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OCCUPATIONAL EDUCATION AND TRAINING FOR TOMORROW'S WORLD OF  
WORK. NUMBER 6, BUSINESS, LABOR, AND OTHER PRIVATE PROGRAMS.

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BUSINESS AND INDUSTRY HAVE A LONG HISTORY OF DEVELOPING AND CONDUCTING TRAINING PROGRAMS. A 1962 U.S. DEPARTMENT OF LABOR SURVEY COVERING 710,662 ESTABLISHMENTS WHICH EMPLOYED FROM FOUR TO OVER 500 EMPLOYEES FOUND THAT ABOUT ONE-FIFTH HAD TRAINING PROGRAMS IN OPERATION. ADVANTAGES OF TRAINING PROGRAMS IN BUSINESS AND INDUSTRY ARE -- (1) THE TRAINING IS SPECIFIC AND JOB ORIENTED, (2) PRIOR VOCATIONAL TRAINING MAY NOT BE REQUIRED, (3) INDIVIDUALS MAY BE ROTATED THROUGH A SERIES OF PROGRAMS TO MATCH THEIR INTERESTS AND CAPABILITIES, (4) EQUIPMENT AND TEACHERS ARE AVAILABLE, AND (5) LEARNING AND EARNING CAN BE COMBINED. DISADVANTAGES ARE -- (1) TRAINING MAY BE TOO SPECIFIC, (2) AVAILABILITY OF TRAINING DEPENDS ON EMPLOYMENT, (3) SMALL FIRMS CANNOT AFFORD EXTENSIVE PROGRAMS, AND (4) SUCH TRAINING IS USUALLY CONCENTRATED IN METROPOLITAN AND INDUSTRIAL CENTERS. OTHER OCCUPATIONAL PROGRAMS INCLUDE APPRENTICE TRAINING, PRIVATE SCHOOL COURSES, HOME STUDY COURSES, AND THE WORK OF PRIVATE PHILANTHROPIC, RELIGIOUS, AND CHARITABLE ORGANIZATIONS, PARTICULARLY FOR THE HANDICAPPED AND DISADVANTAGED. OTHER DOCUMENTS IN THIS SERIES ARE VT 001 353 - VT 001 357. (EM)

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# OCCUPATIONAL EDUCATION AND TRAINING FOR TOMORROW'S WORLD OF WORK

NO. 6

A Series of Publications by the North Central Extension Public Affairs Subcommittee on Providing Occupational Education and Training Opportunities

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THE TASK of providing adequate occupational educational opportunities in every community challenges the best efforts of all of us.

Formal occupational programs in high schools, area trade and vocational schools, junior or community colleges and university programs have been discussed in other publications of this series. This publication directs attention to the numerous opportunities for occupational education available through business and industry programs, union apprenticeships, privately operated business and vocational schools, home study courses, and other programs offered by private organizations. Some or all of these opportunities may exist in your community.

Although the training programs of the Armed Forces are not discussed in this publication, they should not be overlooked as educational opportunities. All branches of the service list numerous occupational specialties, many of which relate to civilian occupations, which are open to trainees. Formal education may often be continued in the Armed Forces through colleges and universities, correspondence courses and group study programs.

It would be a mistake to think these private programs are unrelated to our public educational programs. Business and industry programs are actually continuing educational activities which build on or supplement formal education programs. Furthermore, schools and industry sponsor many cooperative programs. It seems reasonable to expect that many communities could develop additional occupational education opportunities by exploring new ways of combining the unique resources of business and industry with those of public education.

## Business and Industry

Business and industry have a long history of developing and conducting training programs. A large number of companies have educational programs designed to improve managerial ability and technical competence at the professional level. Many conduct safety education and general

company orientation programs. Organized training opportunities for skilled and technical workers are provided by a lesser number.

Cooperative work-study training programs with high schools, industry-union apprenticeship programs and a variety of cooperative arrangements with colleges, universities and industry-wide institutes greatly extend the range of training programs offered by industry to employees. Industry programs also exist in some communities to provide high school and college faculty with actual work experience in technical fields.

## Opportunities Vary With Company Size

The opportunities for occupational training in business and industry depend greatly upon the size of the company and the type of skill involved. A 1962 Department of Labor survey of 710,662 establishments in the United States employing from four to over 500 employees found that about one-fifth had training programs in operation. At that particular time, only about 7 percent of all employees covered by the survey were actually being trained. Recently, a large electrical company estimated that one out of every eight of its employees takes some course or training program during any one year. Another major company requiring high technical skills estimates 50 percent of all its employees were involved in some kind of training program last year. Retraining programs of one- or two-week duration each year are becoming more numerous as companies upgrade the competence of their employees in line with technological developments.

A survey of training programs of a sample of firms operating in the Midwest reveals a number of common characteristics. New employees are expected to possess an aptitude for learning the skills of existing jobs, and to have basic skills in English, arithmetic and communication (writing and speaking). Clerical and stenographic workers, and computer programmers and operators are usually not trained by the companies employing them but are hired as graduates from vocational or business schools.

All major companies have some system of orientation for new employees, often involving a few weeks of formal train-

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Fig. 1 — Thorough training in the mechanics of refrigeration (above) is typical of the training "from the ground up" provided by many industries for employees in many types of work.

ing. This orientation is usually coupled with actual work experience under supervision of a foreman or department head. Depending upon the position held, many new workers are rotated between several jobs to increase awareness of the company structure. This practice also allows the supervisor to assess the interests and capabilities of the new worker.

Because of their unique and highly technical nature, some firms, such as the telephone industry, are organized to train their employees (except stenographic) in the job they are expected to perform. As a result they are normally in the market for the "unskilled" individual who has the qualifications to learn a highly technical skill. The training of these workers takes the form of an initial period of occupational orientation followed by continuous training designed to either improve the employee's knowledge of his present occupation and/or to prepare him to assume different or greater responsibilities.

Training programs for most lower-skilled jobs usually consist of on-the-job training. This may be a formal program with some classroom instruction or informal work experience under supervision. As the technical nature of the job and the skills required become higher, training programs likewise become more intensive and specialized.

College graduation is generally required as a prerequisite for professional and management recruitment and further training. Some companies recruit under a centralized system with rotation of the new man through several departments for orientation and advanced training. Other companies recruit directly into a division such as engineering, manufacturing, marketing, finance and accounting, and research which may maintain a training program varying from a few months to several years in length. Some, as in engineering, have developed a program which will carry the employee through a Ph.D. Many companies take advantage of industry-wide institutes, seminars, and short-courses to train or retrain their professional or management staff.

**ADVANTAGES** of training programs offered by business and industry are: (1) training is specific and job-oriented, (2) prior vocational and technical training may not be required, (3) an individual can be rotated through a series of training programs within a firm as his interests and

capabilities develop, (4) expensive equipment and experienced teachers are readily available, and (5) learning and earning may be combined.

**DISADVANTAGES** are: (1) training may be too specific and narrow in nature, (2) availability of training depends upon employment, (3) many firms are not large enough to offer intensive programs, and (4) training centers for major firms are usually concentrated in metropolitan and industrial centers.

### Union Apprenticeship

Apprenticeship is usually distinguished from other on-the-job training programs of industry by the greater length of the training period and the formality of the program. Most apprenticeships are between two and four years in length, although some last as long as eight years. During this period the employer provides training and pays an arranged wage in return for the work of the apprentice.

At the end of 1962 there were 159,000 apprentices registered by the U. S. Bureau of Apprenticeship and Training. It was estimated that 50,000 to 55,000 more were in unregistered apprenticeship programs at that time. Three major trade groups account for nearly 90 percent of the registered apprentices in the United States. In 1962, of the total number, 65 percent were in the building trades, 15 percent were in the metal trades and 8 percent were in the printing trades. The remaining 12 percent were in a number of other trades, including butchers, cabinet makers, stationary engineers, etc. The following table gives the number of registered apprentices by state for the North Central region.

Despite the growing need for skilled workers and craftsmen, the numbers of registered apprentices in most trades have declined. Many large firms train their own skilled craftsmen and very few unions are strong enough, or interested enough, to insist that persons become journeymen only by serving an apprenticeship. Drop-out rates among apprentices in some trades are high due in part to the declining relative economic advantage of trained apprentices in the labor market, dissatisfaction with apprentice wage rates, and the length of time required in some apprentice programs.

Registered Apprentices by State,  
North Central Region\* 1964

| State        | Number per<br>100,000 non-<br>farm workers | National<br>Rank |
|--------------|--|------------------|
| MINNESOTA    | 443  | 8                |
| WISCONSIN    | 350  | 15               |
| NORTH DAKOTA | 323  | 22               |
| MICHIGAN     | 317  | 23               |
| ILLINOIS     | 283  | 26               |
| OHIO         | 273  | 27               |
| SOUTH DAKOTA | 273  | 27               |
| MISSOURI     | 231  | 36               |
| INDIANA      | 230  | 37               |
| NEBRASKA     | 222  | 38               |
| IOWA         | 215  | 41               |
| KANSAS       | 192  | 47               |

\* Adapted from: David E. Christian, "The National Apprenticeship Program; Unfinished Business", *Monthly Labor Review*, June 1964, Vol. 87, No. 6, p. 630.



Registered apprenticeship agreements usually cover the following areas which should be investigated further by prospective apprentices:

1. Apprenticeship entrance qualifications
2. Apprenticeship term
3. Probationary period
4. Work schedule
5. Related school instruction
6. Hours and working conditions
7. Wages
8. Examinations
9. Apprentice-journeyman ratio

### Private Schools

Hundreds of private business, technical and vocational schools operate in the North Central region, providing occupational training for thousands of youth and adults. Some idea of the magnitude of occupational training offered in this manner may be gained by looking at the Illinois situation which would be representative of many other industrial states. Schools of this nature tend to be concentrated in or near metropolitan and industrial centers and therefore would be less numerous in more rural and sparsely settled states.

In 1964, there were 84 private business schools in Illinois certified by the Office of the Superintendent of Public Instruction. Of this number, nearly two-thirds were in the Chicago metropolitan area. The remaining schools were located in about a dozen of the larger cities in the state. These schools were all privately owned and operated, and offered business courses for which tuition was charged in such subjects as the following:

|                                |                         |
|--------------------------------|-------------------------|
| typing                         | salesmanship            |
| filing and indexing            | personality development |
| shorthand (manual and machine) | leadership training     |
| receptionist's duties          | real estate             |
| key-punch                      | public speaking         |
| teletype                       | insurance               |
| penmanship                     | traffic management      |
| book-keeping                   | business psychology     |
| accounting                     | economics               |
| office machines                | business management     |
| business arithmetic            | other related subjects  |
| English                        |                         |
| business letter writing        |                         |

An even more comprehensive listing of private, technical and vocational schools operating in Illinois is given in the *Directory of Public and Private Educational Institutions in Illinois Offering Approved Courses for the Training of Veterans and War Orphans* (September 1962). Over 150 schools in nearly 50 categories of subject matter are listed in this directory. The categories range all the way from wig-making to medical secretary, from earth-moving equipment schools to linotype operation, and from practical nursing to professional modeling. Seventeen schools are listed under aeronautical education and training, 14 under barbering, 22 under beauty culture, 5 under practical nursing, and of course a large number are listed under accounting, book-keeping, commerce and stenography.

A person interested in learning what private business, technical and vocational schools are available in his community can obtain information by contacting his state department of public instruction. Because of the number and variety of such private schools, prospective students should exercise considerable caution in selecting a school. State offices of public instruction, Chambers of Commerce and Better Business Bureaus can assist in evaluating the offerings of schools.

These private schools make a definite contribution to occupational training in many fields. Courses are usually specific and practical. The primary objective is employability of the graduate; and very often employment, as noted in the preceding section, leads to further training and specialization within the business or industrial firm. Some courses lead into private business ventures and a few may result in development of hobbies.

### Home Study Courses

Training through correspondence courses is not a new venture. Many colleges and universities have a long history in correspondence education. However, the rising demand in business and industry for trained and trainable employees at all levels and in all fields—managerial, administrative, technical and clerical—has stimulated an interest in many kinds of home study courses. Sixty-five private home study schools offering well over 250 study subjects have been accredited by the National Home Study Council for 1964-65. The Council reports, from its 1963 study of institutions offering home study instruction, that the Federal government and the military services had 2,345,000 persons enrolled in home study instruction, private accredited schools had 740,000 and non-accredited schools providing information reported an enrollment of 823,000. Universities enrolled 182,255 in home study courses; religious denominations showed enrollments of 157,000; and industry reported 7,000. Another recent extensive survey conducted by the National Opinion Research Center under a Carnegie Corporation grant showed that nearly nine million adults are involved in study outside the classroom.

Numerous advantages are claimed in support of private home study courses:

1. Provide schooling for those unable to attend the classes because of physical handicaps, economic need or other reasons
2. Provide schooling for those who have dropped out of school
3. No time is lost from work day
4. Courses are specific and concentrated
5. Age is no barrier
6. Each student can learn at his own rate
7. Can be tied into an in-service training program in business and industry.

Home study courses have certain limitations which must be taken into account:

1. Some students need a teacher and classroom stimulation in order to learn.
2. Lack of classroom equipment, visuals, etc., may be a serious handicap.
3. Caution must be exercised by selecting home study schools that are accredited according to a rigorous educational standard.