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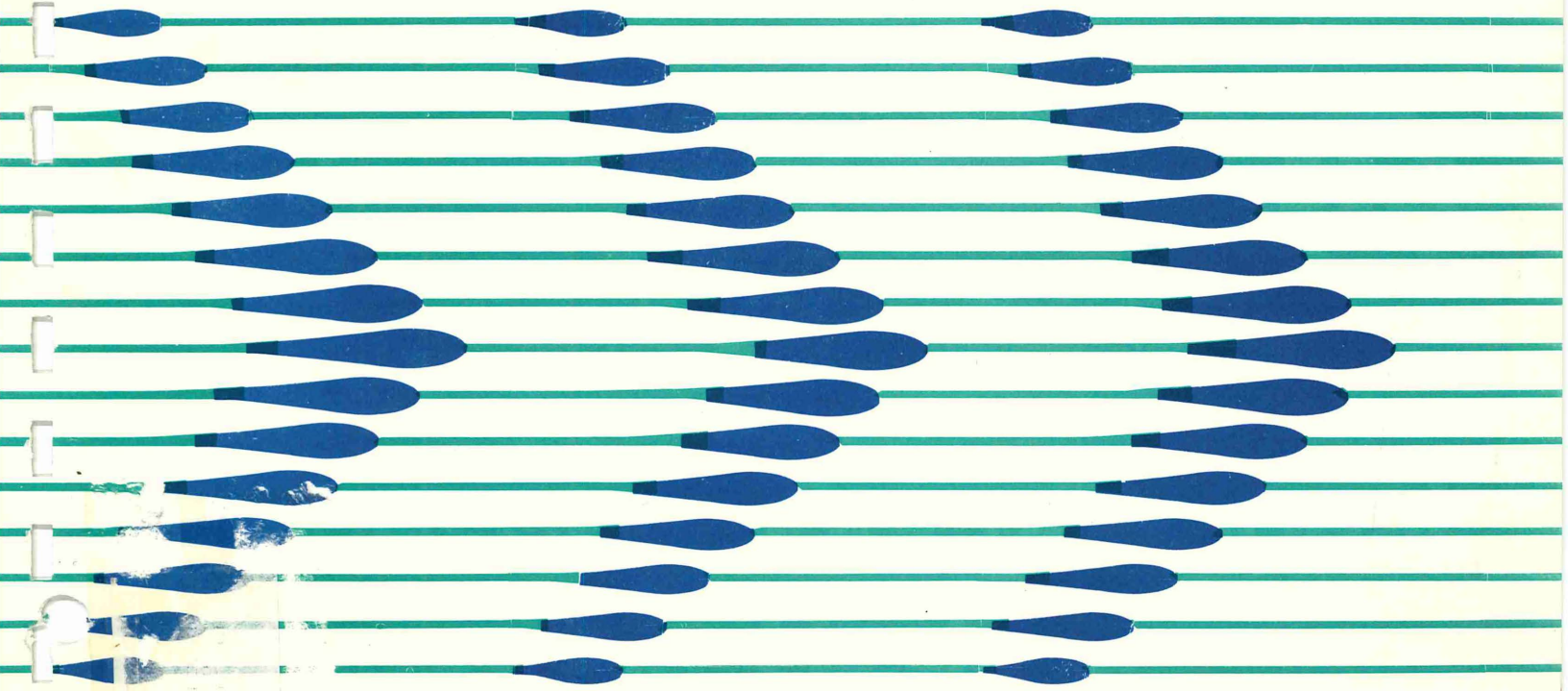
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# Minnesota's Occupational Information System:

## Further Development and Field Testing

EXECUTIVE SUMMARY

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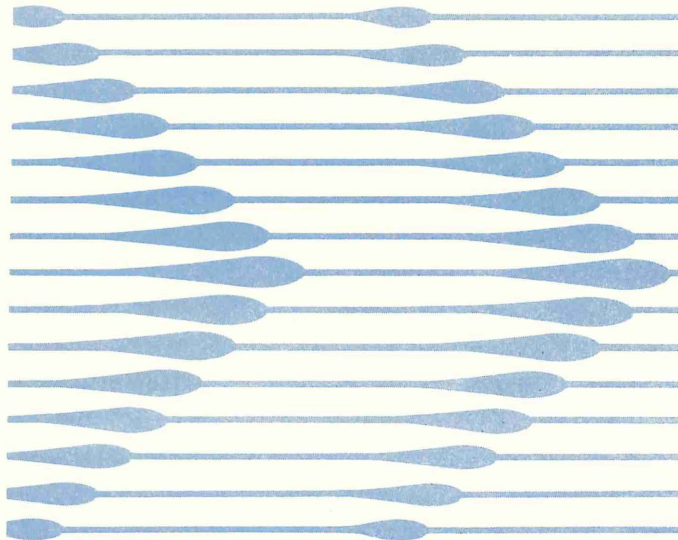
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Executive Summary

# Minnesota's Occupational Information System:

## Further Development and Field Testing

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The activities which are the subject of this report were conducted under contract with the Minnesota Occupational Information Coordinating Committee (MOICC). The opinions expressed in the report do not necessarily reflect the policy or position of MOICC and no official endorsement should be inferred.

October, 1981

## Preface

The project which this report describes was conducted by the Minnesota Research and Development Center for Vocational Education at the University of Minnesota under contract with the Minnesota Occupational Information Coordinating Committee (MOICC). As the title infers, the activities in this project were designed to build upon previous efforts by MOICC which are aimed toward an efficiently and effectively functioning Occupational Information System for Minnesota. Thus, the endeavor reported here is not the beginning, nor does it claim to be the end or accomplishment of that goal. That it makes a significant contribution to progress toward the goal is the desire of those whose work it represents.

A unique feature of this project was the team of people assembled to carry out the varied activities making up the program of work. Their backgrounds are in psychology, labor market information and statistical analysis; anthropology and journalism; statistics, graphics, and industrial education; organizational behavior and industrial relations; planning and research; and vocational education administration. Such variety broadened the perspective and added challenge and interest for all concerned. On a similar note, the Network Seminar, with a refreshing mix of participants, provided timely encouragement and feedback to the project staff.

Special thanks are extended to the members of MOICC for their confidence in awarding the contract, to the MOICC Technical Advisory Committee for their active role in advising and reviewing progress of the project, to MOICC staff, John Cosgrove and Steve Mudd, for their assistance in selecting and completing project activities, and to Brandon Smith and Tom Mahoney for their advice on the internal workings of the project.

Particularly deserving of appreciation are the very able MRDC secretaries, Mary Gupta, Conny Rime, Judy Stangl, and David Rosenbloom who mastered new word processing equipment and created the graphics to produce a report the entire staff is pleased to submit.

## Abstract

This study to further develop and field test an Occupational Information System for Minnesota had a two-dimensional purpose: 1) to document and analyze the existing network of people producing and using occupational information and the channels of communication by which that information is shared and 2) to analyze selected data base sources of supply and demand information for the information they provide for the process of making career, job placement, and education and training program planning decisions.

Activities conducted to achieve the first, or people, dimension included: investigating the "network" as a system; interviewing selected individuals throughout state, along with some regional and local, agencies involved in producing and using occupational information; examining the data gathered to determine and classify roles of and linkages between elements (people) within the network; and identifying both barriers to and facilitators of interorganizational communication.

The information dimension of the study was divided into two major activities: 1) analysis of selected existing supply and demand data bases using a proposed general framework; and 2) analysis of selected existing supply and demand data sources for information on six specific occupations.

In support of the information dimension, the decision-making process and occupational information used in that process was investigated for a specific group of users. One-third of the AVTI directors in the state were interviewed regarding vocational program development and implementation decisions.

A seminar for network participants was held as a culminating activity for this project. Preliminary findings of the study were presented and feedback obtained and integrated into this report.

This report includes recommendations for continued development and strengthening of the Occupational Information Network and the information shared through it.

## Summary and Recommendations

### SUMMARY

This study, to further develop and field test an Occupational Information System (OIS) in Minnesota, represents another step toward achieving the Congressional mandate issued in 1976 and expanded in 1977 and 1978 to meet the occupational information needs of a broad spectrum of users in a cooperative and coordinated manner.

The approach to OIS development being pursued by the Minnesota Occupational Information Coordinating Committee is that of organizing and/or strengthening a network of people who produce and/or use occupational information, calling attention to both the people and the information dimensions of an OIS. The activities of this study were designed to document and analyze what exists on both of these dimensions: (1) the network of people producing and using information and the channels of communication by which that information is shared, and (2) the data bases available and information they provide for the process of making career, job placement, and education and training program planning decisions.

In the network study, the concept of "network" was examined to acquire a clearer understanding of its application to an OIS. A qualitative anthropological approach was used to identify the elements (people) in the network, beginning with the MOICC members themselves, and the formal and informal communication linkages used for obtaining and sharing occupational information. Barriers and facilitators to communication were identified and explained.

The focus of the information dimension was directed toward supply and demand information, which is an indicator of the opportunity and competition for employment in an occupation. Users responding in a survey indicated that this information need was the least well met. The analysis of information was approached in several ways:

- (1) A general framework for considering supply and demand information was proposed and five existing data bases analyzed for the information they provide to fill out the framework.
- (2) Six occupations were selected from a list generated by users using a set of criteria to assure variety. Data sources were analyzed for the specific contributions they make to information about opportunity in each of these occupations.
- (3) The decision-making process for vocational program development and implementation and the nature and source of occupational information used in that process by a specific group of users was documented and examined by a structured interview process with 33% of the AVTI directors in the state.

Throughout these activities, attention was given to the limitations of the available information as well as the positive contributions the various data sources made to the supply/demand picture. Effort was made to consider the needs of a variety of users expressed both through personal encounter and the user needs survey in selecting a format for presenting the information.

## RECOMMENDATIONS

The findings from these activities provided the basis for recommendations for action that could strengthen and improve both the network and the information flowing through it.

### Toward Improving the Network

The informal network is more extensive and more heavily used than the formal network. The informal linkages tend to be motivated by mutual benefit. Formal links established through formalized exchange of resources are likely to become restricted as the scarcity of those resources increases. Intermediary level users (support staff) provide an important bridge or link between occupational information users and producers.

### RECOMMENDATION 1

MOICC member agencies should encourage the development of informal linkage by issuing specific invitations to other network member to participate in agency-sponsored or user group-related meetings and training sessions and by facilitating attendance of their staff when invitations are issued by other agencies.

Information overload is a common problem brought on by extensive distribution of printed materials without due consideration of their match with need for information.

### RECOMMENDATION 2

MOICC should provide a useful service to network members by developing mailing lists of occupational information users by category of user, identifying the type of information and format desired, and updating these lists annually.

### RECOMMENDATION 3

Producers of occupational information should establish advisory groups of users to increase communication

about such issues as information format, interpretation, timing, and specificity, recognizing that the producers' operating resources may become increasingly dependent upon extending their market and increasing the actual use of their products.

The network is extensive and complex, increasingly so as it reaches the "grass roots" level.

#### RECOMMENDATION 4

MOICC should extend the network beyond the agency level by establishing relationships with organizations representing "grass roots" users of occupational information (i.e., counselors, teachers, librarians). Pursuit of this recommendations could assist to accomplishing Recommendation 2.

#### Toward Improving Occupational Information

The use of different classification structures for occupations, geographic areas and time periods confuses users and restricts the use of more than one data source.

#### RECOMMENDATION 5

MOICC should convene an interagency group to work out the classification problem and seek collective agency commitment to more common classification systems and a satisfactory level of specificity (detail).

Decisions are made with information that is available and perceived to be appropriate. Many sources of occupational information exist in addition to formal data collection systems.

#### RECOMMENDATION 6

MOICC should undertake an intense study of a specific category of users each year to identify decisions made involving occupational information, and to assess what type and source of information is really being used and why and what available information is not being used and why not.

### RECOMMENDATION 7

Information producers should use the findings from the study of specific user groups to develop materials and select methods for use in a training session for members of that user group on the acquisition, use and limitations of occupational information and for additional feedback to data producers to assist them in improving the usefulness of the information they produce.

There is some occupational information already available in the state which can be used with appropriate analysis and interpretation to describe supply and demand for specific occupations.

### RECOMMENDATION 8

MOICC should select five specific occupations for analysis and narrative interpretation of supply/ demand relationships for publication in each issue of the MOICC NEWSNET. Expertise about the actual uses of these interpretations, about the specific occupation being analyzed, and about the strengths and limitations of the data sources being drawn upon should be combined in developing these analyses and narrative interpretation.

There are, however, major gaps in both supply and demand information needed to draw a complete picture of the situation for a specific occupation.

### RECOMMENDATION 9

MOICC should expand the analysis of occupational supply/demand information beyond those sources examined in this study, particularly focusing on information about internal labor mobility, geographic migration of people and firms and follow-up data on educational programs. Producers of educational program data should be encouraged to include information about the employment status of those attending educational programs. Where sources of this information do not exist, MOICC should work through the network of producers and users to create effective and efficient ways to provide the needed information.

A major policy decision in interpreting the supply/demand situation for a specific occupation is defining under what conditions an occupation should be termed as having a shortage or surplus of supply for the purposes of various users (i.e., career counselors, educational program managers). The definition is likely to involve a compromise among interests of a variety of groups (i.e., workers, employers, consumers, politicians, professionals such as counselors and teachers).

#### RECOMMENDATION 10

MOICC should support the examination of supply/demand relationships toward defining situations which should be termed a supply shortage or surplus. Users of this information and those who bear the consequences of its use should be heavily involved in shaping these definitions.

A conceptual framework for thinking about occupational supply and demand relationships is important to enhancing common understanding by producers and users, for identifying information gaps and interrelationships, and for uncovering problems and issues in further developing and using occupational information. This framework would be even more valuable for these purposes if it was an integral part of a more comprehensive conceptual framework for the labor market or even the economy as a whole in the state, nation, and world.

#### RECOMMENDATION 11

MOICC should continue to examine, revise, and use the proposed frameworks for occupational supply and demand information in enhancing further use and development of Minnesota's occupational information and support the linkage of this framework to more comprehensive frameworks of the labor market and/or economy of the state, nation, and world.

RECOMMENDATIONS

- (1) MOICC member agencies should encourage the development of informal linkage of issuing specific invitations to other network members to participate in agency-sponsored or user group-related meetings and training sessions and by facilitating attendance of their staff when invitations are issued by other agencies.
- (2) MOICC should provide a useful service to network members by developing mailing lists of occupational information users by category of user, identifying the type of information and format desired, and updating these lists annually.
- (3) Producers of occupational information should establish advisory groups of users to increase communication about such issues as information format, interpretation, timing, and specificity, recognizing that the producers' operating resources may become increasingly dependent upon extending their market and increasing the actual use of their products.
- (4) MOICC should extend the network beyond the agency level by establishing relationships with organizations representing "grass roots" users of occupational information (i.e., counselors, teachers, librarians). Pursuit of this recommendation could assist to accomplishing Rec. Number 2.
- (5) MOICC should convene an interagency group to work out the classification problem and seek collective agency commitment to more common classification systems and satisfactory level of specificity (detail).

REVISED  
RECOMMENDATIONS

- (1) MOICC member agencies should encourage the development of informal linkage of issuing specific invitations to other network members to participate in agency-sponsored or user group-related meetings and training sessions and by facilitating attendance of their staff when invitations are issued by other agencies.
- (2) ELIMINATED.
- (3) MOICC member agencies should encourage producers of occupational information to utilize advisory groups of users to increase communication about such issues as information format, interpretation, timing, and specificity.
- (4) MOICC should extend the network beyond the agency level by establishing relationships with organizations representing "grass roots" users of occupational information (i.e., counselors, teachers, librarians).
- (5) MOICC should work toward common classification systems through the efforts of its Technical Advisory Council

RECOMMENDATIONS

- (6) MOICC should undertake an intense study of a specific category of users each year to identify decisions made involving occupational information, and to assess what type and source of information is really being used and why and what available information is not being used and why not.
- (7) Information producers should use the findings from the study of specific user groups to develop materials and select methods for use in training session for members of that user group on the acquisition, use and limitations of occupational information and for additional feedback to data producers to assist them in improving the usefulness of the information they produce.
- (8) MOICC should select five specific occupations for analysis and narrative interpretation of supply/demand relationships for publication in each issue of MOICC News-Net. Expertise about the actual uses of these interpretations, about the specific occupational being analyzed, and about the strengths and limitations of the data sources being drawn upon should be combined in developing these analyses and narrative interpretation.
- (9) MOICC should expand the analysis of occupational supply/demand information beyond those sources examined in this study, particularly focusing on information about internal labor mobility, geographic migration of people and firms and follow-up data on educational programs. Producers of educational program data should be encouraged to include information about the employment status of those attending educational programs. Where sources of this information do not exist, MOICC should

RECOMMENDATIONS

- (6) MOICC should encourage feedback from users to producers to identify types of data needed and used. A method of assessing occupational information products and services should be developed to determine their relevance and utility for each category of users. Information producers should use the findings from these assessments to develop materials and select methods for use in training sessions for members of that user group on the acquisition, use and limitations of occupational information.
- (7) Modified and combined with Number 6.
- (8) MOICC should publish data on specific occupations for analysis and narrative interpretations on supply/demand relationships in MOICC News-Net. Expertise about the actual uses of these interpretations, about the specific occupations being analyzed, and about strengths and limitations of the data sources being drawn upon should be combined in developing these analyses and narrative interpretation.
- (9) ELIMINATED

RECOMMENDATIONS

- (9) cont'd.  
work through the network of producers and users to create effective and efficient ways to provide the needed information.
- (10) MOICC should support the examination of supply/demand relationships toward defining situations which should be termed a supply shortage or surplus. Users of this information and those who bear the consequences of its use should be heavily involved in shaping these definitions.
- (11) MOICC should continue to examine, revise, and use the proposed frameworks for occupational supply and demand information in enhancing further use and development of Minnesota's occupational information and support the linkage of this framework to more comprehensive frameworks of the labor market and/or economy of the state, nation, and world.

RECOMMENDATIONS

- (10) MOICC should encourage the examination of supply/demand relationships which could be termed supply shortage or surplus. Users of this information and those who bear the consequences of its use should be heavily involved in shaping these definitions.
- (11) MOICC should continue to examine, revise, and use the proposed frameworks for occupational supply and demand information.