# An Inventory of Occupational Oppertunities in the Columbus Service Area 

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# AN INVENTORY OF OCCUPATIONAL OPPORTUNITTES 

 IN THE COLUMBUS SERVICE AREAby

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A THESIS
Presented to the Faculty of The Graduate College in the University of Nebraska.

In Partial Fulfillment of Requirements For the Degree of Master of Science Department of Agricultural Education

Under the Supervision of Professor James T. Horner

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Advisor. Dr. James T. Horner
Purpose. To inventory the number of persons presently employed in the various occupational areas in the columbus, Nebraska service area and to identify the projected employment needs due to turnover and expansion for the next year and the following two years in the same occupations.

Methods. The inventory was conducted in postal zip code area 686 surrounding Columbus, Nebraska. A 25 percent random sampling of business firms in the area netted 667 businesses to be inventoried. The state-wide computerized model for determining occupational opportunities in Nebraska was used as the data collection instrument and data were collected by questionnaire and personal interview from 92 percent of the businesses.

Findings. The inventory showed 38.1 percent of the people worked in agriculture; 9.8 percent in distribution; 1.9 percent in health; 1.0 percent in home economics; 7.4 percent in business occupations; 19.4 percent in trades and industry; and 22.4 percent in other occupations. The total number of persons employed in the area was found to be 27,061.

The greatest need for workers was found to be in the trades and industrial occupations area which accounted for 38.8 percent of the total needs for the next year and 35.5 percent of the needs for the following two years. Following the "other occupations" category was the business occupations area with needs of 8.5 percent in 12 months and 8.7 percent of total needs the following two years. Distribum tion occupations wexe found to be next in needs followed by agriculture, health, and home economics.

## ACKNOWLEDGEMENTS

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## CHAPTER I

## INTRODUCTION

Many changes in occupations have evolved in the past decade in Nebraska. New occupations are being created and old ones discarded.

As new areas of work become evident, so too must new educational and training programs be developed to prepare individuals as workers in these new occupations. Educational policy makers are charged with the responsibility of designing occupational programs needed to educate workers for present day jobs and jobs of the future. Therefore, it is important that the occupations in which people work presently are known as well as the expected employment in occupations several years hence.

Progressive schools of today are searching for better ways to provide adequate occupational education for their enrollees. With present and projected occupational needs of an area available to school boards, administrators, and faculties, it is logical to assume that a more adequate curricula can be developed.

The Problem

It was the purpose of this study to identify the number of persons presently employed in the various occupational areas in the Columbus, Nebraska service area and
the future needs.
The specific objectives of the study were:

1. To inventory the present employment in various occupations in the Columbus service area.
2. To inventory the projected employment needs due to turnover and expansion for the next year and the following two years in the same occupations.
3. To make available information which will assist educational policy makers in the Columbus service area to design effective occupational education programs.

## Importance of study

Updating and revising of curricula is a tralt of progressive schools and colleges. With increased emphastis on vocational education, school curriculum planners are more dependent on occupetional data available to them to provide the necessary information to build adequate occupational curricula for their schools. It is intended that this survey will be a source of data.

It is intended that all school officials charged with developing and improving curricula of schools located in the survey area will use the occupational data herein presented. When more adequate school curricula become available, students in the Columbus service area will have the opportunity to prepare for entry into their chosen occupations with less difficulty. Coordinating educational curricula with occupational opportunities within a community
is, in the writers opinion, of vital importance to all the residents. The economic and social progress of a community is determined somewhat by the efficiency and adequacy of its schools. Industrialists list schools as one of their criteria to consider when contemplating the establishing of a new plant in a community; therefore, any community having a good educational system has a better chance to get a new industry. A community with industry has more opportunities for employment for young workers and helps to reverse the age-old trend in Nebraska of out-migration.

Method of Investigation

The Nebraska Research Coordinating Unit for Vocational Education has designed a data collecting instrument used in a state-wide survey. This instrument lists the following six occupational areas: Agricultural Occupations; Distribution; Health Occupations; Home Economics; Office Occupations; and Trades and Industrial Occupations. 1 The same instrument was used to collect data for this occupational inventory.

The Nebraska Research Coordinating Unit developed a complete list of firms within the state that employed people. The following was reported:
${ }^{1}$ James $T$. Horner et al. State-Wide Computerized Model for Determining occupational opportunities in Nebraska (Preliminary), hesearch Coordinating Unit for Vocational Education, East Campus, University of Nebraska, Lincoln, Nebraska, 1968, p. 2.

The population of Nebraska employers was developed in cooperation with the State Tax Comission, the Internal Revenue Service (IRS), and the State Department of Labor. The population included all businesses required to file Federal Income Tax Reports in the following tax classes: (1) firms employing one or more persons on which social security was paid and income tax withheld, (2) domestic help, and (3) farms and ranches employing off-farm labor. In addition (4) all Federal offices in Nebraska and (5) out-ofstate Nebraska employers wexe included.

The population of firms was 63.125. Names of all firms were transferred to magnetic tape and assigned consecutive numbers. A three per cent sample, 1894 firms, was randomly selected by computer from this population.

Names and addresses were obtained from computer printout. A questionnaire mailed to the 1,894 fjrms yielded a 40 per cent response. Data from the remaining firms were obtained by personal interview.

It would be obviously impractical to enumerate employment opportunities for every job title. The taxonomy of the U. S. Office of Education was used. It identifies job clusters, grouping job titles according to similar educational preparation. The twompage questionnaire consisted of 174 job clusters in seven occupational areas, (i.e., Agriculture, Distribution, Health, Wage Earning Home Economics, Office, and Trade and Industrial occupations).

Data requested from all firms were: (1) the number of people presently employed by occupational group. ing; (2) the employer's estimate of the number of employees needed in each occupational group during the next year due to turnover, promotion, expansion and retirement; and (3) the employer's estimate of employment needs for each occupational grouping in the next three years. Even though this involved estimates, it was thought to be the best source of data available.

The population did not include self-employed persons who hired no employees and withiheld no labor income tax or social security and consequently were not on the IRS sources used. No accurate source of this information is available. 2
$2^{\text {Ibid. }}$, pp. 1-3.

In order that findings would be supporting and comparable to those of the three percent level state-wide survey, the same method was followed in the Columbus service area survey.

The same population of Nebraska employers was used to secure the list of Columbus area business firms used in this inventory. It was decided to establish Columbus service area boundaries by using the Postal Zip Code Area 686 (Figures 1 and 2) as the area for this survey. The postal zip code area 686, which marks Columbus near its center and which encompasses an area around the city, generally thought of as the Columbus trade area, was used to designate the boundaries for the survey. The area includes the entire counties of Platte, Colfax, Polk, Nance, Boone, and Wheeler and parts of the counties of Butler, Dodge, Merrick, Greeley, Antelope, and Saunders. Columbus is the largest city in the area and considered the hub of business and industry.

A 25 percent random sample of business firms of the zip code area was obtained from the 63,125 business firms that were on magnetic tape and previously used in the statewide three percent survey. It was found the area contained 2,668 business firms, and a twenty-five percent sampling was selected by computer and a print-out of 667 consecutively numbered business firms with addresses obtained.



FIGURE 2
U. S. POSTAL ZIP CODE AREA 686 AND GEOGRAPHICAL AREA

IN WHICH OCCUPATIONAL OPPORTUNITIES INVENTORY WAS TAKEN

The two page data collection instrument, ${ }^{3}$ listing 174 job clusters in seven occupational areas, was used to obtain data in this inventory.

It was impractical to enumerate employment opportunities for every job title. The Standard Terminology for Instruction in Local and State School systems was used to identify job clusters or groupings of job titles according to similar educational preparation. ${ }^{4}$ The two-page questionnaire consisted of 174 job clusters in seven occupational areas, (i.é.. Agriculture, Distribution, Health, Wage Earning Home Economics, Business, Trade and Industrial occupations, and Others).

Postal regulations were reviewed regarding the sending of the questionnaire and the receiving of the completed instrument by return mail. Two thousand of the data collection instruments were printed. (Sample included in Appendix)

A letter announcing the start and importance of the inventory was sent to all business firms. Simultaneously a news article and picture appeared in the Columbus Daily Telegram. Four days later the survey form with letter of instructions was sent to all the firms. A follow-up letter
$3_{\text {Ibid }}$.
${ }^{4}$ John F. Putnam and Dale W. Chismore, Standard Terminology for Instruction in Local and State School Systems, State Education Records and Reports series: Handbook VI, Chapter 5, U. S. Department of Health, Education, and Welfare, Office of Education, May, 1967.
reached them one week after the survey. Two weeks later another survey was sent to those not responding (all mailings are included in Appendix).

Business firms not returning completed surveys were interviewed personally. Businesses returning surveys containing partial or questionable data were called upon again via telephone or by a second interview.

The data collected in this inventory were programmed into the computer and the findings projected to the 100 percent level in each of the 174 job clusters and in occupational areas. The data were analyzed and are recorded in Chapter III of this study.

## Limitations of study

This study was limited geographically to the Columbus, Nebraska service area. This area is further defined by the boundaries of the United states postal zip code area 686. Geographically, Columbus is located near the area's center.

A twenty-five percent random sample of the business firms was used which, theoretically, provided a more accurate inventory of the Columbus area occupations and their future needs as compared to a three percent statewide survey.

The list of business firms from which the computer selected a twenty-five percent random sample does not include self-employed persons who have no employees and

Withheld no income tax or social security. Accurate data on the number of self-employed in the occupational area are not available. However, Nebraska Agricultural Statistics provide information on the number of self-employed farmers in the area as shown in Chapter III.

The accuracy of this inventory is limited by the methods of obtaining surveys and to the number obtained. Over 40 percent ( 41.8 ) were returned by mail and 50.8 percent by personal interview. Interviewers were instructed in interview methods; however, it is recognized that personality differences do exist among individuals.

The study did not identify the extent of vertical and horizontal mobility of workers within and between firms, or from promotion within firms; all actions which created employment opportunities were included. In order to determine the net number of new persons needed, such migration patterns need to be established.

Approximately eight percent of the firms on the list were not in existence at the time of interview, nor were the new and emerging firms which have been established since January, 1967. If a firm had changed owners since the list was printed, data were obtained from the new owner.

Data requested from all firms were: (1) the number of people presently employed by occupational groupings; (2) the employees needed in each occupational group during the next year due to turnover, promotion, expansion, and (3) the employer's estimate of employment needs for each
occupational grouping for the two years following.
Human error, computer programming, data analysis, and interpretation are further limitations. Weather conditions on day of interview, mood of both interviewer and interviewee could cause a pessimistic or an optimistjc response.

## Definition of Terms

The term "Agricultural Occupations" includes all occupations in and directly related to farming. Indirect agricultural occupations, such as "meat cutting" are not included.
"Other Occupations" as used in this study included professional and managerial workers, such as teachers and clergymen, not already included. It also includes production and assembly line workers with no specific trade or skil.

The term "next year" refers to the twelve months following the inventory, and the term "following two years" is intended to mean the 24 months after "next year."

Most businesses have several job clusters. One of these is office jobs involving paper work, clerical work and greeting of customers. These jobs are grouped and called "Business Occupations."

## CHAPTER II

## REVIEW OF LITERATURE

A review of Iiterature revealed that little work had been done to inventory the occupational opportunities involving the six occupational clusters that were included in this survey. "Several studies had been made showing occupational opportunities in each of the six clusters but few studies have the scope to encompass the total. Most studies centered around the occupational needs in one area, such as: on-farm and off-farm agriculture; business and office; trades and industry; and various other occupational groupings.

Most recent studies had been made to determine vocational education needs within a geographical area or state. A New Mexico survey revealed that studies of this nature had been made in Ohio, Connecticut, oregon, Illinois, California, Florida, North Carolina, and Utah and that numerous other states plan to conduct surveys. The New Mexico research on occupational needs was conducted to determine the need for vocational and technical education. 5

5 James D. McComas and Darrell S. Willey, Occupational Needs for Vocational and Technical Education, Bureau of Educational Research, College of Teacher Education, New Mexico State University, University Park, New Mexico, Pub. No. 8, pp. 5, 12, 17.
"The scope of the study included 31 population centers which were selected to provide geographical, representative sizes in population, and businesses and industrial diversification." .The data presented showed present vacancies, needed in the next five years, turnover, and total needs in Distributive Occupations, Office Occupations, Trades and Industrial Occupations, Agricultural Occupations, and Home Economics Occupations. The summary of the research showed that present programs in vocational education must be expanded to meet the state's growing needs. It was also determined by the study that the present and projected employment needs of 10,000 plus firms and businesses in New Mexico were in excess of 68,000 persons. ${ }^{6}$

In the occupational axea of agricultural non-farm businesses, Agan of Kansas found in a sampling of 500 employers that 2,823 additional employees would be needed in a five year period due to expansion of business. An additional 1.475 employees would be needed annually to take care of growth and turnover in the Kansas agricultural nonfarm business.?

6Ibid., pp. 14, 33.
7R. J. Agan, Kansas Studies Agricultural Non-Farm Occupations, Agricultural Education, Vol. 37, pp. 15-16, July, 1964.

A compilation of data in the state of Ohio showed 3,058,927 in eleven major occupational classifications. 8 The greatest number of people were employed in three classifications: operatives, craftsmen and foremen, clerical and their kindred workers and account for 52.5 percent of total employment. Farmers, farm managers, and farm laborers made up only 6.7 percent of the total labor force in Ohio. The manufacturing industry accounted for 36.7 percent of the total employment in the state.

Texas occupational surveys from 1964 to 1967 used nearly the same occupational areas as the Nebraska computerized model. Cumulative results of 282 occupational surveys were included in the report. 9 "Employers were also asked to indicate present employment, present needs, and future needs for 12,24 , and 36 months, respectively."

The Texas study compared future needs with present enrollment in vocational programs and found considerable contrast in percentages. For example, the future need in agriculture was 17.2 percent and enrollment accounted for 64.9 percent. The industrial occupational area showed 14 percent enrolled with a future need of 33.8 percent. 10
$8_{\text {The O }}$ Ohio Trade and Industrial Education Services, The Instructional Materials Laboratory, Meeting Ohio's Needs for Vocational and Technical Education, The Ohio state University, 124 Townshend Hall, Columbus, Ohio, pp. 52, 54, Sept., 1957.

9Vocational Education Department, Future Trends for Vocational Education as Indicated by Occupational Surveys, Texas Educational Agency, Austin, Texas, pp. 11, 14, oct., 1967.

$$
10 \text { Ibid. , p. } 14 .
$$

This points out a need for developing new curricula in the vocational schools of Texas and educating employees in the areas in which they are likely to become employed. Nebraska occupational surveys have had similar objectives.

Parrish, in an Omaha study, attempted to identify the characteristics of an educational program which prepares youth and adults for the world of work. 11 A comprehensive study of the system was made. Several recommendations made as a result of the survey seem noteworthy to mention in regard to the Columbus inventory. Schools "Should develop a proper balance between academic and vocational curricula" and "Should establish a continuous program of research in the area of education for work."

A 1968 occupational opportunities survey by the Nebraska Research Coordinating Unit served as a pattern for the Columbus area survey. The survey shows the occupational mix of Nebresia employment based on the educational classifications in the standard Terminology for Instruction in Local and State School Systems. 12

A three percent sample of the 63,125 business firms in the state were randomiy selected. They responded by

11Edwin H. Parrish, A Look at Education for Work in the Omaha Public Schools, Omaha Board of Education, School District of Omaha, Omaha, Nebraska, pp. 141, 143, 144, Sept., 1964.
${ }^{12}$ James T. Horner et al., Occupational Opoortunities in Nebraska, Nebraska Research Coordinating Unit for Vocational Education, 302 As Hall, East Campus, University of Nebraska, Lincoln, Nebraska, pp. 2-4, 1968.
returning a questionnaire or by being interviewed. Present employment in the state was found to be 653,990. Agricul. tural Occupations accounted for 20.4 percent of the total; Distributive Occupations 22.5 percent; Health Occupations 3.9 percent; Wage Earning Home Economics Occupations .8 percent; Business Occupations 26.3 percent; Trades and Industrial 29.6 percent; and Other Occupations 6.5 percent.

The greatest need for workers in Nebraska was shown to be in the Trades and Industry category with 42.3 percent of the state's total needs in the next. 12 months found to exist in this category.

The following two year needs in Trades and Industry claimed 42.8 percent of the state's total employment needs. Distributive occupations area ranked second as showing the greatest employment needs in both the next 12 months and following two years category. "The study revealed that employers estimate there will be 142,899 job opportunities in Nebraska in the next year, and that there will be a total of 294,768 job opportunities in Nebraska in the following two years."

The 1969 occupational opportunities survey by the Nebraska Research Coordinating Unit showed over 70 thousand business firms in the state. ${ }^{13}$ A random three percent sampling of these firms with data projected to the total population as was done in the 1968 survey showed 738,188

## ${ }^{13}$ Ibid., 1969.

persons employed in 1969. The 1968 survey showed 653.990 employed and 142,899 needed in the next twelve months. Differences in 1968 to 1969 employed would indicate that approximately 84,000 additionsl persons were employed during the year. This would report needs due to expansion only and not take into consideration replacement needs.

The number of employees needed in the seven occupational areas in the 1.969 survey was rnore conservative; 121,137 employees were needed in the next 12 months as compared to 142,889 reported needed in the 1968 survey. In the following two years, 130,401 were shown to be needed as compared to 294,768 shown in the 1968 survey. This would indicate that employees expected to hire less than 50 percent as many employees in the next two years in 1969 as they did in 1968. Explanations offered were that: employers were asked to classify new employees needed, specifying reasons the need developed and where replacements might be obtained; and the shift in the country's economy with efforts to curb inflation.

The most significant drop in employment was noted in Distributive Occupations which went from 22.4 to 9.6 percent of total employment. Trades and Industrial area showed greatest increase where 29.6 percent were employed in 1.968 and 40.8 percent in 1969. A 3.7 percent increase in number of persons employed in other occupations seems worthy of mention.

The percent of employees needed in the next 12 months and following two years in Distributive occupations also showed a decline. Need for employees the following two years in the Health occupations area showed an increase of 6.4 percent while need the first year showed a slight decrease. A decrease in the number of employees needed in Business and Office Occupations was shown in both the one year and following two year categories. Trades and Industrial Occupations indicated fairly constant needs in the next 12 months category, but showed rather substantial needs of nearly 7 percent increase in the following two years. Fortymine percent of employees needed in Nebraska for the following two years category were needed in Trades and Industry. A rather significant increase in employees needed in Other Occupations was noted for the next 12 months going from 4.6 percent in 1968 to 18.1 percent in 1969.

## CHAPTER III

## PRESENTATION OF DATA

The employment data were projected by computer to reflect the Columbus service area employment opportunities estimated for each of the 174 job clusters. Current employment in the area was estimated to be 27.061. This total includes an estimated 8,497 self-employed farmers and ranchers who did not appear on the IRS file because they did not employ hired labor. The 8,497 figure was obtained by subtracting the number of projected farmers and ranchers reporting in the study (340) from the number of farms and ranches reported for the Columbus service area in the Nebraska Agricultural Statistics ${ }^{14}$ (see Table A in Appendix).

Table $I$ shows the number of persons currently employed in the seven occupational areas and the percent of total Columbus service area employment in each occupational area. The percent of total Nebraska employment for 1968 and 1969 is also shown for each of the seven occupational areas. Nearly twice as many people are employed in Agricultural Occupations as are involved in Trades and Industrial jobs. Of the total workers in the Columbus sexvice

[^1]TABLE I
NUMBERS AND PERCENTAGES OF PERSONS PRESENTLY EMPLOYED IN COLUMBUS SERVICE AREA
AND PERCENTAGE EMPLOYED IN NEBRASKA BY OCCUPATIONAL AREA

|  | Number | Percent of total | Nebraska Dresent employment* |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Percent of total 1968 | Percent of total 1069 |
| Agricultural Occupations | 10,305 | 38.1 | 20.4 | 18.0 |
| Distributive Occupations | 2,648 | 9.8 | 22.5 | 9.6 |
| Health Occupations | 524 | 1.9 | 3.9 | 4.4 |
| Wage Earning Home Economics Occupations | 260 | 2.0 | . 8 | 1.7 |
| Business occupations | 2,012 | 7.4 | 16.3 | 25.3 |
| Trades and Industrial Occupations. | 5,264 | 19.4 | 29.6 | 40.8 |
| Other Occupations | 6,048 | 22.4 | 6.5 | 20.2 |
| TOTAL | 27,061 | 100.0 | 100.0 | 100.0 |

*The sources of these data are:
James T. Horner et al., Occupational Opportunities in Nebraska, Nebraska Research Coordinating Unit for Vocational Education, 302 Ag Hall, East Campus, University of Nebraska, Lincoln, Nebraska, 1968 and 1969, respectively.
area, 38.1 percent was found to be in agriculture which is twice as high as on the state level. Distributive Occupations accounted for 9.8 percent of the total employment which is consistent with the 1969 state-wide survey.

Business Occupations account for 7.4 percent of total employed which is proportionately less than half that reported on the state level. Trades and Industrial jobs account for 19.4 percent of total employment which is considerably less than reported on the state level. The "Other Occupations" area shows 22.4 percent of total employment in the Columbus service area. Among others, this figure includes assembly line workers with no previous experience needed.

As shown in Table II, the estimated Columbus area manpower need for one and following two years indicates the highest need for trained workers will be in the Trade and Industrial Occupations area, where 19.4 percent of the present labor force is employed. The need for new workers for the next 12 months indicates that 38.8 percent of the new workers needed will be in Trades and Industrial occupations area. The Columbus survey also lists 22.4 percent presently employed in Other Occupations area with 34.1 percent of new workers needed in this area in the next 12 months. The high demand for production or assembly workers with no previous training needed in the Columbus area account for the high percentage needs in the other Occupations area. The study revealed that employers estimate

TABLE II
NUMBERS AND PERCENTAGES OF OCCUPATIONAL OPPORTUNITIES IN THE COLUMBUS SERVICE AREA BY OCCUPATIONAL AREA

|  | Employees needed in 12 months |  | Employees needed the following 2 years |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent of total | Number | Percent of total |
| Agricultural Occupations | 392 | 6.7 | 976 | 7.6 |
| Distributive occupations | 448 | 7.7 | 1,188 | 9.2 |
| Health Occupations | 180 | 3.1 | 344 | 2.7 |
| Wage Earning Home Economics Occupations | 64 | 1.1 | 256 | 1.2 |
| Business Occupations | 496 | 8.5 | 1.124 | 8.7 |
| Trade and Industrial Occupations | 2,259 | 38.8 | 4.580 | 35.5 |
| Other Occupations | 1,988 | 34.1 | 4,520 | 35.1 |
| TOTAL | 5,827 | 100.0 | 12,888 | 100.0 |

there will be 5.827 job opportunties in the Columbus area in the next year and 12,888 in the two following years.

Agricultural Occupations
As shown in Table III, 10,305 persons are employed in the Agricultural Occupations area involving 38.1 percent of all workers (Table I) in the Columbus service area. These figures include both on-farm and off-farm agricultural occupations. Job opportunities in the next year show 392 workers needed and 976 job opportunities the following two years. The opportunities in the next year constitute 6.7 percent and in the next two years, 7.6 percent of the area's employment opportunities by occupational area.

Farmers and ranchers account for the largest number of people employed in agriculture. Nebraska Agricultural Statistics show 8,837 farmers in the Columbus service area which account for 85.8 percent of the total agricultural employment.

Off-farm agricultural occupations were found to employ 1,468 persons and laborers in these occupations account for 376 , or nearly 26 percent of the total off-farm labor force. Professional and managerial jobs showed 292 persons employed, or nearly 20 percent of the off-farm labor force. Jobs in agricultural supplies show 304 persons employed, followed by 192 in agricultural mechanics and 188 in agricultural products processing.

CURRENT AND PROJECTED EMPLOYMENT OPPORTUNITTES IN AGRICULTURAL OCCUPATIONS IN THE COLUMBUS SERVICE AREA (DUE TO TURNOVER, PROMOTION, EXPANSION, AND RETIRENENT)

| Occupational area | Now employed |  | Future needs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Next 12 months |  | $\begin{gathered} \text { The following } \\ 2 \text { years } \end{gathered}$ |  |
|  | $\mathrm{f}^{*}$ | NO. | $\mathrm{f}^{*}$ | No. | f* | No. |
| Professional \& Managerial...............l | 51 | 292 | 4 | 36 | 16 | 104 |
| Farming \& Ranching....................... 2 | 66 | $340$ | 14 | 60 112 | 19 | $\begin{aligned} & 132 \\ & 22415 \end{aligned}$ |
| Agricultural Supplies (Processing, <br> Marketing \& Services)................... 3 | 30 | 304 | 12 | 76 76 | 19 | 200 |
| Agricultural Mechanics (Operations, Sales, and services)..................... 4 | 18 | 192 | 7 | 36 | 9 | 64 |
| Agricultural Products (Processing, Marketing, Inspection \& Services).... 5 | 25 | 188 | 7 | 40 | 16 | 100 |
| Ornamental Horticulture (Production, <br> Processing, Marketing \& Services).... 6 | 3 | 72 | 1 | 16 | 2 | 64 |
| Agriculture Resources (Conservation, Utilization \& Services)................. 7 | 5 | 40 | 2 | 12 | 3 | 12 |
| Forestry (Production, Processing, <br> Marketing \& Services)................... 8 | 1 | 0 | 0 | 0 | 1 | $4$ |
| Laborers....................................... 9 | 27 | 376 | 17 | 112 | 20 | 296 |
| Veterinary Assistants..................lio | $\frac{1}{227}$ | 10.305 | $\frac{1}{65}$ | 4 4 | - 0 | 976 |

15Douglas Genereaux, Annual Estimated Replacement Farmer opportunities in Nebraska, Departmental Report No. 3, Department of Agricultural gaucation, University of Nebraska, Lincoln, Nebraska, March, 1967. (Shows estimated farmer replacements needed. for the next 12 months and following two years.)

* Number of employers reporting employees in this category.

HFFrom 1966 Agricultural Statistics $8,837-340$ reporting $=$ farmers $(8,497)$ not in sample because they do not hire help.

All part-time workers were converted to full-time equivalents. Seasonal fluctua-

The need for replacement farmers in Nebraska was reported by Genereaux (see Table III), and when his findings were applied to the Columbus area it was found that 112 farmers were needed each year. Replacement needs of 60 in the next 12 months and 132 the following two years for farmers and ranchers were found in the Columbus inventory. This only included those that paid social security and were included in the interview.

In the off-farm occupations area, laborers were found to be in greatest demand with 112 needed in 12 months and 296 the following two years. Agricultural supplies job cluster showed next greatest needs with 76 new workers needed in the next 12 months and 20 the following two years. Professional and managerial jobs showed needs of 36 and 104 , respectively, The job cluster of agricultural products showed need of 40 in 12 months and 64 the following two years. Mechanics jobs will require 36 workers in the next year and 64 the following two years.

The numbers employed in Farming and Ranching (Table III) included hired labor and replacement farmexs while the project in the same table for "Laborers" included the group of untrained people in the off-farm agricultural businesses.

The writer recognizes that many farmers are selfemployed and do not hire any help; therefore, their names were not included in the sampling. An attempt was made to
determine the number of self-employed farmers by referring to Nebraska Agricultural Statistics. The 1966 report was used because this was the year the state-wide list of businesses was compiled. 16 Number of farmers reported in the Columbus service area was 8,837 (see Tables $A$ and $B$, Appendix).

Genereaux reported farmer replacement needs for each county in the state ${ }^{17}$ These replacements were projected for the Columbus service area (see Appendix Tables C and D) and are included in Table III for 12 months and the following two years.

## Distributive Occupations

Distributive Occupations include people in business, advertising, sales, merchandising, and distribution. As shown in Table IV the total figure of 2,648 persons now employed constitutes 9.8 percent of the work force in the Columbus area. The 448 opportunities identified for next year account for 7.7 percent of the total anticipated need. In the following two years the 1,188 anticipated opportunities will be 9.2 percent of employment needs. About 19 percent of those currently employed in this group are listed as professional and managerial while only 6 percent of those needed next year are in this category.
$16_{\text {Nebraska }}$ Department of Agriculture, 10c. cit.
$17_{\text {Genereaux, }}$ 10c. cit.

TABLE IV
CURRENT AND PROJECTED EMPLOYMENT OPPORTUNITIES IN DISTRIBUTIVE OCCUPATIONS IN THE COLUMBUS SERVICE AREA (DUE TO TURNOVER, PROMOTION, EXPANSION, AND RETIREMENT)

| Occupational area | Now employed |  | Future needs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Next 12 months |  | The following <br> 2 years |  |
|  |  |  |  |  |  |  |
|  | ${ }^{\text {f }}$ | No. | ${ }^{\text {f }}$ | No. | f* | No. |
| Professional \& Managerial...............l | 103 | 512 | 7 | 28 | 9 | 48 |
| Advextising Services.................... 2 | 3 | 20 | 0 | 0 | 2 | 8 |
| Apparel and Accessories.................. 3 | 7 | 112 | 3 | 36 | 5 | 64 |
| Automotive and Petroleum................ 4 | 19 | 148 | 7 | 40 | 12 | 128 |
| Finance and Credit...................... 5 | 10 | 60 | 3 | 16 | 6 | 52 |
| Food Distribution........................ 6 | 8 | 60 | 1 | 4 | 3 | 12 |
| General Merchandise...................... ? | 4 | 24 | 2 | 8 | 2 | 16 |
| Hardware, Building Materials........... 8 | 16 | 168 | 2 | 8 | 6 | 44 |
| Home Furnishings........................ 9 | 7 | 28 | 1 | 8 | 4 | 20 |
| Hotel and Lodging........................ 10 | 6 | 36 | 1 | 16 | 1 | 32 |
| Insurance................................ 11 | 14 | 80 | 1 | 8 | 4 | 36 |
| Marketing............................... 12 | 1 | 0 | 1 | 4 | 1 | 4 |
| Real Estate.............................. 13 | 5 | 20 | 0 | 0 | 2 | 8 |
| Retailing (General/Miscellaneous).....14 | 19 | 216 | 5 | 44 | 11 | 112 |
| Transportation.......................... 15 | 33 | 292 | 9 | 52 | 15 | 148 |
| Wholesaling (General/Miscellaneous)...16 | 4 | 40 | 0 | 0 | 2 | 32 |
| Shipping and Stock Clerks.............li? | 48 | 632 | 19 | 148 | 30 | 380 |
| Sales Engineers......................... 18 | 5 | 36 | 3 | 28 | 4 | 40 |
| Postal Workers........................... 19 | 11 | 164 | 0 | 0 | 1 | 4 |
| COTST TOT | 323 | 2,648 | 65 | 448 | 120 | 1,188 |

N Number of employers reporting employees in this category.
The figure obtained for "Transportation" included all truck drivers. Part-time workers were converted to full-time equivalents. Grocery sackers and shelf stockers were included in the category of "Shipping and Stock Clerks" and involved most of the part-time workers in this area.

The largest number of persons (632) employed in a single job cluster was found to be shipping and stock clerks. Data in this job cluster showed 148 needed in the next 12 months and 380 the following two years. Jobs in transportam tion showed 292 presently employed with needs of 52 in the next year and 148 the following two years. General retail. ing accounts for 216 presently employed with future needs of 44 and 112. Another job cluster worthy of note is automotive and petroleum with current employment of 148 and needs of 40 employees in 12 months and 128 the following two years.

## Health Occupations

Table $V$ indicates that 524 are presently engaged in health occupations, with 180 occupationsl opportunities in the next 12 months and 344 opportunities in the following two years in the Columbus service area.

The percent breakdown of those employed in each job group was: Nurses' Aide 39.7 percent; Practical (Vocational) Nurse 17.6 percent; Professional and Managerial 13.7 percent; Nurse, Associate Degree 9.2 percent; Medical Laboratory Assistant 3.8 percent; Medical X-ray Technician 3.8 percent; Dental Assistant 2.3 percent; Surgical Technician 2.3 percent; Laboratory Technician, Inhalation Therapy Technician, Hospital Food Services Supervisor and Hospital Food Assemblers, each 1.5 percent; Occupational Therapy Assistant and Physical Therapy Assistant each .8 percent.

TABLE V
CURRENT AND PROJECTED EMPLOYMENT OPPORTUNITIES IN HEALTH OCCUPATIONS IN THE COLUMBUS SERVICE AREA (DUE TO TURNOVER, PROMOTION, EXPANSION, AND RETIREMENT)

| Occupational area |
| :---: |

*Number of employers reporting employees in this category.

Future needs were indicated for cytology technjcians and histology technicians although none were reported as being presently employed. The greatest need for employees in this area was reported to be in the categories of Practical (Vocational) Nurse and Nurses' Aide.

## Home Economics Occupations

Wage earning home economics occupations include those occupational opportunities related to: care and guidance of children; clothing manogement, production and services; food management, production, and services; food management, production, and services; home furnishing, equipment and services; institutional and home management and supporting services. As shown in Table VI, the total number of persons employed in home economics related occupations in the Columbus survey is an estimated 260 with 64 employment opportunities expected in the next year and 156 in the following two years.

The percent breakdown of those employed in each job group was: Institutional and Home Management and Supporting Services 40 percent; Domestic 32.3 percent; Professional and Managerial 24.6 percent; Home Furnishings, Equipment and Services approximately 1.5 percent; and Hostess approxi.mately 1.5 percent. The greatest need for employees in this area was found to be in the job cluster of Institutional and Home Management and Supporting Services with 32 employees needed in the next 12 months and 64 the following two years.

## TABLE VI

CURRENT AND PROJECTED EMPLOYMENT OPPORTUNITIES IN WAGE EARNING HONE ECONOMICS OCCUPATIONS IN THE COLUMBUS SERVICE AREA (DUE TO TURNOVER, PROMOTION, EXPANSION, AND RETIREMENT)

| Occupational area | Now employed |  | Future needs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Next 12 months |  | The following2 years |  |
|  | f* | NO. | $\mathrm{f}^{*}$ | No. | f* | No. |
| Professional \& Managerial...............l | 12 | 64 | 2 | 8 | 8 | 32 |
| Care \& Guidance of Children............. 2 | 0 | 0 | 0 | 0 | 1 | 4 |
| Home Furnishings, Equipment \& Services. 3 | 1 | 4 | 1 | 4 | 0 | 0 |
| Institutional \& Home Management <br> \& Supporting Services................... 4 | 2 | 104 | 2 | 32 | 2 | 64 |
| Domestic ${ }^{*}$. . . . . . . . . . . . . . . . . . . . . . . . . 5 | 15 | 84 | 2 | 16 | 10 | 52 |
| Hostess. . . . . . . . . . . . . . . . . . . . . . . . . . . 6 | 1 | - 4 | 1 | 4 64 | 1 | 4 4 |

* Number of employers reporting employees in this category.

米 It should be noted that it was difficult to record the total number of hours of employment for each domestic, as a domestic employee may work only one day (or part of one day) per week for an employer.
***The major food preparation and serving areas involving Wage Earning Home Economics knowledges and skills are shown in Table VIII Trade and Industrial lines 3436 according to the Standard Terminology for Instruction in Local and State School Systems and should be given consideration in this area.

Employment needs in the job clustex listed as "Domestic" help showed 16 needed in the next year and 52 the following two years. Professional and managerial job opportunities showed a need for 8 in 12 months and 32 the following two years.

## Business Occupations

The total number of people employed in an office or related occupation is estimated at 2,012 with 496 employment opportunities expected next year and 1,124 within the following two years. The 2,012 existing positions account for 7.4 percent of the employment in the Columbus service area.

About 17.1 percent of those employed in this group are listed as professional and managerial people. Filing, office machines, and general office clerical make up the largest percentage in the office and related occupations category confirming 31.2 percent of the total number. The area of stenographic, secretarial and related showed 13.2 percent of the total number. In addition, approximately 9.3 percent of the total number is listed in the accounting and computing areas.

The greatest need in the next three years is expected in filing, office machines, and general office clerical area with 32.4 percent expected increase in opportunities. Stenograbhic, secretarial, and related will constitute an increase of 14.9 percent while accounting and computing category will account for 10.7 percent of the

## TABLE VII

CURRENT AND PROJECTED EMPLOYMENT OPPORTUNITIES IN BUSINESS OCCUPATIONS IN THE COLUMBUS SERVICE AREA (DUE TO TURNOVER, PROMOTION, EXPANSION, AND RETIREMENT)

| Occupational area | Now employed |  | Future needs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Next 12 months The following2 years |  |  |  |
|  |  |  |  |  |  |  |
|  | ${ }^{*}$ | 170. | $\mathrm{f}^{*}$ | No. | f* | NO. |
| Professional \& Managerial...............l | 35 | 344 | 6 | 40 | 11 | 100 |
| Accounting \& Computing................. 2 | 27 | 188 | 6 | 40 | 10 | 120 |
| Business Data Processing Systems......:3 | 3 | 28 | 1 | 8 | 2 | 12 |
| Filing, Office Machines, \& General Office Clerical. | 52 | 628 | 15 | 168 | 22 | 364 |
| Information Communi cation.............. 5 | 2 | 12 | 1 | 4 | 0 | 0 |
| Materials Support, Transporting, <br> Storage, \& Recording...................... 6 | 5 | 112 | 3 | 44 | 4 | 100 |
| Fersonnel Training, \& Related..........? | 6 | 168 | 2 | 32 | 2 | 88 |
| Stenographic, Secretarial, \& Related... 8 | 42 | 268 | 10 | 76 | 17 | 168 |
| Typing \& Related......................... 9. | 10 | 132 | 5 | 60 | 5 | 112 |
| General Office Training................lo | 16 | 80 | 4 | 24 | 9 | 48 |
| Cashiers, Eeceptionist, \& Switchboard. 11 | 6 | 28 | 0 | 0 | 2 | 8 |
| Law Clerk/secretary..................... 12 | 4 | 24 | 0 | 0 | 2 | 4 |
| TOTAL | 208 | 2,012 | 53 | 496 | 85 | 7. 124 |

*Number of employers reporting employees in this category.
future employment opportunities. The professional and managerial category showed a need for 9.8 percent of the total employees needed in this area in the next three years.

Trade and Industrial Occupations

As shown in Table VIII; 5,264 persons are currently employed in Trade and Industrial Ocoupations. This is 19.4 percent of the total projected Columbus service area employment. Professional and managerial occupations account for 7.1 percent of the Trade and Industrial group. Waiters and waitresses under the foods and related occupations category accounted for the largest percentage of employers with 11 percent, cooks and chef's under the same category ranked second with 10.8 percent of the total employees while custodians accounted for nearly 7 percent of the workers in this area.

The data indicate there will be 2,259 employment opportunities in the next year and 4.580 within the following two years. These opportunities represent 38.8 and 35.5 percent, respectively, of the total employment opportunities in the Columbus area during the next year and the following two year period. The greatest need in this area is shown to be in the category of food and related with 760 employees needed in the next year and 1,584 in the following two years, which constitutes 33.6 and 34.6 percent, respectively, of the total labor force needed in the area of Trades and Industry.
future employment opportunities. The professional and manam gerial category showed a need for 9.8 percent of the total employees needed in this area in the next three years.

Trade and Industrial Occupations

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The data indicate there will be 2,259 employment opportunities in the next year and 4.580 within the following two years. These opportunities represent 38.8 and 35.5 percent, respectively, of the total employment opportunities in the Columbus area during the next year and the following two year period. The greatest need in this area is show to be in the category of food and related with 760 employees needed in the next year and 1,584 in the following two years, which constitutes 33.6 and 34.6 percent, respectively, of the total labor force needed in the area of Trades and Industry.

TABLE VIII
CURRENT AND PROJECTED EMPLOYMENT OPPORTUNITIES IN TRADES AND INDUSTRY IN THE COLUMBUS SERVICE AREA (DUE TO TURNOVEP, PROMOTION, EXPANSION, AND RETIREMENT)

| Occupational area | Now employed |  | Future needs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Next 12 months |  | The following2 years |  |
|  | ${ }^{*}$ | No. | ${ }^{+3}$ | NO. | ${ }^{\text {f * }}$ | NO. |
| Professional \& Managerial...............l | 48 | 372 | 5 | 56 | 12 | 136 |
| Air Conditioning |  |  |  |  |  |  |
| Cooling. . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | 5 | 32 | 1 | 4 | 2 | 8 |
| Heating.................................. 3 | 6 | 40 | 2 | 8 | 3 | 12 |
| General. . . . . . . . . . . . . . . . . . . . . . . . . . 4 | 3 | 24 | 2 | 12 | 2 | 20 |
| Appliance Repair......................... 5 | 3 | 12 | 2 | 12 | 4 | 24 |
| Architectural Engineering Technician... 6 | 2 | 40 | 3 | 12 | 4 | 16 |
| Automotive |  |  |  |  |  |  |
| Body \& Fender. . . . . . . . . . . . . . . . . . . . . ? | 8 | 52 | 3 | 12 | 3 | 16 |
| Mechanic............................... . . 8 | 23 | 260 | 10 | 116 | 15 | 176 |
| Service Stations.......................9 | 23 | 196 | 13 | 68 | 17 | 164 |
| Automotive Specialists, <br> Air Conditioning, Brakes, Tires... 10 | 4 | 36 | 2 | 16 | 4 | 60 |
| Aviation |  |  |  |  |  |  |
| Ground Operations..................... 11 | 1 | 12 | 0 | 0 | 1 | 8 |
| Crop Dusters........................... 12 | 1 | 8 | 1 | 4 | 1 | 12 |
| Business Machine Maintenance..........I3 | 2 | 8 | 1 | 4 | 1 | 4 |
| Civil Engineering Technician...........14 | 1 | 8 | 1 | 4 | 1 | 4 |
| Commercial Art........................... 15 | 1 | 4 | 1 | 8 | 1 | 12 |
| Commercial Photography.................. 16 | 3 | 36 | 0 | 0 | 2 | 12 |
| Construction and Maintenance 16 |  |  |  |  |  |  |
| Carpentry.. . . . . . . . . . . . . . . . . . . . . . . 17 | 28 | 280 | 16 | 108 | 20 | 192 |
| Masonry, Cement Work \& Tile.........l 18 | 14 | 128 | 6 | 36 | 9 | 80 |
| Electricity...........................19 | 9 | 36 | 3 | 12 | 5 | 24 |
| Painting \& Decorating. . . . . . . . . . . . 20 | 1 | 8 | 1 | 16 | 1 | 16 |
| , Plumbing \& Pipe Fitting.............. 21 | 14 | 96 | 5 | 36 | 5 | 40 |
| Laborers............................. . . 22 | 14 | 276 | 12 | 144 | 12 | 196 |

TABLE VIII (Continued)

| Occupational area | Now employed |  | Future needs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Next 12 | months | The following2 years |  |
|  | ¢* | No. | f* | NO. | $\mathrm{f}^{*}$ | No. |
| Custodian Services..................... 23 | 41 | 368 | 10 | 84 | 15 | 192 |
| Diesel Mechanic.......................... 24 | 7 | 48 | 2 | 28 | 4 | -60 |
| Drafting. . . . . . . . . . . . . . . . . . . . . . . . . . . 25 | 6 | 20 | 2 | 20 | 5 | 44 |
| Electrical |  |  |  |  |  |  |
| Industrial Electrician............... 26 | 3 | 28 | 2 | 40 | 3 | 76 |
| Motor Repairman. . . . . . . . . . . . . . . . . . 27 | 2 | 12 | 0 | 0 | 1 | 4 |
| Projectionists........................ 28 | 1 | 8 | 0 | 0 | 0 | 0 |
| Radio/Television...................... 29 | 7 | 32 | 30 | 20 | 5 | 24 |
| Electrical Technician............... 30 | 1 | 92 | 1 | 92 | 1 | 128 |
| Electro-Mechanical Technician......... 31 | $\underline{1}$ | 4 | 0 | 0 | 0 | 0 |
| Fabric Maintenance |  |  |  |  |  |  |
| Laundry \& Dry Cleaning................ 32 | 5 | 48 | 3 | 28 | 2 | 28 |
| Others................................. . 33 | 1 | 4 | 0 | 0 | 0 | 0 |
| Food and Related Occupations |  |  |  |  |  |  |
| Baker. . . . . . . . . . . . . . . . . . . . . . . . . 34 | 2 | 8 | 1 | 8 | 1 | 12 |
| Cook/Chef. . . . . . . . . . . . . . . . . . . . . . . 35 | 39 | 568 | 21 | 208 | - 27 | 420 |
| Waiter/Waitress....................... 36 | 31 | 580 | 26 | 392 | 28 | 796 |
| Bartender.............................. 37 | 26 | 276 | 7 | 48 | 15 | 144 |
| Dishwasher \& Bus Boys................. 38 | 14 | 192 | 8 | 104 | 9 | 212 |
| Graphic Arts............................. 39 | 8 | 72 | 3 | 12 | 5 | 40 |
| Industrial Engineering Technician.... 40 | 2 | 8 | 1 | 4 | 2 | 8 |
| Instrument Maintenance \& Repair....... 41 | 4 | 32 | 0 | 0 | 0 | 0 |
| Mechanical Engineering Technician..... 42 | 6 | 24 | 3 | 36 | 4 | 52 |
| Metalworking |  |  |  |  |  |  |
| Machine Shop.......................... . 43 | 9 | 152 | 4 | 92 | 5 | 216 |
| Sheet Metal. . . . . . . . . . . . . . . . . . . . . . . 44 | 8 | 112 | 2 | 36 | 5 | 116 |
| Welding. . . . . . . . . . . . . . . . . . . . . . 45 | 9 | 252 | 5 | 216 | 5 | 504 |
| Machine operators......................... . . 46 | 2 | 36 | 1 | 8 | 2 | 28 |
| Tool \& Die Worker...................... . 47 | 2 | 36 | 1 | 24 | 2 | 76 |

TABLE VIII (Continued)

| Occupational area | Now employed |  | Future needs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Next 12 months |  | The following <br> 2 years |  |
|  | f* | No. | $\mathrm{f}^{*}$ | No. | f* | NO. |
| Metalurgy . . . . . . . . . . . . . . . . . . . . . . . . . . 48 | 1 | 4 | 1 | 4 | 1 | 4 |
| Personal Services |  |  |  |  |  |  |
| Barbering. . . . . . . . . . . . . . . . . . . . . . . . 49 | 6 | 36 | 1 | 4 | 3 | 12 |
| Cosmetology............................ . 50 | 6 | 36 | 2 | 24 | 2 | 48 |
| Recreation \& Health.................. 51 | 2 | 24 | 2 | 20 | 1 | 24 |
| Petroleum Technician................. 52 | 1 | 8 | 1 | 4 | 1 | 16 |
| Public Service |  |  |  |  |  |  |
| Law Enforcement. . . . . . . . . . . . . . . . . . 53 | 5 | 20 | 0 | 0 | 1 | 4 |
| Guards............................ . . . . 54 | 3 | 16 | 0 | 0. | 1 | 16 |
| Treatment Plant Operators........... 55 | 1 | 4 | 0 | 0 | 0 | 0 |
| Refrigeration............................ 56 | 2 | 8 | 0 | 0 | 2 | 8 |
| Stationary Energy Sources |  |  |  |  |  |  |
| Electric Power \& Generating Plants..57 | 0 | 0 | 0 | 0 | 0 | 0 |
| General................................ 58 | 1 | 12 | 0 | 0 | 1 | 4 |
| Upholstering............................ 59 | 1 | 4 | 0 | 0 | 2 | 8 |
| Woodwork |  |  |  |  |  |  |
| Millwork \& Cabinet Making........... 60 | 1 | 12 | 0 | 0 | 0 | 0 |
| Other Trades \& Industries |  |  |  |  |  |  |
| Well Drillers......................... 61 | 2 | 40 | 0 | 0 | 0 | 0 |
| Bus Drivers........................... 62 | 5 | 40 | 0 | 0 | 3 | 12 |
| Cemetary Workers...................... 63 | 5 | 24 | 2 | 8 | 1 | 12 |
| $\ldots$ TOTAL | 493 | 5,264 | 232 | 2,259 | 290 | 4,580 |

Humber of employers reporting employees in this category.

Many of the occupations in the Trade and Industrial Occupations area are highly specialized, therefore, difficult to group successfully. Table VIII depicts only the job groups on which data were obtained.

Other Occupations

This occupational category enabled employers to report employees that did not logically fit into one of the previous six groups. The majority of the persons reported in the professional and managerial group were teachers, ministers, lawyers, and other professionals not logically fitting in the professional category of other occupational groups.

The 1,796 persons in the Professional and Managerial group reported in Table IX, when combined with those in the Professional and Managerial from the other six groups, totaled 3.452 which is 12.8 percent of the Columbus area labor force.

The 4,252 employees reported in the Production or Assembly Worker with No Previous Training Needed category account for 15.7 percent of the total Columbus area labor force. The 1,624 employment opportuntties in the next year account for 27.8 percent of the total labor needed in the Columbus area in the next year, while the 3,788 employees reported needed the following two years account for 29.4 percent of total Columbus area labor needs.

## TABLE IX

CURRENT AND PROJECTED EMPLOYMENT OPPORTUNITIES IN OTHER OCCUPATIONS IN THE COLUMBUS SERVICE AREA (DUE TO TURNOVER, PROMOTION, EXPANSION, AND RETIRENENT)

| Occupational area | Now employed | Future needs |  |
| :---: | :---: | :---: | :---: |
|  |  | Next 12 months | The following <br> 2 years |
|  | $\mathrm{f}^{*}$ No. | ${ }_{\text {f }}{ }^{*}$ No. | f* No. |
| Professional \& Managerial................ | 78 1,796 | $18 \quad 364$ | 31732 |
| Production or Assembly Worker with No Previous Training Needed............ 2 | 11.4 .252 | 71.624 | $8 \quad 3.788$ |
| TOTAL | 896.048 | 2511,988 | $39 \quad 4.520$ |

*Number of employers reporting employees in this category.

## CHAPTER IV

## SUMMARY

The purpose of this study was to inventory the number of persons presently employed in the various occupational areas in the Columbus, Nebraska service area and to identify the projected employment needs due to turnover and expansion for the next year and the following two years in the same occupations.

The method of this study involved an occupational inventory in postal zip code area 686 surrounding Columbus, Nebraska. A 25 percent random sampling of business firms in the area netted 667 businesses to be inventoried. The statewide computerized model for determining occupational opportunities in Nebraska was used as the data collection instrument and data were collected by questionnaire and personal interview from 92 percent of the businesses in the Columbus area.

Surveying of the Columbus service area to determine where people worked showed the following: 38.1 percent worked in agriculture; 9.8 percent in distribution; 1.9 percent in health occupations; 1.0 percent in home economics; 7.4 percent in business occupations; 19.4 percent in trades and industry; and 22.4 percent in other occupations. The total number of persons employed in the area was found to be 27.061 with agricultural occupations having the greatest number of employees in a single occupational area.

The greatest number of people employed in the Columbus Service area are farmers with 8,837 of the 10,305 agriculturally employed. Farm employees needed in the next 12 months were 60 and 132 the following two years. Genereaux reported in his study the replacement farmers needed for Nebraska, and when applied to the Columbus area 112 farmers were found to be needed annually. 18 off-farm agricultural occupations show 332 employees needed in the next year and 844 the following two years.

Farmers and ranchers in the Columbus area account for 85.8 percent of the total agricultural employment. The survey showed 1,468 persons employed in off-farm agricultural occupations. Greatest needs in the off-farm area were found to exist in the job cluster of laborers with 112 needed in the next 12 months and 296 the following two years. The job cluster of agricultural supplies showed 304 persons presently employed with needs of 76 in the next year and 200 the following two years. Agricultural products processing and agricultural mechanics job clusters showed needs of 36 and 40 in the next 12 months and 64 and 100 in the following two years, respectively.

Distributive occupations employ 2,648 persons and account for 9.8 percent of the total work force in the Columbus service area. This compares with findings of the 1969 state-wide survey which reported 9.6 percent employed

[^2]in this area. Greatest needs in this area were found to exist in the following job clusters: shipping and stock clerks; transportation; automotive and petroleum; and general retailing.

Health occupations employ 524 persons in the Columbus area and show employee needs of 180 in the next 12 months and 344 the following two years. Greatest needs were in the job clusters of: nurses aid; vocational nurse; and in professional and managerial. Those employed in health occupations in the Columbus area constitute 1.9 percent of the total work force.

Wage earning home economics occupations employees in the Columbus survey show a close correlation with the statewide surveys. It must be remembered that most students graduating from home economics courses do not use their skills for wage earning, but rather in home and family management. One percent of total employees in the Columbus area were employed in wage earning home economics. Greatest employee needs were found to be in the job clusters of: institutional and home management and supporting services; domestic help; and professional and managerial.

Business occupations employ 2,012 persons or 7.4 percent of the total work force in the Columbus area. Employment opportunities in the next year show 496 needed and 1,124 the following two years. Job clusters showing greatest needs are: filing, office machines and general office
clerical; stenographic, secretarial and related; typing and related.

Most job opportunities were found to be in the Trades and Industrial area. There are 5,264 persons currently employed with 2,259 needed in the next 12 months and 4,580 in the following two years. These opportunities represent 38.8 and 35.5 percent, respectively, of the total employment needs in the Columbus service area. Job occupations showing greatest need were: food and related occupations; construction and maintenance; metal working; and automotive. There is a great need for waitresses with 392 needed in the next 12 months and 796 the following two years. Welders were found to be next in demand with 216 needed in 12 months and 504 the following two years. Cook or chef needs were 208 and 420 followed by construction laborers with 144 and 196 shown needed. Automotive mechanics are needed to the extent of 116 in 12 months and 176 the following two years. "Other occupations" includes employees that do not logically fit into any other area. Employed in this area were 6.048 persons, accounting for 22.4 percent of the total work force in the Columbus service area. The job of production and assembly worker, with no previous training, accounts for 4,252 persons employed and professional and managerial jobs account for 1,796. Future needs in this occupational area are: 1,624 production or assembly workers in the next 12 months and 3,788 the following two years; professional and managerial, 364 and 732, respectively.

## Conclusions

Based on the findings of the study, it is logical to conclude the Columbus service area is still predominately agriculture, compared with state-wide data. Nearly twice as many people are employed in agriculture in the Columbus area percentagewise as are employed in agriculture over the state.

The high demand for workers in the Trades and Industrial area as shom in the findings indicate the presence of considerable trades and industries within the Columbus service area.

Based on the findings regarding agricultural occupations, it seems logical to conclude that the most opportunities for employment in this area are in off-farm occupations and particularly in the job clusters of: unskilled labor; agricultural supplies; professional and managerial; and agricultural products processing. Contrary to general opinion, occupational opportunities still exist in farming and ranching.

After finding that 9.8 percent of the Columbus area work force is employed in distribution and the 1969 statewide work force in distribution is 9.6 percent, it is logical to conclude that the Columbus service area distributive business is on par with that in the state.

Based on findings, the need for production and assembly workers indicates extensive manufacturing present
in the area and many work opportunities exist.

Recommendations

The writer recommends that future surveys of this nature be conducted entirely by personal interview. It is felt that the survey could be conducted more economically and the data gathered would be more representative of the actual conditions.

In view of the data presented in this study, the writer recommends that school boards, administrators and teachers place more emphasis on enlarging and creating new vocational education offerings in the Columbus area schools. The large number of opportunities in vocational jobs seems to support this recommendation.

It is further recommended that present vocational offerings be changed to prepare students in occupational areas where opportunities exist and to strengthen present vocational education programs that may not currently supply the need for workers in that area.

The writer recommends that additional study be conducted in the Columbus area to determine the number of workers being prepared in the various occupations and compare these data with the number of opportunities existing as presented in this study.
$B I B L I O G R A P H Y$

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8. Parish, Edwin H., A Look at Education for Work in the Omaha Public Schools, Omaha Board of Education, School District of Omaha, Omaha, Nebraska, September, 1964, pp. 141, 143, 144.
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10. Vocational Education Department, Future Trends for Vocational Education as Indicated by occupational Surveys, Texas Educational Agency, Austin, Texas, October, 1967, pp. 11, 14.

> APPENDIX

TABLE A
NUMBER OF FARMS IN COUNTIES WHOLLY INCLUDED IN POSTAL ZIP CODE AREA 686*
County Number of Farms

| Platte | 1,580 |
| :--- | :--- |
| Colfax | 1,090 |

Polk 970
Nance $\quad 700$
Boone 1.120
Wheeler $\begin{aligned} & 210 \\ \text { TOTAL } & 5,670\end{aligned}$

TABLE B
NUMBER OF FARPMS IN COUNTIES PARTIALLY INCLUDED IN POSTAL ZIP CODE AREA 686*

|  |  |  |  |
| :--- | :---: | :---: | :---: |
| County | Total farms | Percent included | Number of farms <br> in survey area |
| Butler | 1,400 | 92 | 1,288 |
| Dodge | 1,370 | 52 | 713 |
| Merrick | 870 | 50 | 435 |
| Greeley | 570 | 40 | 228 |
| Antelope | 1,370 | 30 | 411 |
| Saunders | 1,830 | 5 | 92 |
| ToTAL |  |  | 3,167 |

*Nebraska Department of Agriculture, Nebraska Agricultural Statistics, Annual Report, 1967, Preliminary, 1968, State-Federal Division of Agricultural Statistics, Lincoln, May, 1967, pp. 100-101.

## TABLE C

FARMER REPIACEMENT NEEDS BY COUNTIES WHOLLY TINCLUDED TN
COLUMBUS SERVICE AREA*

| County | Needed <br> replacements |
| :--- | :---: |
| Platte | 22 |
| Colfax | 10 |
| Polk | 12 |
| Nance | 11 |
| Boone | 7 |
| Wheeler | 3 |
|  |  |
|  |  |

## TABLE D

FARMER REPLACEMENT NEEDS BY COUNTIES PARTIALLY INCLUDED IN COLUMBUS SERVICE AREA*

| County | Needed replacements | Percent included | Number of replacements needed in area |
| :---: | :---: | :---: | :---: |
| Butler | 29 | 92 | 27 |
| Dodge | 19 | 52 | 10 |
| Merrick | 4 | 50 | 2 |
| Greeley | 4 | 40 | 2 |
| Antelope | 18 | 30 | 5 |
| Saunders | 21 | 5 | 1 |
| TOTAL |  |  | 47 |

*Genereaux, Douglas, Annual Estimated Beplacement Farmer Oportunities in Nebraska, Departmental Report No. 3, Department of Agricultural Education, University of Nebraska, Lincoln, Nebraska, March, 1967.

ADVANCE NOTICE

## MEMO TO: SELECTED EMPLOYERS

FROM: DR, DONALD NEWPORT, PRESIDENT, PLATE COLLEGE

SUBJECT: OCCUPATIONAL OPPORTUNITY INVENTORY AND flat te college manpower questionnaire

1. Mr. Ralph Eickhoff of Columbus High School is surveying the present and projected occupational opportunities in this area.
2. We of Platte College feel that the information sought will be of great value to us in planning our college programs, therefore we highly endorse these surveys.
3. As a new institution dedicated to serving the needs of the people of this area, we are also interested in obtaining some additional information involving such data as: present and anticipated sources of employees; methods of upgrading them; an employer's feelings on work-study programs and your interpretaction of how much emphasis should be placed upon other major study areas, by a perspective employee to be hired by your company.
4. In a very few days, you will receive these questions along with the occupational inventory. We ask that you take FIVE minutes of your working day to provide this information. In so doing, you will enable educators in this area to better prepare capable workers for you as an employer. We certainly thank you in advance for your cooperation.



A REMINDER

September 7, 1968

MEMO TO: SELECTED EMPLOYERS
FROM: RALPH EICKHOFF

SUBJECT: SURVEY REMINDER

Two weeks ago you received my Occupational Opportunity Inventory and Platte College's Manpower Questionnaire in your mail. At that time I asked you to take five minutes of your time and complete the inventory and questionnaire. To date, I have not received a reply.

Let me reassure you that your reply is very important and necessary in completing this worthwhile survey. Information which I am attempting to gather is not presently available.

School curriculum planners and guidance personnel are aware of the fact that employers will need additional employees but how many, and in which occupational areas, is currently unknown. Your completion and return of these surveys will give our school administrators this vital information and enable them to plan better school curriculum to meet your present and anticipated needs.

Please help me to help our community by completing the surveys and returning them to me today. I will gladly send you another survey in the event the original was misplaced. If your reply crosses this letter in the mail, please disregard this reminder.

Thank you again for your cooperation.

MEMO TO: SELECTED EMPLOYERS
FROM: RALPH EICKHOFF, INSTRUCTOR, COLUMBUS SENIOR HIGH SCHOOL AND DR. DONALD L. NEWPORT, PRESIDENT OF PLATte COLLEGE

SUBJECT: OCCUPATIONAL OPPORTUNITIES INVENTORY AND
PLATTE COLLEGE MANPOWER QUESTIONNAIRE

The information on this inventory and questionnaire which we are asking you to complete and return is of great importance to future education in this area. First, it will help school officials to develop more adequate educational opportunities for your present and future enployees and second, it will enable guidance counselors to more effectively advise students on employment opportunities.

The Occupational Inventory lists six major job groups. Your business may employ people in one, two, or more of these groupings. In completing this inventory, first, please indicate the number of employees normally employed in each job title representing their major occupational duty, and next, please project for us the number of persons you believe will be needed in each job category during the next twelve months and in three years due to your own businesses' possible employee turnover and/or job expansion. If you cannot find a job group in which to record your employees, please list their job title under "other occupations".

On the back of this letter you are now reading, you will find the Manpower Questionnaire. Questions one and two are designed to determine where you have procurred present employees for your organization and where you plan to obtain them in the future. Other items concern methods of improving employee proficiency, your views on possible work-study programs, desired major study areas and preparation levels needed by a perspective job applicant to be successful in your firm.

Your cooperation and assistance in completing these surveys is greatly appreciated, and your answers become especially important since these materials are only being provided to a SAMPLE of area firms. YOU ARE REPRESENTING FOUR SIMILAR BUSINESSES IN CENTRAL NEBRASKA. We assure you that through your answers to these surveys and the information we will be able to gain about your manpower requirements, we will be better able to serve you and the young people of this area.

Agriculture \& Related
Distributing, Buying, Selling
$\ldots \quad$ Trades, Industries, \& Related
$\begin{array}{r}\text { Distributing, Buying, Selling } \\ \hline \quad \text { Trades, Industries, \& Related }\end{array}$

Health
__Home Economics Other (please specify)

## MANPOWER QUESTIONNATRE <br> PLATTE COLLEGE

Present source of manpower at present
time (check all appropriate blanks)
local high school graduates
part-time farmers or ranchers
spouses of farmers or ranchers
high school students part-time
college graduates (four-year degree)
college graduates (two-year degree)
college or high school drop-outs
other (please specify)
III. Present method of upgrading employee proficiency at present time (check all appropriate blanks) in plant or on-the-job training general experience in position personal supervision
high school and/or adult classes non-coll. credit educational courses technical school course work two-year and four-year college work none other (please specify)
II. Anticipated source of manpower (check all appropriate blanks) local high school graduates part-time farmers or ranchers spouses of farmers or ranchers high school students part-time college graduates. (four-year degree) college graduates (two-year degree) college or high school drop-outs other (please specify)
IV. If available, which of the following methods of proficiency upgrading would you prefer and utilize (check all appropriate blanks)
in plant or on-the-job training high school and/or adult classes non-college educational courses technical school course work two-year college course work four-year college course work other (please specify)
7. If a college work/study program were available, would you... employ these students when feasible not employ college students part-time employ 1 to 4 students part-time employ 5 or more students part-time
VI. Indicate which major area you would prefer to have students pursue if in your employ part-time (check any appropriate blanks)
a program of general studies business management and accounting secretarial agriculture engr. technology (drafting, etc.) other (please specify)
VII. Indicate which major area you think college students should pursue if they plan to enter your field for a career a program of general studies business management and accounting secretarial agriculture engineering technology other (please specify)
VIII. Indicate level of educational preparation students should have to enter your occupational area two years of high school high school diploma technical or trade school training two-year college education four-year college education graduate study

Record each employee only once in the colum headed Number Now Employed.

| OCCUPATIONAL AREA | NumberNowEmployed | Future needs due to tumover $\varepsilon$ expansion |  |
| :---: | :---: | :---: | :---: |
|  |  | Next 12 Months | $\begin{array}{r} \text { Next } 3 \\ \text { Years } \end{array}$ |
| AGRICULTURE \& RELATED OCCUPATIONS |  |  |  |
| Professional \& Managerial. : . . . . |  |  |  |
| Farming and Ranching . |  |  |  |
| Agricultural Supplies (Processing, Marketing \& Services). |  |  |  |
| Agricultural Mechanics (Operations; Sales, and Services) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Agricunture Resources (Conservation, |  |  |  |
| Forestry (Production, Processing, |  |  |  |
| Marketing and Services). . . . . . |  |  |  |
|  |  |  |  |  |
|  |  |  |  |
| DISTRIBUTING, BUYLNG, SELJING $\varepsilon$ RELATED |  |  |  |
| Professional \& Managerial. . . . . . |  |  |  |
|  |  |  |  |  |
| Apparel and Accessories. |  |  |  |
|  |  |  |  |  |
| Finarce and Credit . . . . . . . . . . |  |  |  |
|  |  |  |  |  |
|  |  |  | General Merchandise. |
| Hantwane, Building Materials |  |  |  |
| Hone Furnishings. |  |  |  |
| Hotel and Lodging. |  |  |  |
| Insurance. . . . |  |  |  |
| Marketing (General). . . . . . . . . |  |  |  |
| Real Estate. . . . . . . . . . . |  |  |  |
| Retailing (Geremal/Miscellaneous). . . |  |  |  |
|  |  |  |  |
| Wholesaling (Generai/Miscellaneous). |  |  |  |
| Others (list) |  |  |  |
|  |  |  |  |
| HEALTH OCCUPATIONS |  |  |  |
|  |  |  |  |  |
| Dental Services |  |  |  |
| Assistant. |  |  |  |
| Hygienist (Associate Degree) . . . |  |  |  |
| Laboratory technician. |  |  |  |
|  |  |  |  |  |
| Others (list 2 |  |  |  |
|  |  |  |  |
| Medical Services |  |  |  |
| Cytology rechnician. . . . . . . . |  |  |  |
| Medical Labonatory Assistant . . . . |  |  |  |
|  |  |  |  |
| Nurse, Associate Degree. Prectical (Vocational) Nurse . . . . |  |  |  |
|  |  |  |  |

Hospital Food Services Supervisor Inhalation therapy technician. Medical X-ray Technician Optician
Sutician $\dot{\text { Sutal }}$ Phnician.
Surgical Technician. . . . .
Occupational Therapy Assistant Physical Thera

HOME ECONOMICS \& RELATED OCCUPATIONS Professional \& Managerial.
Care $\&$ Guidance of Children.
Home Furnishings, Equipment $\varepsilon$ Service Institutional and Home Management \&

Supporting Services. . . . . . . . Others (list)

OFFICE \& RELATED OCCUPATIONS Professional \& Managerial. Accounting and Computing Accounting and Computing - . - .
Business Data Processing Systems . Office Machines, and General office Clerical
Information Communication
Materials Support, Trensporting,
Storage and Recording. . . .
Personnel, Training and Related.
Stenographic, Secretarial and Related
Typing and Related
General Office Training. . . . . . . Others (list)

TRADES, INDUSTRIES \& REIATED OCOUPATIONS Professional \& Managerial.
Air Conditioning
cooling. . .
Heating.
Others (iist)

Appliance Repair $\cdot$. . . . .
Anchitectural Engineering Technician
Automotive
Body and Fender.
Mechanic
Others (list) . . . . . . . . .

Aviation
Maintenance
Ground Operations.
Others (list)




[^0]:    Eickoff, Ralph V. Sr., "An Inventory of Occupational Oppertunities in the Columbus Service Area" (1970). Theses, Dissertations, \& Student Scholarship: Agricultural Leadership, Education \& Communication Department. 34.

[^1]:    ${ }^{14}$ Nebraska Department of Agriculture, Nebraska Agricultural Statistics, Annual Peport, 1966, Preliminary 1967, State-Federal Division of Agricultural Statistics, Lincoln, Nebraska, pp. 82-83, May, 1968.

[^2]:    $18_{\text {Genereaux }}$ loc. cit.

