

Vocational Training For Defense*

ALMOST IMMEDIATELY following the initial announcement that the country was going to embark on a defense program came simultaneous demands for workers from all parts of the country and from a great variety of industries. Almost overnight, some communities which were experiencing widespread unemployment found their supplies of certain types of workers exhausted. The initial demand was not general, but rather directed mainly to occupations in the metal trades and other skills which are peculiar to armament production. Supplies of such workers are, even under favorable employment conditions, fairly limited. Because of the unstable character of the industries employing such workers, many had shifted from this type of work into other occupations.

The machine-tool industry, for example, a "prince and pauper" among the durable-goods industries, had not, except for the year 1937, operated at anywhere near capacity since the late 20's. The shipbuilding industry had been inactive for years, and shipbuilding workers had sought other outlets for their skills. The aircraft industry, even though expanding prior to the defense program, was producing relatively few planes, with a handful of workers. Ordnance had not been produced for years in any quantities, and workers equipped with the skills utilized in this industry had long since transferred to other industries. In other words, the very industries which were expected to make the greatest contribution in the way of defense materials were the ones in which supplies of labor were limited. Consequently, shortages of such workers as loftsman, coppersmiths, instrument makers, all-around machinists, die makers, tool designers, ship fitters, ship riggers, and a host of aircraft occupations, were bound to occur almost from the outset of the program.

Under the circumstances, it was obvious that other means would have to be utilized in order to augment the supply of workers who might be obtained through ordinary recruitment processes. This was recognized in the action taken by Congress in June 1940, when it appropriated \$15 million, supplemented by \$60.5 million in October,

*Prepared in the Division of Research and Statistics, Bureau of Employment Security. Regular monthly data on vocational training activities are inaugurated in this issue of the Bulletin (see pp. 52-53).

for a training program to be conducted under the supervision of the United States Office of Education. In July 1941 another appropriation of more than \$100 million was made to continue the program for a second year.

The present emergency does not allow time for the training of inexperienced workers as machinists, coppersmiths, boat builders, and ship fitters, for example, all of whom require a lengthy apprenticeship. Public vocational schools, however, are equipped to provide effective refresher training for large numbers of skilled workers whose skills had become rusty from disuse during the depression years. In addition, by giving supplementary training to employed workers to facilitate upgrading and pre-employment training to others, coupled with an extensive simplification of job skills that would relieve the pressure of demand for highly skilled workers, the training program provides workers who can step into the less skilled occupations. If this training can be given outside of the plants, interference with production may be avoided. Otherwise, the same kind of training might be given in the shops.

In a great many instances, the trainee emerging from the vocational education courses with a knowledge of blueprint reading, use of micrometers, and shop mathematics, is only less green than the greenest hand in the shop. He may be qualified to do no more than the most elementary of jobs around the plant, but even so, he is of much greater value to the employer and his production is speeded up at a considerably greater rate once he goes to work than if he entered the plant without any prior training. On the other hand, many trainees are fairly well equipped to perform simple jobs when they complete training in welding, riveting, or sheet-metal work.

The result of the training process is to convert large segments of our untrained labor reserve into workers with some skill. Skill-rusty workers have been returned to their skilled occupations and others have been retrained to do work for which there is a greater demand. Clerical and service workers, for example, have been trained for production jobs.

Training within industry has also been greatly stimulated by the shortage of labor. Plants have

been giving training not only to new entrants and unskilled help, but also to their more experienced workers so that they might undertake more highly skilled jobs. While the numbers receiving in-service training may be less than those trained outside of plants, the importance of such training cannot be minimized. It is an integral part of any well-rounded training program.

In June 1941, nearly 2 million more workers were employed in manufacturing industries than a year earlier—one of the largest net gains in employment in this period on record. Prospects are that equal or greater gains are likely for the next 12 months. The demand for certain types of workers continues to outstrip by far the existing supplies. Reports from public employment offices in April 1941 indicated that shortages were exceptionally acute for most aircraft, metal-trades, and shipbuilding occupations. In May, 10,000 employers in a selected list of 26 defense industries reported to representatives of the State employment services that they would need a minimum of 478,000 additional workers. The aircraft industry alone itemized the need for 108,000 workers between May and October 1941 and shipbuilding concerns, exclusive of Government shipyards, evidenced requirements of at least 98,000 workers. Among the outstanding demands were those for 28,000 machinists, 10,500 engine-lathe operators, 11,000 aircraft sheet-metal workers, 12,000 arc welders, 9,800 floor assemblers, and 16,000 detail assemblers. Needs for many other occupations during this brief period extend into the thousands. With supplies already drastically reduced, training emerges as one possible solution to the problem of meeting these needs.

The Defense Vocational Training Program

While training during the World War period was conducted chiefly by industry through "vestibule schools" in plants, training in the present emergency has thus far been largely a public function. The need for training vast numbers of workers to make our defense program effective was translated into action through a congressional appropriation in June 1940 of \$15 million to open the public vocational schools for short summer courses in occupations essential to defense industries. When first planned, the courses were intended mainly to refresh the skills of unemployed

persons who had had previous training, work experience, or particular aptitudes and to give supplementary training to employed persons so that they might be equipped to assume more highly skilled jobs in defense industries.

In October 1940, the initial appropriation was supplemented by \$60.5 million, and the original program was expanded to a more comprehensive fourfold plan. This program provided for (a) continuation of the original pre-employment refresher and supplementary courses, (b) intensive full and part-time engineering courses, (c) training of out-of-school rural and nonrural youth, and (d) training of young people employed on work projects of the National Youth Administration. The original estimates made by the United States Office of Education of the number of persons to be trained during the fiscal year 1940-41 were: pre-employment refresher, 250,000; supplementary, 350,000; out-of-school rural and nonrural youth, 205,000; NYA enrollees, 100,000; and engineering, 100,000. Developments, however, proved these estimates to be too low.

The Government also expanded its Federal Committee on Apprenticeship in the Department of Labor and established a new Training Within Industry Division in the Office of Production Management to stimulate training by industry; their functions are discussed in detail elsewhere in this article.

The national defense vocational training program is financed by the Federal Government and administered by the United States Office of Education through the respective State boards for vocational education. On March 27, 1941, the Federal Security Administrator appointed Frank J. McSherry as Director of Defense Training, to direct and supervise both the training programs carried on by the Office of Education and the defense projects of the NYA.

Although vocational training is basically a function of the States, a State must nevertheless submit its plan for approval to the United States Commissioner of Education before it can qualify for funds to participate in the program. This provision does not apply to the engineering training program, which is solely an arrangement between the Office of Education and the cooperating engineering schools. All State and local defense training programs, with the exception of NYA work projects, are subject to inspection by

the Office of Education and also, more recently, by special agents attached to the staff of the Director of Defense Training.

Within the respective States, State boards for vocational education are responsible for the conduct of the program and, with the advice and counsel of advisory committees, determine and approve the courses to be given. The advisory committees exist at both the State and local levels and consist of an equal representation from labor and management groups, with occasional representation of agriculture in the out-of-school rural and nonrural youth program.

Representatives of other groups interested in the training programs are also included as consultants. These committees contribute materially to the success of the program, since they are generally composed of representative individuals acquainted with the problems and needs of a community or State.

In order to coordinate more effectively and efficiently the activities of the various participating agencies, State and local councils of administrators were recently established. These councils, on the State level, consist of one representative each designated by the State boards for vocational education, the State administrators of the NYA, and the State employment security agencies. The State councils are responsible for the establishment of similar councils with like representation and functions in each local community conducting defense training.

An even more recent development is the establishment of a Labor Supply Branch in the OPM Labor Division. This branch coordinates the activities of various governmental units associated with training and other phases of labor supply. Operating under the Labor Supply Branch are 12 regional labor-supply committees. The regional representatives of the Bureau of Employment Security act as the chairmen of these committees. Problems created by the demand for workers in the region are handled by these committees, frequently on an individual plant basis.

The following types of publicly conducted or financed training are available to persons wishing to prepare for employment in defense industries.

Pre-employment and supplementary training.—Pre-employment refresher training courses were originally intended to refresh the skills of men

who had not worked at their trades for a number of years. Because the supply of prospective trainees with skills requiring retraining is rapidly dwindling, these courses are gradually turning into courses for inexperienced youth. They are open to unemployed persons of employable age with previous training or work experience or with particular aptitudes which make possible rapid training for jobs in defense industries. All applicants must be selected from public employment office rolls.

To improve the private employment opportunities of Work Projects Administration workers, all of whom are registered with the employment offices, an arrangement has been made whereby, whenever possible, one-half of those selected are from WPA lists. Those chosen from WPA rolls are paid by that agency while being trained. The procedure, therefore, has developed into one whereby trainees are requisitioned by the vocational schools from the public employment offices and the WPA in equal proportions, the schools having the final word on whether the persons referred by these agencies are qualified for training. Classes generally run from 8 to 12 weeks but may vary according to the nature of the work for which training is being given or with the ability of the individual trainee to assimilate the instruction.

Supplementary training, another phase of the program, is directed primarily toward teaching employed workers additional skills which would qualify them for promotion to higher-grade jobs in defense industries. Enrollment is limited to persons employed in occupations essential to national defense. Supplementary training courses are initiated at the request of an employer or trade-union. This type of training is a boon to employers who anticipate a need for upgrading their workers because of scheduled employment expansion but do not have the facilities to conduct their own training courses. Also included as supplementary courses are classes conducted for army cooks, radio operators and mechanics, and other personnel of the armed forces.

Three new fields of training activity were opened by the supplementary appropriation of October 1940 and included:

Training of NYA youth.—This field is restricted to young people employed on NYA work projects. Until recently, vocational training was offered for any occupation requested by NYA authorities,

and no distinction was drawn between defense and other occupations. Since inauguration of a more intensive training program on July 1, 1941, the NYA distinguishes between its defense and non-defense work projects. Related training for the defense projects is now restricted to the occupations approved by the OPM as essential to national defense. Training for nondefense occupations continues as a separate phase of the program for training NYA project workers.

Out-of-school rural and nonrural youth.—This part of the program extended training to out-of-school rural and nonrural youths over 17 but less than 25 years of age. Out-of-school youth defense training is intended to create a reservoir of youth with preliminary training who may go into national defense industrial employment as the occasion demands, or who may be better qualified to serve agriculture as it becomes increasingly mechanized. These courses also serve as devices for the selection and guidance of individuals into advanced or specific training courses. The enrollees are selected by local school authorities and must register with a public employment office on or before completing their training. Originally, two major types of courses were offered: (1) general pre-employment courses, which offer basic vocational instruction in occupations common to farm work but also basic to defense industry, such as operation, care, and repair of tractors, trucks, and automobiles, metal work, woodworking, and elementary electricity, including operation, care, and repair of electrical equipment; (2) specific pre-employment preparatory courses which provide training in specific occupations, such as riveting, welding, various machine-shop occupations, aircraft sheet-metal work, and radio service and repair. The minimum duration of the courses is 8 weeks. On July 1, 1941, the specific pre-employment courses were disassociated from the out-of-school youth program and incorporated in the pre-employment and refresher program.

Training of engineers.—This program represents still another plan designed to overcome the shortages of qualified workers in defense industries. Instruction is given in accredited engineering colleges and universities and is comparable in grade to that given to regular engineering-school students. The emphasis, however, is on short, intensive training in highly specialized phases rather than general instruction in the profession.

The nature of the courses offered is determined on the basis of demonstrated needs. Both employed and unemployed persons are eligible, and application for enrollment is made directly to the institution in which training is desired. The final selection is made by the institution concerned, subject to specified standards for each course approved by the United States Commissioner of Education. The Employment Service often aids in the recruitment of applicants, as well as in placement of persons who have completed the course. At the beginning of the fiscal year 1941-42, the engineering program was expanded to provide training for chemists, physicists, and production supervisors.

Training by industry.—In addition to sponsoring and financing public courses, the Federal Government is encouraging industry to expand its own training activities. This particular field of training is of special significance, because in the last war it was proved the most effective means of rapidly training defense workers. Moreover, management is in the most advantageous position to train workers, because it has at its disposal not only the necessary training facilities, equipment, and instructors but also the best possible training material—the workers in its plants. Foreign experience has also shown this kind of training to be most effective.

At the start of the present emergency, industrial training was undertaken on a relatively small scale. Realizing the implications of the defense program in terms of vast prospective demands for qualified labor and the need to awaken industry to the importance of training as a means of satisfying its own future requirements, the OPM established the training-within-industry program. Its express purpose is "to assist defense industries to meet their manpower needs by training within industry each worker to make the fullest use of his best skill up to the maximum of his individual ability, thereby enabling production to keep pace with defense demands."¹ Upon specific request of an employer, representatives of the Training-Within-Industry Division will go into a plant to analyze the training needs, formulate and suggest an appropriate training program, make available the experience of other employers who have met similar problems, and acquaint the management

¹ Office of Production Management, Labor Division, "Training Within Industry," Bulletin No. 1, p. 1.

with the services available at various public agencies, such as public employment offices, vocational schools, engineering colleges, NYA, CCC, WPA, and others, which might be of assistance in overcoming problems of obtaining labor. These services are offered without charge, and employers may either accept or disregard any suggestions made to them. The initiative for starting a plant training program and the cost of such a program are left entirely to industry.

The field representatives of the Division are competent and experienced supervisors or personnel men lent to the Government by key defense industries. Underlying their operating technique is the belief that the most efficient and rapid means of satisfying the need for qualified skilled workers is to use the shortest method possible, namely upgrading. By this means a worker proficient in a skill a grade below that required can be trained in a minimum of time to meet the requirements of the higher skill. There is also the conviction that training is most fruitful when aimed at developing a worker's skill on one particular operation so that high production can be achieved in a minimum of time. In addition to suggesting which jobs are most adaptable to upgrading methods, the field representatives also consider the possibilities of breaking down highly skilled operations into component tasks for which comparatively less skilled workers can be quickly trained. As of June 15, 1941, the training-within-industry program had stimulated or affected training programs in 892 companies employing a total of 1.5 million workers. Long-term apprentice training is also suggested.

Another Government agency which plays an important part in the defense training program is the Apprenticeship Unit of the Division of Labor Standards, United States Department of Labor. In the summer of 1940, the National Defense Advisory Council assigned to this agency responsibility for the apprenticeship phase of the in-plant training program, and during the past year the apprenticeship field staff has been greatly expanded to meet constantly increasing demands from both management and labor for assistance in setting up apprenticeship systems in defense industries. It has worked closely with the training-within-industry program. Because the emergency emphasizes importance of apprenticeship in the metal trades, aircraft, and shipbuilding,

national specialists on training workers for these industries have joined the staff of the Apprenticeship Unit.

A functioning unit since 1934, the apprenticeship agency was brought into the Department of Labor by an act of Congress in 1937 and was made permanently responsible for the promotion of apprenticeship on a Nation-wide basis and for the establishment of standards to ensure sound trade training for the country's future skilled mechanics. The Federal Committee on Apprenticeship—on which outstanding employer and labor representatives serve in equal number, together with representatives of interested Government agencies—has continued as a national policy-making body, with the Chief of Apprenticeship as secretary.

In May 1940, there were approximately 500 apprenticeship programs operating under standards approved by the Federal Committee on Apprenticeship. Today there are more than 1,000 such programs, the majority of which operate through joint apprenticeship committees on which management and labor are represented. Apprentices are being employed at an increase of approximately 3 percent per month. Their number now totals 51,000, an increase of 30 percent over the past 6 months.

Role of the United States Employment Service

The original responsibility of the United States Employment Service in connection with the defense training program was largely one of selecting trainees for referral to pre-employment refresher courses and finding jobs for the graduate trainees. Almost immediately, however, the scope of the organization's responsibility was broadened until at present, as a constituent agency of the Labor Supply Branch, it plays a crucial role in meeting the entire labor-supply problem of the country.

The Employment Service finds itself in this strategic position because of several factors. Through its function of registering applicants for jobs and for unemployment benefits, it has in its files the employment records of millions of workers. Since the present organization was established, more than 108 million applications for work have been handled by the local employment offices. Even with liberal allowance for duplicate applications, vast numbers of employment records of different workers are available in these files. The

number of persons actively seeking work through these facilities represents the most comprehensive reservoir of labor that can be readily tapped.

In order to obtain current information on the labor supply available with given defense skills, monthly surveys of the application files are made. To supplement this information, surveys are conducted in defense plants, which indicate their labor needs, specified by occupations, for 6 months ahead. In addition, monthly reports describing developments in the State and its localities, which have a bearing on the current and prospective labor supply or demand, are received from the State employment offices. When these data are related, it is possible to get a composite picture of the labor market which reveals the number of workers with skills in essential defense occupations who are or will become available, and the number and occupations of the workers who are or will be needed by defense industries. To both employers and public training authorities, this information serves as a fairly accurate indicator of the need for training workers to supplement the available supply and also the occupations for which training should be given.

Because the Employment Service occupies a strategic position in local communities, it was originally directed to act in an advisory and consultative capacity to State and local advisory committees on defense vocational education. Under a recent agreement, however, its responsibilities were broadened even further. At present, it is responsible for determining and defining the need for training to the State and local councils of administrators, the number of workers needed, when they are needed, and the occupational requirements to be met by trainees for employment. The Employment Service must also keep all councils of administrators currently informed on labor demand and supply and other labor-market developments. Since it is represented on all councils, the Employment Service is also charged with reviewing and advising on pre-employment and refresher training proposals submitted by other sources.

The Employment Service activities in the field of occupational analysis may also be expected to contribute to more effective operation of the training process. The recent development, in cooperation with the Office of Education, of a list of 550 occupations, subsequently approved by the OPM,

for which training may be given, to replace 14 broad industrial classifications under which training has heretofore been given, makes possible more exact coordination of training and labor demand. Instruction can be geared to the specific skills that are in demand, as indicated by the Employment Service records.

Other aids which are being developed pertain to job analysis and occupational information. The Employment Service is constantly improving job information and trade tests to make possible more accurate appraisal of workers' occupational knowledge and skills; using these, it is possible to judge the type and extent of training that will be required to upgrade the worker. An additional section is being added to the *Dictionary of Occupational Titles* which will provide a classification structure for inexperienced or partly qualified workers and which will assist in the selection of such workers for training, either in special courses or on the job.

The Employment Service can also assist in counteracting local shortages of trainees. This problem would be difficult to cope with if it were necessary for trainees, who are generally unemployed and without financial resources, to leave home and take unpaid training elsewhere. However, where workers have been trained in their home communities, the Employment Service can arrange to refer them through clearance to jobs in localities which need them. An example of this type of arrangement is furnished by a large Baltimore aircraft concern which intends to employ thousands of trainees this year. Relatively few trainees are available in the area, and the number that can be attracted from other parts of the State is insufficient. The State director of one State employment service, therefore, is now working out plans with representatives of the United States Employment Service and school authorities in adjoining States for the establishment of vocational training courses to be given to individuals who are willing to go to Baltimore to work. Local supplies of trainees must be exhausted, however, before other areas are called upon to furnish trainees.

Finally, the Employment Service is responsible for the fulfillment of the principal objective of the entire training program—referral of trainees to jobs upon completion of training.

Progress of the Vocational Training Program

The initial estimates of enrollment have been exceeded in all fields of training. As of June 30, 1941, the total number of enrollments reported since the beginning of the program was estimated by the United States Office of Education to be: pre-employment refresher, 400,000; supplementary, 400,000; engineering, 110,000; out-of-school rural and nonrural youth, 300,000; and NYA, 250,000.

Table 1.—Number of persons enrolled in pre-employment refresher and supplementary training courses, by type of course, July 1940–June 1941

Training course	In pre-employment refresher courses	In supplementary training courses
Total.....	400,000	400,000
Automotive services.....	27,200	20,700
Aviation services.....	90,400	101,000
Construction.....	7,200	7,400
Drafting and blueprint reading.....	17,200	65,200
Electrical services.....	14,800	18,400
Forging.....	2,400	600
Foundry.....	4,400	1,400
Machine shop.....	130,800	100,700
Patternmaking.....	8,000	9,200
Radio services.....	4,000	8,000
Sheet-metal work.....	17,200	10,100
Ship and boatbuilding.....	11,200	34,700
Welding.....	40,000	46,000
Woodworking.....	4,800	2,300
Other.....	10,800	41,900

Detailed information on enrollments by type of course for the pre-employment refresher and supplementary training programs is shown in table 1. According to the United States Office of Education, more than 145,000 trainees from pre-employment refresher courses are known to have found employment as of June 30.

More detailed but less comprehensive data, collected by the United States Employment Service in connection with its participation in the pre-employment refresher program, are available on the age of persons referred for training or placed in jobs, enrollment by type of course, bases for selection of trainees, and other aspects. Since these data cover only United States Employment Service activities and since comparable data are not available from other cooperating agencies, it is not known to what extent the experience of the Employment Service is representative of the over-all defense vocational training program. Nevertheless, an appraisal of this experience reveals a number of fairly well-defined trends which may well be typical of the entire program.

During the first 12 months of the training program—July 1940–June 1941—nearly 205,000 applicants referred by the public employment offices were accepted for training in pre-employment refresher courses (table 2). There has been a generally marked increase in referrals in recent months, reflecting primarily a growing recognition of the urgent need for expanded training activities to satisfy requirements of booming defense industries.

Machine-shop courses have attracted nearly one-third of all persons referred; large numbers have also been enrolled in aviation services, sheet-metal work, and welding classes. This concentration is natural, since the skills taught in these courses have been in greatest demand in defense industries.

There has been a fairly steady increase in the proportion of referrals of persons under 25 years of age and a decrease in those aged 25–44 years. This change is probably due, in some measure, to the fact that the older workers who are generally more experienced and better qualified are being absorbed more readily by expanding industry, leaving fewer available for training. For certain types of work young people are considered more suitable for vocational training.

Paralleling and undoubtedly responsible for the greater acceptance of younger applicants has been the steadily increasing reliance by public employment offices on aptitude as the basis for selection of trainees (table 3). Aptitude in itself implies

Table 2.—Number of applicants referred by public employment offices to pre-employment refresher courses and percentage distribution by age group, by month, July 1940–June 1941

Year and month	Number of referrals	Percentage distribution by age groups (years)					
		Total	Under 21	21–24	25–44	45 and over	Un-specified
July 1940–June 1941.....	204,872	100.0	26.9	23.6	38.4	0.0	5.1
1940							
July–August.....	20,000	100.0	21.5	18.4	22.2	8.5	37.4
September.....	12,700	100.0	21.3	21.8	40.2	6.8	3.9
October.....	12,052	100.0	22.8	27.8	42.7	6.7	0
November.....	9,048	100.0	24.3	24.0	43.9	7.2	0
December.....	10,421	100.0	24.9	25.4	43.8	5.9	0
1941							
January.....	17,004	100.0	24.3	20.4	43.4	5.0	0
February.....	18,009	100.0	20.3	20.5	41.8	5.2	.2
March.....	21,304	100.0	20.9	27.3	40.0	6.8	0
April.....	23,130	100.0	23.5	23.9	41.5	0.1	0
May.....	22,664	100.0	23.0	25.0	38.6	7.8	0
June.....	20,088	100.0	30.9	21.2	35.3	6.6	0

† First report covered activities during July and August.

little more than an inclination for or natural leaning to a certain type of work; actual experience is generally lacking. The combination of these factors is usually characteristic of youth. Another reason for the increasing use of aptitude as a measure for selection of trainees is the dwindling supply of potential trainees who possess previous training or work experience.

There has also been a fairly rapid gain in the number of trainees placed by public employment offices in regular jobs. Placements, including those of trainees from pre-employment refresher courses, regardless of the agency referring them to training, totaled nearly 44,000 through June 1941 (table 4).

Of the trainees placed by public employment offices, over two-fifths had been trained in machine-shop work and over one-third in aircraft services; shoot-metal and welding courses were the only others from which any appreciable number of trainees were placed. To date, nearly 90 percent of the training placements have been made in jobs corresponding to the training taken.

There has been an increasing tendency among employers to favor the older trainees when hiring, probably on the assumption that older men are more likely to have had some previous experience.

While figures given indicate definite progress of the program, there have been certain inevitable difficulties and obstacles to overcome and criticism on a number of points. Some communities have been unable to establish appropriate training pro-

Table 3.—Percentage distribution by basis of selection of applicants referred by public employment offices to pre-employment refresher courses, by month, July 1940–June 1941

Year and month	Percentage distribution by basis of selection				
	Total	Aptitude	Previous experience	Previous training	Unspecified
July 1940–June 1941	100.0	50.2	25.1	19.5	5.2
1940					
July–August ¹	100.0	25.9	21.2	15.5	37.4
September	100.0	38.3	31.5	23.2	4.0
October	100.0	46.7	32.1	21.2	0
November	100.0	48.5	28.3	23.2	0
December	100.0	50.1	30.1	19.5	.3
1941					
January	100.0	50.8	29.0	19.0	.3
February	100.0	53.7	26.0	19.0	.1
March	100.0	57.3	24.4	18.3	0
April	100.0	57.8	23.0	19.2	0
May	100.0	50.2	23.3	17.5	0
June	100.0	58.6	19.5	21.9	0

¹ First report covered activities during July and August.

Table 4.—Number of trainees placed by public employment offices from pre-employment refresher courses and percentage distribution by age group, by month, July 1940–June 1941

Year and month	Number of trainees placed	Percentage distribution by age groups (years)					
		Total	Under 21	21–24	25–44	45 and over	Unspecified
July 1940–June 1941	43,768	100.0	27.1	28.2	38.6	4.8	1.3
1940							
July–August ¹	1,260	100.0	27.1	18.3	9.3	.0	44.7
September	1,908	100.0	41.1	20.4	27.1	2.4	0
October	1,923	100.0	39.1	20.6	31.2	2.8	.3
November	2,864	100.0	34.1	20.2	33.2	3.5	0
December	3,377	100.0	31.2	27.3	30.4	4.8	.3
1941							
January	4,117	100.0	24.7	32.4	38.0	4.8	.1
February	4,825	100.0	22.7	32.2	40.6	4.5	0
March	5,073	100.0	23.1	20.2	42.8	4.9	0
April	5,630	100.0	24.8	27.0	41.6	6.0	0
May	6,651	100.0	22.7	25.0	45.1	5.0	.7
June	6,128	100.0	29.0	27.0	38.0	5.4	0

¹ First report covered activities during July and August.

grams, because they lacked adequate training facilities, equipment, and instructors; in others, persons have been trained without adequate regard to defense labor requirements. The gearing of training to specific needs is being aided materially through the participation of local employment offices.

That employers are generally satisfied with the results of the training program is shown by the fact that they frequently hire trainees even before they complete their courses. For example, from Indiana comes the report that there is such a demand for trainees in Indianapolis that industry is hiring most of the trainees before they complete their full period of training. This situation, however, may be confined to areas where labor shortages are acute or where employers intend to hire learners and appreciate the fact that trainees are better qualified than completely untrained workers. Generally, when such trainees are hired, the employers follow through with some sort of in-plant training. Additional training on the job is usually the rule, even with trainees who have completed their courses.

The growing tendency to adapt courses to meet the needs of specific companies will undoubtedly improve not only the quality of the training but the prospects of employment for the trainees. There has been an increasing amount of cooperation between employers, the United States Employment Service, and vocational training authori-

tics. Generally, employers inform the Employment Service of their anticipated labor needs and the occupational functions required of the prospective employees; knowing these facts, the Employment Service informs the schools, which are then able to meet clear-cut objectives in formulating their training courses. The value and success of this type of cooperation is reflected in a labor-market report from Kansas which states: "Representatives of the national defense training course in Wichita conferred with personnel directors of all aircraft factories, and the vocational school is now training men in specific occupations needed in the factories; 2,000 trainees from the school are now working in the factories." Another report, from New York, indicates a similar situation: "Training courses are being given at 10 high schools in Nassau and Western Suffolk Counties. Each school is run for a particular plant. The instructors are supplied by the plant. The opening of 3 aviation centers at Lynbrook, Freeport, and Bay Shore is expected . . . Like the high schools, each aviation center will be run for a specific plant with instructors supplied by the plants."

Shortages of applicants for courses are developing as a hindrance to defense training efforts in some areas. In many large industrial centers where employment opportunities have expanded enormously, many workers who ordinarily would be expected to take training accept immediate job opportunities instead of enrolling in training courses. From the Baltimore area, where intense industrial activity has absorbed a large portion of the employable workers, comes word that shortage of the kind of trainees wanted by local firms is next in importance to shortage of skilled workers. Reports from employment service offices in other States indicate a similar situation. Michigan reports: "The pre-employment refresher

training program is hampered in a few localities by scarcity of suitable trainees." A South Carolina report states: "One difficulty . . . is the scarcity of eligible trainees for referral to ship-building courses. Since opportunities for employment are very good in this area, workers would rather accept jobs at low pay than spend the required training period without income." Reports such as these will undoubtedly become more numerous as industry continues to expand. The clearance system of the United States Employment Service, however, should be able to provide some relief by making possible the transfer of workers trained in areas of little defense activity to areas where stringencies are felt.

Racial restrictions established by employers have seriously limited the employment opportunities of certain minority groups of trainees. The restrictions also tend to limit the number of courses offered to persons from these groups. Such restrictive factors are no different from those which exist throughout the country with respect to the hiring of even skilled workers. As labor stringencies become more acute and the OPM policy of nondiscrimination makes itself felt, employers may modify, at least to some extent, their discrimination against minority groups.

Because only a year has passed since the inception of the defense training program, its total effectiveness cannot yet be fully measured. However, some indication of its importance may be gathered from a recent statement by Mr. Sidney Hillman: "Thus far, with local exceptions, it may be said that no wheel in defense industry has failed to turn for lack of the properly qualified man. Continuation of this situation depends . . . upon the adequacy and constant improvement of the arrangements thus far devised to make a trained labor supply available to all defense industries wherever located."