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ABSTRACT

The report on the career-education program at Mamaroneck High School, New York, is presented in two sections. The first section relates to the high school Practical Arts department. Three overall objectives for the department are stated, followed by tabulations, for each course, of the numbers of students achieving teacher-constructed specific objectives. The second section lists seven overall objectives under the heading of career exploration and skills training. Tables follow showing specific objectives for various courses and the numbers of students who achieved them, employers' evaluations of students in work-study programs, and students' achievement of consumer skills. A followup letter to 40 graduates of three programs brought 16 responses, indicating that 68 percent of the respondents were working in the field in which they were trained or in a related area or were pursuing further study in that area. (SA)

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EVALUATION  
OF  
CAREER EDUCATION PROGRAM  
Mamaroneck High School

Margery R. Bernstein

Program Evaluation & Research  
Mamaroneck Public Schools

July 1973

E004310

#### SUMMARY:

The Career Education evaluation consists of two sections. The first relates to the high school Practical Arts Department and includes specific objectives for each course offering and the numbers who achieved them. The second section consists of evaluation of objectives for career exploration and skills training. Skills objectives are given and evaluated for the banking, distributive education, office and secretarial practice and work-study programs. In addition employers rated students in the work-study program in relation to four on-the-job objectives. A follow-up letter to 40 graduates of three programs brought 16 responses indicating that 68% of the respondents were working in the field in which they were trained or in a related area or were pursuing further study in that area. Of the remaining five students, three developed and used insights gained in their school experience to make a career decision.

The Department of Career Education Programs consists of two divisions.

1. The Practical Arts Department has existed for several years.

During the current year the major focus was to restate existing goals into more specific objectives and to relate existing methods of evaluation, such as tests, to these objectives.

2. The Career Education Project is part of a federally funded project involving six school districts. Mamaroneck is the Local Education Agency for the total grant for which there will be a separate evaluation. Specific courses, designated as Career Education Programs within the Practical Arts Department are: Office and Secretarial Practice, Distributive Education, Banking and Economics, and Work-Study, so characterized because they fulfill the following aims of the above project:

To enable students to learn vocational, avocational and practical skills simultaneously, relating all three.

To develop courses in which students learn through actual, as opposed to simulated, experiences combined with theoretical instruction through the establishment of laboratory-learning centers.

To enable students to pursue learning at their own rate by providing them with choices of learning activity packages.

To qualify interested students for job entrance upon graduation from high school.

The present evaluation is thus organized in two sections: Section I deals with Practical Arts; Section II concerns Career Education Projects currently in operation in Mamaroneck.

SECTION I

Practical Arts

Overall objectives for the Practical Arts Department are as follows:

1. Industrial Arts: Students will learn the proper use of tools and equipment while they acquire basic skills necessary for practical use and for their basic understanding of the requirements of related career areas.
2. Home Economics: Students will learn to use equipment in the performance of skills and acquire related information which is essential to home and family living. This knowledge would be applicable to personal or employment needs;
3. Business Education: Given a simulated personal and business situation, students will solve problems by using manual skills and/or applying business theory.

For each course offered, teachers constructed specific objectives and evaluated each of their students as to whether or not he had satisfactorily fulfilled the objective. Specific objectives and results for each course are indicated below.

TABLE 1

Basic and Advanced Woodworking

|   | Achievement       |                     |              |
|---|-------------------|---------------------|--------------|
|   | Satis-<br>factory | Unsatis-<br>factory | Not<br>Rated |
|   | N                 | N                   | N            |
| States rules of safety in writing or orally                   | 61                | 5                   | 0            |
| Works safely  | 56                | 9                   | 1            |
| Selects appropriate supplies                                  | 63                | 2                   | 1            |
| Uses supplies correctly                                       | 61                | 2                   | 3            |
| Selects appropriate tools and equipment                       | 61                | 5                   | 0            |
| Uses tools and equipment correctly                            | 59                | 6                   | 1            |
| Makes accurate drawings                                       | 33                | 13                  | 20           |
| Applies knowledge of tools and supplies                       | 57                | 6                   | 3            |
| Writes steps for procedures                                   | 31                | 18                  | 17           |
| Demonstrates ability to follow procedure<br>such as rabbeting | 55                | 10                  | 1            |

The check list in Table 2 was used in lieu of formal objectives and the students were rated as indicated.

TABLE-2

## Power Mechanics

|   | Achievement |    |    |    |    |
|---|-------------|----|----|----|----|
|   | E           | G  | F  | P  | U* |
|   | N           | N  | N  | N  | N  |
| Mechanical Fundamentals                               | 5           | 37 | 15 | 3  |    |
| Electrical Fundamentals                               | 1           | 24 | 28 | 5  |    |
| Magnetism - induced currents                          | 4           | 40 | 9  | 5  |    |
| Automotive elec. circuits                             | 0           | 19 | 33 | 6  |    |
| Automobile engine -<br>valves and firing orders       | 5           | 30 | 19 | 4  |    |
| Pistons, cylinder walls<br>and rings                  | 7           | 22 | 24 | 4  |    |
| Engine bearings                                       | 3           | 15 | 33 | 6  |    |
| Diagnoses engine troubles                             | 2           | 17 | 32 | 6  | 1  |
| Cooling system  | 1           | 36 | 19 |    |    |
| Electrical test instruments                           | 0           | 22 | 29 | 7  |    |
| Mechanical instruments and<br>instrument combinations | 1           | 32 | 18 | 6  |    |
| Tune-up - meaning and<br>opportunities                | 2           | 43 | 7  | 6  | 1  |
| Automotive oscilloscope                               | 0           | 4  | 19 | 32 |    |
| Storage battery -<br>care and service                 | 0           | 44 | 7  |    |    |
| Ignition system -<br>coil and condenser               | 0           | 29 | 21 | 5  |    |
| Four barrel carburetors -<br>automatic choke          | 0           | 29 | 23 | 6  |    |
| Fuel system -<br>maintenance and troubles             | 0           | 35 | 18 | 5  |    |
| Starting circuit -<br>maintenance and troubles        | 0           | 15 | 34 | 9  |    |
| Lighting and horn circuits                            | 0           | 13 | 35 | 7  |    |

E=excellent, G=good, F=fair, P=poor, U=unsatisfactory

Advanced Power Mechanics

This course was organized around individual projects. Students were rated Excellent, Good, Fair or Poor in the psychomotor, affective and cognitive domains as follows:

TABLE 3

Advanced Power Mechanics

|   | Psychomotor      | Affective      | Cognitive      |
|---|------------------|----------------|----------------|
| Installs synchronizers in transmissions     | E(1)             | E(1)           | G(1)           |
| Installs new water pump                     | E(1)             | E(1)           | G(1)           |
| Installs new temperature guage              | E(2)             | E(2)           | E(2)           |
| Repairs small engine                        | E(1)             | G(1)           | G(1)           |
| Tunes up engines                            | E(5)             | E(4) G(1)      | E(3) G(2)      |
| Fixes fenders                               | E(1)             | G(1)           | G(1)           |
| Constructs go-cart                          | E(2)             | E(2)           | G(2)           |
| Replaces oil pan gasket                     | E(1)             | E(1)           | G(1)           |
| Replaces front shocks                       | E(2)             | E(2)           | E(2)           |
| Replaces lower control arms and ball joints | F(1)             | E(1)           | G(1)           |
| Replaces muffler                            | E(2)             | E(2)           | G(2)           |
| Replaces carburetor                         | E(2)             | E(2)           | E(2)           |
| Replaces brakes                             | E(3)             | E(3)           | E(2) G(1)      |
| Bleeds brakes                               | E(5)             | E(3) G(2)      | E(3) G(2)      |
| Inspects brakes                             | E(1)             | E(1)           | E(1)           |
| Changes tires and/or oil                    | E(4) G(1)        | E(2) G(3)      | G(5)           |
| Does general maintenance                    | E(1)             | E(1)           | G(1)           |
| Does odd jobs                               | E(2), G(3), F(1) | G(2) F(3) P(1) | G(3) F(2) P(1) |
| Helps on odd jobs                           | G(2)             | F(1) P(1)      | F(1) P(1)      |

Tables 4 through 7 cover the subjects of Electricity, Electronics, Basic Graphics and Serigraphy for which the instructor used the full check list.

TABLE 4  
Electricity

|   | Excellent | Pass | Fail |
|---|-----------|------|------|
| Atoms, Molecules, Electrons             | 3         | 20   | 0    |
| Conductors, Insulators, Semi-conductors | 3         | 20   | 0    |
| Electrostatic Theory                    | 5         | 18   | 0    |
| Volts                                   | 8         | 14   | 0    |
| Amps and Milliamps                      | 5         | 14   | 4    |
| Ohms and Resistance                     | 7         | 16   | 0    |
| Operation of Voltmeter                  | 6         | 17   | 0    |
| Operation of Armeter                    | 6         | 17   | 0    |
| Operation of Ohmeter                    | 6         | 17   | 0    |
| Kirchoffs Current Law                   | 2         | 8    | 13   |
| Kirchoffs Voltage Law                   | 5         | 11   | 7    |
| Voltage dividers                        | 5         | 14   | 4    |
| Potentiometers                          | 6         | 16   | 1    |
| Primary and Secondary Cells             | 6         | 17   | 0    |
| Photoconductive and Emission Cells      | 7         | 17   | 0    |
| Generators                              | 4         | 18   | 1    |
| Current from Magnetism                  | 5         | 17   | 1    |
| Development of Sine Wave                | 3         | 8    | 11   |
| Peak, RMS and Average Voltage           | 1         | 5    | 17   |
| Relays and Solenoids                    | 6         | 17   | 0    |
| Transformers                            | 6         | 17   | 0    |
| Identification of Transformer Leads     | 6         | 16   | 0    |
| Coil Characteristics                    | 6         | 15   | 2    |
| Inductive Reactance                     | 2         | 7    | 13   |
| Inductive Kick                          | 6         | 16   | 1    |
| Cap Characteristics                     | 6         | 16   | 1    |
| Blocking action of a cap to DC          | 8         | 14   | 1    |
| Capactive Reactance                     | 2         | 9    | 12   |
| RC Time Constants                       | 1         | 11   | 11   |
| Crossover Networks                      | 3         | 15   | 4    |

TABLE 5

Electronics

|                                       | Excellent | Pass | Fail |
|---------------------------------------|-----------|------|------|
| Inductive Reactance                   | 6         | 9    | 3    |
| Capacitive Reactance                  | 6         | 9    | 3    |
| Series + Parallel Resonance           | 5         | 8    | 5    |
| Q of a tuned circuit                  | 1         | 6    | 11   |
| Alignment of a Superhet               | 7         | 8    | 2    |
| Semiconductor Diodes                  | 14        | 4    | 0    |
| Half-wave Rectifiers                  | 13        | 4    | 1    |
| Full-wave Rectifiers                  | 11        | 5    | 2    |
| Capacitor Filtering                   | 10        | 7    | 1    |
| Ripple                                | 4         | 8    | 6    |
| Regulation                            | 10        | 7    | 1    |
| Zener Diodes                          | 10        | 6    | 2    |
| Zener Regulation                      | 10        | 5    | 2    |
| Applications of Power Supplies        | 11        | 6    | 1    |
| Elements of a Triode                  | 11        | 5    | 2    |
| Characteristic Curves                 | 9         | 5    | 4    |
| Phase Inversion of a Triode           | 11        | 3    | 4    |
| Biasing an Amp                        | 9         | 4    | 5    |
| Graphic Analysis of a Triode          | 4         | 5    | 8    |
| Classes of Operation                  | 9         | 5    | 4    |
| Single Ended Power Amps               | 9         | 5    | 4    |
| Push-Pull Power Amp                   | 8         | 5    | 5    |
| Methods of Coupling                   | 5         | 6    | 7    |
| Transistors                           | 4         | 10   | 5    |
| Transistor Biasing                    | 4         | 8    | 8    |
| Comparison of Transistors and Triodes | 5         | 5    | 9    |
| Amplifier Configurations              | 2         | 8    | 9    |
| Graphic Analysis of Transistor Amps   | 2         | 7    | 8    |
| Oscilloscope operation                | 16        | 2    | 0    |
| Sweep Frequencies                     | 10        | 7    | 2    |
| Lissajous Figures                     | 12        | 6    | 1    |
| Application of Ext. Sync.             | 1         | 12   | 6    |

TABLE 6

Basic Graphics

|  | Pass | Fail |
|--|------|------|
| <u>Safety</u>  |      |      |
| Identifies rules of safety   | 38   | 1    |
| Observes rules of safety   | 38   | 1    |
| <u>I Relief Process</u>  |      |      |
| Identifies the characteristics of the process  | 37   | 2    |
| Can list the advantages of the process   | 38   | 1    |
| Lists the disadvantages of the process   | 38   | 1    |
| Designs one color linoleum blocks  | 38   | 1    |
| Produces one color linoleum blocks   | 38   | 1    |
| Prints with one color linoleum blocks  | 37   | 2    |
| <u>II Combination - Linoleum block and typesetting</u>                               |      |      |
| Knows typesetting process  | 37   | 2    |
| Can list advantages and disadvantages of the process                                 | 37   | 2    |
| Practices the process  | 37   | 2    |
| <u>III Gravure</u>   |      |      |
| Identifies the characteristics of the process  | 37   | 2    |
| Lists the advantages and disadvantages of the process                                | 36   | 3    |
| Designs a simple gravure print   | 35   | 4    |
| Produces a simple gravure print (one color)  | 34   | 5    |
| <u>IV Planographic</u>   |      |      |
| Identifies the characteristics of the process  | 36   | 3    |
| Identifies advantages and disadvantages of the process                               | 37   | 2    |
| Makes corrected negative   | 35   | 4    |
| Makes a corrected aluminum plate   | 36   | 3    |
| Runs a multilith 2650  | 33   | 6    |
| Runs a multilith 85  | 35   | 4    |
| <u>V Photography</u>   |      |      |
| Identifies characteristics of the process  | 37   | 2    |
| Lists advantages and disadvantages of the process                                    | 37   | 2    |
| Takes pictures   | 37   | 2    |
| Develops negatives   | 37   | 2    |
| Makes enlarged prints  | 37   | 2    |
| <u>VI Silk Screen Printing</u>   |      |      |
| Identifies characteristics of the process  | 37   | 2    |
| Lists advantages and disadvantages of the process                                    | 37   | 2    |
| Designs a stencil film (cut screen - by hand)  | 37   | 2    |
| Creates a stencil film   | 37   | 2    |
| Designs a photographic screen  | 36   | 3    |
| Creates a photographic screen  | 37   | 2    |
| <u>VII Assorted Machines</u> Uses unassisted to the extent necessary for production: |      |      |
| a) spirit duplicator (Ditto)   | 36   | 3    |
| b) typewriter  | 38   | 1    |
| c) paper folder  | 38   | 1    |
| d) electric stapler  | 37   | 2    |
| e) copying machine (Xerox)   | 37   | 2    |
| f) mimeograph (Gestetner)  | 31   | 8    |
| <u>VII Occupations</u>   |      |      |
| Identifies related occupations   | 37   | 2    |
| Analyzes occupational opportunities  | 36   | 3    |

TABLE 7

## Serigraphy

|  | Pass | Fail |
|--|------|------|
| <u>Safety</u>  |      |      |
| Identifies rules of safety   | 18   | 0    |
| Observes rules of safety   | 17   | 1    |
| <u>Understands 4 basic printing processes</u>                        |      |      |
| 1) Planographic  | 16   | 2    |
| 2) Relief  | 16   | 2    |
| 3) Gravure   | 15   | 3    |
| 4) Screen  | 17   | 1    |
| Utilizes a fundamental design to produce product                     | 15   | 3    |
| Creates a one color paper stencil                                    | 15   | 3    |
| Creates a one color hand-cut stencil                                 | 15   | 3    |
| Creates a two color paper stencil                                    | 12   | 6    |
| Creates a two color hand-cut stencil                                 | 12   | 6    |
| Creates a three color paper stencil                                  | 10   | 8    |
| Creates a three color hand-cut stencil                               | 10   | 7 *  |
| Creates a one color photographic stencil                             | 15   | 3    |
| Creates three color phonographic stencil                             | 10   | 7 *  |
| Creates assorted projects independently combining various techniques | 14   | 4    |
| <u>Occupations</u>   |      |      |
| Identifies related occupations                                       | 16   | 2    |
| Analyzes occupational opportunities                                  | 15   | 3    |

\* one not available

Home Economics

Tables 8 through 12 show the achievement of students in the fields of Foods and Nutrition, Interior Design, Fashion Design, Personal Development, and Child Psychology.

TABLE 8

Foods and Nutrition

|  | Achievement |   |   |    |
|--|-------------|---|---|----|
|  | E           | G | F | P* |
|  | N           | N | N | N  |
| Demonstrates knowledge of nutrition for individual and family health | 17          | 2 |   |    |
| Uses basic and special utensils and equipment                        | 7           | 5 | 5 | 2  |
| Reads recipes  | 4           | 9 | 3 | 3  |
| Plans meals  | 6           | 6 | 5 | 2  |
| Orders from market   | 6           | 5 | 6 | 2  |
| Demonstrates knowledge of food storage                               | 7           | 5 | 5 | 2  |
| Prepares food  | 7           | 4 | 5 | 3  |
| Demonstrates good work habits  | 6           | 5 | 6 | 2  |

\* E=excellent, G=good, F=fair, P=poor

TABLE 9

Interior Design

|                                   | Achievement |   |   |   |
|-----------------------------------|-------------|---|---|---|
|                                   | E           | G | F | P |
|                                   | N           | N | N | N |
| Plans color schemes               | 4           | 4 | 4 | 2 |
| Draws rooms to scale              | 4           | 4 | 2 | 4 |
| Arranges furniture                | 4           | 5 | 1 | 4 |
| Plans space for living activities | 4           | 3 | 2 | 5 |
| Recognizes period furniture       | 3           | 4 | 3 | 4 |
| Chooses floor coverings           | 4           | 4 | 2 | 4 |
| Dresses windows                   | 4           | 4 | 2 | 4 |
| Chooses and buys houses           | 2           | 5 | 2 | 5 |



TABLE 10  
Fashion Design

|   | Achievement |   |   |   |
|---|-------------|---|---|---|
|   | E           | G | F | P |
|   | N           | N | N | N |
| Selects and changes patterns                    | 6           | 4 | 3 | 1 |
| Demonstrates knowledge of basic pattern layout  | 5           | 5 | 3 | 1 |
| Finishes seams                                  | 5           | 5 | 3 | 1 |
| Fits patterns and makes alterations             | 5           | 5 | 3 | 1 |
| Makes jacket lap, zipper, and buttonholes       | 6           | 4 | 3 | 1 |
| Sets sleeves                                    | 5           | 5 | 3 | 1 |
| Sets collar                                     | 6           | 4 | 3 | 1 |
| Performs final finishing                        | 4           | 6 | 1 | 3 |
| Demonstrates knowledge of wardrobe coordination | 6           | 4 | 2 | 2 |

TABLE 11

Personal Development

|  | Achievement |   |   |   |
|--|-------------|---|---|---|
|  | E           | G | F | P |
|  | N           | N | N | N |
| Selects daily foods for health                               | 7           | 2 | 6 | 0 |
| Uses basic equipment--prepares simple foods                  | 3           | 7 | 4 | 1 |
| Selects pattern and appropriate fabric                       | 6           | 3 | 6 | 4 |
| Constructs simple garment--seams, zipper, facings            | 4           | 6 | 4 | 1 |
| Demonstrates knowledge of coordination of wardrobe           | 7           | 2 | 6 | 0 |
| Demonstrates knowledge of recognition and care of sick child | 4           | 6 | 4 | 1 |
| Manages personal grooming                                    | 6           | 4 | 4 | 1 |
| Selects and applies makeup appropriately                     | 5           | 4 | 6 | 0 |

TABLE 12

## Child Psychology

|                     | Achievement |    |
|---------------------|-------------|----|
|                     | S           | U* |
|                     | N           | N  |
| Observations        | 33          | 3  |
| Readings            | 29          | 7  |
| Research            | 28          | 8  |
| Class Participation | 30          | 6  |

\* S=satisfactory, U=unsatisfactory

Business Education

TABLE 13

## Typing I

|  | Achievement |    |
|--|-------------|----|
|  | S           | U  |
|  | N           | N  |
| Ability to type:   |             |    |
| An average mailable letter with envelope and carbon copy   | 71          | 12 |
| A manuscript with footnotes in a generally acceptable form | 69          | 14 |
| Common business forms                                      | 72          | 11 |
| A simple tabulation  | 71          | 12 |

This year the State Education Department for the first time issued Typing Competency Tests which teachers might administer in lieu of the Regents. Mamaroneck teachers used them extensively as they met the needs of many students better than the Regents. Thus of the 128 students enrolled in Typing I, 29 took the Regents and 27 passed. The percentage of students taking the Typing Regents is smaller in Mamaroneck than in New York State as a whole, chiefly due to the fact that in Mamaroneck typing is treated as an elective subject and taken by large numbers of college-bound students who do not need this Regents credit.

TABLE 14  
Shorthand I

|   | Achievement |   |
|---|-------------|---|
|   | S           | U |
|   | N           | N |
| The ability to take dictation at a minimum of 50 words per minute on unpracticed material | 49*         | 5 |
| The ability to transcribe with 95% accuracy   | 46          | 8 |

\* 7 students took dictation at 60 words per minute

TABLE 15  
Shorthand II

|   | Achievement |   |
|---|-------------|---|
|   | S           | U |
|   | N           | N |
| The ability to take dictation at a minimum of 80 words per minute on unpracticed material | 12          | 0 |
| The ability to transcribe mailable letters with carbons and envelopes                     | 12          | 0 |

Of 13 enrolled 13 took the Regents and 12 passed.

TABLE 16  
Business Law

|  | Achievement |   |   |   |
|--|-------------|---|---|---|
|  | E           | G | F | P |
|  | N           | N | N | N |
| The student will master those concepts of Business Law as tested by the New York State Regents Examination | 2           | 2 | 4 | 1 |

Of 10 students enrolled 8 took the Regents and 8 passed.

Business Arithmetic

Basic arithmetic ability tests recommended by the New York State Education Department were used to appraise students' ability. One form of the test was given at the beginning of the school year and another form at the end of the year. Table 17 shows the number of students whose scores corresponded to the various state percentile ranks.

TABLE 17

New York State Education Department  
Basic Arithmetic Ability Tests

| NYS<br>Percentile<br>Rank | Number of Hamaroneck<br>Students |           |
|---------------------------|----------------------------------|-----------|
|                           | 9/72                             | 5/73      |
| 99                        | 0                                | 2         |
| 95                        | 0                                | 1         |
| 90                        | 0                                | 1         |
| 85                        | 1                                | 1         |
| 80                        | 0                                | 4         |
| 75                        | 1                                | 0         |
| 70                        | 0                                | 0         |
| 65                        | 0                                | 0         |
| 60                        | 1                                | 0         |
| 55                        | 0                                | 0         |
| 50                        | 0                                | 1         |
| 45                        | 3                                | 0         |
| 40                        | 0                                | 1         |
| 35                        | 0                                | 1         |
| 30                        | 2                                | 2         |
| 25                        | 2                                | 0         |
| 20                        | 0                                | 1         |
| 15                        | 0                                | 0         |
| 10                        | 2                                | 3         |
| 5                         | 2                                | 1         |
| 1                         | 8                                | 1         |
|                           | <u>22</u>                        | <u>21</u> |

Of 16 students who took the Regents, 12 passed.

TABLE 18

## Bookkeeping I

|  | Achievement |        |        |        |
|--|-------------|--------|--------|--------|
|  | E<br>N      | G<br>N | F<br>N | P<br>N |
| Understanding or comprehension of:   |             |        |        |        |
| Career opportunities as a result of taking the course  | 9           | 6      | 1      | 0      |
| Distinction between assets, liabilities and proprietorship   | 7           | 5      | 4      | 00     |
| Preparation and use of balance sheet   | 5           | 7      | 4      | 0      |
| Use of a general journal   | 3           | 5      | 8      | 0      |
| Purpose and uses of a general ledger   | 3           | 6      | 6      | 1      |
| Analyzing the more common transactions by using T accounts   | 4           | 5      | 3      | 4      |
| Journalizing the more common transactions, using a cash journal  | 4           | 5      | 6      | 1      |
| Posting from a cash journal to a general ledger  | 5           | 3      | 7      | 1      |
| Proving the accuracy of posting by footing accounts in ledger and preparing a trial balance  | 2           | 4      | 6      | 4      |
| The use and purpose of a work sheet  | 2           | 4      | 7      | 3      |
| Determining whether a business has net income or loss  | 10          | 5      | 1      | 0      |
| Preparing an income statement using a model  | 5           | 6      | 5      | 0      |
| Preparing a balance sheet, using a model, and checking to insure that solution is correct  | 2           | 2      | 5      | 7      |
| Information contained in Income Statement and Balance Sheet  | 3           | 9      | 4      | 0      |
| Use of special journals to record: a) purchase of merchandise on account, b) sales of merchandise on account, c) cash receipts, d) cash payments, e) misc. entries not recorded in special journal | 2           | 8      | 5      | 1      |
| Reconciling a bank statement   | 6           | 7      | 3      | 0      |
| Reasons for adjusting certain accounts   | 2           | 5      | 7      | 2      |
| Use of automation in bookkeeping and accounting  | 2           | 3      | 9      | 2      |
| Use of a combination journal   | 3           | 5      | 7      | 1      |
| Handling sales discount  | 1           | 2      | 5      | 8      |
| Handling purchases discount  | 1           | 2      | 5      | 8      |
| Recording purchases returns and allowances   | 1           | 2      | 5      | 8      |
| Replenishing petty cash  | 3           | 6      | 5      | 2      |
| Figuring out payroll, using time cards, FIGA chart, Federal income tax tables  | 11          | 4      | 0      | 0      |
| Recording payment of payroll with deductions   | 1           | 2      | 6      | 7      |
| Recording liabilities for employer's payroll taxes   | 1           | 2      | 6      | 7      |
| Completing a practice set reviewing the principles learned during the year   | 3           | 5      | 5      | 3      |

SECTION II.

Career Exploration and Skills Training

Overall objectives are as follows:

1. Students will demonstrate the specific skills defined in the course of study.
2. Each participating student will demonstrate an increasing sense of responsibility toward work, specifically:
  - a. he will pursue an assigned job to its conclusion,
  - b. he will be present and punctual whenever possible,
  - c. he will inform his appropriate supervisor when he is absent or late,
  - d. he will perform ancillary tasks.
3. Each student will respond positively to the needs of customers.
4. Each student will carry out his responsibilities in coordination with those of co-workers.
5. Students will acquire usable consumer skills related to the occupational area they are studying.
6. Students who complete a course of study will either obtain employment in the area in which they are trained or in a related area or pursue further study in that area.
7. A student who has completed a career education course or has been employed in an occupation, who decides he does not wish to pursue that career, will analyze the elements contributing to his decision and incorporate the insights gained into the decision-making process involved in selecting his next career experience.

Specific objectives for the various courses are given below in Tables 19 through 23 with the numbers of students who achieved them. These tables are an evaluation of Objective 1.

TABLE 19

## Office Practice

|  | Achievement |       |
|--|-------------|-------|
|  | S           | U     |
|  | N           | N     |
| Performs the operations of addition, subtraction, multiplication, etc. on:                                       |             |       |
| a. ten key adding and listing machine  | 11          | 0     |
| b. printing calculator   | 11          | 0     |
| c. full keyboard adding & listing machine  | 11          | 0     |
| d. rotary calculator   | 11          | 0     |
| e. key driven calculator   | 11          | 0     |
| f. electronic calculator   | 10          | 1     |
| Types dittos and stencils and operates Gestetner machine   | 10          | 1     |
| Transcribes material from transcribing machine with 95% accuracy.  | 9           | 2     |
| Combines all of previous year's typing instructions into specific office jobs                                    | 10          | 1     |
| Differentiates among the different types of files and filing systems, with special emphasis on alphabetic filing | 10          | 1     |
| Uses correct general office procedures (spelling, grammar, telephone, mail, receptionist)                        | 8           | 3(B)* |

\* Relates to Objective 5, see explanation on p. 21

TABLE 20

## Secretarial Practice

|                            | Achievement |       |
|----------------------------|-------------|-------|
|                            | S           | U     |
|                            | N           | N     |
| Office Procedures          |             |       |
| Telephone technique        | 5           | 0(A)* |
| Filing                     | 5           | 0     |
| Handling mail              | 5           | 0(A)  |
| Receptionist duties        | 5           | 0     |
| Duties of secretary        | 5           | 0     |
| Payroll                    | 5           | 0(A)  |
| Original letters           | 5           | 0(A)  |
| Personality                |             |       |
| Good grooming              | 5           | 0(A)  |
| Employable characteristics | 5           | 0(B)  |
| Interview and the Job      |             |       |
| Letter of application      | 5           | 0(B)  |
| Data sheet                 | 5           | 0     |
| What business expects      | 5           | 0(B)  |
| How to succeed on the job  | 5           | 0(B)  |

TABLE 21

Distributive Education I

|  | Achievement |      |
|--|-------------|------|
|  | S           | U    |
|  | N           | N    |
| Laboratory work - performance in the store   | 15          | 6    |
| Rings up sales and inventory records on cash register with 95% accuracy                | 14          | 7    |
| Makes change with 95% accuracy   | 14          | 7(A) |
| Makes extensions on sales checks and inventory lists with 95% accuracy                 | 14          | 7    |
| Prices products with 90% accuracy  | 14          | 7(A) |
| Determines net or sale prices with 90% accuracy  | 14          | 7    |
| Deals with customers courteously and efficiently                                       | 15          | 6(B) |
| Creates displays which attract attention and show off products to their best advantage | 15          | 6    |
| Conducts an inventory with 90% accuracy  | 15          | 6    |
| Checks invoices and deals with incoming merchandise                                    | 14          | 7(A) |
| Maintains proper inventory records with 90% accuracy                                   | 14          | 7    |
| "Sells" effectively  | 14          | 7(B) |
| Maintains store facilities in clean, orderly manner                                    | 15          | 6    |
| Stocks shelves correctly and attractively  | 15          | 6    |
| Maintains the necessary accounting records   | 14          | 7(A) |
| Prepares cash deposits   | 14          | 7(A) |

TABLE 22

## Banking Program

|  | Achievement |      |
|--|-------------|------|
|  | S           | U    |
|  | N           | N    |
| Knows role of a) money   | 13          | 0    |
| b) credit  | 13          | 0(A) |
| Knows definition of credit   | 13          | 0(A) |
| Understands relationship of credit & money to total economy  | 12          | 1(A) |
| Knows purpose of bank  | 13          | 0(A) |
| Recognizes banking operations  | 13          | 0    |
| Understands credit policy  | 12          | 1(A) |
| Relates principle of banking to personal needs   | 13          | 0(A) |
| Relates principle of banking to public needs   | 13          | 0    |
| Understands interrelationship existing between government and private economy  | 8           | 5(A) |
| Is cognizant of kinds of credit, types of instruments, advantages and disadvantages of credit                          | 11          | 2(A) |
| Understands functions banks perform in local community and in total domestic & foreign economic community              | 8           | 5    |
| Understands role of Federal Reserve System in creation of deposit currency and its ability to exercise monetary policy | 10          | 3    |
| <b>Teller Training</b>   |             |      |
| Verifies amount of money to be deposited (basic math)  | 13          | 0(A) |
| Verifies large deposits (calculating machine)  | 13          | 0    |
| Completes transactions with accuracy   | 13          | 0(A) |
| Verifies amount of currency against deposit ticket   | 13          | 0(A) |
| Is accurate when accepting deposits and storing currency in cash drawer  | 13          | 0    |
| Maintains same denomination currency in orderly fashion in cash drawer   | 13          | 0    |
| Posts all transactions on ledger cards and passbooks using NCR posting machines  | 13          | 0    |
| Batch proofs daily deposit slips against money stored in cash drawer   | 13          | 0    |
| Knows how to open savings club (Christmas) accounts renews lost passbooks, and closes club accounts                    | 13          | 0(A) |
| Corrects errors in presence of customer, explaining correction   | 13          | 0    |
| Cashes checks with proper identification endorsement and issues correct currency                                       | 13          | 0(A) |

TABLE 22-B

Banking Program Cont'd

|   | Achievement |     |
|---|-------------|-----|
|   | S           | U   |
|   | N           | N   |
| The Banking Program is designed:  |             | (A) |
| To help student understand and recognize the role of money and credit in economic activity. Such understanding and recognition will result if the student learns: |             |     |
| a. Money is a device in the area of economic exchange used as a standard of value and as an exchange medium   | 13          | 0   |
| b. Credit is a device that supplements money in the area of economic exchange.  | 13          | 0   |
| c. The supply of money and credit and the utilization of the supply affects our economy   | 12          | 1   |
| d. Banking facilitates and affects the operation of the exchange function by the use of money and its credit policy   | 12          | 1   |
| Banking will help the student to:   |             | (A) |
| a. Appreciate the role of money and credit  | 13          | 0   |
| b. Understand the interrelationships that exist between government and private economy  | 10          | 3   |

TABLE 23

## Work Study

|   | Achievement    |        |      |
|---|----------------|--------|------|
|   | S<br>N         | U<br>N | NR*  |
| Masters skills outlined in Individual Course of Study   | 21             | 1      | 3    |
| Logically defines and considers ten major areas when investing money to develop career needs    | 19             | 1      | 5(A) |
| Assesses the difficulty of various jobs by applying accepted standards                          | 20             | 1      | 3    |
| Exercizes 10 basic rules essential to proper employee appearance                                | 18             | 3      | 4(B) |
| Knows and refers to ten sources from which employment outlook in a given field can be predicted | 14             | 4      | 7(B) |
| Identifies and exercizes the factors that apply to the improvement of saleable skills           | 22             | 1      | 1    |
| Informs employer tactfully with full knowledge as to the position of labor law                  | 23             | 1      | 1    |
| Knows how to handle a labor complaint through proper agency                                     | 20             | 2      | 3    |
| Knows how to follow the five processes designated when taking care of an injured customer       | 17             | 4      | 4    |
| Knows how to handle a person who has ingested poison in the establishment                       | not able to do |        |      |
| Claims proper benefits as a part-time employee  | 18             | 3      | 4(A) |
| Handles customer damage complaint when sales slip is not available                              | 18             | 1      | 6    |
| Resolves a wrong delivery   | 18             | 0      | 7    |
| Handles goods damaged on delivery   | 18             | 0      | 7    |
| Applies minimum wage law to existing position   | 16             | 4      | 5(A) |
| Makes out tax returns using the most beneficial form  | 17             | 2      | 6(A) |
| Handles customer who complains about waiting too long   | 17             | 1      | 7(B) |
| Handles customers who want special privileges   | 17             | 1      | 7(B) |
| Exercizes behavior which will lead to a raise   | 20             | 1      | 4(B) |
| Knows how to prepare a resume for a job   | 21             | 2      | 2(B) |
| Knows how to effect a job separation without antagonizing the employer                          | 19             | 1      | 5    |
| Knows how to inspect an establishment for public safety code violations                         | 16             | 4      | 5    |
| Prepares directions for a substitute or replacement   | 21             | 1      | 3(B) |
| Follows a job order   | 25             | 0      | 0(B) |
| Checks out an inventory   | 23             | 2      | 0    |

\* NR=not rated

Objectives 2 through 4 (see p. 15) were interpreted as applying only to students who have had actual work experience. Of the students involved in work-study, 26 were evaluated by their employers (according to objectives 1 through 4 as shown in Table 24. A rating from 50%-the poorest, to 100%-the best is used as an indicator.

TABLE 24

Employer's Student Evaluation

| Obj. |                                      | 50<br>N | 60<br>N | 70<br>N | 80<br>N          | 90<br>N | 100<br>N |
|------|--------------------------------------|---------|---------|---------|------------------|---------|----------|
| 1    | Skill on the job                     |         |         |         | 4                | 8       | 14       |
|      | Ability to learn new tasks           |         |         | 2       | 2                | 5       | 11       |
|      | Safety                               |         |         | 1       | 3                | 5       | 10       |
|      | Speed on the job                     |         |         | 3       | 5                | 1       | 8        |
|      | Neatness                             |         |         | 1       | 4                | 5       | 8        |
| 2a   | Completion of work                   |         |         |         | 2                | 3       | 5        |
|      | Cleanup                              |         |         | 1       | 2                | 5       | 7        |
|      | Record keeping                       |         |         |         | 2                | 2       | 6        |
| 2b   | Attendance                           |         | 1       | 1       | 2                | 4       | 10       |
|      | Punctuality                          |         | 1       | 0       | 0                | 9       | 10       |
| 2c   | Informs supervisor if absent or late |         |         |         | (no information) |         |          |
| 2d   | Initiative to do new or extra work   |         | 1       | 2       | 1                | 4       | 6        |
| 3    | Customer relations                   |         |         |         | 3                | 3       | 12       |
|      | Appearance                           |         |         | 1       | 3                | 4       | 8        |
| 4    | Cooperation with other workers       |         |         |         | 1                | 1       | 10       |

Objective 5 was subsequently subdivided as follows:

Students will acquire usable consumer skills related to-

A. - personal living

B.. - obtaining and keeping a job in any field.

Separate lists of consumer skills were not compiled. In the lists of skills for each course of study used in evaluating Objective 1., skills which have carry-over in personal living have been marked with an A; those related to obtaining and maintaining employment have been marked with a B.

Table 25 summarizes these results.

TABLE 25

## Students' Achievement of Consumer Skills

|                             | Relevant<br>Items | Number of<br>Possible<br>Evaluations | Number of<br>Satisfactory<br>Evaluations | Per-<br>cent<br>Success |
|-----------------------------|-------------------|--------------------------------------|--|-------------------------|
| 5A Personal                 | 34                | 470                                  | 422                                      | 90                      |
| 5B Related to<br>Employment | 16                | 259                                  | 229                                      | 88                      |

Objective 6. Students who complete a course of study will either obtain employment in the area in which they are trained or in a related area or pursue further study in that area.

Letters were sent to 30 graduates of banking, work-study and distributive education courses. Of these 16 or 53% responses were received. Of the 16, 10 were working in the field in which they were trained, one was going to school in his field, three were employed in different fields while two were unemployed. Two who are listed as working are also going to school for further training in related fields. Thus 11 out of 16 students or 68% met the objective.

Objective 7. A student who has completed a career education course or has been employed in an occupation, who decides he does not wish to pursue that career, will analyze the elements contributing to his decision and incorporate the insights gained into the decision-making process involved in selecting his next career experience.

Of the three students shown above to be employed in other fields, two used the experience gained in the career education program to decide to change fields while one did not. One of the two unemployed students analyzed her experience to decide not to pursue training. One student who was working in the field in which he was trained gained insight so that he wishes to change in the future.

Discussion

The above evaluation pertains to specific objectives of the Practical Arts Department and to the Career Education courses given at the high school.

The Career Education Program is in the process of infusing into the existing curricula the objectives of career education especially in the affective domain. Hopefully, changes in values and attitudes will result in more valid motivation for students' decisions to be in the Career Education Program, evidenced by increased enrollments of both college-bound and non-college-bound students. These aspects of the Career Education Program will be included in future evaluations.

7/73  
MRB