The Vocational Training of Adults

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The increasing pace of industrial progress and the growing numbers of workers migrating for employment as a result of international economic agreements have made the vocational training of adults more necessary than ever before, as the International Labour Conference foresaw when it adopted, at its 33rd Session, the Vocational Training (Adults) Recommendation, 1950. As Mr. Rossignol shows in the present article the characteristic features of adult vocational training systems in Western Europe today are the thoroughness of both the teaching methods on which they are based and the administrative machinery set up to run them, as well as the active international collaboration to which they have given rise since they were first introduced.

IT is the general concern of governments and of those responsible for the industrial and commercial future of their countries to develop the technical training of young persons. Whether such training is carried out exclusively at school or in suitable centres or whether it is given partly on the job and the rest of the time in special institutions, the instruction must comprise, in addition to subjects specifically connected with a particular trade, a sufficiently extensive syllabus of general education, since the democratic ideal could hardly be reconciled with a refusal to give such young people the means of subsequently rising to higher grades. To secure this, however, many precautions need to be taken. Preliminary guidance, for example, is eminently desirable; if it is to be sound and effective not only must tests be applied but sufficient time must be devoted to studying the character and aptitudes of the young trainee. It should not be forgotten, moreover, that a young person's future is conditioned by his physical development, which must not be subjected to undue strain.

For all these reasons the training of young persons should take several years ; it is considered that between three and five years are required, according to the country and the occupation, to bring a young person up to the standard of a skilled worker just taking up a job, that is to say to the minimum level of technical skill required.[1]

Some ten years ago businesses were so stable and technical developments so slow that a young man learning a trade could expect to be able to practise it subsequently, no doubt improving his skill as he went along but always building on the foundations laid at school or during his apprenticeship. Nowadays this is no longer the case ; while the value of such instruction extending over several years is unquestionable, the inherent drawbacks of the system are considerable.

In financial terms it is a heavy burden, either directly or through the subsidies required ; as a general rule training is not free and the bursaries granted, even if on a liberal scale, do not enable all those who might hope to receive such instruction to do so in practice. However many training schemes there are for young persons, not enough of them can ever get training. Particularly when training schemes are organised by the public authorities, they are relatively difficult to change over time : a young man who has begun training as a fitter must go through with it to the very end, even if in the meantime there have been developments which mean that the fitter's trade, which was once a well paid one, will no longer be so when he leaves school ; it may also happen that while he is in training new techniques are introduced in industry, with the dual drawback that he is not taught these new techniques and that, while industry waits for a new batch of trainees who have been taught them, it cannot meet its pressing need for skilled workers to apply the new techniques, to the detriment of the national economy.

Moreover, the last war led to radical changes in the economic and scientific fields, and the practical repercussions of these changes, which were unthought of only a short time ago, foreshadow a revolution in industrial operations and in working methods, the few existing examples of automation being only the forerunners of an era of which we can form no idea. In such circumstances what worker employed in a prosperous industry can be sure that during his life he will not have to change over to another trade because his has been displaced by others? With the opening of national frontiers and the creation of common markets the dense populations

[1] A skilled worker taking up a job for the first time is in a higher grade than a semi-skilled entrant, who may come either from the workplace after a course of accelerated training or from a technical course which he has been unable to complete or the final examination of which he has failed to pass.

of the poorer countries will be able to penetrate without difficulty into rich areas and will therefore considerably accentuate this trend. It is to be expected that this will become increasingly common even in a field such as the building trades, where development is slow: prefabrication, the use of plastics and other synthetic materials and of much more powerful machinery, and the application of special methods for the erection of tall buildings, will result in a much more similar utilisation of labour in the building trades and in industrial work than is the case at present.

The future will therefore be uncertain for all young people with vocational qualifications, since headlong economic development will threaten them with the loss of their jobs.

How can this danger, which constitutes a major threat to labour and to social stability, be avoided ?

From the strictly logical point of view there can be only one solution : since it is impossible to preserve young workers from the uncertainties of unstable occupations some means must be found to restore the earning capacity of those who have lost it through technical development. The vocational training of adults is such a means.

The History of Vocational Training for Adults

Scope and Limitations of Adult Vocational Training Schemes

The accelerated training of adults may vary infinitely as to its length, nature, standard, methods and financing. It should be explained at the outset that its object is neither to educate nor to impart wide general knowledge : its aim is purely technical in character.

In the second place, such training may be imparted at all levels, from the lowest—since a labourer needs a minimum of training if he is to do his job properly—to the very highest (that of the engineer). As a general rule, however, the following considerations relate only to workers at an intermediate level—skilled workers, who come between semi-skilled workers and supervisors—although we may well cast a quick glance, when it seems to serve a useful purpose, at special instances of training at other levels in order to show the range and nature of the applications of methods that were originally used exclusively for skilled workers and were only subsequently applied to other grades.

Thirdly, there are so many kinds of training facilities, even for skilled adult workers alone, that they cannot all be considered here. Many of them are of undoubted utility ; there are any number of private companies that provide excellent training for their staff, sometimes at considerable expense, and the reader will be aware

of the remarkable efforts made by employers' organisations in various occupations, which have evolved excellent training and upgrading schemes. In this study, however, it would be impossible to go into the details of such schemes.[1] We shall therefore confine ourselves to an examination of the practical training schemes run at the national level under the direct authority of the State or with state subsidies ; in addition we shall deal only with methods of so-called " accelerated training ", that is to say those intended to achieve results in a few months and which have original features from the point of view of teaching, as suggested in Paragraphs 35 and 36 of the Vocational Training (Adults) Recommendation, 1950, adopted by the International Labour Conference at its 33rd Session in 1950.

Their Origins and Occasional Character

It is very instructive to read the monographs published by the I.L.O. on the vocational training of adults in the United Kingdom, Belgium and the United States [2] ; from the historical point of view these. three studies show that the need for vocational training became apparent at the time of the world slump from 1930 onwards. To counter unemployment the three countries set up a variety of schools or courses within undertakings, to train unemployed workers as quickly as possible to take up new jobs. (In France a few centres were also opened for metallurgical workers.) Sometimes the workers had to undergo training or lose their right to unemployment relief.

It seemed very probable that as unemployment fell off after 1936-38 these centres and courses would be closed : the restrictive drafting of the legislation concerning them seems to show that their aim was to remedy a temporary ill by temporary means. But the events of 1938 altered the fate of adult retraining centres in Europe : in Great Britain and France they developed into centres for retraining workers for essential industries ; in Belgium they still retained their original purpose, under the auspices of the National Employment and Unemployment Office, but they became more numerous, and retraining really began to play an important role in that country. In the United States accelerated training was not introduced on a very large scale until 1940, under the auspices of

[1] The O.E.E.C. has recently published the report on the survey of industrial in-plant training programmes in seven European countries which was carried out in 1955. See *The Training of Workers within the Factory. Survey of Industrial In-plant Training Programmes in Seven European Countries.* Report prepared by the National Institute of Industrial Psychology, London. Project No. 179 (Paris, European Productivity Agency of the O.E.E.C., 1957).

[2] Vocational Training Monographs, Nos. 1, 2 and 3 (Geneva, I.L.O., 1948, 1949 and 1948).

the federal Government but with the strong backing of industry and specialised organisations.

The vocational training of adults thus developed almost simultaneously in various parts of the world. While it was in some cases due to private enterprise, the State very quickly took over either wholly or partly. Indeed a feature that should be stressed, since it has had a very marked influence on the results achieved, is the fact that the vocational training of adults was directly or indirectly subordinated to the government authorities in charge of labour and social insurance. As a result of the need to combat unemployment and improve employment services, responsibility for the vocational training of adults has in all countries been assigned to these departments in preference to the other departments concerned. The effect of this assignment on the methods and organisation of schemes for the vocational training of adults will be described at a later stage.

Their Extension

The objectives laid down for adult vocational training schemes at the end of the war were to combat unemployment and remedy the consequences of mobilisation. At that time most countries, whether victors or vanquished, had tremendous numbers of men who had spent much of their youth under arms and were therefore unacquainted with any trade that would be useful in civilian life. There had been widespread destruction and industries organised on a wartime footing had to be adapted to peacetime needs. Rapid reconversion was essential. Hundreds of thousands of men could not be allowed to remain unemployed when their homes were in ruins and the factories were short of labour. In several countries governments and the leaders of industry and labour introduced or multiplied accelerated training centres. In addition, where they already existed the aims of the centres changed radically : it was no longer a question of transferring a few hundred unemployed workers from one industry to another but of training tens of thousands of workers of whom it could be assumed that many would have to learn a new trade. Some occupations had also to be revived. Only the most carefully worked-out plans held out any hope of success since what was required was not only the practical and financial organisation of training but also a complete revision of the concepts and methods on which it was to be based. Belgium, France, the Netherlands and the United Kingdom, as well as other nations, embarked upon such programmes of training.

Although the International Labour Conference had emphasised the need for " curricula adjusted to the special requirements of adult workers " as far back as 1939, it was its 33rd Session, in

June 1950, that marked a turning point in the vocational training of adults. The Vocational Training (Adults) Recommendation, 1950, adopted at that session defines the scope of vocational training schemes and specifies, in particular, that they should cover both men and women, the unemployed, prospective emigrants, production workers, foremen and higher supervisors and both the disabled and the non-disabled; it also defines the principles governing satisfactory training preceded by vocational selection.

The moral effect of the discussions in the International Labour Conference and the repercussions of the Recommendation were perhaps even more important than the provisions of the Recommendation itself. Countries that had already introduced accelerated training for adults derived encouragement from the Recommendation and developed their activities; others decided to adopt these methods and frequently relied on technical assistance rendered by experts from the International Labour Office. This was the case in particular in Italy, Malta and certain parts of Latin America and Asia. Accelerated training was discussed at the technical conference organised by the I.L.O. in Rangoon in December 1955, where it was recognised to be one of the most effective methods of raising the standard of living of the Asian peoples. At the national level vocational training for adults has been introduced by the authorities in the Belgian Congo and in French Africa south of the Sahara among others.

Their Tendency to Become Permanent

The dual economic and social aspect of vocational training for adults was clear from the start, for effective action against unemployment depended on an investigation not only of manpower requirements and vacancies but also of the many possible effects of a change of trade on the worker. But these inquiries were essentially pragmatical and it is only later that more elaborate studies were undertaken with a view to evolving a clear-cut teaching method. In addition, from 1948 onwards, under the influence of missions sent by various European countries to the United States and with the subsequent establishment of specialised national and regional bodies, the notion of productivity and the idea of improving human relations in the undertaking created a favourable atmosphere for the extension of adult training far beyond the narrow objectives of a measure to combat unemployment. Nowadays accelerated vocational training is used, according to the particular country—

(a) To meet the essential needs of the economy. Even in times of full employment there are industries that are expanding as a

result of scientific and technical progress, the modernisation of plant, etc., and conversely other industries that are stagnant or declining. Before unemployment occurs, therefore, it is desirable to guide workers from one industry to another after giving them the requisite occupational qualifications. Such a policy is followed in many countries by the State, or occupational organisations, and usually by both.

(b) To increase labour mobility between underdeveloped areas with a surplus and other areas where the economic outlook is either already brighter or likely to become so in the future.

(c) To improve the qualifications of workers so that they will have better prospects and that their standard of living will be raised. Training of this sort may take a variety of forms : it may be a matter of comprehensive training or simply of theoretical or practical instruction to supplement qualifications already acquired, and may therefore vary greatly in length.

(d) To meet industry's needs for technicians and supervisors with the shortest possible delay. These needs arise not only as a result of the modernisation of plant but also of the application of systematic and extensive productivity and work simplification studies.

(e) In overpopulated countries, to promote the emigration of surplus labour.[1]

(f) To rehabilitate persons disabled in civilian life or on military service. In this connection the two principles laid down in the Vocational Rehabilitation (Disabled) Recommendation, 1955, adopted by the International Labour Conference at its 38th Session in June 1955, are, in the writer's opinion, of absolutely fundamental importance, namely that wherever possible disabled persons should receive training under the same conditions as non-disabled persons (in fact, it is even desirable that the qualifications acquired should slightly exceed the standard for non-disabled workers, chiefly so that employers may be more ready to recognise the qualities of

[1] During the recent period of full employment the accelerated training centres in the Netherlands gave young prospective emigrants training that would be useful in a variety of trades in order to facilitate their placement abroad. Training lasted longer than for young people in general, and the courses were more advanced. An experiment, which was unfortunately very limited in scope but appears theoretically sound, was carried out by Italy and France in 1951. It consisted in recruiting unskilled Italian workers for the French building industry through the French National Immigration Office. After selection these workers were sent to French vocational training centres, where they were taught the trade and simultaneously given a practical knowledge of the language. At the end of training, which lasted six months, they were placed with employers. It is now proposed to repeat the experiment on a larger scale.

disabled workers) ; and that the principles, measures and methods of vocational training applied in the training of non-disabled persons should also apply to disabled persons.[1]

All this gives some idea of the many purposes served at the present day by accelerated vocational training schemes, which range from countering unemployment to retraining the physically disabled and include the training of unskilled workers, upgrading at various levels, training for immigration and so on. It has already been pointed out that if these objectives are to be attained a number of conditions must be satisfied : the first of these in the writer's opinion is the use of an appropriate teaching method, and that is what will now be discussed.

Principles and Methods of Accelerated Vocational Training

The methods used for accelerated training are based on the very simple fact that those being taught are adults and not adolescents. The two groups cannot be treated in the same way : in particular, it is always unpleasant for a manual worker to feel that he is " back at school ". Moreover, many of the trainees have been earning their living and some of them have dependants ; it would therefore be unthinkable that they should be made to undergo a longer course of training than is absolutely essential. Even if they are paid unemployment benefit or a special wage during their

[1] In France these two rules are broadly observed in the retraining centres set up by the Secretariat of State for Labour and Social Security or by the public or private bodies under its supervision. The same syllabuses are used ; when a syllabus is issued it is stated whether it applies to the disabled and to which categories. The only difference in use concerns the daily training period for disabled persons at the beginning of a course ; at the start this is often limited to only half the time normally so spent and is gradually increased to the full normal time towards the end of the course. Since courses for non-handicapped workers last about six months, those for the disabled vary between eight and ten months, or sometimes a little more. The final stages of training have to be completed at the same rate as is required in the case of the non-disabled, and the final examinations are identical for the fit and the disabled. It should be added that whenever possible the physically handicapped are entered for training courses with ordinary workers. Much more often than is thought their practical work is as good as that of their fellows, and many statements have been received from the directors of training centres, as well as letters from the trainees themselves, to prove that they have been fully successful in the practice of the trade they have learnt. Since in France there is a fairly centralised organisation under the authority of the Secretariat of State for Labour and Social Security, disabled trainees are given preference in certain activities in retraining centres (e.g. industrial draughtsmanship, watchmaking, etc.) Finally, private industry is increasing its efforts on behalf of those of its employees who are injured in occupational accidents and, through suitable courses, is facilitating the resettlement of a very large proportion of these employees in other jobs, or failing that, in special workshops.

retraining or advanced training, the sums offered could never be equivalent to a normal wage.

Courses that go straight to the point and are not encumbered with superfluous matter have therefore had to be devised. While simple, they must also be rapid, lasting a few weeks for the training of semi-skilled workers and a few months for skilled workers. But this gives rise to difficulty: the persons taking these courses are generally relatively unused to intellectual work and the intentionally short duration of the training does not give them the time to get used to it. How then is the aim of accelerated training (to retrain the largest possible number of people in the shortest possible time) to be reconciled with this characteristic of the trainees? This is where the two essential conditions of accelerated vocational training come in, viz: selection of trainees and choice of syllabus and teaching methods.

Selection

We shall only touch upon the subject of selection. In particular we shall not discuss how batteries of tests are prepared, however interesting the subject may be. It will be enough to mention that all the subsequent stages of training depend on the tests chosen and the norms fixed. In determining the latter, account must be taken of each trade, and within each trade of each special skill in which training is to be provided. In the writer's opinion learning capacity is more important than previous qualifications for training to the level of a skilled worker, but it is, of course, much more difficult to assess. Through efficient selection it will be possible to choose trainees who can learn all they can be taught within the time available.

Choice of Syllabus and Teaching Principles

It is remarkable that two countries, the Netherlands and France, between which there is no link as regards the accelerated training of adults, should have simultaneously organised training courses that are strikingly similar. The existence in France of a National Institute of Pedagogy and the constant use of the Cartesian method [1] may have given these courses the appearance of being

[1] The application to vocational training of the general principles of pedagogy advocated by the French philosopher Descartes. The main features of this method are as follows: *(a)* complex operations should be broken down into their simple elements; *(b)* only one thing should be taught at a time, going from the simple to the complex; *(c)* the work done should be confined to knowledge already imparted; *(d)* interest should be maintained, while avoiding fatigue; *(e)* the lesson should be carefully planned; and *(f)* the co-ordination of theory and practice should be ensured by making a single person responsible for instruction in both.

more systematic ; but the principles are the same in the two cases. Nor is it merely by chance that Belgium and Italy have adopted similar methods. There are differences, no doubt : in France the practical work is divided into two parts, of which one, known as " preliminary training ", lasts three weeks during which the trainees are mainly taught to know the tools of their trade and how to handle them correctly, while the second constitutes training properly so called and lasts five months at the rate of 44 hours a week. In Italy no such distinction exists and trainees are taught to use their tools in the course of their practical exercises. In the Netherlands there is not the same degree of standardisation of courses as in France, and in Belgium the method used falls somewhere between the two extremes. All this is of secondary importance, for the essential principles are the same everywhere.[1] The rules are—

(a) To prefer practice to theory. The time spent on theory is reduced to the strict minimum, and it is taught only in connection with a practical exercise.

(b) To discover which aspects of the subject to be taught are the simplest and the most easily understandable to the trainees, so that they will not be discouraged at the very beginning.

(c) After the first step has been taken, to go on to the second only when it is certain that the preceding difficulties have been mastered. The efforts required of the trainees should be very carefully measured and they should not be made to learn too much at one time. Conversely, the work should not be allowed to become tedious and the instructor should go on to another exercise as soon as he is certain that the lesson has been properly understood.

(d) To ensure that there is a logical and clearly defined sequence in the exercises which make up a course. Each exercise taken on its own must be visibly and closely linked to the preceding one. On the other hand it must be distinguished from it by the new demands it makes on the trainees' comprehension ; these should not overtax the presumed intelligence of the trainees.

(e) To keep the trainees' intellectual faculties constantly on the alert. The instructor should not speak over his trainees' heads nor wander off into unnecessary theoretical digressions ; on the contrary, he must always stick closely to his subject.

(f) To take advantage of the slightest mistake or slip to point out why it should have been avoided and, if possible, to get another

[1] This refers, of course, to the training of workers, since when technicians are being trained the rules given above are necessarily less generally applicable.

trainee to explain what should have been done. Trainees correct each other more than they are corrected by the direct action of the instructor.

(g) To make extensive use of visual aids, since the most highly developed form of memory is visual memory, particularly among manual workers.

Application of the Teaching Principles

Before a course of instruction based on these principles can be put into effect it must be determined, in close consultation with experts in the trades concerned, exactly what items are to be included in the syllabus and what standard of training is to be required. Using this information as a starting point, the instructors must evolve training exercises in accordance with the principles of teaching method they apply. At this point it is a good idea for the instructors to check with the experts in the trade that nothing has been forgotten and that the various parts of the syllabus are well balanced.[1] The series of practical exercises, however, is only one aspect of the training. Provision must also be made for the essential theoretical subjects (technology, mathematics, draughtsmanship), as well as for very positive safety training, the importance of which cannot be overemphasised. Workers are particularly prone to forget such training, and the instructors should never lose an opportunity of emphasising the dangers that may arise from defective parts, carelessness, or clumsiness. There should be many examples to bring out this point in the course of practical training.

It is sometimes alleged that too much importance is attached to mathematics, and particularly to draughtsmanship. It is true that in working out a syllabus it is easier to plan instruction in these two subjects, and therefore to increase the attention devoted to them, than in the case of practical exercises ; and instructors with a well balanced syllabus often tend to give more than the allotted time to mathematics and draughtsmanship. Although this tendency should be resisted the importance of these subjects

[1] The difficulties the trainees will have to master are then classified in increasing or diminishing order, i.e. starting either from the easiest exercise and progressively adding more and more difficult operations to it, or from the most complex exercise and progressively eliminating the difficult operations from it. Another method consists in determining which is the easiest exercise and which the hardest and in providing for key exercises at intervals between them ; the series can then be completed with intermediate exercises. Needless to say, this can result only in an approximate classification, which is subsequently reviewed and if possible tried out on trainees before it is applied. In this regard the Italian arrangement of having an experimental centre attached to the training establishment seems to be ideal.

for the skilled worker should not be underestimated. An elementary but sound knowledge of draughtsmanship and mathematics will subsequently enable a worker to rise to a higher grade. All too often training on the job leads to a serious weakness on the theoretical side, and this may subsequently prevent a worker with excellent practical knowledge from rising to the top of his trade. While admittedly designed to meet the immediate requirements both of production and of the workers, accelerated training courses should not be run without regard for the future of either. It has been found that theoretical instruction is easy to arrange if given at a moderate pace, and that the trainees absorb it quite well.

How, then, are practical and theoretical exercises to be combined in a particular course ? The most convenient method would seem to consist in taking the practical exercises one by one and in deciding what knowledge of mathematics or draughtsmanship is required to do them correctly. Problems or drawings relating to the work to be done are then devised, so that even theoretical training rests on a practical foundation and the interest of the trainees is sustained because they understand that the lessons to be learned or the assignments to be carried out are directly connected with a particular piece of work and will make it easier for them to understand it.

Another aspect of training has been the subject of much discussion : should trainees take written notes during classes or should they simply listen and be provided with ready-made notes at the end of the lecture ? No hard and fast rule can be laid down. Admittedly a trainee may be able to concentrate better when he does not have to write at the same time; but it is also true that certain trainees remember better if they take notes. As a general rule the average intellectual standard of the trainees is a determining factor in this connection : it is better that trainees whose level is fairly low should merely listen and that trainees of a higher standard should take notes. In France, for example, we recommend the first method for the accelerated training of structural building workers and the second for metallurgical workers.

It is essential, therefore, that educational specialists and trade circles should keep in close touch from the very beginning of an accelerated training scheme so that they can pool their experience and knowledge. The writer has found that even in the Netherlands, where the organisation of the training of adults is a direct government responsibility, such liaison is in fact very close, as it is in all the other countries known to him, where trade circles consist in some cases of employers alone and in others of both employers and employees. Irrespective of the methods used, this is the secret of effective and successful accelerated training for adults.

Recruitment of Training Staff

We have just seen how a training syllabus is worked out. Staff is needed not only to work out a syllabus but also to apply it. How is such staff to be chosen ? At first sight the answer is simple : good skilled craftsmen are needed ; they must have substantial teaching abilities. Those who plan the syllabus must also have received a sound general education and have a critical and analytical turn of mind, but must also be capable of carrying out a proper synthesis ; in so far as an ideal type can be described the writer would look for it among practising engineers who have an aptitude and a vocation for teaching and are endowed with considerable self-denial and patience. The instructors to apply the syllabus should preferably be recruited from among capable foremen with teaching abilities similar to those just described.

This shows how difficult it is to recruit suitable training staff. Since schemes for the accelerated training of adults are designed to meet a considerable demand for labour, the search for specialists to take charge of the courses is hampered by competition from industry, which frequently offers higher wages. Even assuming that such people can be recruited through the enlightened co-operation of the trade, the teaching abilities of those recruited must then be assessed, and they must also be taught the training method.

Training of Instructors

The value of sound training in teaching methods for future instructors, whatever the nature and the standard of the instruction to be given, cannot be overemphasised. Experience has shown that, for the accelerated training of adults, an instructor who thoroughly understands how people should be taught and who has only a minimum of knowledge of the trade achieves better results than one who has a superior knowledge of the trade but is not such a good teacher.

The truth of this, however, is far from being recognised; above all its practical inferences are not drawn. This arises as a result of financial considerations (since the training of instructors is costly), because of reluctance to appoint highly placed personnel who do not show directly measurable results, or from sheer habit or indifference. The fact is that few States have set up instructors' training institutes where future staff can get to know the courses they will have to run and learn how to present their subjects to the trainees clearly and simply. It is forgotten that there is a world of difference between a craftsman and an instructor. Instructors' training institutes seem to be the only genuine and effective remedy ; the

time and money spent on them would be amply repaid, for the trainees cannot be better than their instructors.

Various methods are used in the training of instructors, and the length of the courses may vary from a few days to several months, depending on the intellectual level and prior qualifications of the entrants. But they should take the form of real courses for the training of workers so that the trainee-instructors will be aware of the difficulties they are bound to come across sooner or later and of their own mistakes or weaknesses. The trainees must also learn to reason and analyse. So that they will not be discouraged they should first learn model lessons ; they may then take turns in teaching these lessons, preferably to workers of the same standard and trade as those they will have to train when they complete their own courses.

Although the writer knows of no cases in which this has been done, he would be inclined to recommend dividing the training course into three parts : the first, an introductory part using a method such as Training Within Industry, would be aimed at quickly fostering receptiveness to instruction ; during the second part trainee-instructors would be introduced to the accelerated training method and to their educational role ; the third phase would consist in applying the method under supervision, either in an instructors' training institute or in a workers' training centre. It would even be a good thing if a first refresher course were held for young instructors three months after they have completed the basic course and followed by two more at intervals of six months.

Organisation and Operation of an Accelerated Vocational Training System for Adults

It will be convenient to base our account of the organisation and operation of systems for the accelerated vocational training of adults on those at present applied in France, which would appear to constitute a fairly comprehensive example.

Determination of Short-Term and Long-Term Needs

The importance of determining manpower requirements before undertaking the accelerated training of adults has already been emphasised and it was stated in this connection that it was most fortunate that the accelerated training of adults came under the ministries responsible for meeting manpower requirements. In so far as France is concerned, however, a distinction has to be drawn between short-term needs and medium or long-term needs.

Short-Term Needs.

In each département there is a departmental manpower committee, consisting of representatives of various trades and of the authorities, which keeps in touch with developments on the local labour market ; in addition there is a joint vocational committee of ten titular members (five employers and five representatives of workers' organisations), besides the departmental director of labour and manpower as government representative and advisory members—the principal inspector of technical education and the departmental director of the Ministry of Reconstruction and Housing (the latter only in the case of the departmental building committee). There are as many committees as there are groups of trades in the centres for the accelerated training of adults in the département concerned ; at the present time many départements have at least two committees, one for the building trades and the other for the metallurgical industry. These committees meet every month, not only in order to keep in touch with the practical operation of centres for accelerated vocational training but also to ascertain that the number and nature of the sections operating meet the needs of the départements. They submit regular reports on this subject to national authorities.

Thus the Ministry of Social Affairs, through the manpower committees, and the National Inter-Occupational Association for the Rational Training of Labour (A.N.I.F.R.M.O.) [1], through the departmental subcommittees for the vocational training of adults, are kept constantly informed of the general trend of local manpower needs.

Moreover, attached to the A.N.I.F.R.M.O. in Paris there are several national committees on the vocational training of adults with the same kind of membership as the departmental committees. Every month they consider local needs in the light of the national situation and propose alterations in the distribution of training sections either in all centres or only in a particular area or centre. Since courses generally last five-and-a-half months the operation of the system for the vocational training of adults is remarkably adaptable to the demand, with a greater time lag, however, when the necessary changes involve costly building work or the purchase of machine tools.

[1] A semi-governmental body set up under a decree issued jointly by several ministries on 11 January 1949 to run centres for the vocational training of adults under the supervision of the Secretariat of State for Labour and Social Security. It is headed by a governing body of 18 members (six representing the State, six representing employers and six representing the main workers' organisations).

Medium and Long-Term Needs.

Medium and long-term manpower forecasts are made by the departmental committees, and more particularly the above-mentioned national committees, which, by their very composition, are well informed of technical developments in the trades they represent. Some months ago, for example, the authorities concerned with the vocational training of adults in France decided to launch a programme of fairly intensive training for electronic technicians; within six months of this decision the programme was showing concrete results.

In addition to this information there is, of course, that supplied by the larger bodies, such as the Office of the Commissioner-General for Planning and that of the Commissioner-General for Productivity. The authorities in charge of the vocational training of adults are in close touch with these bodies; they are kept informed of the results of studies carried out on economic and population trends and their possible repercussions on the accelerated training of adults, and are already concerning themselves with the consequences of the increase of the working population that will become apparent in France from 1962 onwards.

Recruitment of Trainees

Recruitment is the responsibility of the departmental directors of labour and manpower, and of the manpower offices under their authority. Applicants must register with the office nearest to their place of residence, which subsequently convenes them for the medical and psychological examinations that must be taken by all applicants in France. The psychological examinations are organised by the A.N.I.F.R.M.O., which has a special department for the purpose in Paris—the Directorate of Selection Services. This department is in charge of 16 area selection centres, from which selection officers go out to the various départements to hold psychological examinations.

Applicants must be between 17 and 40 years of age (45 years for the building trades), though exceptions may be made. Up to 10 per cent. of the trainees, or more if there is a shortage of French nationals, may be aliens. The entrants are sent by the departmental offices to the nearest training centre with a section for the particular trade they are to learn. Not more than five-and-a-half months are likely to elapse between the date of registration and the beginning of training. In fact the waiting period is shorter when the entrant agrees to move outside his own area and to enter a centre anywhere in France. In exceptional circumstances

the waiting period may, however, be longer if there are few sections teaching a particular trade and if there are many applicants.

In the case of the building trades, where recruitment is very difficult, there are some areas with a labour surplus and others with a very considerable shortage. To speed up the admission of trainees and to avoid losing applicants who have had to wait too long, it was decided to set up within the A.N.I.F.R.M.O. a " National Equalisation Service " for recruitment operations. As soon as a selection examination has been held the Service receives from the psychologists each applicant's card showing the trade in which he is to be trained and the places to which he would prefer to go. It keeps a record of the number of trainees in the various sections, allocates applicants to training centres as soon as their cards are received and informs them where and when they are to begin training. In this way applicants receive their instructions within eight days of taking the selection examination.

Placement

Like recruitment, placement is arranged by the manpower services of the Secretariat of State for Labour and Social Security. The arrangements are the same for the building trades as for other branches of training.

Once again, however, the importance of the assistance received from trade circles should be noted. As already stated, the departmental committees for the vocational training of adults visit the centres at frequent intervals and are responsible for marking the final examinations. Their members, particularly the employers' representatives, therefore see the trainees and what they can do, and establish contacts with them ; sometimes they engage the trainees directly, or at any rate facilitate their placement with fellow employers. Moreover, since the authorities in charge of training aim to operate only in important branches of the economy where there are labour shortages, placement problems hardly arise.

Working and Financing of the Centres

Centres Run by the A.N.I.F.R.M.O.

Organisation of the centres is fairly centralised under a central administration comprising two departments, one dealing with administration (personnel, equipment, and maintenance, repair or extension work), and the other with technical matters (preparation of syllabuses, training of instructors, setting of final examinations). This central administration is closely linked on the one hand with the Secretariat of State for Labour and Social Security,

which provides all the funds, and, on the other hand, with the employers and employees in the various trades, who are represented on the committees and subcommittees already mentioned.

All instructors are recruited by the central administration; under the supervision of the departmental committees for the vocational training of adults they first undergo medical and psychological examinations and theoretical and practical vocational examinations, which are held in their département of residence. If they pass they are summoned to the National Instructor Training Centre [1] in Paris to take a second vocational examination, which is marked by a joint national board of examiners appointed by the appropriate national committee. This examination, which comprises practical work, technology, mathematics and draughtsmanship, takes between three and five days according to the particular trade. If successful, the candidate takes a six-week course in teaching methods, at the conclusion of which, if found suitable, he is sent to a centre to take charge of a section.

The size of an adult vocational training centre may vary very greatly; the training unit known as a section comprises from ten to 15 trainees, according to the particular trade taught. In any one centre there may be between six and 40 sections belonging to various trades. Most of the centres now include sections for the building and metallurgical trades. To run a centre the director has an administrative assistant, as well as a technical assistant if the establishment has more than 20 sections. There is an instructor at the head of each section. For the training of skilled workers the instructor is responsible for teaching all subjects—practical work, draughtsmanship, mathematics and technology.

As a rule all the trainees in a section begin the course at the same time, which facilitates training. The course lasts 1,000 hours, or about five-and-a-half months, at the rate of 44 hours a week.

During the course the trainees receive an allowance which now amounts to 126 francs an hour, that is to say the equivalent of the national guaranteed minimum wage. This sum, which is adequate for young trainees, is less so in times of full employment for older workers with dependants, who can find unskilled work at higher rates of pay and therefore hesitate to take a vocational training course. The trainees are also covered by the general social security scheme.

In almost all the centres there is free accommodation and a

[1] The National Instructor Training Centre is one of the technical departments of the A.N.I.F.R.M.O. The trainers at the centre are responsible for planning the syllabus and training instructors and for setting and supervising examinations held in the centres for the vocational training of adults that are run by the A.N.I.F.R.M.O. or under some working arrangement with it.

canteen where the price of a meal roughly corresponds to the allowance for one hour.

The teaching method used is based on Descartes' principles as applied by Carrard. It has since been modernised or adjusted in various respects, and is essentially an active method designed to make the trainees think for themselves.[1]

Most of the teaching time (generally 38 hours out of 44 per week) is devoted to manual work, though technology, since it is taught on the basis of practical problems, comes to be merged with practical work. The rest of the time is devoted to mathematics, draughtsmanship and discussions on technology.

Once a week the instructors meet for one hour, with the director of the centre in the chair, to go through the technical problems that have arisen during the week and to examine any teaching difficulties or problems.

Marks for each exercise done by the trainees are noted down by the instructor on a special form giving the particulars of the exercise ; the " time " entry is not counted at first so as not to discourage the trainees and so that they will concentrate on quality of execution rather than rapidity ; entries relating to time are made only after one-third of the training course has been completed. Output gradually improves, the ultimate aim being to arrive at 75 per cent. of the output of a normal worker in the particular trade.

The course concludes with an examination covering all the main skills learnt during the course ; in this way extremely little is left to chance and all trainees who have made satisfactory progress with the various consecutive parts of the syllabus are bound to pass, while conversely any bad trainee will be shown up. As already stated, the marking of the examination is carried out not by the staff of the centres but by experts from the industry, who are members of the departmental committees or are selected by them.

Centres Not Run by the A.N.I.F.R.M.O.

Quite a large number of other public and private bodies use adult vocational training methods in their training establishments. In addition to technical advice and the training of their staff in teaching methods, many of them receive state assistance in the form of a subsidy. Assistance is, however, granted only after an inquiry has been made into the nature and aims of the body applying for a grant ; if the conclusion of the inquiry is favourable

[1] See above p. 333.

the Ministry of Social Affairs gives its approval. The amount of the state financial assistance varies, but generally covers all allowances paid to trainees and the remuneration of the instructors.

Among these bodies the following may be mentioned: the Prisons Administration for its rehabilitation centres; the National Social Security Fund and the regional social security funds, together with several associations concerned with the physically handicapped; and occupational bodies and industrial firms which run training or upgrading schemes.

In terms of numbers there are about as many of these centres as there are centres run by the A.N.I.F.R.M.O. (125), but their enrolment is much smaller (fewer than 4,000 annually, as against about 25,000).

From the educational point of view the courses are run in the same manner in both types of centre. In its National Instructor Training Centre the A.N.I.F.R.M.O. trains instructors for both; it has a corps of inspectors who visit all the centres without distinction to check whether the prescribed syllabuses and teaching methods are observed. If an inspector makes an unfavourable report the Secretariat of State for Labour and Social Security may withdraw its approval from an association or centre. This involves cancellation of the subsidy.

The only difference relates to centres for the retraining of the physically handicapped, where the courses last somewhat longer for the reasons already given.

Prospects for International Co-operation

Reference was made above to the accelerated (six months') vocational training of Italian building workers for employment in France. The intergovernmental agreement signed on 21 March 1952 had been preceded by discussions under the auspices of the International Labour Office, which had been very encouraging. This experiment was not followed up, for many of the Italian workers who had thus become skilled went back to their own country shortly after being trained in the French centres. In spite of this we believe that, if a way of ensuring that this failure is not repeated can be found, it would be worth concluding other agreements of this type.

Continuous relations in the field of vocational training have, in addition, been established between the Italian and French authorities in another more durable form. Since 1951 Italy has been systematically developing the training of adults with the assistance of the I.L.O., which sent a French expert to Genoa for the purpose. The work of this expert resulted in a great initial

similarity of principles and practice between the system existing in France and that introduced in Italy; subsequently the two systems have evolved side by side but independently. At the time of the Conference on Selection and Training of Vocational Training Instructors and Selection of Candidates for Vocational Training held in Geneva from 16 to 26 April 1956 [1] the Italian and French delegates discovered that while the general principles of their training system were still very similar there were on the other hand quite serious differences in organisation and in the detailed methods used. While working independently, training specialists were of course aiming at a steady improvement in training facilities, but they sometimes ended up with different solutions. Both sides thought that this waste of effort was to be regretted, and it was therefore decided by the Italian Ministry of Social Insurance and by the French Secretariat of State for Labour and Social Security that experts in the Italian method of accelerated training should go to France at intervals to learn the latest developments in the latter country and that French experts should go to Italy to keep track of the improvements in teaching methods that were being introduced there. This decision has already been implemented; each delegation made one trip at the end of 1956, and the Italian experts came back to France for the second time in April 1957. These relations are already proving valuable, for on both sides they immediately provided food for thought and consequently opened the way to improvement. Each country will learn from the mistakes of the other; and each will be able, above all, to avoid undertaking inquiries that have already been begun or completed in the other. In this way both time and money can be saved.

A third example of international co-operation is worth mentioning, even if only because it is the most recent one to the writer's knowledge. Concerned at the number of unskilled workers in Spain and with the need to train skilled tradesmen for industrial development, the Spanish Government organised a mission to inquire in 1954 into accelerated training methods used by different European countries. After this inquiry it was apparent that the methods used in France and the way in which they were applied in accelerated training centres would be most satisfactory for the purposes of the Spanish authorities, and talks were therefore held between the National Spanish Trade Union Office on the one hand and the Secretariat of State for Labour and Social Security and the A.N.I.F.R.M.O. on the other. As a result of these talks it was agreed that Spanish educational specialists would be sent to

[1] See " Report on an International Conference on Vocational Training ", in *International Labour Review*, Vol. LXXV, No. 5, May 1957, pp. 450-467.

France to take a course in French teaching methods and to visit training centres so that they could subsequently apply what they had learnt in their own country. The Spanish director of accelerated training, together with six technicians who had been chosen as future teachers at the instructor training centre in Madrid, came to Paris and took a course in teaching methods. To supplement this course and to help in the first stage of the training of instructors the A.N.I.F.R.M.O. sent two trainers to Madrid on two occasions, in October 1956 and January 1957. Accelerated training in Spain has now begun, and in March of this year the first centre for the vocational training of adults, with 20 sections for 15 trainees each opened in the capital. The courses last six months, with 40 hours of training each week ; six other centres are to be set up in various provinces by the end of 1957 or the beginning of 1958. The trades taught are those of the building and metallurgical industries.

Underdeveloped Countries

No more than a passing reference need be made to the fruitful work done by the I.L.O. through the experts it sends to various countries [1] to develop vocational training and so assist their economic and social development. It may, however, be of interest to mention a project that complements this international action, since some of its features are quite original. This concerns the organisation of training in the Belgian Congo under the authority of the High Commissioner for the Ten-Year Plan, together with similar work done on the initiative of industrial firms established in the Congo. In 1955 the High Commissioner sent one of his assistants, together with a number of instructors, to Paris to study the teaching methods used in the French adult vocational training system. Armed with all the information they required, these officials quickly set up a network of vocational training centres in the Congo. Fairly considerable adjustments had to be made to local conditions, however, and more time has to be allowed for the courses. The range of subjects taught to any particular trainee is also greater than is generally the case in a more industrialised country.

Another example of co-operation, though not strictly international in character, may nevertheless be worth mentioning. For many years there had been state-operated accelerated training centres for adults in Algeria ; they had been set up along the lines

[1] See in this connection " International Technical Assistance in the Field of Vocational Training ", in *International Labour Review*, Vol. LXXV, No. 6, June 1957.

of those in metropolitan France, but the Algerian centres had no link with the metropolitan system. There were even fairly noticeable differences in the syllabuses and especially in the standard of final examinations of the two systems. This lack of uniformity affected the employment opportunities of large numbers of Algerian workers arriving in France each year; they would be greeted with suspicion, since the qualifications they had acquired in Algeria seemed lower than those acquired in metropolitan France. The Government-General of Algeria therefore asked the French Ministry of Social Affairs in 1956 to send out two trainers, one for the building trades and the other for metallurgy, to give Algerian instructors the pedagogical training which they had not hitherto received; the selection tests, the syllabuses and the final examinations were henceforward supplied by the A.N.I.F.R.M.O. in order to ensure that trainees from Algeria could be relied on to have the same vocational qualifications as those from metropolitan France and might therefore find work on either side of the Mediterranean without distinction.

The relations between the Governments of Tunisia and France in this regard are governed by different arrangements from those made between France and Algeria; since there is no system for the vocational training of adults in Tunisia an agreement has been signed between the two countries to facilitate the entry of Tunisians to French centres. Places are reserved as soon as applications are submitted by Tunisians, who take the same psychological examination as French candidates so that the standard on entry will be the same. When they leave the centres Tunisian workers may either work in France or go back to their own country.

The writer believes that these arrangements, though very different, bear some relation to the governing idea set forth in the Vocational Training (Adults) Recommendation, 1950, Paragraph 41 of which provides that the States Members should cooperate, where necessary and practicable, and where desired with the help of the International Labour Office, in measures to promote the training of adults. The Recommendation further states that action should be taken to promote training by such methods as " the systematic exchange of information on training questions " and " the exchange of qualified personnel " or " the loan of experienced personnel from one country to another to help organise training ".

The diversity of the arrangements that have been mentioned shows the course of international action, which, though of recent origin, is now making great headway and may have the happiest results both for the workers and for the great economic regroupings of countries that are now being organised.

It will not be possible to lessen the imbalance between the populations of different countries, or for the rich countries to receive the manpower they need, until the workers who are prepared to emigrate are no longer the totally unskilled, as is too commonly the case nowadays. There can be no doubt that when adequate vocational training of the type and standard required is given before departure abroad the mobility of labour will be considerably improved. This ideal solution is still a long way off. But the first step towards it would probably be to lay down " a common standard " of vocational training on, say, a European scale. Without necessarily having the same training system everywhere it would be necessary to try to adopt the same teaching method (which would doubtless be a synthesis of the various methods now applied), and to have as wide a variety of comparable selection procedures as possible ; moreover, while the syllabus used would not necessarily be everywhere the same, the differences would have to be known and correlated.[1] The writer is sure that such a programme would promote, in a way in which the isolated action of national particularism could not do, the true material and social interests of employers and workers. It is to be hoped that the examples of bilateral action that have been mentioned above will, in conjunction with the activities of the specialised agencies of the United Nations, constitute only a first step, and provide better prospects for international co-operation in the field of the accelerated vocational training of adults.

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[1] Mention should be made in this connection of the proposal put forward at the vocational training conference already mentioned to set up a European vocational training institute. See " Report on an International Conference on Vocational Training ", op. cit., pp. 465-467.