Industrial Education in the United States, 1928-1930 [1]

The term " industrial education " in the United States includes not only apprenticeship and vocational training, but also the training or re-training of adults, vocational guidance for children, and teacher training. Progress in such education in 1928-1930 was marked by a large increase in occupations included in training programmes, by increased enrolments, expenditure, and courses, by the inclusion in programmes of more occupations of the highly specialised and semi-skilled types, by further co-operation between joint advisory training committees and the educational authorities, and by a more critical attitude towards the training of teachers.

Among factors contributing towards the spread of industrial training were : recognition of the responsibility of public schools to provide training for specialised and semi-skilled jobs, the need for short courses which would assist workers to secure promotion, and an increased knowledge of the types of occupations for which training under public school auspices might be attempted. This last is the outcome of occupational studies on a National or State scale, of the reports of joint advisory training committees, and of " foremen conferences " (lectures to foremen having the responsibility for the training of those under them). Unemployment is also thought to be a factor which has increased enrolment in full-time classes. This is ascribed to the laws which, in certain States, require all young people up to a given age who are not at work to attend school, as well as to the voluntary attendance at such classes of unemployed youths who are over the compulsory school age.

Public education in the United States is, as is generally known, a State, and not a Federal, obligation. There are, however, certain Federal Acts affecting education, notably the Smith-Hughes Act of 1917 which provides Federal aid towards the establishment of vocational education in the States in (*inter alia*) trade and industry. There is also a Federal Board for Vocational Education which links up with the State Boards (of which in 1930 there were 42) and their Vocational Education Divisions. The types of industrial training offered are calculated to satisfy two main needs: those of apprentices and other young workers, and those of adult or other workers not undergoing systematic training. For the first there are apprenticeship courses, general industrial classes, what are called " co-operative classes ", and four-year full-time courses in trade and industrial subjects. For the second, vocational evening classes and foremanship courses are provided.

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[1] UNITED STATES. DEPARTMENT OF THE INTERIOR : *Biennal Survey of Education, 1928-1930*, Vol. I, pp. 145-188. Washington, Govt. Printing Office, 1932. For further particulars of the contents of the volume see below under the heading " Book Notes ".

Apprenticeship courses are found in small communities with one or two dominant industries and enough apprentices to make it worth while to form a class. The success of such classes depends on the possibility of securing a well-qualified teacher, suitable arrangements with industrial enterprises as to hours of instruction and attendance of apprentices, and co-ordination of plant and shop work. Granted all these the probability of training being well done is high. When all apprentices are from the same undertaking instruction may be carried out in the plant itself, an arrangement which has the advantage of securing adequate equipment (a difficulty with which vocational schools may have to contend) and the right shop atmosphere.

When not possible, owing to the size of the community, to arrange specific trade classes, it is sometimes possible to organise general industrial classes for a few closely allied trades such as concrete work, plastering, and bricklaying, or carpentry, painting, and sheet-metal work. For small communities where occupations are not highly specialised such courses would appear to be adequate, and even to present advantages over specialised instruction.

By " co-operative classes " is meant those in which pupils are divided into two groups working alternately in school and plant for a definite period, usually one or two weeks. This plan suits States where pupils are allowed to leave school before the regulation age on condition that they continue to attend on a limited part-time basis. Much of the success of such classes depends upon an efficient co-ordinator whose duty it is to see that the work the boy is performing in employment is properly related to what he is being taught in class.

Four-year full-time classes in trade and industrial subjects are organised in some high schools. Apparently they are not as yet general, but various causes are contributing to spread the movement, among them the tendency for pupils to remain longer in the upper schools, the desire to obtain increased grants, the increasing age for admission to employment, and the higher qualifications demanded for admission to trade and technical schools.

For adult workers, and those not following a systematic course of training, vocational evening classes are arranged. Available statistics show that attendance at these is increasing in many localities. This is partly due to unemployment and the strong competition for any work that may be available. Workers realise that employment is likely to go to those who are best qualified, and seek to add to their qualifications by attending evening classes.

Another type of class which has shown a large growth during the years 1928-1930 is the foremanship course for foremen who wish to increase their industrial value or whose responsibilities include the instruction of workers under them. The State of Wisconsin is mentioned as having devoted special attention to such classes, and in particular to itinerant instructors in foremanship; these serve the needs of communities not large enough to justify a permanent instructor.

Among new problems confronting technical vocational schools is one due to technological unemployment. This has put a demand upon

schools to provide instruction which will enable workers to fill new kinds of jobs. In some instances schools have found themselves saddled with what the Federal Board for Vocational Education calls "frozen equipment" which, while good for training in the processes formerly in use, is worthless for instruction in new methods. These schools, if they are to carry on, have no choice but to scrap their obsolete equipment and to invest in new.

In the domain of vocational guidance an increase in activity is noted. It is now generally recognised that vocational guidance should have a part in school programmes, but experiments are still being conducted to decide what that part should be. On certain broad principles, however, agreement has been reached, as, for example, the need that high school pupils should be given opportunities to study and analyse the major vocational groups ; the need for giving advice as part of a vocational guidance programme ; the need to include placement and follow-up work in such programmes, and for studying the aptitudes, interests, and social backgrounds of individuals to discover the possible bearing they may have upon the choice of a career. Nine States have guidance programmes under way, no less than seven of these having been started within the last two years dealt with in the report. The organisation of vocational guidance programmes includes talks by specialists to groups of pupils, and the attendance at school of persons competent to advise pupils concerning the occupations they think they would like to follow. The complaint is made that the guidance programmes of high schools are still too heavily biased towards professional services needing college training ; this, it is considered, should be remedied. The vexed question of the application of mechanical aptitude tests to vocational guidance is referred to. Though the attitude towards such tests is still critical, they are not condemned. Considerable progress along these lines has been made, and investigations continue with a view to determining the reliability of mechanical tests.

The need for providing and maintaining an adequate supply of teachers for vocational instruction has always been recognised but it has become especially apparent during the last two years. The importance is emphasised of selecting applicants for teacher-training courses with care ; a first essential is a number of years' experience in the trade to be taught. The question has been raised of the subjects to be included in teacher-training courses : should they include general subjects, or only those which have a direct and immediate bearing upon the subject in which instruction is given ? No reply is as yet forthcoming, but it is agreed by all that while there is no objection to a teacher in industrial subjects being a college graduate, no college graduate should become an industrial teacher unless he has also the requisite industrial training.