

TIME MAGAZINE

Education: Fastest-Growing Army

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One of the biggest jobs so far undertaken in democracy's defense is the training of the U.S. industrial army, the world's fastest-growing force. In a year the nation's schools and workshops have given training to 1,500,000 men and women for defense jobs. A measure of their achievement: during the 18 months of World War I U.S. vocational schools trained 65,000. But the big problem is still ahead: training men for the new defense plants still under construction—particularly shipbuilding and aircraft—now that the national reserve of skilled labor has already been drained nearly dry.

Major credit for the work so far done goes to quiet, wiry little Floyd Wesley Reeves, director of labor supply and training under Sidney Hillman. Born on a South Dakota ranch, a crack distance runner in high school and college, he is now technically a professor of educational administration at University of Chicago. He went to Washington on leave as chairman of the President's Advisory Committee on Education in 1936, has been there ever since.

Work Done. Dr. Reeves's big job was to get different agencies steamed up for defense job training and keep them running at full speed without getting in one another's way. Chief cogs in his training machine:

Public Trade Schools, supervised by the U.S. Office of Education, have given short courses to more than 1,000,000, besides enrolling a record 760,000 in full-time courses. About half their special trainees were green or rusty hands, half were employed mechanics improving their skill. Working hand in glove with factories, which lent teachers, the schools by last week were sending 70% of their graduates directly to jobs.

Engineering Colleges (138), by means of quick courses, have retrained 110,000 engineers for defense work.

National Youth Administration has more than 400,000 youngsters enrolled in its 4,300 workshops, sends them to jobs at the rate of about 25,000 a month. In their own shops, housed in deserted factories and equipped with secondhand machinery, NYA enrollees make army cots, tool chests, torpedo parts. Last year they built six airports,

improved 14. A big NYA expansion is slated next year; its budget will be \$151,000,000, up 50%.

Civilian Conservation Corps has 250,000 in training for a wide variety of defense jobs, from cooking to truck driving. With the nation's largest unit (500,000) of trained fire fighters, CCC is ready for incendiary bombs.

Work Ahead. This done, Dr. Reeves well knew that his job had just begun. Aircraft and shipbuilding alone need 500,000 more workers in the coming year. While peacetime industry requires that 25% of its man power be skilled, defense industry needs 37.5% skilled. To speed the production of skill, Dr. Reeves and his assistants have created a new alphabetical agency: Training Within Industry (TWI).

Each workman is taught a slightly higher skill right on the job. Thus by easy stages unskilled workmen become semiskilled, semiskilled become skilled—and they produce while they learn. To help him run this system (called upgrading) Dr. Reeves drafted as assistants Socony Vacuum's Industrial Relations Manager Channing R. Dooley and Western Electric's Walter Dietz.

How upgrading works was spectacularly demonstrated by Glenn L. Martin and Wright aircraft plants. Two years ago the Martin plant near Baltimore had 3,500 workers when it was suddenly swamped with rush orders that required 10,000 more. The company got Baltimore schools to increase their courses, set up classes in its factory, in ten months had its 10,000. By last week Martin had 18,500 employees, but it faced the necessity of expanding to 42,500 by next spring. So it started more courses in its plant and, to help in the job, grown too big for Baltimore schools alone, it called on the University of Maryland, Johns Hopkins and nearby public schools.

For a new plant in Lockland, near Cincinnati, where it needed 10,000 men to produce 1,000 engines a month, Wright had to start from scratch. While its plant was abuilding, it got the vocational schools of five Ohio towns, including Cincinnati, to set up courses for the specific jobs to be done, and brought out supervisors from its Paterson, N.J. plant to teach them. It also picked up 15 smart young men around Lockland, sent them to Paterson to learn core making. After eight weeks they will return to Lockland to teach others. As it prepares to open its new plant, Wright expects to have most of the skilled men it needs there.

These feats were the more remarkable because since 1929 training of new workers had all but disappeared from U.S. industrial plants. Last week, with new plants opening and TWI booming, Floyd Reeves looked forward to doubling, perhaps trebling the industrial defense army in the coming year.