REPORT RESUMES

ED 011 930

MANPOWER PROJECTIONS AND TRAINING NEEDS FORECAST TO 1975 FOR THE TERRE HAUTE AREA.

INDIANA STATE UNIV., TERRE HAUTE

REPORT NUMBER BR-6-2717

GRANT OEG 3-6-062717-2144

EDRS PRICE MF-$0.09 HC-$1.04 26P.

PUB DATE NOV 66

DESCRIPTORS-- "OCCUPATIONAL SURVEYS, "EMPLOYMENT TRENDS, "EDUCATIONAL NEEDS, EMPLOYMENT OPPORTUNITES, PROFESSIONAL OCCUPATIONS, TECHNICAL OCCUPATIONS, CLERICAL OCCUPATIONS, SALES OCCUPATIONS, SKILLED OCCUPATIONS, SEMISKILLED OCCUPATIONS, SERVICE OCCUPATIONS, FARM OCCUPATIONS, UNSKILLED OCCUPATIONS, MANAGERIAL OCCUPATIONS, TERRE HAUTE"

INTERIM REPORT
Project No. 6-2717
Grant No. OEG3-6-062717-2144

MANPOWER PROJECTIONS AND TRAINING NEEDS
FORECAST TO 1975
for
THE TERRE HAUTE AREA

November, 1966

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research
MANPOWER PROJECTIONS AND TRAINING NEEDS
FORECAST TO 1975
for
THE TERRE HAUTE AREA

Project No. 6-2717
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Indiana Research Coordinating Unit

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The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Indiana State University
Terre Haute, Indiana
MANPOWER PROJECTIONS AND TRAINING NEEDS
FORECAST TO 1975
for
THE TERRE HAUTE AREA

Indiana Research Coordinating Unit

November, 1966

This Report was Supported by a Grant
from the U. S. Department of Health, Education, and Welfare
Office of Education
The Research Coordinating Unit, working with the 1950\(^1\) and 1960\(^2\) census figures taken from the Bureau of Census Report for the Terre Haute Standard Metropolitan Statistical Area (SMSA) and information taken from *Indiana Manpower Trends to 1975* prepared by the Indiana Employment Security Division, has attempted to update Part III of the *Survey of Terre Haute Industries as a Basis for Vocational-Technical Education Planning in the Public Schools*, which was prepared and written by Dr. L. W. Yoho.

Figure 1 shows the work force, broken into percentages by major areas, for the United States, United States Urban Areas, Indiana, and the Terre Haute Standard Metropolitan Area. The 1940, 1950, and 1960 percentages were taken from the Bureau of Census Reports for those years. Please note that no percentage is shown for the Terre Haute SMSA for 1940, since no figures were given for that year. The 1965 percentage for Indiana is an estimate taken from *Indiana Manpower Trends to 1975*, and the Terre Haute figure for 1965 is also an estimate, based on the information furnished by the Indiana Employment Security Division. The 1970 and 1975 figures for Indiana and Terre Haute are projections from the 1965 figures. No attempt was made to forecast or predict for the United States as a whole or for the urban areas of the United States. The forecasts for the 1970 and 1975 Indiana figures

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were taken from *Indiana Manpower Trends to 1975* and the forecasts for 1970 and 1975 for the Terre Haute area were made by applying the percentages of increase or decrease for each major division, as given in the *Indiana Manpower Trends to 1975*, to the Terre Haute area.
Figure 1
Figure 2 shows the graphic history and specific number in each occupation included in the Professional and Technical Division. The six narrow bars on the left represent the Indiana workforce and the line graph above them represents Terre Haute. The 1940, 1950, and 1960 figures are census figures and the 1965, 1970, and 1975 figures are estimates and projections.

The broad bar over 1960 contains the numbers in each specific occupation making up the total of 3,855 in the Professional and Technical Division in the Terre Haute area as recorded in census records. The proportions from the 1960 bar were projected to the 1965, 1970, and 1975 bars. The number for each specific occupation was then recorded as a proportion of the total estimate. The numbers assigned to specific occupations in 1965 represent estimates; the numbers assigned to 1970 and 1975 represent a forecast of the occupational needs for these years.
Figure 2

Terre Haute

Engineers
Chemists and Natural Scientists
Technicians, Designers, and Draftsmen
Authors
Teachers

Other Professional
Musicians and Music Teachers
Lawyers and Judges
Physicians and Surgeons
Pharmacists
Nurses and Student Nurses

Clergymen
Accountants and Auditors
Artists and Art Teachers
College Professors & Instructors
Social Welfare & Recreational wkrs.
Dentists

TOTALS: 3490 3855 4625 6106 7402
### Terre Haute

#### Totals:

<table>
<thead>
<tr>
<th>Year</th>
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#### Other Clerical and Kindred

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#### Retail Trade

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<td>1970</td>
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#### Manufacturers' Agents and Brokers

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<td>1960</td>
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<tr>
<td>1970</td>
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#### Other Specified Sales

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<td>1960</td>
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<td>1970</td>
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#### Real Estate Agents and Brokers

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<td>1960</td>
<td>403</td>
</tr>
<tr>
<td>1970</td>
<td>446</td>
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</table>

**Note:** The total numbers for each year are as follows:

- 1940: 8988
- 1950: 8801
- 1960: 9585
- 1970: 10329
- 1975: 11435

**Figure 3:**

- Real Estate Agents and Brokers
### Figure 4

#### Terre Haute

#### CRAFTSMEN AND FOREMEN

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<tr>
<td>149</td>
<td>167</td>
<td>184</td>
<td></td>
</tr>
</tbody>
</table>

#### Automobile Repairmen
- Radio, T.V. and Airplane Repairmen
- Foremen, Non-Manufacturing Ind.
- Foremen, Manufacturing Non-Durable Goods
- Foremen, Manufacturing Durable Goods
- Machine and Job Setters
- Moulders, metal
- Tinsmiths, Coppersmiths & Sheet Metal
- Structural metalworkers, Hammerman and foremen
- 206 Boilermen, Toolmakers, Millwrights, and Die Setters
- 190 Carpenters
- 28 Cabinet and Pattern Makers
- Electricals
- Linemen and Servicemen
- Painters, Paper Hangers, & Glaziers
- Compositors and Setters
- Plumbers and Pipefitters
- Stonecutters, Plasters and Cement Finishes

### Totals:

- Indiana 1950: 5736
- Terre Haute 1950: 5195
- 1955: 5766
- 1960: 6343
- 1965: 7093
Figure 6

Terre Haute

TOTALS: 5099 5210 6043 6902 7849
The projections for the Clerical and Sales Division (Fig. 3), Craftsmen and Foremen Division (Fig. 4), Operatives and Trainees Division (Fig. 5), and Service Division (Fig. 6) were made in the same manner as the projections for the Professional and Technical Division.

Although it was assumed that each occupation within a division would maintain the same percentage of that division for 1965, 1970, and 1975 as shown for 1960, it can be said that this probably will not be so. For example, with the increasing emphasis given to education and the existing teacher shortage, the percentage of teachers in the Professional and Technical Division will probably increase.

Projecting future manpower and training needs is a difficult task. There are many variables that must be considered. The preceding projections are offered as a guide in planning training programs and dealing with other manpower and educational problems and the training needs forecasts which follow are also offered as guides.

A graphic forecast of training needs based upon the occupational needs for technicians, designers, and craftsmen is presented in Figure 7. These specific occupations were selected from the projections developed in Figure 2. The forecast reveals a need for approximately 83 in training during 1960, 99 by 1965, 114 by 1970, and 138 by 1975. Approximately 43% of the trainees should be in drafting and design and the remaining 57% in other technical occupations.
GRAPHIC FORECAST OF TRAINING NEEDS FOR TECHNICIANS, DESIGNERS AND DRAFTSMEN

1. Estimates based on work life and rapidly increasing occupation.
2. Estimates based on realistic percentage for states having highest percentage of enrollments—15% of occupational group.
3. Assuming a 2-year training period and 30% drop out.
4. Preparatory training and in-service training estimates.

Figure 7
Figures 8, 9, 10, 11, 12, 13, 14, and 15 are training forecasts for various occupations. The charts were developed by selecting the specific occupations from the projections developed in Figures 3, 4, 5, and 6. The training forecast charts are self-explanatory. To determine the training needs for specific occupations within each training forecast chart, simply apply the percentage for that group to the total training needs forecast. For example, the total training needs forecast for Clerical occupations is 1757. Of that total, 193 should be preparing for bookkeeping work. (1757 x .11 = 193)
GRAPHIC FORECAST OF TRAINING NEEDS FOR SELECTED CLERICAL OCCUPATIONS (2 year training assumed)

Employment Needs Estimates

- 62% Other Clerical and Kindred
- 18% Stenographers, Typists, and Secretaries
- 11% Bookkeepers
- 6% Cashiers
- 3% Telephone Operators

1. Replacement Needs
2. Preparatory Training
3. In-Service Training Needs
4. Total Training Needs

1. 2% by Jaffe and Carleton and 3.4% by Moss (Av. 2.7%) Growth rate .8%
2. Assumed 2 year training period plus 30% trainee drop-out
3. 15% of total work force.
4. In-service plus Preparatory = Total Training

Figure 8
GRAPHIC FORECAST OF TRAINING NEEDS
FOR SELECTED SALES OCCUPATIONS
(1 Year Training Assumed)

61% Retail Trade
12% Wholesale Trade
7% Insurance and Brokers
8% Manufacturing Sales
13% Real Estate and Others

1. Replacement and Growth Needs equals Preparatory Training Needs
2. In-Service Training Needs
3. Total Training Needs

1. 2% by Jaffe and Carleton and 3% by Moss (Av. 2.5%). Growth rate .1% (Replacement 2.5 plus 1.0 = 3.5%)
2. 15% of total group
3. Preparatory plus in-service

Figure 9
GRAPHIC FORECAST OF TRAINING NEEDS FOR BUILDING TRADES OF TERRE HAUTE

1. Replacement Needs
   - 2.3% by Jaffe and Carleton and 3.3% by Moss (average 2.8%) Growth rate 1.8% annually (replacement 1.8 plus 2.8 = 4.6%)
2. In-Service
   - 15% of total group
3. Preparatory Training Needs
   - Assumed 4-year training period plus 30% trainee drop-out
4. Total Training Needs
   - 24% Carpenters
   - 17% Painters and Decorators
   - 19% Electricians
   - 11% Masons
   - 9% Tinsmiths
   - 1% Structural Metal Workers
   - 2% Cabinet Makers
   - 17% Plumbers and Steamfitters

Figure 10
GRAPIC FORECAST OF TRAINING NEEDS FOR
MISCELLANEOUS SKILLED TRADESC

1. Replacement Needs
   1. 2.3% by Jaffe and Carleton and 3.3% by Moss (Av. 2.8%). Growth rate 1.8% annually (Replacement 1.8 plus 2.8 = 4.6%)
   2. 15% of total group
   3. Assumed 4-year training period plus 30% trainee drop-out.
   4. Preparatory plus in-service

2. In-Service Training Needs
   1960 105 114 2.3%
   1965 341 379 3.3%
   1970 546 593 4.6%
   1975 725 887 6.5%

3. Preparatory Training
   1960 105 114 2.3%
   1965 341 379 3.3%
   1970 546 593 4.6%
   1975 725 887 6.5%

4. Total Training Needs
   1960 105 114 2.3%
   1965 341 379 3.3%
   1970 546 593 4.6%
   1975 725 887 6.5%

5. Occupational Needs
   1960 2274 887 2.3%
   1965 2526 972 3.3%
   1970 2779 1082 4.6%
   1975 3027 1179 6.5%

   42% Mechanics
   27% Craftsmen
   11% Locomotive Engineers and Firemen (Diesel)
   7% Foremen
   6% Linemen
   3% Bakers
   1% Shoemakers
   3% Radio and Television
GRAPHIC FORECAST OF TRAINING NEEDS FOR INDUSTRIAL TRADES

Employment Needs Estimates

27% Auto Mechanics
25% Foremen
11% Stationary Engineers
12% Printers and Compositors
7% Machine and Job Setters
6% Molders
3% Cranemen
9% Boilermen

1. Replacement Needs
2. In-Service Extension Training
3. Preparatory Training Needs
4. Total Training Needs

1. 2.3% by Jaffe and Carleton and 3.3% by Moss (average 2.8%).
   Growth rate 1.8% annually (replacement 1.8 plus 2.8 = 4.6%).
2. 15% of total group
3. Assumed 4-year training period plus 30% drop-out
4. Preparatory plus in-service

Figure 12
Graphic Forecast of Training Needs
For Selected Operative Occupations
(1 year or less training assumed)

Occupational Needs

31% Truck, Bus, Taxi Drivers
13% Food and Kindred
5% Mining
4% Brakemen and Switchmen
2% Communications
7% Chemical and Allied
2% Non Durable Goods and Other
6% Auto Parking and Attendants
2% Miscellaneous Industry
3% Wholesale and Retail
10% Durable Goods and Other
4% Paper and Allied
2% Stationary Firemen
1% Wood Furniture
3% Primary Metal
1% Apparel and Textiles
3% Fabricated Metals
1% Furnacemen and Heaters

1. Replacement and Growth Needs = Preparatory Training Needs
2. In-Service Training Needs
3. Total Training Needs

1. 2.2% by Jaffe and Carleton and 3% by Moss (Av. 2.6%). Growth rate 1.3%
   (Replacement 1.3 plus 2.6 or 3.9%)
2. 15% of total group
3. Preparatory plus In-Service

Figure 13
GRAPHIC FORECAST OF TRAINING NEEDS FOR
SELECTED OPERATIVE OCCUPATIONS
(2 Year Training Assumed)

1. Replacement and Growth Needs
   - 2.2% by Jaffe and Carleton and 3% by Moss (Av. 2.6%). Growth rate 1.3%
     (Replacement 1.3 plus 2.6 or 3.9%)
2. Assumed 2 year training period plus 30% drop-out
3. 15% of total group
4. Preparatory plus in-service

43% Laundry and Dry Cleaning
36% Welders and Flame Cutters
12% Meat Cutters
9% Dressmakers and Seamstresses

Figure 14
GRAPHIC FORECAST OF TRAINING NEEDS FOR WAITERS, JANITORS, COOKS, BARBERS, PRACTICAL NURSES, FIREMEN, AND KINDRED

1. 3.5% annual growth, plus an average of 2.7% annual replacement (an average of separations found by Moss in average years in work force found by Jaffe and Carleton). The training period was assumed to be one year or less.


3. Preparatory, plus in-service

Figure 15
Summary: A summary of the forecasts for preparatory and in-service training needs for 5-year intervals from 1960 to 1975 is presented in Table 1.

Table 1
Summary of Training Needs Forecasts

<table>
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