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ABSTRACT

Procedures for assessing the educational and employment activities of former high school students are presented and evaluated through a test conducted in seven Minnesota school districts (14 high schools). The procedure consisted of data gathering forms, an assessment procedures manual, and a computer program summarizing information for school use. Assessment procedure criteria were to: (1) provide information to assist schools in planning and evaluation; (2) be directed, conducted, and financed by local schools; (3) include all school leavers; (4) provide valid and reliable status information about educational and employment activities of former students; (5) produce a high rate of response from former students; (6) be kept at reasonable cost; (7) supply information to simplify future assessment; and (8) provide consistent information across schools. The assessment procedure test was conducted in four steps: (1) an orientation workshop for local directors and clerical assistants, (2) implementation, (3) local process evaluation, and (4) summary evaluation by the Minnesota Research Coordinating Unit. The test concluded that the assessment procedures met each of the criteria and recommendations based on test results are presented. Appended materials include a selected bibliography and lists of possible local interest groups, and currently available publications of the Minnesota Research Coordinating Unit. (Author/EC)

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RCU

# Status of Former High School Students: Procedure for Local Assessment

Report of the Final Test

THE MINNESOTA RESEARCH COORDINATING UNIT FOR VOCATIONAL EDUCATION performs the following four functions in behalf of the State and national systems of vocational education:

1. Stimulate, facilitate and coordinate innovative research and development efforts.

2. Disseminate research-related information to assist research and development efforts and to speed the implementation of worthy educational innovations.

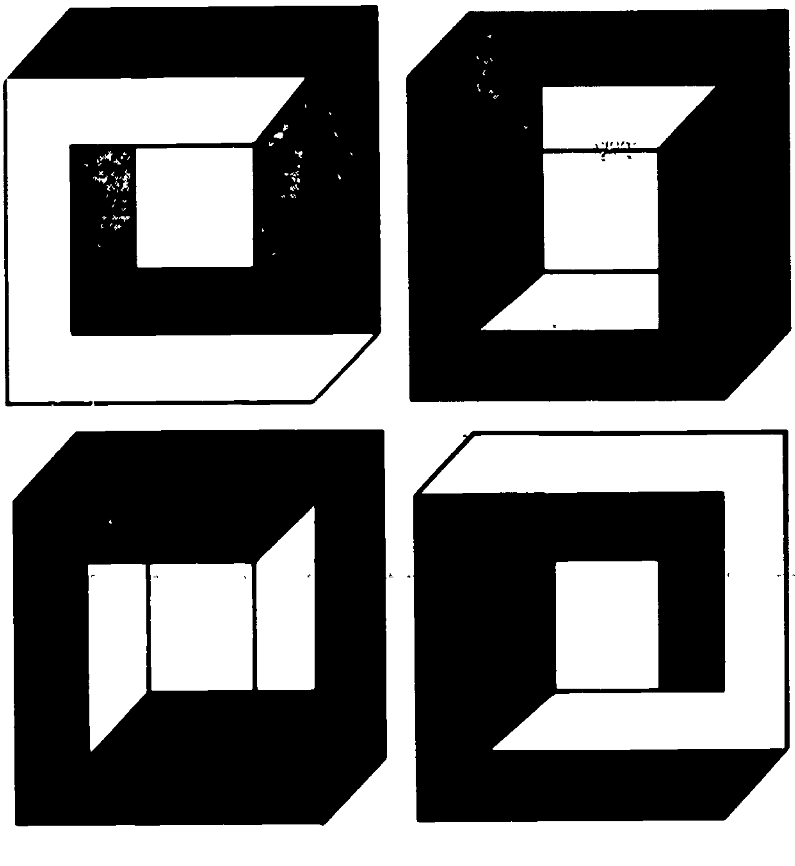
3. Increase the number and improve the competence of producers and consumers of vocational research-related materials.

4. Create knowledge and useful products that have potential for making long-range and general qualitative improvements in vocational education.

# Status of Former High School Students: Procedure for Local Assessment

Report of the Final Test

by Donald Irvin and George Copa



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November 1974

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ABSTRACT

The research project reported in this publication had as its purpose to revise and final test a procedure for assessing the educational and employment activities of former high school students. The revision was based on the results of a first pilot test conducted in three school districts during the 1972-73 school year. The final test was conducted in seven school districts during the 1973-74 school year. The procedure was evaluated on the basis of the validity and reliability, usefulness and cost of information collected. The assessment procedure was designed to be initiated, directed and largely conducted by school personnel wishing to assess the post-high school activities of their former students. Procedures consists of a set of data collection forms, a procedures manual for conducting the assessment, and a computer program to summarize the information for school use.

In general, it was found that the assessment procedure met each of the criteria. The procedure provided valid and reliable status information about the educational and employment activities of former students. The information was being used by the local schools. The procedure resulted in a return rate over the required 80% for all schools and time periods involved. It was concluded that the procedure could be implemented by clerical staff under minimal direction of a project director in the local school. The cost of assessment varied from $1.12 to $1.48 per student assessed, with an average of $1.24 per student. Total costs per school were almost directly related to size of the group being contacted. By obtaining updated name and location information, the procedure would facilitate future assessment of the former students involved in the assessed groups. Since the same forms were used in all schools, it was possible to prepare summary reports for groups of schools within districts.

Hopefully, the procedure, in final form, will serve as a useful aid to local schools in compiling a more complete set of information on which to base educational decisions.

# CHAPTER I

## INTRODUCTION

Assuming that educational programs at the high school level are designed and developed to help students prepare for future activities after high school, it is important that educators identify relationships between the high school programs and students' post high school activities. One step in better defining these relationships is the identification of the post high school activities of former students. This information is a prerequisite to effective and efficient guidance and curriculum planning activities within the high school. While the total list of possible post high school activities in which students engage may be large, two important activities are further education or employment or both. Therefore, it seems apparent that information about these major "ends" of the high school educational process should be considered an essential input into the planning and evaluation of high school programs. This report presents the results of a second test of a procdure for conducting a school directed assessment of former high school students to obtain information about their post high school educational and employment activities.[1]

### Uses of the Information

The information about the educational and employment status of former students can be useful to several groups of decision makers concerned with high school programs. For example, administrators, teachers, and guidance personnel can use the information as (1) documentation of what happens to their students after leaving high school, (2) as a source of information for planning the school curriculum and guidance services, and (3) as information to accurately complete local, state, and federal reports to insure accountability.

In combination with knowledge about the educational program pursued by former students, the information can also prove useful to students and parents in (1) deciding the combination of courses which will be taken in high school and (2) making decisions relative to activities to be retained or changed in the local high school.

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[1]The first pilot test of the procedures was reported in August of 1973 in a publication entitled Status of Former High School Students: Procedure for Local Assessment - Report of the First Pilot Test by George Copa and Donald Irvin, and published by the Minnesota Research Coordinating Unit for Vocational Education.

By summarizing follow-up information from the several local school districts in the State, State Department of Education officials can also use the information to assist in documenting the effect of state and federal monies spent on high school programs by identifying the numbers of persons who pursue various types of employment and/or further education.

## Criteria for Assessment Procedure

In order for the assessment procedure to function effectively in providing information about former high school students, it was judged that several criteria would have to be met. The criteria and their justifications were as follows:

| Criteria | Justification |
|---|---|
| 1. Provide information useful in assisting local school personnel in planning and evaluation. | --Local school personnel are the closest and have the most specific control over school programs. |
| 2. Largely directed, conducted and financed by local school. | --Insured that the information collected is useful and worth the expense.<br>--The large size of the population to be assessed and the number of schools involved makes a centralized system difficult to manage. |
| 3. Include all school leavers | --Educational programs at the high school level are available to all students.<br>--There are many interactions between programs taken by students with differing educational and employment goals. |
| 4. Provide valid and reliable "status" information about educational and employment activities of former students. | --Employment and further education are two of the most common student activities (ends) following high school.<br>--Status information serves as baseline for identifying subgroups requiring further study. |

| | |
|---|---|
| | --More feasible to get agreement within and between schools on "status" as compared to "attitudinal" information. |
| 5. Produce a high rate of response from former students. | --Need to insure valid and reliable information.<br>--Low return would require additional procedures to validate the information. |
| 6. Reasonable cost | --Feasibility of implementation by local school is enhanced by lower costs. |
| 7. Supply information which would simplify future assessment of same students. | --Since only "status" information is collected, future assessments asking other kinds of information or dealing with particular subgroups may be necessary. |
| 8. Provide consistent information across schools. | --Necessary if information is to be aggregated among school within districts and districts within the State. |

Using these cirteria for guidance, a set of procedures and materials were developed to accomplish the task of providing status information on former high school students. These procedures and materials were first pilot tested and evaluated during the 1973-74 school year. Based on the results of that first test, the following changes were recommended for future applications of the procedures and materials:

1. Allow coding of students into each vocational education cluster in which he/she took classes while in high school;

2. Allow more than five interest groups for local school use;

3. Expand the number of occupational titles to provide more specific information on students post high school employment status;

4. Provide for the addition of questions to the questionnaire at the option of the local school;

5. Complete all coding on one form, rather than two, to simplify data handling;

6. Provide for more efficient data storage and retrieval using optical scanning forms for reporting data;

7. Change the format of the data report tables so as to make easier interpretation;

8. Expand the scope of procedures to include assessments of former students who had been out of high school for more than one or three years (i.e., two and five years);

Based on these recommendations, the procedures and materials were modified to better meet the established criteria. The remaining chapters of this report describe (1) the revised procedure and materials to conduct a locally based assessment of former students and (2) the results of the final test of these procedures and materials.

# CHAPTER II

## DATA GATHERING FORMS

Given the criteria specified for the assessment procedure and the recommendations resulting from the initial pilot test, the first task was the modification of information gathering forms. Five of the previously given criteria were of primary concern during form modification. These criteria were: (1) provide information useful in assisting local school personnel in planning and evaluating, (2) provide valid and reliable "status" information on educational and employment activities, (3) produce a high rate of response from former students (80%), (4) supply information which would simplify future assessments of the same students, and (5) provide consistent information across schools.

In addition, attempts were made to incorporate modifications based on the previously listed recommendations which resulted from the first pilot test of the forms. These recommendations were: (1) Allow coding of students into each vocational education cluster in which he/she took classes rather than forcing him/her into only one cluster; (2) expand the number of occupational titles to provide more specific information on students; (3) place all information for computer analysis on one form to reduce errors; (4) allow for more than five local interest groups; and (5) provide for the addition of questions to the questionnaire at the option of the local school.

### Information to be Collected

In order to design forms which would gather useful information, it was first necessary to identify the types of data which would be most helpful for program planning and evaluation. Based on the results of the first pilot test, it was decided that a combination of "in school" data and data about the post high school educational and/or employment activities of former students would provide the most useful information. The following categories of information were chosen to be gathered:

1. In School Information (from School Records)

   Student's name
   Student's address
   Parent's address
   Parent's telephone number
   Educational program during high school
   Student's sex
   Student's exit status

2. Assessment Information

   Name
   Address
   Telephone Number
   Social Security Number

Brief history of employment and educational activities since leaving high school
Present employment status and description
Present educational status and description

These categories of information and the procedural recommendations from the first pilot test were then used as guidelines in developing data gathering forms. Two separate forms were developed. The first, designated as the Information Reporting Form, was designed for a three fold purpose. First, the form was used to record the "In School" data on the student to be followed-up. Second, the form was used to summarize and code the follow-up data collected from the student at the time of the assessment. And third, the form was used as an integral part of the data analysis process. The second form which was developed was the Follow-up Questionnaire. This questionnaire was designed to collect status information about post high school activities from the former students.

## Information Reporting Form

A copy of the Reporting Form is shown in Exhibit I. The sections of that form are described below as they relate to the three purposes listed above.

### Recording "In School" Data

The first purpose of the Reporting Form was to record information about the student to be followed-up. This information was taken from the student's permanent record file. As shown on the sample Reporting Form, items 1, 2, and 3 collected the students name, telephone number and address, respectively. This information provided the primary means to contact the former student. Items 4, 5, and 6 on this form collected the names, telephone number and address of the student's parents or guardian. This data provided an alternative address to which questionnaires could be sent in an attempt to contact the former student. Item 7 and 8 provided another alternate address which could be used in an attempt to contact the student.

The section entitled "CLASS OF", which appears in the upper right hand corner of the form, was used for coding the year the student graduated or in the case of a non-graduate the year he/she should have graduated. The section entitled "I.D. CODE" was included to allow for computerized storage and retrieval of the information on the form. The code number consisted of a four digit school code and a four digit student code.

The "SEX" and "EXIT STATUS" section of the form provided for the coding of student's sex and his/her status at the time of exit from high school. The sex categories are self explanatory. The exit status categories were defined as follows:

EXHIBIT I

# HIGH SCHOOL FOLLOW-UP PROJECT REPORTING FORM

CLASS OF

0 0 / 1 1 / 2 2 / 3 3 / 4 4 / 5 5 / 6 6 / 7 7 / 8 8 / 9 9

1. Name ____________________ 2 Phone No. ____________

. ddress ____________________

4. Parent's Name ____________________ 5. Phone No ____________

6. Parent's Address ____________________

7. Other Contact (i.e. relative or emergency number) ____________________

8. New Address ____________________

## I.D. CODE

School: 0000 / 1111 / 2222 / 3333 / 4444 / 5555 / 6666 / 7777 / 8888 / 9999

Student: 0000 / 1111 / 2222 / 3333 / 4444 / 5555 / 6666 / 7777 / 8888 / 9999

## SEX

1 Male
2 Female

## EXIT STATUS

1 Graduate
2 Dropout
3 Other

SMILE

## RECENT HISTORY

| | 1 2 3 4 | P |
|---|---|---|
| Vocational School | 1 2 3 4 | P |
| Jr. College | 1 2 3 4 | P |
| College or Univ | 1 2 3 4 | P |
| Apprentice | 1 2 3 4 | P |
| Other Education | 1 2 3 4 | P |
| Unemployed | 1 2 3 4 | P |
| Homemaker | 1 2 3 4 | P |
| Military | 1 2 3 4 | P |
| Paid Employment | 1 2 3 4 | P |
| Other Activity | 1 2 3 4 | P |

## VOCATIONAL CLUSTER

| VOCATIONAL CLUSTER | Member | Ed. Rel. | Ed. Unrel. | Occ. Rel. | Occ. Unrel. |
|---|---|---|---|---|---|
| Ag. Production | a | 1 | 2 | 3 | 4 |
| Agribusiness | b | 1 | 2 | 3 | 4 |
| Accounting Data | c | 1 | 2 | 3 | 4 |
| Office | d | 1 | 2 | 3 | 4 |
| Insurance-Finance | e | 1 | 2 | 3 | 4 |
| Audio Visual | f | 1 | 2 | 3 | 4 |
| Electricity Electron. | g | 1 | 2 | 3 | 4 |
| Journalism | h | 1 | 2 | 3 | 4 |
| Building Trades | i | 1 | 2 | 3 | 4 |
| Consumer Homemaking | j | 1 | 2 | 3 | 4 |
| Environment | k | 1 | 2 | 3 | 4 |
| Entertainment | l | 1 | 2 | 3 | 4 |
| Health | m | 1 | 2 | 3 | 4 |
| Marine | n | 1 | 2 | 3 | 4 |
| Child Care & Educ. | o | 1 | 2 | 3 | 4 |
| Fashion & Apparel | p | 1 | 2 | 3 | 4 |
| Personal Service | q | 1 | 2 | 3 | 4 |
| Community Service | r | 1 | 2 | 3 | 4 |
| Air Transportation | s | 1 | 2 | 3 | 4 |
| Land Transportation | t | 1 | 2 | 3 | 4 |
| Foods | u | 1 | 2 | 3 | 4 |
| Hotel-Motel | v | 1 | 2 | 3 | 4 |
| Recreation & Tourism | w | 1 | 2 | 3 | 4 |
| Metal Work | x | 1 | 2 | 3 | 4 |
| Marketing | y | 1 | 2 | 3 | 4 |
| Other | z | 1 | 2 | 3 | 4 |

## LOCAL INTEREST GROUPS

| | Member | Ed. Rel. | Ed. Unrel. | Occ. Rel. | Occ. Unrel. |
|---|---|---|---|---|---|
| 1 | a | 1 | 2 | 3 | 4 |
| 2 | b | 1 | 2 | 3 | 4 |
| 3 | c | 1 | 2 | 3 | 4 |
| 4 | d | 1 | 2 | 3 | 4 |
| 5 | e | 1 | 2 | 3 | 4 |
| 6 | f | 1 | 2 | 3 | 4 |
| 7 | g | 1 | 2 | 3 | 4 |
| 8 | h | 1 | 2 | 3 | 4 |
| 9 | i | 1 | 2 | 3 | 4 |
| 10 | j | 1 | 2 | 3 | 4 |
| 11 | k | 1 | 2 | 3 | 4 |
| 12 | l | 1 | 2 | 3 | 4 |
| 13 | m | 1 | 2 | 3 | 4 |
| 14 | n | 1 | 2 | 3 | 4 |
| 15 | o | 1 | 2 | 3 | 4 |
| 16 | p | 1 | 2 | 3 | 4 |
| 17 | q | 1 | 2 | 3 | 4 |
| 18 | r | 1 | 2 | 3 | 4 |
| 19 | s | 1 | 2 | 3 | 4 |
| 20 | t | 1 | 2 | 3 | 4 |
| 21 | u | 1 | 2 | 3 | 4 |
| 22 | v | 1 | 2 | 3 | 4 |
| 23 | w | 1 | 2 | 3 | 4 |
| 24 | x | 1 | 2 | 3 | 4 |
| 25 | y | 1 | 2 | 3 | 4 |
| 26 | z | 1 | 2 | 3 | 4 |

## PRESENT EDUCATIONAL STATUS

Full Time / Part Time: 1 2

Public / Private: 1 2

Location: 0 0 / 1 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9

## PRESENT EMPLOYMENT STATUS

Full Time / Part Time: 1 2

Occupation: 000 / 111 / 222 / 333 / 444 / 555 / 666 / 777 / 888 / 999

Industry: 0 0 / 1 1 / 2 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9

Location: 0 0 / 1 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9

## PROCEDURE STATUS

| | |
|---|---|
| Return Complete | 1 |
| Return Incomplete | 2 |
| NO Return Received | 3 |

## NO Marks

A 0 1 2 3 4 5 6 7 8 9
B 0 1 2 3 4 5 6 7 8 9
C 0 1 2 3 4 5 6 7 8 9
D 0 1 2 3 4 5 6 7 8 9
E 0 1 2 3 4 5 6 7 8 9

## NO Marks

0000 / 1111 / 2222 / 3333 / 4444 / 5555 / 6666 / 7777 / 8888 / 9999

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PLEASE CHECK ALL CODING
THANK YOU

(1) Graduate - the student completed his/her educational program and received a diploma.

(2) Dropout - the student left school without receiving a diploma and did not continue his/her education.

(3) Other - the student left school without graduating or transferring to another school, but was not considered a dropout.

The remaining two section of the Reporting Form which relate to the recording of in school information are the "VOCATIONAL CLUSTER" and "LOCAL INTEREST GROUP" sections. The "VOCATIONAL CLUSTER" area was used to classify the student on the basis of vocational courses in which he/she enrolled while in high school and the "LOCAL INTEREST GROUP" area was used to classify the student on the basis of his/her membership in one or more groups of interest to local school personnel. The student was classified as a member of a particular vocational cluster if he/she was enrolled in a vocationally reimbursed course fitting into that cluster of courses. As can be seen on the Reporting Form, twenty-six clusters were pre-specified.[2] The student was classified into local interest groups on the basis of criteria established in the local school. No local interest groups were pre-specified, thus, allowing the local school the option of selecting a maximum of twenty-six groups which were most useful to local school personnel. For examples of local interest groups used by local schools see Appendix II.

Coding Follow-Up Data

The second purpose of the Reporting Form was to provide for the summary and coding of the information received from the former student during the assessment procedure. The columns labeled "Ed. Rel., Ed. Unrel., Occ. Rel. and Occ. Unrel." were included for identifying the relationship between the students post high school activity and his/her high school program of study. Relatedness was defined by local school personnel.

The "RECENT HISTORY" section of the Reporting Form provides the opportunity to code the former student's responses relating to his activities from the time he/she left school until the time of the assessment. Since the assessment procedure was used with students who had been out of school for varying lengths of time, the time period designations also vary. These designations are shown in Table 1 as they relate to different times away from the school. For example, a school following-up the graduating class of 1969 would use five time periods, each period representing one year. In contrast, a school following-up the graduating class of 1971 would use only three time periods.

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[2]The Vocational Clusters used were identified for this project by the Secondary Unit, Program Operations Section of the Division of Vocational and Technical Education, Minnesota Department of Education.

Table 1
Time Period Designations for The Recent History Section of the Reporting Form

| | Date of Graduating Class | | | | |
|---|---|---|---|---|---|
| Time Period | 1969 | 1970 | 1971 | 1972 | 1973 |
| 1 | 1970 | 1971 | 1972 | 1973 | Sept-Nov |
| 2 | 1971 | 1972 | 1973 | X | Dec-Feb |
| 3 | 1972 | 1973 | X | X | X |
| 4 | 1973 | X | X | X | X |
| 5 | Present | Present | Present | Present | Present |

The "Present Educational Status" section of the reporting form provides for the coding of information which describes the former student's educational status at the time of the assessment. The information to be coded in this section relates to whether the former student is now a full or part-time student, the type of educational institution in which now enrolled (i.e., public or private), and the geographic location of the educational institition attended.

The "Present Employment Status" section of the Reporting Form provides for the coding of information which describes the former student's employment activity at the time of the assessment. The information to be coded in this section relates to whether the former student is full or part-time employed, occupational title of the job held, industry category of the business in which employed and geographic location of the job.

The section of the Reporting Form entitled "NO MARKS" and containing five horizontal rows of numbered circles was used to provide the local school personnel with the capability of coding responses to ten questions of their own design, in addition to the standard questions on the questionnaire. These question were formulated by local school personnel.

## Data Processing

The third purpose of the Reporting Form was in the data analysis process. To fulfil this purpose, the form was designed and printed to allow processing by optical scanning equipment. This equipment "read" the coded circles on the form and generated, a magnetic computer tape containing the data for each former student. This tape was then analyzed by computer to generate summary reports for local schools.

## Follow-Up Questionnaire

The second form developed for use in the assessment procedure was designed to gather educational and employment information about the former student. A copy of this form appears as Exhibit II.

In light of the previously stated criteria, the questionnaire was designed to take advantage of known questionnaire characteristics which facilitated information gathering and maximized response. Examples of these characteristics included (1) items with low threat, (2) appealing color of paper on which the questionnaire was printed, (3) ease of completion, and (4) reading level of questions.

The information needed from the former students was classified into four categories: (1) identifying information, (2) recent history information, (3) present educational activity information, and (4) present employment activity information. A brief explanation of each item is given below by item number as they appear on the questionnaire.

Items numbered 1 and 2 recorded the following information: (1) name, (2) social security number, (3) present address, and (4) present telephone number. This information was collected primarily to identify students for future reference. The student's name may have changed as a result of marriage, for example, and the social security number provides a means for keeping all students separate in future studies.

Item 3 requested information describing the kinds of activities engaged in by former students since leaving school. As shown in Exhibit II, item 3 was subdivided into three broad categories of activities: (1) education, (2) employment, and (3) other activity. The respondent was asked to check each of the activities appropriate to him/her for each time period. The time periods which appear on the questionnaire were dependent on the length of time the group of former students to be assessed had been out of school. The time periods used by the schools included in this study were the same as previously presented in Table 1. The questionnaire shown in Exhibit II was designed for use with students who were in the first year after leaving high school - the time period designations are, therefore, Sept.-Nov., Dec.-Feb., and Present. An individual could be in more than one activity during the time period (i.e. going to school and employed). These time periods were chosen in order to obtain information on the sequence of activities pursued by students after leaving high school.

Item 4 was to be completed only if the respondent checked one of the education activities in the present activity column. This item was developed to obtain specific information about the educational activity in which the student was involved at the time of the follow-up. Item 4.1, for example, was designed to determine whether or not the respondent was a part-time or full-time student and items 4.2, 4.3, and 4.4 were designed to obtain information about the name, location and type of financing of the educational insti-

EXHIBIT II

SCHOOL | STUDENT

## HIGH SCHOOL FOLLOW-UP QUESTIONNAIRE

PLEASE COMPLETE AND RETURN THE FORM BELOW.

**1.** Name: ______ (Last) ______ (First) ______ (Middle Initial) (______) (Maiden) Social Security No. ______-____-______

**2.** Present Address: ______ (Street or R R ) Phone: ______ (Area Code) ______ (Number)

______ (City) ______ (State) ______ (Zip Code)

**3. Recent History:** For each time period (column) in the YEAR FOLLOWING HIGH SCHOOL, check (√) the activity or activities in which you were involved. Check *at least* one activity for each column. Note that you may respond to *both* the employment and education sections if they both apply.

ld Here

| *Activity* | *Time Periods* Sept. thru Nov. | Dec thru Feb. | Present (Complete even if same *Activity* as other time period) | |
|---|---|---|---|---|
| **Education:** | | | | |
| 3.1 Vocational School | ( ) | ( ) | ( ) | If you marked here, *complete* **#4** below. |
| 3.2 Junior College | ( ) | ( ) | ( ) | |
| 3.3 College or University | ( ) | ( ) | ( ) | |
| 3.4 Apprenticeship | ( ) | ( ) | ( ) | |
| 3.5 Other Education ______ (Specify) | ( ) | ( ) | ( ) | |
| **Employment:** | | | | |
| 3.6 Unemployed (looking for work) | ( ) | ( ) | ( ) | |
| 3.7 Homemaker | ( ) | ( ) | ( ) | |
| 3.8 Military (full time) | ( ) | ( ) | ( ) | |
| 3.9 Paid Employment | ( ) | ( ) | ( ) | If you marked here, *complete* **#5** below. |
| **Other Activity:** (For example; ill, vacation, etc.) | | | | |
| 3.10 ______ (Specify) | ( ) | ( ) | ( ) | |

**4. Present Educational Activity**

4.1 Hours Per Week You Attend:

d Here

1. 1 to 12 ( )
2. 13 to 18 ( )
3. 19 or more ( )

4.2 School Name: ______

4.3 School Address: ______ (City) (State)

4.4 Type of School: 1. Public ( ) 2. Private ( )

4.5 Major Area or Program:

______ (For example. Auto Mechanic. Elementary Teaching)

4.6 Intended occupation after completing education

______ (For example Legal Secretary. Carpenter Teacher. undecided. etc )

**5. Present Employment Activity**

5.1 Hours Per Week You Work:

1. Less than 30 ( )
2. 30 or more ( )

5.2 Job Title: ______ (For example Truck Driver, Secretary)

5.3 Employer: ______

______ (company or business name) (If self employed. write "self ")

5.4 Employer's Address: ______ (Street or R R )

______ (City) (State)

5.5 Kind of Business: ______

______ (For example. Farming. Retail Shoe Store)

5.6 Supervisor's Name: ______

**THANK YOU FOR YOUR HELP**



Please Fold, then Staple or Tape and Place in Return Mail. No Stamp Is Required.

tution attended, respectively. Items 4.5 and 4.6 requested the respondent to identify his/her present area of study and intended occupation after completion of education, respectively. Information from these two items formed a basis for determining the degree of relatedness between post high school activity and high school education program.

Item 5, Present Employment Activity, was to be completed only if the respondent checked Item 3.9, Paid Employment, in the present activity column. The purpose of this item was to describe the post high school employment activities of high school leavers. Within Item 5, Item 5.1 requested information about part-time or full-time employment status. Item 5.2, Job Title, was included to determine the relatedness of the respondent's occupation to his high school program. In addition, this job title provided a means for classifying the former students by occupational title. Items 5.3 and 5.4 requested information about the name and location of the former student's employer. This information was desired to establish geographic location of the job and to provide a reference address for future studies, where employer might be involved. Item 5.5, Kind of Business, was used to classify the industry in which the former student worked. Item 5.6, Supervisor's Name, was included on the questionnaire to provide the name of a person who, if it was desired later, could be contacted for more information about the former student on his/her job.

# CHAPTER III

## ASSESSMENT PROCEDURE

The second task during the final test of the assessment procedure was the modification and further development of a procedure by which the data could be gathered, organized and processed into a form useful to local school personnel.

The primary concerns at this stage were that the procedure: (1) provide valid and reliable "status" information about educational and employment activities of former students, (2) include all school leavers, (3) produce a high rate of response, (4) be largely directed, conducted and financed by local school, and (5) be conducted at a reasonable cost. To meet these criteria, an eight stage procedure was developed. Each of these stages was developed and placed in a procedures manual which was used to guide the local school in the conduct of the assessment.[3] In order to meet the criteria of low cost, the manual was designed to be self-instructional to clerical staff at the local school with minimum supervision from administrative or teaching personnel. A brief explanation of each of the eight stages is presented below.

### Stage 1: Identification of Population and Sub-Groups

Stage 1 of the procedures manual explained the methods to be used in: (1) Identifying the population to be followed-up and (2) identifying sub-groups of interest within this population. Forms designed to facilitate these processes were included in this section of the manual.

### Stage 2: Collection and Coding Base Information

The second stage of the procedures manual presented directions for collecting baseline information on each student in the follow-up population. This information was taken from school records and coded onto the Reporting Form previously described. Once completed, these forms were filed in a 3-ring binder and became a primary reference for later stages of the procedure.

### Stage 3: Preparation and Mailing

The method of data collection decided upon was a mailed questionnaire. The third stage of the procedures manual provided directions for the preparation and mailing of materials to each individual to be assessed. This section identified materials required, suggested a format for the cover letter and provided guidelines for efficient prepartion of the materials for mailing.

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[3] Secondary School Follow-Up Project Procedures Manual, Minnesota Research Coordinating Unit for Vocational Education, University of Minnesota, 1973 (revised).

## Stage 4: Questionnaire Return

The fourth stage of the procedures manual presented directions for the handling of returned questionnaires. A "filing system" was described which allowed for accurate and efficient handling of the returned questionnaires to prevent loss or damage.

## Stage 5: Non-Respondents

The primary purpose of the fourth stage of the procedures manual was to provide direction for obtaining data from those individuals who did not respond to the first questionnaire. The process described in this stage was a two step process. Directions were given for the preparation and mailing of a second questionnaire to all individuals not responding to the first questionnaire. A second step provided directions for contacting all non-respondents by telephone.

## Stage 6: Coding

This stage of the procedures manual presented guidelines and directions for the coding of the information on the Base Information Form and Follow-Up Questionnaire. Accurate coding was required if the data were to be summarized by computer. The following items were coded:

(1) Extent of present education (part or full-time)
(2) Education location (by economic region in Minnesota and out-of-state)
(3) Relatedness of high school program to present education activity
(4) Extent of present employment (part or full-time)
(5) Relatedness of high school program to present employment activity
(6) Employment location (by economic region in Minnesota and out-of-state)
(7) Occupational category of employment
(8) Industrial category of employment

## Stage 7: Preparation for Data Analysis

Directions were presented in Stage 7 for the preparation of the forms for data analysis. Emphasis in this stage was on local school examination of the forms to insure accurate data analysis. In addition, options available for processing were explained.

## Stage 8: Process Evaluation

The eighth stage of the procedures manual contained process evaluation forms on which local project personnel could summarize information about follow-up procedures (i.e. costs, time requirements, suggestions for improvement). This information was collected to assist in the final revision of the assessment procedure.

# CHAPTER IV

## DATA REPORTS

Upon completion of the eight stages of the assessment procedure the local schools sent the Reporting Forms to the Minnesota Research Coordinating Unit for Vocational Education for data processing. This section of the report describes the set of tables which were utilized to summarize the information collected. Note that the tables described form a set of tables (Tables 1-10); the school receives this set of tables for each group of former students (vocational cluster and local interest group) which was identified earlier in the follow-up procedure. The data presented in the Exhibits shown in this Chapter are intended for illustrative purposes only, they are not actual results from any of the participating schools.

### Table 1: Questionnaire Response

The first table (See Exhibit III) was designed to summarize the responses to the assessment. The responses were divided into four categories: Return Complete, Return Incomplete, No Return Received, and Errors. The Return Complete Category contains the number of individuals who returned completed questionnaires. The Return Incomplete Category contains a count of those persons who returned questionnaires not sufficiently complete to be included in the analysis. The No Return Received Category includes those persons who failed to return a questionnaire and the Errors category indicates the number of reporting forms which contained coding errors which made inclusion in the analysis impossible. For each category, the results are presented for males, females, and the total group. In addition, the totals are presented as percentages.

### Table 2: Present Activity

The information on the present activity of former students was presented in the second table of the set (see Exhibit III). This information was again provided for males, females, and the total group. The percentages in the percent column (PCT) were based on the total number of complete returns. The present activity categories used for this table were divided into three broad categories: Educational Activity, Employment Activity, and Other Activity.

The Educational Activity category was further sub-divided into five categories: Vocational School, Jr. College, College or University, Apprenticeship and Other Education. The Vocational School category includes those indicating they were enrolled in public or private vocational schools or institutes. The Junior College category includes those indicating enrollment in two year public or private junior colleges. The category, College or University, includes those enrolled in four year public or private colleges or universities. Those enrolled in apprenticeships programs were categorized in the category called Apprenticeship. If an individual was involved in educational activities not included in any of the above categories he/she was categorized into the

Exhibit III

## TABLE 1

### QUESTIONNAIRE RESPONSE

| STATUS | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| RETURN COMPLETE .......... | 592 | 664 | 1256 | 94.6 |
| RETURN INCOMPLETE ....... | ..... | ..... | ..... | ..... |
| NO RETURN RECEIVED ...... | 42 | 30 | 72 | 5.4 |
| ERRORS ................. | ..... | ..... | ..... | ..... |
| TOTAL ................. | 634 | 694 | 1328 | 100.0 |

## TABLE 2

### PRESENT ACTIVITY

| | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| EDUCATIONAL | | | | |
| VOCATIONAL SCHOOL ....... | 67 | 58 | 125 | 10.0 |
| JR. COLLEGE ............ | 82 | 66 | 148 | 11.8 |
| COLLEGE OR UNIVERSITY ... | 92 | 111 | 203 | 16.2 |
| APPRENTICESHIP .......... | 4 | ..... | 4 | 0.3 |
| OTHER EDUCATION ........ | 5 | 18 | 23 | 1.8 |
| EMPLOYMENT | | | | |
| UNEMPLOYED ............. | 47 | 75 | 122 | 9.7 |
| HOMEMAKER .............. | ..... | 57 | 57 | 4.5 |
| MILITARY ............... | 66 | 19 | 85 | 6.8 |
| PAID EMPLOYMENT ........ | 370 | 421 | 791 | 63.0 |
| OTHER | | | | |
| OTHER ACTIVITY .......... | 8 | 3 | 11 | 0.9 |
| NOT REPORTED ........... | 9 | 3 | 12 | 1.0 |

Other Education category.

The employment activity category was sub-divided into four categories: Unemployed, Homemaker, Military, and Paid Employment. The Unemployed category included those who indicated they did not have paid employment, but were seeking it. The Homemakers category included those individuals who were maintaining a household. The Military category contained those indicated they were in the military service full-time. Those working for pay were categorized in the Paid Employment category.

The third Present Activity category entitled Other contains the count of individuals who (1) reported that they were engaged in some activity not categorized above or (2) did not report their present activity.

## Table 3: Combinations of Present Activities

Table 3 represented an attempt to further specify the present activity status of students. It was possible for an individual to be counted in more than one category in Table 2, for example, Homemaker and Vocational School. Therefore, Table 3 presents several selected categories, each of which is independent of the others. The categories presented were selected for their anticipated usefulness to local school personnel and do not represent an exhaustive list of possible categories. See Exhibit IV for an example of Table 3.

## Table 4: Time Status of Individuals In School At Present

The time status of individuals who were in school at the time of the follow-up was presented in Table 4 (see Exhibit IV) for males, females, and total group. Full-time was defined as being enrolled for 19 or more hours per week for students attending vocational schools or institutes and 13 or more hours per week for students attending a junior college, college, or university. Students were classified part-time if they were enrolled in a vocational school or institute for 19 or fewer hours per week or in a junior college, college, or university for 12 or fewer hours per week. The Errors category included a count of processing errors. The Not Reported category included all students who did not report that they were in school at the time of the follow-up.

## Table 5: Time Status of Individuals Employed At Present

The time status, part-time or full-time, of individuals who were employed at the time of the assessment was reported in Table 5 (See Exhibit IV) for males, females, and total group. Full-time was defined as being employed 30 or more hours per week. Part-time was defined as being employed 29 or fewer hours per week. The Errors category contained a count of processing errors. Not Reported represented a count of those persons who reported that they were not employed at the time of the assessment.

Exhibit IV

TABLE 3

COMBINATIONS OF PRESENT ACTIVITIES

| PRESENT ACTIVITIES | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| PAID EMPLOYMENT (ONLY) | 236 | 285 | 521 | 41.5 |
| UNEMPLOYED (ONLY) | 26 | 49 | 75 | 6.0 |
| HOMEMAKER (ONLY) | 53 | 66 | 119 | 9.5 |
| EDUCATION (ONLY) | 40 | 36 | 76 | 6.1 |
| PAID EMPLOYMENT & HOMEMAKER | ..... | 13 | 13 | 1.0 |
| PAID EMPLOYMENT & VOC. SCHOOL | 45 | 37 | 82 | 6.5 |
| PAID EMPLOYMENT & JR. COLLEGE | 59 | 46 | 105 | 8.4 |
| PAID EMPLOYMENT & COLLEGE OR UNIVERSITY | 25 | 34 | 59 | 4.7 |
| PAID EMPLOYMENT & OTHER EDUCATION | 2 | 9 | 11 | 0.9 |
| EDUCATION & HOMEMAKER | ..... | 4 | 4 | 0.3 |
| EDUCATION & UNEMPLOYED | 21 | 24 | 45 | 3.6 |
| OTHER ACTIVITIES | 8 | 3 | 11 | 0.9 |

TABLE 4

TIME STATUS FOR INDIVIDUALS IN SCHOOL AT PRESENT

| STATUS | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| FULL TIME | 236 | 242 | 478 | 38.1 |
| PART TIME | 13 | 11 | 24 | 1.9 |
| ERRORS | ..... | ..... | ..... | ..... |
| NOT REPORTED | 343 | 411 | 754 | 60.0 |

TABLE 5

TIME STATUS FOR INDIVIDUALS EMPLOYED AT PRESENT

| STATUS | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| FULL TIME | 261 | 276 | 537 | 42.8 |
| PART TIME | 114 | 139 | 253 | 20.1 |
| ERRORS | ..... | ..... | ..... | ..... |
| NOT REPORTED | 217 | 249 | 466 | 37.1 |

## Table 6: Location of Individuals Who Are In School

The geographic location of individuals in school at the time of the follow-up was summarized in Table 6 (See Exhibit V). The locations presented represent the eleven Minnesota Economic Regions, the four states adjacent to Minnesota, Canada, and other states. In addition, the locations of individuals were categorized by the type of education being pursued. The educational categories used were: Vocational School, Junior College, College or University, Apprentice and Other Education. A map indicating the boundries of the eleven Minnesota Economic Regions is shown as Appendix III.

## Table 7: Location of Individuals Who Are Employed

The geographic location of individuals who were employed at the time of the assessment was presented in Table 7 (See Exhibit V). The locations used are the same as explained above for Table 6. The location information was presented for males, females, and total group. The percentages presented represent percentages of the total number of complete returned (See Table 1).

## Table 8: Industries In Which Individuals Are Employed

The information presented in Table 8, was intended to categorize the employment activities of former students by type of industry in which they were employed. The industry categories used were the same as the broad reporting categories used by the U.S. Bureau of the Census. These categories were: Agriculture, Fisheries and Forestry; Mining; Construction; Manufacturing; Transportation, Communication, and Public Utilities; Wholesale/Retail Trade; Finance, Insurance, and Real Estate; Business and Repair Service; Personal Service; Entertainment and Recreation; Professional and Related Service; and Public Administration. A sample of Table 8 is given in Exhibit VI. Percentages were based on the total number of complete returns (See Table 1).

## Table 9: Occupations In Which Individuals Are Employed

Information relative to the occupations in which individuals were employed at the time of the assessment was presented in Table 9 (See Exhibit VII). The categories used for Table 9 were the same as those categories used by the U.S. Bureau of the Census; there are approximately 360 occupational categories if all were used. The data were again presented for males, females, and total group.

## Tables 10.0—10.9: Recent History of Activities

Tables 10.0 through 10.9 (where appropriate) were designed to summarize information relative to the "flow" of individuals into and out of different educational and employment related activities

Exhibit V

TABLE 6

LOCATION OF INDIVIDUALS WHO ARE IN SCHOOL AT PRESENT

| LOCATION | VOC. SCHOOL | JUNIOR COLLEGE | COLLEGE/ UNIVER. | APPREN-TICE | OTHER |
|---|---|---|---|---|---|
| MINNESOTA ECONOMIC REGION 1 | ..... | ..... | ..... | ..... | ..... |
| MINNESOTA ECONOMIC REGION 2 | ..... | ..... | 11 | ..... | ..... |
| MINNESOTA ECONOMIC REGION 3 | ..... | ..... | 9 | ..... | 1 |
| MINNESOTA ECONOMIC REGION 4 | 1 | ..... | 21 | ..... | ..... |
| MINNESOTA ECONOMIC REGION 5 | ..... | ..... | ..... | ..... | ..... |
| MINNESOTA ECONOMIC REGION 6 | ..... | ..... | ..... | ..... | ..... |
| MINNESOTA ECONOMIC REGION 7 | 1 | ..... | 29 | ..... | ..... |
| MINNESOTA ECONOMIC REGION 8 | ..... | ..... | 1 | ..... | ..... |
| MINNESOTA ECONOMIC REGION 9 | ..... | ..... | 13 | ..... | ..... |
| MINNESOTA ECONOMIC REGION 10 | ..... | ..... | 7 | ..... | ..... |
| MINNESOTA ECONOMIC REGION 11 | 121 | 143 | 80 | 3 | 17 |
| NORTH DAKOTA | ..... | ..... | 2 | ..... | ..... |
| SOUTH DAKOTA | ..... | 1 | 10 | ..... | ..... |
| IOWA | ..... | ..... | 1 | ..... | ..... |
| WISCONSIN | ..... | ..... | 6 | ..... | ..... |
| CANADA | ..... | ..... | 1 | ..... | ..... |
| OTHER | ..... | 2 | 10 | 1 | 1 |
| ERRORS | 1 | ..... | ..... | ..... | 3 |
| NOT REPORTED | 1 | 2 | 2 | ..... | 1 |

TABLE 7

LOCATION OF INDIVIDUALS WHO ARE EMPLOYED AT PRESENT

| LOCATION | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| MINNESOTA ECONOMIC REGION 1 | ..... | ..... | ..... | ..... |
| MINNESOTA ECONOMIC-REGION 2 | 1 | 3 | 4 | 0.3 |
| MINNESOTA ECONOMIC REGION 3 | ..... | ..... | ..... | ..... |
| MINNESOTA ECONOMIC REGION 4 | 2 | 3 | 5 | 0.4 |
| MINNESOTA ECONOMIC REGION 5 | 1 | 1 | 2 | 0.2 |
| MINNESOTA ECONOMIC REGION 6 | ..... | ..... | ..... | ..... |
| MINNESOTA ECONOMIC REGION 7 | 1 | 5 | 6 | 0.5 |
| MINNESOTA ECONOMIC REGION 8 | 1 | ..... | 1 | 0.1 |
| MINNESOTA ECONOMIC REGION 9 | 2 | 1 | 3 | 0.2 |
| MINNESOTA ECONOMIC REGION 10 | ..... | 1 | 1 | 0.1 |
| MINNESOTA ECONOMIC REGION 11 | 352 | 376 | 728 | 58.0 |
| NORTH DAKOTA | 2 | 1 | 3 | 0.2 |
| SOUTH DAKOTA | 2 | 4 | 6 | 0.5 |
| IOWA | ..... | 1 | 1 | 0.1 |
| WISCONSIN | 1 | 2 | 3 | 0.2 |
| CANADA | ..... | ..... | ..... | ..... |
| OTHER | 4 | 12 | 16 | 1.3 |
| ERRORS | 2 | 1 | 3 | 0.2 |
| NOT REPORTED | 4 | 4 | 8 | 0.6 |

Exhibit VI

TABLE 8

INDUSTRIES IN WHICH INDIVIDUALS ARE EMPLOYED AT PRESENT

| INDUSTRY | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| AG., FISH, FORESTRY | 6 | 1 | 7 | 0.6 |
| MINING | ..... | ..... | ..... | ..... |
| CONSTRUCTION | 33 | 3 | 36 | 2.9 |
| MANUFACTURING | 122 | 89 | 211 | 16.8 |
| TRANS/COMM./PUBLIC UTILITIES | 35 | 15 | 50 | 4.0 |
| WHOLESALE/RETAIL TRADE | 134 | 143 | 277 | 22.1 |
| FINANCE, INSURANCE, REAL ESTATE | 3 | 45 | 48 | 3.8 |
| BUSINESS/REPAIR SERVICE | 5 | 4 | 9 | 0.7 |
| PERSONNAL SERVICE | 3 | 10 | 13 | 1.0 |
| ENTERTAINMENT/RECREATION | 3 | 7 | 10 | 0.8 |
| PROFESSIONAL/RELATED SERVICE | 16 | 83 | 99 | 7.9 |
| PUBLIC ADMINISTRATION SERVICE | 5 | 11 | 16 | 1.3 |
| ERRORS | 2 | 2 | 4 | 0.3 |
| NOT REPORTED | 8 | 2 | 10 | 0.8 |

Exhibit VII

TABLE 9

OCCUPATIONS IN WHICH INDIVIDUALS ARE EMPLOYED AT PRESENT

| | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| CRAFTSMEN AND KINDRED WORKERS ------------------(CONT) | | | | |
| ELECTRICIANS .......................................... | 1 | ..... | 1 | |
| ELECTRICIAN APPRENTICES ........................... | 1 | ..... | 1 | |
| GLAZIERS ................................................ | 1 | ..... | 1 | |
| INSPECTORS, N.E.C. ................................ | 1 | 1 | 2 | |
| JEWLERS & WATCHMAKERS ........................... | 1 | ..... | 1 | |
| MACHINISTS ............................................. | 8 | 1 | 9 | |
| AUTOMOBILE MECHANICS ............................ | 19 | ..... | 19 | |
| AUTOMOBILE MECHANIC APPRENTICES ............... | 2 | ..... | 2 | |
| HOUSEHOLD APPLIANCE-ACCESSORY INSTALLER,MECHANIC.. | 1 | ..... | 1 | |
| MISCELLANEOUS MECHANICS & REPAIRMEN ............. | 1 | ..... | 1 | |
| PAINTERS, CONSTRUCTION & MAINTENANCE ............. | 4 | 1 | 5 | |
| PRESSMEN & PLATE PRINTERS, PRINTING ............. | 5 | ..... | 5 | |
| PRESSMAN APPRENTICES ................................ | 1 | ..... | 1 | |
| SHEETMETAL WORKERS & TINSMITHS ................... | 2 | ..... | 2 | |
| TELEPHONE INSTALLERS & REPAIRMEN ........................ | | 1 | 1 | |
| TILE SETTERS ............................................ | 1 | ..... | 1 | |
| TOOL & DIE MAKERS ...................................... | 1 | ..... | 1 | |
| OPERATIVES, EXCEPT TRANSPORT ------------------ | 94 | 73 | 167 | 13.3 |
| ASSEMBLERS .............................................. | 35 | 59 | 94 | |
| DRY WALL INSTALLERS & LATHERS ..................... | 1 | ..... | 1 | |
| GARAGE WORKERS & GAS STATION ATTENDANTS .......... | 21 | 1 | 22 | |
| MEAT WRAPPERS, RETAIL TRADE ........................ | 1 | 1 | 2 | |
| PACKERS & WRAPPERS, EXC. MEAT & PRODUCE .......... | 1 | 5 | 6 | |
| PAINTERS, MANUFACTURED ARTICLES .................... | 4 | ..... | 4 | |
| PRECISION MACHINE OPERATIVES, N.E.C. .............. | 2 | ..... | 2 | |
| PUNCH & STAMPING PRESS OPERATIVES ................. | 2 | ..... | 2 | |
| SEWERS & STICHERS ............................................ | | 1 | 1 | |
| WELDERS & FLAME-CUTTERS ............................ | 5 | ..... | 5 | |
| MACHINE OPERATIVES, MISCELLANEOUS SPECIFIED ...... | 5 | 1 | 6 | |
| MACHINE OPERATIVES, NOT SPECIFIED ................. | 16 | 4 | 20 | |
| MISCELLANEOUS OPERATIVES ............................ | 1 | 1 | 2 | |
| TRANSPORT EQUIPMENT OPERATIVES ---------------- | 25 | 1 | 26 | 2.1 |
| BUS DRIVERS ............................................. | 11 | 1 | 12 | |
| DELIVERYMEN & ROUTEMEN .............................. | 3 | ..... | 3 | |
| FORK LIFT & TOW MOTOR OPERATIVES ................. | 4 | ..... | 4 | |
| TRUCK DRIVERS .......................................... | 7 | ..... | 7 | |
| LABORERS, EXCEPT FARM ------------------------ | 61 | 2 | 63 | 5.0 |
| CARPENTERS' HELPERS .................................. | 3 | ..... | 3 | |
| CONSTRUCTION LABORERS, EXC. CARPENTERS' HELPERS .. | 21 | ..... | 21 | |
| GARBAGE COLLECTORS .................................... | 4 | ..... | 4 | |
| GARDENERS & GROUNDSKEEPERS, EXC. FARM ............ | 3 | ..... | 3 | |
| WAREHOUSEMEN, N.E.C. ................................. | 6 | ..... | 6 | |

since they left high school. The tables each present data about the activities of individuals during two periods of time. For Example, Exhibit VIII presents hypothetical data concerning the activities of students during time periods 1 and 2. Note that these tables must be "read" by looking at only one cell at a time. Since individuals can be in more than one activity at a given time, no row or column summation can be done without the possibility of double counting. The time periods corresponding to the notation "Time 1, Time 2, etc." is the same as was described in Chapter III of this report. For example, if the table shown in Exhibit VIII was generated from a one-year follow-up, the time periods would be: Time 1 = September through November, and Time 2 = December through February. However, if the table had been generated for a three year follow-up the time periods would have been: Time 1 = 1972 and Time 2 = 1973.

## Table 11: Educational Relatedness

The intent of Table 11, see Exhibit IX, was to summarize the relatedness of former student's educational activity at the time of the follow-up to their high school programs. This table was included only in the sets of tables which summarized across groups of student categorized by vocational clusters and by special interest groups. Each school was permitted to use definitions of relatedness which would prove most useful to local personnel.

## Table 12: Occupational Relatedness

The relatedness of former students' employment activities at the time of the follow-up to their high school programs was presented in Table 12, see Exhibit IX. As with Table 11, local school personnel were required to form their own definitions of relatedness.

## Tables 13.0—13.9: Questions (Optional)

Tables 13.0 through 13.9 appear as part of the set of reports only if the local school chose to add questions to the basic questionnaire. These tables summarize the frequency of response to each possible answer for each question. The data are presented for males, females, and total in each table. Due to the variable nature of questions which were most useful to different schools, no questions were included for use by <u>all</u> schools and a sample table is not shown.

Exhibit VIII

TABLE 10.0

RECENT HISTORY OF ACTIVITIES - TIME PERIOD 1 TO TIME PERIOD 2

| TIME 1 \ TIME 2 | VOCATIONAL SCHOOL | JR. COLLEGE | COLLEGE OR UNIVERSITY | APPRENTICESHIP | OTHER EDUCATION | UNEMPLOYED | HOMEMAKER | MILITARY | PAID EMPLOYMENT | OTHER ACTIVITY | NOT REPORTED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VOCATIONAL SCHOOL | 125 | 1 | .... | 1 | 1 | 7 | 2 | 1 | 97 | 1 | .... |
| JR. COLLEGE | 4 | 146 | 3 | .... | 1 | 11 | 2 | .... | 123 | .... | .... |
| COLLEGE OR UNIVERSITY | .... | 2 | 201 | 1 | .... | 18 | 1 | .... | 69 | .... | .... |
| APPRENTICESHIP | 1 | .... | 1 | 8 | .... | .... | .... | .... | 7 | .... | .... |
| OTHER EDUCATION | .... | 1 | .... | .... | 28 | 2 | .... | .... | 15 | 2 | .... |
| UNEMPLOYED | 7 | 8 | 14 | .... | 1 | 67 | 3 | 1 | 27 | 1 | .... |
| HOMEMAKER | .... | .... | 1 | .... | .... | 2 | 45 | .... | 12 | .... | .... |
| MILITARY | .... | .... | .... | .... | 1 | .... | .... | 69 | 1 | .... | .... |
| PAID EMPLOYMENT | 77 | 106 | 60 | 7 | 12 | 22 | 12 | 10 | 703 | 2 | 1 |
| OTHER ACTIVITY | 2 | 2 | 1 | .... | 1 | 2 | 2 | 1 | 7 | 9 | .... |
| NOT REPORTED | .... | .... | .... | .... | .... | .... | .... | .... | 20 | .... | 12 |

Exhibit IX

## TABLE 11

### RELATEDNESS OF PRESENT EDUCATIONAL ACTIVITY

| STATUS | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| RELATED | 2 | 7 | 9 | 20.0 |
| UNRELATED | ..... | 4 | 4 | 8.9 |
| BOTH | ..... | ..... | ..... | ..... |
| ERRORS | ..... | ..... | ..... | ..... |
| NOT REPORTED | 2 | 31 | 33 | 73.3 |

## TABLE 12

### RELATEDNESS OF PRESENT EMPLOYMENT ACTIVITY

| STATUS | MALE | FEMALE | TOTAL | PCT |
|---|---|---|---|---|
| RELATED | 1 | 22 | 23 | 51.1 |
| UNRELATED | 1 | 6 | 7 | 15.6 |
| BOTH | ..... | ..... | ..... | ..... |
| ERRORS | ..... | ..... | ..... | ..... |
| NOT REPORTED | 2 | 14 | 16 | 35.6 |

# CHAPTER V

## TEST OF THE ASSESSMENT PROCEDURE

In order to evaluate the assessment procedures described in previous chapters of this report, a test was conducted in fourteen different Minnesota High Schools in seven Minnesota school districts. The criteria stated in Chapter I which formed the basis on which the procedure and forms were developed served as the primary evaluation criteria. These criteria in question form were:

1. Did the procedure provide information useful in assisting local school personnel in planning and evaluation?
2. Could the procedure be largely directed, conducted and financed by the local schools?
3. Were all school leavers included in the assessment population?
4. Did the procedure provide valid and reliable status information about the educational and employment activities of former students?
5. Would the procedure produce a high rate of response from former students?
6. What was the cost of implementing the procedure?
7. Would the procedure supply information which would simplify future assessment of the same students?
8. Did the procedure provide consistant information across schools?

## Sample

The schools participating in the test of the procedure were chosen from a list of schools that had indicated an interest to the State Department of Education. The following three criteria were used in selecting the schools:

1. Represent different sizes of districts (as measured by total number of graduates per year).
2. Represent different geographic area of the State
3. Willing to finance conducting the assessment study

The school districts participating in the final test of the assessment procedure were: (1) Independent School District Number 11 in Anoka, (2) Independent School District Number 834 in Stillwater, (3) Independent School District Number 623 in Roseville, (4) Independent School District Number 256 in Redwing, (5) Independent School District number 535 in Rochester, (6) the three independent school districts which were associated with Oakland Vocational Center District, and (7) the three independent school districts associated with the Agassiz Valley Vocational Center.

Independent School District 11 serves the communities of Anoka, Coon Rapids, and Blaine, Minnesota. The District has two existing high schools, Anoka Senior High and Coon Rapids Senior High, which, in combination, graduate approximately 1300 students per year. The District is one of the largest, in terms of enrollment, in the State and is located in economic Region 11. Some parts of the District may be considered a close suburb of Minneapolis and St. Paul.

Independent School District 834 contains the community of Stillwater, Minnesota, a city also located in economic Region 11. However, Stillwater is approximately 25 miles east of the Minneapolis-St. Paul area and is generally not considered a suburb of the Twin Cities. The District has one high school, Stillwater Senior High, which graduates approximately 450 students per year.

Independent School District 623 serves the community of Roseville, Minnesota. The Roseville district has two high schools, Kellogg Senior High and Alexander Ramsey Senior High, which, in combination, graduate approximately 1000 students per year. The District is located in Economic Region 11 and may be considered a suburb of the Twin Cities.

Independent School District 256 serves the community of Red Wing, Minnesota, located approximately 60 miles south of the Minneapolis-St. Paul Metropolitan area. The District has one high school, Red Wing Central, which graduate approximately 300 students annually.

Independent School District 535 serves the community of Rochester, Minnesota. The district is located approximately 100 miles south of the Minneapolis-St. Paul area in economic Region 10 and is one of the four largest communities, outside of the metropolitan area, in the State. Rochester has two high schools, Mayo Senior High and John Marshal Senior High, which, together, graduate about 950 students per year.

The Oakland Vocational Center is one of the secondary vocational centers designed to provide vocational education to students from several independent school districts. The school districts served by this vocational district include: (1) Cambridge, (2) Princeton, and (3) St. Francis. These districts, in combination, graduate approximately 400 students per year.

The Agassiz Valley Vocational Center is another of the secondary vocational centers designed to provide vocational education to students from several independent districts. The districts served by this vocational center include: (1) Climax, (2) Crookston, and (3) Fertile. These districts, in combination, graduate approximately 250 students per year. (Note: Due to changes in personnel at the schools involved with this vocational center, the procedure was not completed in time for results to be included in this report.)

In summary, the school districts selected for the final test of the assessment procedure were located in different geographic areas of the State and were different relative to size of student population. Each school district also agreed to finance the cost of testing the assessment procedure on their former students.

## Methods

An attempt was made to conduct the test of the assessment procedure under conditions which would least represent an experimental or special situation. Efforts were made to have the school districts treat the assessment procedure as a part of their regular ongoing activities and expenses.

The Minnesota Research Coordinating Unit for Vocational Education developed and supplied each school with a manual for implementing the assessment procedure, associated forms and materials and conducted: (1) a workshop on the use of the procedure and forms and (2) a summary meeting with school personnel to discuss the procedures, costs and results of the assessment. In addition, the Research Coordinating Unit: (1) made available a computer program to summarize the data collected and (2) did trouble-shooting on problems encountered by the local schools.

Each local school had the responsibility of providing a project director and clerical assistant to conduct the assessment. This staff identified the group of former students to be assessed, completed the assessment procedure and kept a record of the activities, costs and problems encountered during the study.

The test of the secondary school assessment procedure was carried out in four steps. The first step was accomplished by conducting a workshop in which the local directors and local clerical assistants were familiarized with the assessment procedures and instruments. This workshop was held in December and lasted one day.

The second and third steps, conduct of the assessment and local process evaluation, respectively, were completed simultaneously during the months of February through May. Both of these steps were conducted completely by the local school district personnel; staff from the Minnesota Research Coordinating Unit for Vocational Education were available to answer questions about the assessment process. The second step involved implementing the assessment procedure previously presented in this report. The third step, local process evaluation, was intended to permit the local school personnel involved in the test to make comments and recommendations about the procedures as they worked through them. To accomplish this objective, each individual involved completed a procedures diary in which they recorded the following information:

(1) Problems encountered
(2) Time spent on different tasks
(3) Expenses incurred
(4) Recommendations and comments

The fourth step of the pilot test was a summary evaluation of the procedure which was conducted at the completion of the test by the Research Coordinating Unit. The RCU also directed the development of a computer program which would summarize the follow-up data for each school. This program was written and operated at the St. Paul Campus Computer Center, University of Minnesota.

## Results

The results of the pilot test of the assessment procedure are presented below as they relate to the questions stated at the beginning of this chapter.

1. Did the procedure provide information useful in assisting local school personnel in planning and evaluation?

Due in part to the lack of time since the local school personnel received the final reports of the pilot test, a complete answer to this question was not possible. However, some immediate uses of the data were made by the local schools. These were: (1) use the data as summary information to inform local school boards, parents, and teachers about the employment and educational status of former students, (2) use the data to identify employers who hired former students (in conjunction with another research project, these employees are now being visited by school personnel), (3) use the information to identify the schools attended by former students (guidance and counseling information about these schools is being collected for student use), (4) information on special interest groups (i.e. dropouts) is being used to examine school policies and procedures as they effect these groups, (5) use of the information for curriculum review as part of the implementation of a management by objectives procedures, and (6) use of the information in program evaluation for acreditation purposes. It is anticipated that further uses will be identified after local school personnel have more time to inspect the assessment reports. The schools involved in the pilot test will be contacted again and asked how they had or would use the assessment information in their planning and evaluation.

2. Could the procedure be largely directed, conducted and financed by the local school?

The follow-up procedure was designed to be a self contained and self sufficient procedure. That is, after the initial training workshop, the local project personnel were to conduct the assessment with minimum assistance from the Research Coordinating Unit. Responsibility of the Research Coordinating Unit differed in this test from the first pilot test in that no site visits were made to the schools while they were conducting the assessment.

During the test, it was found that the procedure was largely self sufficient. The local school personnel were able to conduct all parts of the procedure except computer analysis without excessive help by the Research Coordinating Unit. Problems which did arise were minor interpretation problems which could be answered on the telephone.

The local schools did need assistance to obtain computer analysis of the assessment data. This was primarily because the analysis was conducted at a university facility and could be more efficiently arranged and conducted by the Research Coordinating Unit.

3. Were all former students included in the assessment population?

The assessment procedure was designed to assess all former high school students regardless of the high school program taken (i.e. vocational, general, college preparatory). Each of the school districts participating in the pilot test assessed their total group of former students. These groups of students were different for different schools. In addition to testing the use of the follow-up procedure with students who were out of school one and three years as was accomplished in the first pilot test, during this second test, students out of school two and five years were also included. Graduating classes of 1969, 1970, 1971, and 1973 were included in the process although no schools assessed more than two of these classes. The groups which were assessed are shown in Table 2 for each school which participated in the study.

Table 2: Class of Students Follow-Up By Each School

| School | Class Of | | | | |
|---|---|---|---|---|---|
| | 1973 | 1972 | 1971 | 1970 | 1969 |
| Anoka Sr. High | X | | | | |
| Coon Rapids Sr. High | X | | | | |
| Stillwater Sr. High | X | X | | | |
| Redwing Sr. High | | | X | | |
| Kellog Sr. High | | | X | | |
| Ramsey Sr. High | | | X | | |
| Cambridge Sr. High | | | | | X |
| St. Francis Sr. High | | | | | X |
| Princeton Sr. High | | | | | X |
| Mayo Sr. High | | | | | X |
| John Marshall Sr. High | | | | | X |

4. Did the procedure provide valid and reliable status information about the educational and employment activity of former students?

Inspection of the final reports for the schools involved revealed that the procedure did supply information about the status of former students relative to their post-high school educational and/or employment activity. In addition, information was summarized concerning the geographic location of former students and a brief history of their activities since leaving school.

The major sources of error in validity and reliability for the information could be: (1) not having responses from the complete group being assessed, (3) former students not answering the questions accurately (for several reasons), and (3) clerical staff not coding the responses correctly. Because of the high rate of response obtained which is documented in the answer to the next question, the error due to not having a response from everyone in the group being assessed was assumed to be small. Error in information due to respondents not completing the form accurately was not directly assessed. However, very few questionnaires were incomplete or had inconsistent responses which indicated that directions for completing the follow-up questionnaire were understood and that the respondents made some effort to accurately complete the questions asked.

Error caused by incorrect coding by clerical staff could be of two types. The first involves choosing an incorrect code. The second type of error was a failure to sufficiently darken the appropriate circles on the Reporting Form or omit a code on the Form. Errors of the first type were to be checked by the project directors in the local schools. It was assumed that this was done and that the coding was correct. However, errors of the second type, omissions and improperly darkened circles, were assessed by a computer program; and in some cases were found to be of sufficient number to delay final processing of the Reporting Forms until the Forms could be corrected. An investigation of the optical scanning type of reporting form indicated that the error caused by inadequate darkening of circles could be corrected in the future by using a special pencil for coding purposes.

In summary, it was concluded that the information collected by the assessment procedure had sufficient validity and reliability to make it useable.

5. <u>Would the procedure produce a high rate of response from former students?</u>

In order to maximize the usefulness of the data collected by the assessment procedure, a goal of 80% questionnaire return rate was set for the pilot test. This goal was exceeded by all school districts participating in the pilot test, regardless of the length of time the former students had been out of school. The numbers and percent of returns achieved at each stage of the assessment procedure is shown in Table 3.

In general, the first mailing of the questionnaire elicited between 43% and 54% return while the second mailing resulted in an additional return of between 12% and 31%.

The third stage of the procedure, telephone calls to all remaining non-respondents, accounted for between 18% and 25% additional returns. However, since the information requested on the questionnaire was descriptive in nature, any person with a knowledge of the non-respondent's post-high school activities could respond to telephone calls. For example, responses were accepted from parents, brothers, or sisters and wives or husbands. It was concluded that the follow-up procedure would produce the required 80% questionnaire return. This was true for all time periods included in this test. However, it was apparent that higher returns were obtainable from students who had been away from school shorter periods of time.

Table 3

Returns for Each Stage of the Assessment Procedure

and Length of Time Student Had Been Out of School

| | One Year | | Two Years | | Three Years | | Five Years | |
|---|---|---|---|---|---|---|---|---|
| | No | % | No. | % | No. | % | No. | % |
| Stage 1 | 774 | 43.0 | 192 | 43.7 | 582 | 43.3 | 707 | 54.5 |
| Stage 2 | 555 | 30.8 | 124 | 28.2 | 265 | 19.7 | 162 | 12.5 |
| Stage 3 | 369 | 20.5 | 81 | 18.5 | 329 | 24.5 | 240 | 18.5 |
| Total | 1698 | 94.3 | 397 | 90.4 | 1176 | 87.5 | 1109 | 85.5 |
| Base | 1801 | 100.0 | 439 | 100.0 | 1343 | 100.0 | 1298 | 100.0 |

Table 4: Major Cost Factors as a Percent of Total Cost and Length of Time Students Had Been Away From the High School

| Length of Time / Cost Factor | One Year | Two Year | Three Year | Five Year | Average |
|---|---|---|---|---|---|
| | % | % | % | % | % |
| Postage | 23% | 19% | 20% | 16% | 19% |
| Supplies[1] | 4% | 5% | 4% | 7% | 5% |
| Clerical[2] | 50% | 58% | 52% | 50% | 52% |
| Computer Tape[3] | 6% | 8% | 5% | 6% | 6% |
| Analysis[4] | 17% | 10% | 19% | 21% | 18% |
| TOTAL | 100% | 100% | 100% | 100% | 100% |

1 - Includes all supply costs such as stationary, rubber stamps, etc.

2 - Estimated wage of $2.50 per hour.

3 - Cost for optical scanning of report forms at $.05 per form.

4 - Cost of analysis at $.005 per student per report requested.

5 - Includes cost of correcting errors in original forms.

6. What was the cost of implementing the procedure?

One responsibility of the local school was to keep a record of all costs incurred by the assessment project. A summary of these costs for major cost factors and length of time the students had been away from the high school is shown in Table 4.

As can be seen in the total column of Table 4, clerical time was the largest single factor contributing to the cost of the assessment. The average being 52% of the total cost of conducting the assessment. The postage and analysis of the data cost factors contributed 19% and 18%, respectively, to the cost of the assessment. And the remaining 11% of the total cost was accounted for by the generation of a computer tape, 6%, and the purchase of needed supplies, 5%. Note that the contribution of each cost factor remained fairly constant across all time periods.

In order to establish a base on which comparisons could be made, the cost per students was calculated for each time period, or length of time students had been away from the high school. These calculations are presented in Table 5.

Table 5: Cost Per Student and Length of Time Away from the High School

| | Total Cost | Number of Students | Cost/Student |
|---|---|---|---|
| One Year | $2,006.60 | 1801 | $1.12 |
| Two Years | 569.30 | 439 | 1.30 |
| Three Years | 2,002.17 | 1360 | 1.48 |
| Five Years | 1,555.43 | 1345 | 1.16 |
| TOTAL | $6,133.50 | 4945 | $1.24 |

As can be seen in Table 5, the costs per students ranged from $1.12 per student for a one-year follow-up to $1.48 per student for a three-year follow-up. And the average across all time periods was $1.24 per student.

7. Would the procedure supply information which would simplify future assessments of the same students?

Since only status information was collected in the present assessment, it was desirable that this process also provide information which would facilitate future assessments of these same students for other types of information. For example, a school might want to assess the "attitudes toward work" of a specific subgroup of the original follow-up population. As a means of facilitating future contacts with the former student, the present assessment procedure was designed to obtain the following information:

(1) Most recent address and telephone number
(2) Address of employer (if employed)
(3) Name of immediate supervisor (if employed)
(4) Address of post-secondary education institution (if going to school)

8. Did the procedure provide consistent information across schools?

Since all schools agreed to use the same follow-up questionnaire, the information gathered was consistent across schools. In districts with several high schools, reports were prepared for each school and a summary report including all schools in the district.

## Summary

In summary, a revised procedure to assess the educational and employment status of former high school students was tested in six Minnesota high school districts. The test was conducted to determine the degree to which a set of pre-specified criteria were met by the procedure.

In general, it was found that the assessment procedure met each of the criteria. The procedure provided valid and reliable status information about the educational and employment activities of former students. The information was being used by the local schools. The procedure resulted in a return rate over the required 80% for all schools and time periods involved. It was concluded that the procedure could be implemented by clerical staff under minimal direction of a project director. The cost of assessment varied from $1.12 to $1.48 per student assessed, with an average of $1.24 per student. Total costs per school were almost directly related to size of the group being contacted. By obtaining updated name and location information, the procedure would facilitate future assessments of the former students involved in the pilot test populations. Since the same forms were used in all schools, the information reported was consistent between schools which would facilitate summary reporting for groups of schools within districts.

# CHAPTER VI

## RECOMMENDATIONS

Based on the results and evaluation of the final test of the assessment procedure, the list of recommendations presented below was formulated. In light of these recommendations, the assessment procedure and materials are presently being reviewed and will be modified where needed and published in final form. The recommendations are listed by procedure stage to which they relate.

Stage 1: Identification of Population and Sub-groups

1. Incorporate more emphasis on choosing which class is to be assessed. Add information about the differences in data received from one vs. three vs. five year follow-ups.

2. Provide samples of useful local interest groups. Due to the cost of generating reports, local schools should select local interest groups carefully; only those groups of primary interest should be included.

3. Re-define the list of vocational clusters to more closely reflect the types of courses available at the secondary level. This may be accomplished by adding more undefined clusters, thus, allowing local personnel the option of including special vocational programs (i.e. special needs programs, work study programs).

Stage 2: Collection and Coding Base Information

1. Include more emphasis on the importance of correctly following coding procedures in an effort to eliminate problems in data analysis.

2. Provide liquid ink coding pens, to replace pencils, for use in coding forms. This should significantly reduce one of the most prevelant coding errors.

Stage 3: Preparation and Mailing of Questionnaires

No changes were recommended for this stage.

Stage 4: As Questionnaires Are Returned

No changes were recommended for this stage.

Stage 5: Non-Respondents

1. Emphasize the need to follow the prescribed time schedule for the second mailing.

2. Provide more complete instructions relative to the preparation for the second mailing of questionnaires.

Stage 6: Coding

1. Again, as in Stage 2, more emphasis should be included about the importance of strict adherence to coding directions.

2. Eliminate coding of "relatedness". The detail reporting of occupational titles and educational programs will make this unnecessary and result in significant saving of clerical time during coding. Determination of degree of "relatedness" will be the responsibility of the reader.

3. Modify the Reporting Form to allow the option of having it keypunched as well as optically scanned. This would be helpful for correcting errors found during data processing and allow efficient processing for small groups of students.

4. Code geographic area by county and community as well as economic region. Coding in this manner will allow the local school to more closely define where its former students work and go to school.

5. Provide for detailed coding of educational institutions and educational programs so as to parallel the information on occupations.

6. Add a section in which the wage ranges of employed individuals could be coded.

Stage 7: Preparation for Data Summary

1. Emphasize the need for "local checking" of all forms for completeness and validity.

Stage 8: Completion of Process Evaluation

No changes were recommended in this stage.

Final Reports to the Schools

1. Drop tables on "relatedness" (Table 11 and 12)

2. The set of Recent History Tables, Tables 10.0 through 10.9 should be re-formated to improve their interpretability.

3. Eliminate separate report sets for "males", "females", and "graduates".

4. Establish the base for percentages for any given table as the total included in that table rather than the total who returned complete questionnaires.

5. Provide tables indicating the names of educational institutions and educational programs in which former students enrolled.

The above recommendations will form the basis for the modification of both the assessment procedure and the assessment materials. The goal is to produce a set of tested materials and procedures which can be made avaliable to local school that desire to conduct an assessment of their former students.

# APPENDIX I

## Selected Bibliography

Astin, Alexander W. and Boruch, Robert F., Link System for Assuring Confidentiality of Research Data in Longitudinal Studies. Ace Research Reports, Vol 5, No. 3. Washington, D.C. American Council on Education, Office of Research, 1970.

Bachman, Jerald G. and others, Youth in Transition, Volume I, Blueprint for a Longitudinal Study of Adolescent Boys. Washington, D.C., Office of Education, 1967.

Baird, Leonard L., and Holland, John L., The Flow of High School Students to Schools, Colleges and Jobs. Iowa City, Iowa: American College Testing Program, 1968.

Byram, Harold M., Editor, Locally Directed Evaluation of Local Vocational Education Programs, Third Edition: A Manual for Administrators, Teachers and Citizens. Danville, Illinois, The Interstate Printers and Publishers, Inc., 1971.

California State Department of Education, Proposed Systems for Reporting Job Placement Follow-Through Data. Sacramento, California, California State Department of Education, 1968.

Colorado Research Coordinating Unit, A Follow-Up Study of 1963 Colorado High School Graduates, Ft. Collins: Colorado Research Coordinating Unit, 1966.

Connecticut State Department of Education, Follow-Up of 1965 Graduates, Connecticut State Department of Education, 1966.

Cooley, William W. and Lohnes, Paul R., Project Talent Five-Year Follow-Up Studies Predicting Development of Young Adults, Pennsylvania, Pittsburgh University, 1968.

Craig, Judith S. (Ed.), Proceedings of the Conference on Follow-Up Studies in Educational Research, University of Wisconsin: Industrial Relations Research Institute, 1965.

Flanagan, John C., Project Talent One-Year Follow-Up Studies, Pittsburgh, Pennsylvania: University of Pittsburgh, School of Education, 1966.

Goff, Maurice L., Follow-Up Procedure for Post Secondary Vocational Technical Graduates, Cheyenne, Wyoming: State Department of Education, 1967.

Goff, Maurice L., Selected Techniques for Formulating the Questionnaire, Mechanics and Related Materials of a Follow-Up Procedure Dealing With Post-Secondary Vocational-Technical Graduates. Cheyenne, Wyoming: Research Coordinating Unit, State Department of Education, 1966.

Henderson, John T. Program Planning with Surveys in Occupational Education. Washington, D.C. American Association of Junior Colleges, 1970.

Labor, United States Department of, Bureau of Labor Statistics, BLS Handbook of Methods for Surveys and Studies. Washington, D.C., United States Department of Labor, 1966.

Mailey, Patrick J., A Vocational-Technical Student Follow-Up System, Olympia, Washington: State Board for Vocational Education, 1966.

McKinney, Floyd L. and Oglesby, Charles, Developing and Conducting Follow-Up Studies of Former Students. Lexington, Kentucky: Kentucky Research Coordinating Unit, 1971.

Pucel, David J. and others, Questionnaire Follow-Up Returns as a Function of Incentives and Responder Characteristics, Minneapolis, Minnesota: University of Minnesota, Department of Industrial Education, 1968.

Stevenson, W.W., Frazier, W. D., Harris, J. L. and Allen, R.D. Follow-Up Study of Oklahoma Vocational and Technical Education Graduates and Dropouts 1968-1969 and 1969-1970. Oklahoma: Oklahoma State Department of Vocational and Technical Education, 1971.

# APPENDIX II

## Possible Local Interest Groups

The following list of local interest groups represents a partial list of groups used by schools during this test of the assessment procedure and is included to provide examples of groups which can be useful to local school personnel.

High absentee students

Low absentee students

Upper third of graduating class

Middle third of graduating class

Lower third of graduating class

College preparatory students

Vocational students

Work-study students

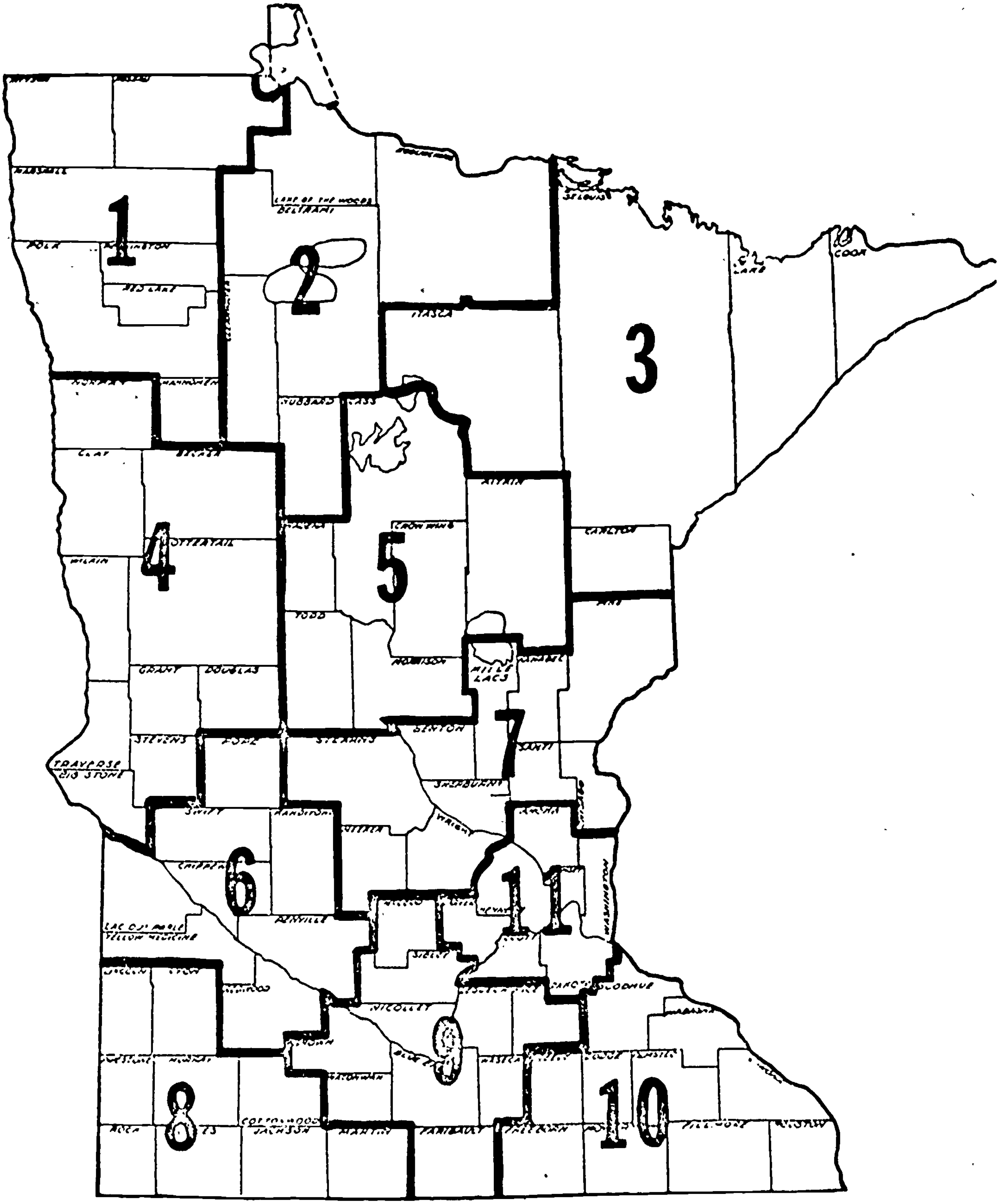
Students who participated in athletics

National Honor Society students

Students who worked while in high school

## APPENDIX III

### Minnesota Economic Regions



# CURRENTLY AVAILABLE PUBLICATIONS OF THE MINNESOTA RESEARCH COORDINATING UNIT

*Bailey, Willard F. Jr. and Jerome Moss, Jr., A Comparison of Mail-Techniques for Stimulating Interest in Occupational Education Research. 1966. ED 011 289

*Moss, Jerome Jr., Measuring Creative Abilities in Junior High School Industrial Arts, Monograph 2. 1966.

Moss, Jerome Jr., The Influence of Industrial Arts Experience on Grades Earned in Post-High School Trade and Technical Curriculums. 1966. ED 012 324

Pucel, David J., Brandon B. Smith, Marshall S. Hahn, and Willard F. Bailey, Jr., Estimating the Human Resources for Research in Occupational Education in Minnesota. 1966. ED 011 290.

*Jiloca, Editha L., Bibliography of Studies in Occupational Education Conducted in Minnesota: 1965-67. 1967.

Moss, Jerome Jr., Report of a Five-State Occupational Education Research and Development Planning Conference. January, 1967. ED 012 317.

Technical Report No. 1: Sources of Information for Preparation of Research Proposals. January, 1967.

Technical Report No. 2: Selecting and Developing a Research Problem. September, 1967.

Moss, Jerome Jr., Review of Research in Vocational Technical Teacher Education. September, 1967. ED 016 803.

*Pucel, David J., Variables Related to MDTA Trainee Employment Success in Minnesota. February, 1968. ED 027 449.

Vocational-Technical Education: A Study of the Effect of the Area Vocational-Technical Schools in the State of Minnesota. Minnesota Research Coordinating Unit, July 1968.

Moss, Jerome Jr., Technical Report No. 3: The Evaluation of Occupational Education Program. September, 1968.

Hahn, Marshall, Review of Research on Creativity. September, 1968. ED 029 090.

*Randleman, Robert R. and David N. Wheeler, Report of an Evaluation of a Summer Institute for Training Researchers in Occupational Education. September, 1968.

*Pratzner, Frank C. and Lyle Faurot, Summary of Studies Conducted in Minnesota: 1965-67. September, 1968. ED 023 895.

McMillion, Martin B., Correlates of Leadership Decision Patterns of High School Pupils. 1968. ED 025 646.

Klaurens, M. (Editor), Developing Inovative Vocational Technical Teacher Education Programs. 1968. ED 209 094.

Moss, Jerome Jr., David J. Pucel, and Frank C. Pratzner (Editors), Report of a Developmental Project Guidelines Conference. 1968. ED 025 647.

Pratzner, Frank C. and Marjory Hanson, The Relative Effectiveness of Two Ways of Structuring and Presenting Pre-Service and Initial In-Service Vocational-Industrial Teacher Education Lessons. April, 1969. ED 029 995.

*Stock, William E. and Frank C. Pratzner, Review of Research on Student Selection and the Prediction of Success in Occupational Education. August, 1969. ED 039 319.

*Price, R. G., (Editor), Assessment of Educational Programs: Proceedings of the Eleventh Annual Research Conference for Graduate Advisors in Business Education. 1970.

Collofello, P., Helen Henrie, and Emma Whiteford, The Relative Effectiveness of Two Sources of Feedback on Teachers in the Micro-Teaching Situation. 1970. ED 044 490.

Smith, Brandon B. and Jerome Moss, Jr., Process and Techniques of Vocational Curriculum Development. April, 1970. ED 042 917.

Persons, Edgar and George Copa, Report of the Central Regional Research Conference on Agricultural Education. October, 1970. ED 056 249.

*Minnesota Research Coordinating Unit, Abstracts and/or Titles of Research and Development Projects Dealing with "Orientation to Work" and Career Development. 1970.

*Copa, George H., Technical Report No. 4: Identifying Inputs Toward Production Function Application in Education. April, 1970. ED 053 317.

*Smith, Brandon B. and Editha L. Jiloca, The Relationship of Selected Factors to the Occupational-Educational Choices of Twelfth Grade Students. April, 1971. ED 052 370.

Wheeler, David N., Technical Report No. 5: The Measurement of Job Relatedness for Vocational Program Evaluation. May, 1971. ED 053 318.

*Kreutzkampf, June and Charles Kiefer, Status of Vocational Education Research and Development Activities in Minnesota, 1968-1970, An Annotated Bibliography. June, 1971. VT 014 068.

*Wheeler, David N., Technical Report No. 6: Reviewing the Literature: A Handbook for the Vocational Researcher. June, 1971. VT 014 086.

Copa, George and Edgar Persons, Computeration Beef: A Management Decision Aid. 1971.

*Henric, Helen H. and Emma B. Whiteford, The Teleconference: A Supervisory Procedure in Educational Clinical Experiences. February, 1972.

*Kiefer, Charles C., The Need for Vocational Education Teachers in Minnesota. Spring, 1972.

*Smith, Brandon B. and Jerome Moss, Jr., Developing a State System of Managed Research and Development Activities in Vocational Education. February, 1972.

*Re-Source: Foods Service Curriculums. Minnesota Research Coordinating Unit, 1972.

*Re-Source: Occupational Home Economics Curriculums. Minnesota Research Coordinating Unit, 1972.

*Re-Source: Occupational Home Economics Program Development. Minnesota Research Coordinating Unit, 1972.

Copa, George H. and Donald E. Irvin, Jr., Occupational Demand in Minnesota for 1973. July, 1972.

*Kiefer, Charles C., The Perceptions of Selected Male Public High School Seniors Concerning Specialized and Comprehensive Post-Secondary Schools in Minnesota. August, 1972.

*Copa, George H., Edgar Persons, and Paul Thomas, Individual Demand for Vocational Education. February, 1973.

*Persons, Edgar A. and Gary Leske, Staffing Patterns for Programs in Adult Agricultural Education. July, 1973.

Copa, George and Donald Irvin, Status of Former High School Students: Procedure for Local Assessment. August, 1973.

*Smith, Brandon B., A System for Evaluating Career Education in Minnesota: 1972-73. February, 1974.

Copa, George H. and Donald E. Irvin, Jr., Average Annual Occupational Demand in Minnesota for the Period 1971-1980. June, 1974.

Copa, George and Robert W. Korpi, The Need and Sources of Teachers in Vocationally Reimbursed Positions in Minnesota. July, 1974.

*(Several editions of a newletter, News and Reviews, are also available.)

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*Single copies of these publications are available, free of charge, from the Minnesota Research Coordinating Unit for Vocational Education. The other publications listed are available in either hardcopy or microfiche form from Central ERIC.