. The System delivers information; it does not counsel students and clients. It is not programmed to react to the user with a number of counselor-type responses simulating a counseling interview. Rather, it is programmed so the user can get occupational and educational information in amounts desired. There is evidence that the System:

1. Motivates students and clients to think about their own preferences and relate those preferences to the world of work;

2. Increases the user's knowledge of occupations and information about certain occupations;

3. Provides students with information that they want to keep for future reference;

4. Saves counselors time from researching the information themselves;

5. Increases the possibility of the counselor using more reliable occupational information in his counseling interview; and

6. Tends to introduce more order into the occupational decision-making and counseling process.

System Helps the Guidance Process. An important part of the counselors' responsibility is to help with the integration of the System. As an informational device, the System must become a part of the school's planned program for assisting students in their career decision making. Guidance and counseling goals should be articulated by school and agency staff; OIAS and the Occupational Needle-Sort System are part of the activities that will be provided to accomplish these goals.

Counselors must provide initiative to bring a greater awareness of career opportunities into the classroom. Teachers generally need encouragement to think creatively about methods for career information in their subject matter. In more than one school, the System has been an important tool that "turns teachers on," too.

PUBLICITY TO USERS

The best publicity device to promote the System is a conspicious location in the school or agency. Experience shows that spectators become users.

Many approaches have been tried in introducing the System. The school's newspaper is often a key link to good communication with a wide variety of students. In agencies, demonstrations to groups of clients have provided motivation for individuals to use the System. Notices on bulletin boards and announcements over public address systems have also been effective. A few moments of discussion with several of the school's staff and its students usually produces a publicity plan that best informs students.

ORIENTATION TO STAFF

Institutional staffs are not always waiting for labor market information with "open arms." However, the current emphasis on career education, the career oriented workshops that are involving classroom teachers, and the career awareness of the public are all factors that are changing these attitudes. Interestingly, the concept and the delivery devices of CIS have served to motivate staffs to get involved with current labor market information and relate this information to their daily activities.

Develop a plan to get the staff excited about the System and you've done a lot about communicating the System to students or clients. Short staff meetings where each staff member is given a user handbook, encouraged to answer the QUEST questionnaire, and then observes a fellow staff member use the System often is incentive enough for others to try it themselves. It helps to point out the personal advantages to each member of following through and using the System (i.e., they will find interesting occupational information that can add content to their subject matter, occupations that relate to their teaching field, will assist them in helping students).

Memorandums to staffs telling them about the System have been used too. However, it is the actual use of the System by each staff member that should be the goal of orientation. "One use is better than a thousand words."

CHAPTER IV

INTEGRATION OF SYSTEM

IN-SERVICE TRAINING

There is little doubt that staff pre-service training is important. However, it is impossible to cover adequately in one meeting all the applications of such a versatile tool. Experience has shown that most school and agency guidance staffs benefit from a follow-up meeting about the System one to two months after its installation. It is at this time that they have had enough firsthand experience with the System and have observed students or clients interacting with it, so they want some questions answered. Limitations as well as new applications of components can be addressed. Local problems are developing and solutions need to be found. A staff is usually ready then to get into the job of integration.

Effective Usage of the System. QUEST is often the most misunderstood part of the System. Some frequent inquiries about QUEST follow: Short LIST or no LIST--although this happens infrequently (to less than 10% of the users), it is very important that user becomes aware of what has happened so that he can "regroup." For example, a student who obtains a relatively short or no list at all will be cautioned on his computer printout that he should not limit himself to these few occupations but rather to look over his responses to the questionnaire again and change some to be less restrictive. With the needle-sort, the user may need encouragement by staff or training student assistants to review his QUEST and try to locate responses that may have eliminated occupations unnecessarily. For instance, he may have responded to Question #12, the ability with arithmetic question, as "fairly poor," thus eliminating more than 2/3 of the occupations. Is he really poor with addition, subtraction, multiplication and division?

He may want to re-read the question and re-check his response. User's must become aware that QUEST is merely a device whereby they can manipulate occupations based upon their own self-assessment or preference. It should not be used with any sense of finality but as a start in the process of career exploration.

The opposite of the short list is one that numbers fifty occupations or more. This often indicates the user's inability to make very definitive occupational preferences. Studying a user's QUEST responses, one may find the user has made excessive use of the NP (no preference or not sure) option. This inability to express preferences may indicate a need for assistance from a counselor.

The QUEST list, whether printed by teletype (OIAS) or appearing as a stack of occupational cards (Occupational Needle-Sort System) provides an exploratory base from which the user can directly obtain pertinent information from the System's various information components.

QUEST and Counseling. While clients and students can operate the System without assistance, it is compatible with counseling and can be used by counselors to enhance the counseling process. A number of high schools in the state ask students to use the System prior to career counseling interviews routinely carried on in specific grades. Counselors who have used this technique generally agree that the interview progresses more easily and that the System tends to introduce more order into the occupational decision-making process.

Needle-Sort in the Classroom. The Occupational Needle-Sort System appears to be a flexible tool to use in a classroom setting. Teachers and counselors have demonstrated to students the significance of the various questions in QUEST by inserting the needle through certain holes in the cards causing occupations to drop out. This has proven to be a dramatic way to illustrate how much training or education is needed for particular occupations or what the degree of ability is needed to perform certain tasks. There are many applications such as these where the needle-sort can be used as an effective teaching tool in helping students better understand the world of work.

Use of Needle-Sort in an Agency. At an ADC Mother's Confidence Clinic where the needle-sort version is being used, the clinic's director went through the entire process of showing the women the System (card deck, description file and selected

occupational books). She gave some background on QUEST, explaining how a person's occupational options were affected by the way they answered the questions. She then turned the System over to the group to work with as they wanted. The result was that the women within the group began to help each other. One person would use the card deck while another would work with the descriptions and another would discuss their responses to QUEST and what would happen if their answers were different. This activity led the women to examine their decisions more carefully in terms of occupational opportunities and to utilize occupational information in their decision making.

Career Guidance Courses. An additional development to assist integration is the growing number of career decision-making classes that are being developed such as SUTOE. Taught by counselors or guidance-oriented teachers, these classes are beginning to meet the need of many students who want assistance. The need appears too great to be fully met through individual counseling. These types of classes can do much to help a student understand himself, instruct him in the decision-making process, and help him find relevant sources of occupational and educational information.

Descriptions in the Classroom. A language arts teacher in one school asked all her students to save their computer printouts of descriptions to be used with subsequent writing assignments. This not only provided a very practical reason for each student to use the System to obtain information but directed all of them into updated information about the labor market. The teacher followed up with an in-class writing exercise on the "essential elements of information about an occupation" and a term paper dealing with "the three occupations that interested me the most and why." The System was seen as a resource for occupational information for the classroom activities just as any of a number of traditional resources could have (i.e., school library, persons in occupations, etc). The exception, however, being that this particular resource was readily available, easy to access, fun to use. Is it any wonder that all the students completed both writing assignments.

Developing Your Own Cassette Tapes. Developing an assortment of tape recorded interviews with persons in particular occupations is being successfully carried on in a number of schools in the state. Using the few cassette interview tapes produced by CIS as a model, counselors and career education specialists have captured student interest and horsepower to greatly expand the number. On page 16 of the User Handbook, a list of interview questions is

provided to assist students. It's difficult to equal the attractiveness of locally produced tape recordings, especially if some care is taken in the quality of the sound track. In one school, the counselor teamed up with the speech teacher and his students to achieve an extensive library of occupational interview tapes. And, the students taking speech at the time indicated they had learned from and enjoyed the experience.

Developing a Career Information Center. Two common problems, the proper placement of the System and its integration into the school's or agency's on-going activities, have found some resolve in the development of a career information center. Such a center, sometimes utilizing the space of a former classroom, can be staffed by a para-professional or by student assistants or both. The center can offer a variety of informational resources (e.g., pamphlets, college catalogues, etc.) in addition to components of the System. The Center established several years ago at *Wilson High School in Portland can service requests for guidance information from other schools in addition to serving the needs of its own student body. Using a little imagination can do wonders in establishing a comfortable area where various guidance and information resources can be placed.

The Career Information Center established during the 1972-73 school year at **Lane Community College is staffed by a full-time para-professional and a number of trained student assistants. Located in the Center building of campus, heavy student and faculty traffic guarantees extensive use of OIAS and the materials housed in the Center. The para-professional estimates that almost a third of the users of the System ask for an interview with a counselor after use of the System.

***Marshfield Senior High School in Coos Bay has established a Skills Lab where a para-professional oversees a number of activities (i.e. individualized instructor, student tutors, students listening to cassette tapes in various subject areas). Included in

*Additional information can be obtained by writing Mrs. Margaret Oberteuffer, Career Counselor, Wilson High School, Portland Oregon.

**Additional information can be obtained by contacting Dr. Ken Hi , Director of Counseling, Lane Community College, Eugene, Oregon.

***Additional information can be obtained by contacting Dr. John Peters, Asst. Supt. or Mrs. Eleanor Baker, Director of Skills Lab, Marshfield Senior High School, Coos Bay, Oregon.

these activities are both the OIAS and the Occupational Needle-Sort System. Students are encouraged to make individual use of the computer terminal and sit together at round tables with the needle-sorts. Having both delivery systems available appears to enrich the students' exploration process.

Collecting Data on Users. The OIAS operating from the Eugene based computing center, OTIS, has a valuable user accounting record that is sent each month to schools and agencies using the computerized version. Although this record does not collect student's names, it does record substantial amounts of information about the use of the System (e.g. number of uses of QUEST, how questions were answered, the occupations most often asked for, etc.). It is worth re-stating that inherent in the development of OIAS, there was intent not to make the System a student information gathering device but to make it easy for students and clients to get information. Consequently, the intent to collect user names without his or her expressed consent is not authorized.

Security of the System. The OTIS computing center in Eugene maintains a special security system so that users cannot gain access to student or school records stored in the computers. It is important that this security measure is utilized to protect records.

The procedures are as follows:

TO LOG IN USING THE "TIME-LOCK" SECURITY PROCEDURE

You can prevent unauthorized access to confidential, computer-stored records by locking your terminal to OIAS. This feature makes feasible the unsupervised use of OIAS by students.

User Enter: =%LOGIN(00,000,000), number of clock minutes desired
Terminal: *MSG 000 YOU ARE LOGGED IN TO 00 000 000
User Enter: =%TYPE OIAS

Once logged in using this procedure, there is no way to log out of OIAS until the specified number of minutes has passed. (In an emergency you can arrange to override this

security by calling Bill Manley, Director of Career Education, Lane Intermediate Education District, 342-5576.)

REMEMBER, security is your responsibility:
-----You must log in properly.
-----You must physically secure the terminal or provide more OIAS time-lock time when the initial period expires.

Involving the Total Staff. The fact should not be overlooked that the guidance function is generally the responsibility of the entire staff, not just the counselors or some other designated group. For this reason, ways need to be sought to expose the entire staff to the computer or the needle-sort system shortly after it is put in operation. A most obvious and quite practical process is to demonstrate the System at a staff meeting. CIS personnel have helped to conduct a number of these meetings and recommend the following guidelines:

1. The length of the presentation should be short, probably not more than 30 to 40 minutes.

2. CIS has for loan a short, professionally-prepared slide-tape show which covers general background about the System, introduction to system components, and a few of the effective uses of the System in various settings. The slides are loaded in a Kodak Carousel slide tray and the tape is reel type that runs at 3 3/4 IPS. (Order from: Career Information System, 247 Hendricks Hall, University of Oregon, Eugene, Oregon 97403. Phone: 503/686-3872.)

3. Each staff member should be given a user handbook and a few moments to respond to the twenty-five questions. Then someone should be selected to use the System in front of the group. This illustrates the System's process and allows each staff member a vicarious experience.

4. An attempt should be made to induce each of the staff to fill out QUEST and use one or several of the information components. It has proved successful to circulate a sign-up for time on the System at the staff meeting so that definite commitment is made.

5. Generally, the meeting should be conducted by the agency's or school's coordinator of the System. He or she can then be available for staff questions at a later time.

Another process to reach the staff, particularly a large one, is for the System coordinator to visit each department. He or she is not only able to make the presentation more informal but to respond to particular instructional or functional features of the System as it applies to that department. To illustrate, if you are talking with a group of math teachers about the System, mention the logic in the QUEST process as well as how occupations are dropped out by the amount of arithmetic ability self-assessed by the users.

Promotion of the System among school staff members is more subtly accomplished by getting them to use the System with their respective classes. The success of these classroom activities will not only be communicated among staff members, but the students will want to participate too.

CHAPTER V

TROUBLE SHOOTING

TECHNICAL PROBLEMS -- OIAS

Special messages from the computing centers (OTIS in Eugene or METCOM in Portland) are printed out by the computer terminals periodically. Notice should be taken by the System's coordinator of these messages (hours or days the System won't be in operation, change of telephone numbers for dial-up ports, area meetings, etc.) since they generally refer to the operation of the System.

Many interesting things can happen when you are working with systems. However, OIAS runs on some of the most reliable computers in the industry, Hewlett-Packards. Experience has shown them to be most capable of running this kind of program.

Basic problems with login procedures, how to perform certain inquiries into the OIAS program, and others are well explained in each User's Handbook. On occasion, the coordinator may find it necessary to contact the computing center in his area on a specific need. Technical difficulties appear to be occurring less as computer facilities and their personnel become more experienced with systems' operation.

TECHNICAL PROBLEMS -- OCCUPATIONAL NEEDLE-SORT SYSTEM

Considerable care and expense has been taken by CIS to make the 1973-74 needle-sort as durable and trouble-free as possible. The box as well as the cards themselves will be made from plastic, thus extending use many hundreds of times from previous materials used. The needle will be shortened to facilitate the sorting process as well as to fit neatly into the new plastic container.

The computer dumps will continue to be stapled so that the occupational and educational descriptions can be used as a booklet. However, pages will be three-hole punched so that staples may be removed from the binder and duplicated for the user's convenience.

Of course, if needle-sort cards are damaged or lost, the deck should be immediately returned to CIS for replacement. The agency's or school's coordinator should check the needle-sort decks periodically to see that the cards remain in good condition.

PROFESSIONAL PROBLEMS

Neither OIAS nor the Occupational Needle-Sort System should be represented as devices that assist a student to compile a realistic self-concept or to assess his personal probability of success. Rather, both represent a major step forward in providing counselors and other professional staff with tools that can assist them in their guidance endeavors. Both are information tools which help users become aware of more of the factors and alternatives involved in career choice and how such factors affect occupational options. The System's usage appears to enrich the occupational decision-making process by stimulating exploratory activity.

CHAPTER VI

EVALUATION

RESEARCH IN VARIOUS SETTINGS

Evaluation of the System may be simplified by looking at its adequacy and effectiveness as measured by a number of studies conducted in a variety of settings around the state. The following research monographs can be ordered from: Career Information System, Office of the Director, 247 Hendricks Hall, University of Oregon, Eugene, Oregon 97403.

Evaluation of Occupational Information Access System Use in Six Pilot Agencies, by Bruce McKinlay and Larry L. Ross, 1970, 51 pp. Summary available.

Summarizes the early experiences of pilot usage of OIAS in Employment Division offices, one high school, a community college, a university counseling center, and a vocational rehabilitation office.

"Occupational Information Access System: A Model System of Labor Market Information for Use in Counseling," by Bruce McKinlay, Journal of Educational Data Processing, 1970, 9 pp.

A brief description of the delivery system and results of early pilot testing.

Validity and Readability of the Occupational Information Access System "QUEST" Questionnaire, by Bruce McKinlay, 1971, 55 pp.

This study addresses the questions: (1) how difficult is OIAS material to read, and (2) is it valid procedure to ask clients to report their preferences and abilities?

Abstract of the above.

Evaluation of the Occupational Information Access System as Used at Churchill High School, by Bruce McKinlay and Daniel Adams, 1971, 61 pp.

Presents results and detailed evaluation of usage of OIAS in a major high school where it was used on an ongoing basis by half the students.

Abstract of the above.

The Effectiveness of Two Systems for Delivering Occupational Information: A Comparative Analysis, by Larry Lynn Ross, 1971, 110 pp.

Compares the efficiency and effectiveness of the Counseling Center at Lane Community College and OIAS with ten ideal occupational information delivery system characteristics.

Abstract of the above.

Older Workers and Occupational Information, by Leonard D. Adams and W. Michael Anderson, 1971, 5 pp.

Summary of pilot use of occupational information delivery systems by older workers.

Occupational Information for Employment Service Counseling: An Evaluation of Occupational Information Access System Pilot Usage in Three Portland Employment Division Offices, by Jerry Weick, 1972, 60 pp. (In Review)

Presents results and analysis of OIAS usage with 200 Employment Service clients, both non-disadvantaged and disadvantaged, who used either the computer or manual card-sort version of the information delivery system.

Abstract of the above.

Oregon Career Information System: An Evaluation of Phases I and II of a Three-Phase Development Project, March 1973, 215 pp. (In Review)

This report summarizes the experience of the first two phases of a three-phase attempt to institute a systematic information development procedure and to implement and

manage an effective system for delivering information to program planners and clients.

Chapter I, "Summary and Basic Conclusions" of the above report, 5 pp.

CONDUCTING YOUR OWN RESEARCH

We live in an age of accountability. Therefore, the System's effectiveness in your setting should be studied. Here are some suggestions from which to select:

1. Keep a record of the number of students who use the System each year by sex, quartile, and year level.

2. Develop a questionnaire which can be mailed to parents of students who have used the System.

3. The next few pages are sample questionnaires that may be utilized to conduct your own research. All have been used in other settings; consequently, they may need some adaptation for your use.

APPENDIX A

Evaluation Questionnaire: System Users
Occupational Information Access System

(Circle One)
Sex: Male Female

Class: 10 11 12

GPA Rank: upper 1/3
middle 1/3
lower 1/3

Since you recently used the Occupational Information Access System, we would appreciate your frank opinion about your experiences with the computer terminal, tapes, or printed information.

1. Why did you use OIAS?

   a) Curious about the computer and how it works ( )
   b) Personally interested in looking for occupational information ( )
   c) Counselor or teacher recommendation ( )
   d) Class assignment ( )
   e) Other _____ ( )

2. What information were you searching for?

   a) Names of occupations to explore ( )
   b) General information about a particular occupation ( )
   c) Specific information about a particular occupation ( )
   d) a and b ( )
   e) Other _____ ( )

3. Were you able to find the information you were looking for?

   a) Yes ( )
   b) No ( )

4. How satisfied were you with the information you recieved from OIAS?

   a) Very satisfied ( )
   b) Satisfied ( )
   c) Dissatisfied ( )
   d) Very dissatisfied ( )

   Comments: _____

5. What information would you like to have that OIAS was unable to supply?

6. Which parts of the system did you use?

	Used	Didn't Use	Most Valuable (check one)
Questionnaire and list of occupations from the teletype terminal	( )	( )	( )
Job Descriptions from the teletype terminal	( )	( )	( )
Bibliography Notebook, books, and other written material	( )	( )	( )
Cassette interview tape Recordings	( )	( )	( )
Personal Visits from the teletype terminal	( )	( )	( )

7. How many different times did you use the system? _____

8. Altogether, about how much time did you spend using the system? _____

9. Did you have any problems using OIAS?

a) Yes ( )
b) No ( )

If so, what kind of problems? _____

_____

10. If you were seeking occupational information at a later date, would you want to use OIAS again?

a) Yes ( )
b) No ( )

11. How would you describe the information you received from OIAS?

	Yes, Definitely	Yes	No	Definitely Not
Job Descriptions were:				
Accurate and up-to-date	( )	( )	( )	( )
Complete (covered all important topics)	( )	( )	( )	( )
Easy to understand	( )	( )	( )	( )
Fun to use	( )	( )	( )	( )
Related the job to my own interests, values, and abilities	( )	( )	( )	( )
How would you describe the Questionnaire (if you used it):				
Easy to understand	( )	( )	( )	( )
Fun to use	( )	( )	( )	( )
Asked relevant questions	( )	( )	( )	( )
Related occupations to my own interests, values, abilities	( )	( )	( )	( )
How would you describe the Personal Visits (if you used them):				
Easy to set up appointments	( )	( )	( )	( )
Willing to take time to talk	( )	( )	( )	( )
Gave a good idea what the work is really like	( )	( )	( )	( )
Objective about the advantages and disadvantages of the occupation	( )	( )	( )	( )

12. Have you recommended OIAS to a friend?

a) Yes ( )
b) No ( )

13. What changes or additions can you think of that would improve OIAS?

14. Did the list of occupations from the terminal give you some new occupations that you would seriously consider for future work?

a) Definitely Yes ( )
b) Yes ( )
c) No ( )
d) Definitely No ( )

15. Please list the occupations you feel you might be able to follow later on?

Before using OIAS, how certain were you about your future career?

a) Very Certain ( )
b) Certain ( )
c) Uncertain ( )
d) Very Uncertain ( )

As a result of using OIAS, do you have a career in mind more certainly now than before?

a) Very Certain ( )
b) Certain ( )
c) Uncertain ( )
d) Very Uncertain ( )

Check the one occupation in the above list (question 15) you think you are most likely to follow as a career.

Why did you choose that occupation?

Hiring Requirements: What are the major requirements for employment in that line of work?

Employment Prospects: How good or poor are job prospects for that line of work in the local area?

Excellent ( )
Good ( )
Fair ( )
Poor ( )

Are job prospects better, worse, or about the same in other parts of the country?

Better ( )
Worse ( )
About same ( )

Evaluation Questionnaire: Non-Users
Occupational Information Access System

(Circle One)
Sex: Male Female

Class: 10 11 12

GPA Rank: upper 1/3
middle 1/3
lower 1/3

We didn't expect everybody to use the Occupational Information Access System, but we are interested in knowing why you didn't. Please read the reasons listed below, then check the one that best fits your reason for not using it.

1. I Never Heard about it ( )
2. I Heard about it, but I wasn't interested in occupational information ( )
3. I didn't need it because I already know what I am going to do ( )
4. I Heard about it and probably would have used it, but I didn't know how ( )
5. I Heard about it and probably would have used it, but I didn't know I could ( )
6. I didn't need it because I am going to college ( )
7. Computers are too impersonal ( )
8. I Heard it wasn't very helpful ( )
9. I Heard it was pretty hard to use ( )
10. Other _____ ( )

Do you have an idea what occupation you will follow as a career?

a) Yes ( )
b) No ( )

Please list the occupations you think you might be able to follow later on:

How certain are you about your future career?

a) Very Certain ( )
b) Certain ( )
c) Uncertain ( )
d) Very Uncertain ( )

Check the one occupation in the above list you think you are most likely to follow as a career.

Why did you choose that occupation?

Hiring Requirements: What are the major requirements for employment in that line of work?

Employment Prospects: How good or poor are job prospects for that line of work in the local area?

Excellent	( )
Good	( )
Fair	( )
Poor	( )

Are job prospects better, worse, or about the same in other parts of the country?

Better	( )
Worse	( )
About same	( )

NAME _____

JOB INFORMATION TEST

Directions: Circle the letter beside the correct answer in each question below.

PART I

SECTION A.

1. How much regular schooling do you think a physical therapist needs?

   (a) less than a high school diploma
   (b) high school diploma
   (c) some college or technical training
   (d) college degree

2. How much regular schooling do you think a telephone or telegraph operator needs?

   (a) less than a high school diploma
   (b) high school diploma
   (c) some college or technical training
   (d) college degree

3. How much regular schooling do you think a watchman needs?

   (a) less than a high school diploma
   (b) high school diploma
   (c) some college or technical training
   (d) college degree

4. How much regular schooling do you think a hospital administrator needs?

   (a) less than a high school diploma
   (b) high school diploma
   (c) some college or technical training
   (d) college degree

5. How much regular schooling do you think a licensed practical nurse needs?

   (a) less than a high school diploma
   (b) high school diploma
   (c) some college or technical training
   (d) college degree

6. How much regular schooling do you think a janitor needs?

   (a) less than a high school diploma
   (b) high school diploma
   (c) some college or technical training
   (d) college degree

7. How much regular schooling do you think a cosmetologist needs?

(a) less than a high school diploma
(b) high school diploma
(c) some college or technical training
(d) college degree

8. How much regular schooling do you think a construction laborer needs?

(a) less than a high school diploma
(b) high school diploma
(c) some college or technical training
(d) college degree

9. How much regular schooling do you think a bank teller needs?

(a) less than a high school diploma
(b) high school diploma
(c) some college or technical training
(d) college degree

10. How much regular schooling do you think a caseworker needs?

(a) less than a high school diploma
(b) high school diploma
(c) some college or technical training
(d) college degree

SECTION B.

11. Who earns more?

(a) a registered nurse
(b) a recreation leader

12. Who earns more?

(a) a domestic service worker
(b) a millwright

13. Who earns more?

(a) a medical techologist
(b) a draftsman

14. Who earns more?

(a) a welder
(b) a fry cook

15. Who earns more?

(a) an optician
(b) an optometrist

16. Who earns more?

(a) a sawmill greenchainman
(b) a veterinarian

17. Who earns more?

(a) a long-haul truck driver
(b) a receptionist

18. Who earns more?

(a) a powerhouse fireman
(b) a forester

19. Who earns more?

(a) an engineering technician
(b) an accountant

20. Who earns more?

(a) a tool and die maker
(b) a stock clerk

SECTION C.

21. Which of the following best describes the work of an ecologist?

(a) treats diseases found on various plants
(b) studies the relationships between living organisms and their environment
(c) searches for data about the ocean and its plants and animals
(d) studies the behavior of individuals and groups and recommends ways in which their problems can be solved

22. Which of the following best describes the work of a warehouseman?

(a) receives, stores, ships and distributes tools, materials, equipment, and other products
(b) sweeps and cleans floors, picks up trash, and washes windows in large buildings
(c) builds and constructs warehouses
(d) operates boilers that supply heat or power for engines and turbines

23. Which of the following best describes the work of a stenographer?

(a) delivers messages to administrators and executives
(b) assists scientists in drawing various mathematical graphs
(c) keeps records of a company's assets and liabilities
(d) records and transcribes letters, minutes, reports, etc.

24. Which of the following best describes the work of a bus boy?

(a) sweeps out city buses after daily routes have been run
(b) collects trays and dishes from tables in eating establishments
(c) helps people take luggage to their rooms in hotels and motels
(d) serves food to customers in cafes and restaurants

25. Which of the following best describes the work of a performing artist?

(a) designs buildings, bridges, highways, etc.
(b) paints portraits, landscapes, and other kinds of pictures
(c) translates man's emotions into some artistic form such as in the work of an actor, singer, dancer, or musician
(d) engages in the sculpturing of images from such material as clay, marble, and slate

26. Which of the following best describes the work of a stock clerk?

(a) assists a stock broker in the trading of stocks and bonds
(b) works on a farm tending to such livestock as cows and hogs
(c) works in wholesale and retail stores storing and keeping records of merchandise
(d) rings up sales on cash registers for customers in retail establishments

27. Which of the following best describes the work of a draftsman?

(a) recruits young men for induction into the military service
(b) serves beverages, such as draft beer, in bars and taverns
(c) translates the ideas and rough sketches of engineers and architects into detailed drawings
(d) prepares step-by-step instructions for computer operators in processing various computer programs

28. Which of the following best describes the work of a pharmacist?

(a) attempts to prevent, control, and cure animal diseases
(b) engages in protecting, managing, and developing natural resources
(c) assists chemists in determining physical and chemical properties of various materials
(d) compounds and issues various medicines according to doctors specifications

29. Which of the following describes the work of a routeman?

(a) sells and delivers goods to regular wholesale and retail customers
(b) serves food and beverages to customers inside eating establishments
(c) works for travel agencies, charting out various roads for tourists to take while driving on a trip
(d) collects money from motorists crossing toll bridges

30. Which of the following best describes the work of a clergyman?

(a) manages and directs funeral homes and services
(b) supervises prisons and other corrective institutions
(c) supervises pools of secretaries who engage in various clerical tasks
(d) serve as spiritual leaders for congregations in worship services and holy rites

APPENDIX B

Career Information System

Office of the Director
247 Hendricks Hall
University of Oregon
Eugene, Oregon 97403
(503) 686-3872

AGREEMENT BETWEEN THE
XYZ SCHOOL DISTRICT
AND THE CAREER INFORMATION SYSTEM
1973-74

The following agreement represents considerable commitment by both parties to promote and service an occupational information system at the XYZ School District for the 1973-74 school year. This agreement also implies an effective working relationship between both parties to communicate on important developments in the System.

CAREER INFORMATION SYSTEM'S RESPONSIBILITY:

Program and File Format:

The CIS will make available the following files and programs for the use of approximately 10,000 junior and senior high school students.

Descriptions (DESC) file updated, and localized to the Salem Metro Area;

Occupational Books, updated for use during 1973-74;

Education and Training Opportunity (EDUC) file as it becomes available;

QUEST program (computerized).

Materials:

The CIS will deliver the following materials for use by 10,000 students and supportive staff.

a) Occupational Books--one set for each school designated to use the System;

b) User's Handbooks--10,000 copies.

Information Development and Maintenance:

The CIS will deliver occupational and educational information by computer printout and by computer dumps and continuously update same.

Evaluation:

The CIS will assist Dr. Joe Smith with an evaluation of the System's effectiveness for the students in XYZ School District.

In-Service Training:

a. The CIS will cooperatively plan pre-service training with Dr. Joe Smith. This session should include a school administrator, school coordinator/counselor, secretary and any other interested personnel from each school using the System. This group training will precede activation of the System in the XYZ School District.

b. The CIS will be available as a resource for in-service training at each school using the System upon the request by Dr. Joe Smith.

XYZ SCHOOL DISTRICT'S RESPONSIBILITY:

1. The XYZ District estimates that approximately 10,000 students will be served by the CIS information files and programs during the 1973-74 school year.

2. The District agrees to commit $5,240 to the CIS by May 1, 1974 for staff in-service, information development and maintenance, OIAS and the Occupational Needle-Sort System, and user materials for approximately 10,000 students to be served during the 1973-74 school year. This is consistent with the pricing policy which has been established by the CIS Board of Directors.

3. The CIS files and programs are for the sole use of students, teachers, and counselors in designated secondary schools during the school year 1973-74 and any subsequent school year during which an agreement is effective. A designated secondary school is a school whose staff has had a CIS approved group in-service training session and has materials and access to the System.

4. The XYZ District agrees that no charges shall be made to individual students, faculty, or counselors for the use of the System.

5. Standards for Use: The "Standards For Use...," Appendix A, as adopted by the CIS Board will be the basis of operation in the designated schools (agencies) except as modified below:

a. (Specific reference to the "Standards" can be made)

6. Dr. Joe Smith will place in each user school (agency) all materials for use with the System.

Violation of the above terms and conditions shall constitute a breach of this agreement. Upon such breach of agreement and after a thorough review of the breach by both parties, either party may terminate this agreement upon 10 days written notice to the other.

This agreement expires June 30, 1973.

Upon expiration of this agreement or upon termination for breach of the agreement, the XYZ School District agrees to return to the Career Information System any unused copies of the user materials, information files, cassette tapes, and other materials obtained or developed for the purpose of implementing the occupational information system.

FOR XYZ SCHOOL DISTRICT

_____

_____

Date

FOR THE CAREER INFORMATION SYSTEM

_____

Bruce McKinlay, Director

_____

Date

Ratified by the CIS Board:

_____

William Manley, Board Chairman

_____

Date

APPENDIX C

Career Information System

Office of the Director
247 Hendricks Hall
University of Oregon
Eugene, Oregon 97403
(503) 686-3872

STANDARDS FOR USE OF THE OCCUPATIONAL INFORMATION ACCESS SYSTEM OR OCCUPATIONAL NEEDLE-SORT SYSTEM

The Career Information System (CIS) has the responsibility for providing practical means of direct access to current career and labor market information in forms which are meaningful to individual students and clients and for encouraging integration of such information into schools and social agencies in the State. Two of the methods available through the CIS are the Occupational Information Access System (computerized) and the Occupational Needle-Sort System (manual).

Both systems are good tools, but, like most tools they are designed to do a particular kind of job, and they work best when they are used for that purpose. This set of "Standards" is intended to help user schools and agencies understand the System and to plan uses that will complement their other activities.

The purpose of CIS as the name implies, is to make occupational labor market information more accessible for career exploration. To achieve this end, the CIS:

--helps the user identify relevant occupations to explore.

--helps the user find publications which will give him facts about occupations he wants to know more about.

--presents personal visits as well as printed materials to meet the different needs of different users.

--utilizes delivery systems that can be operated by inexperienced students and other individuals. They do not require staff assistance, though parts of the System fit easily into counseling and instructional situations.

--covers all of the major occupations in the area as well as significant ones not found locally.

--updates information immediately as new or revised data become available.

--establishes a statewide cooperative to reduce costs and insure quality information to individual schools and agencies.

The delivery systems consist of several semi-independent components, so they have a certain built-in flexibility to adapt to different user needs and different institutional resources. The basic components are:

QUEST Program: Helps users identify occupations to explore and helps them locate appropriate types of information about occupations. (Computer and needle-sort versions available.)

DESCRIPTION: Brief, 300-word summaries about each of the occupations in the System (teletype and pre-printed "dumps" are available).

OCCUPATIONAL BOOKS: The systems refer users to the most pertinent general and specific publications about particular occupations.

EDUCATION: Lists available post-secondary occupational preparatory programs (teletype and pre-printed "dumps" are available).

VISITS: Give more intimate exposure to the occupation. Arrangements are made for people in occupations to talk about their jobs and to show others the work place.

The System has been tested in a number of locations: University of Oregon Counseling Center, Churchill High School, five Employment Division offices, Lane Community College, Vocational Rehabilitation Division Office in Eugene, Shasta Junior High School, the Valley River Shopping Center, and Coos County High Schools.

Among other things, these tests indicated certain rules for effective use of the System. (Copies of the individual evaluation reports are available on request.)

Rules for System Use

1. The following table indicates four ways in which System components can be used to meet particular needs. Prospective user institutions should analyze their needs to determine which purposes they want the System to serve.

USES OF CIS COMPONENTS

TYPE OF USE	Principal Component	Other Required Components	Optional Additional Components
1) Identification of Occupations for Exploration	QUEST	DESCRIPTIONS OCCUPATIONAL BOOKS	VISITS
2) Introduction to Occupations	DESCRIP-TIONS	OCCUPATIONAL BOOKS	VISITS
3) Introduction to Educational & Training Opportunities	EDUCA-TION	DESCRIPTIONS OCCUPATIONAL BOOKS	VISITS
4) Counselors' Reference to Selected Occupational Materials	OCCUPA-TIONAL BOOKS		DESCRIPTIONS EDUCATION

The requirements listed in the preceding table are based on experience which has shown, for instance, that the QUEST questionnaire and list of occupational titles should not be used by itself. The questionnaire contains several pertinent occupation selection criteria, but other information, for instance job opportunities and licensing requirements, is essential to a sound occupational choice. Users should have access to and be encouraged to use some additional material--descriptions, books, visits, etc.-- to get information about the occupations they want to explore. Any institution using the QUEST part of the System must plan to utilize at least the DESCRIPTIONS and OCCUPATIONAL BOOKS.

2. Institutions should incorporate the System into on-going courses and counseling practice, wherever appropriate and feasible.

It is advantageous, though not required, that they also make the System available for independent student/client use. Experience has proved that the System receives effective use when it is open to independent client/ student usage, but its resources should also be integrated into on-going instructional and counseling programs.

3. Batch processing of the QUEST questionnaire, whereby students receive only a printout of their QUEST list without an opportunity to make changes, inquire why not, and immediately retrieve descriptive information about the occupations, is not authorized. A school or agency who desires to use this process should obtain authorization from CIS.

4. In-Service training of staff is a prerequisite to use of the System. Effective use of the System requires an understanding of: System components, sources and use of information, mechanics of System use, discussion of System applications within the particular setting. Staff who will use or be responsible for the use of the System in individual schools and agency offices must attend a training program which has been approved by the CIS.

5. Each user institution should designate one person as the coordinator for the institution. This will provide a contact point for communication between the institution and the CIS staff.

6. Current local, regional, and national occupational labor market information is at the heart of the System. Providing inaccurate or outdated information is a serious misuse of the System and a disservice to students. User schools and agencies must support an adequate program of information maintenance by helping to pay the information development costs of CIS, which operates such an information maintenance program for the System. (Design of the System was financed by the U.S. Department of Labor, Manpower Administration, so user agencies are not charged for any of the initial developmental costs. However, the Labor Department is not underwriting localized operation of the System beyond certain minimum testing, so operating costs must be borne by user institutions.) These costs will include:

For the Computerized Occupational Information Access System

I. terminal costs
installation
telephone connection
operating costs (teletype equipment rental, computer use charge)

II. appropriate printed materials (user questionnaires, occupational books, etc.)

III. share of updating costs (continuous information maintenance and system modifications)

IV. agency staff training and program evaluation

For the Occupational Needle-Sort System

I. needle-sort cards, box and needle

II. appropriate printed materials (user questionnaires, occupational books, DESC and EDUC dumps, etc.)

III. share of updating costs (continuous information maintenance and system modifications)

IV. agency staff training and program evaluation

8. CIS materials are copyrighted and remain the property of the Career Information System. They may not be duplicated by user agencies without the written approval of the CIS Director.

9. User agencies and schools employing terminals for access to the System need to make plans for compatible scheduling. For OTIS users, computer "time-lock" security procedures and other security measures are available and are the responsibility of the school.

10. Both systems are still being tested and modified, and new applications may be tested. Experimentation is encouraged, provided it is conducted with evaluation and with approval by CIS staff. However, the above requirements have proven to be essential, and any institution using the systems must observe these requirements unless other arrangements are made in advance. Unauthorized departure from these standards will be viewed as a breach of the agreement and will result in termination of system availability.

Revised 11/71
Adopted 11/15/71
Revised and Adopted 8/73
CAREER INFORMATION SYSTEM