COMMISSION OF THE EUROPEAN COMMUNITIES

STUDIES

Apprenticeships in the United Kingdom

SOCIAL POLICY SERIES – 1976 – 30

This study deals mainly with training for skilled craft occupations in large and small undertakings, but also covers apprenticeships for technician, student, graduate and commercial trainees.

The absence of legislation governing apprenticeship is noted and the work of national joint apprenticeship bodies set up by collective agreement is described in detail. This system is criticized as inadequate except where it is supported by the greater resources of the boards set up under the Industrial Training Act (1964).

An account is given of the vocational education courses related to the various types of apprenticeship and the effective coordination now achieved with the respective training programmes.

Comment is made on the enhanced professionalism of the personnel now engaged in the training function in ITBs and undertakings and the impact this has on efficiency in training. Other topics dealt with include – careers education, vocational guidance, selection of apprentices and group training schemes.

The study ends with a critical review of the inadequate scale of apprentice training and the top-narrow range of apprenticeship occupations, especially in the commercial field and in "women's occupations". The final section concludes hopefully that the new Manpower Services Commission and the Training Services Agency set up under the 1973 Employment and Training Act, together with the ITBs, provide the UK for the first time with machinery that can effectively tackle the nation's long-term needs for skilled manpower.

COMMISSION OF THE EUROPEAN COMMUNITIES

Apprenticeships in the United Kingdom

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1. Introduction

1.1. Apprenticeship is the normal and traditional means of training for skilled manual occupations in the UK. The term is now also applied, though with less uniformity, to analogous patterns of training for technicians and higher level occupations and, much less often, to training for occupations in the commercial field. (A note on the historical perspective is given in Appendix 1).

1.2. It has for long been regarded as the responsibility of employers to train employees to meet needs, without any government intervention. There is, accordingly, no legislative framework specifically relating to apprenticeship; neither is there any legislation which makes it obligatory for an employer to provide systematic training or associated vocational education for young entrants to skilled industrial or commercial occupations.

1.3. The Industrial Training Act of 1964, which initiated major developments in training, provided a mechanism whereby employers may be given guidance by statutory bodies - the industrial training boards set up under the Act - on good training practice and also be offered inducements in the form of monetary grants to follow boards' guidance. It did not, however, compel employers to provide such, or any, training. This situation is largely unchanged under the Employment and Training Act of 1973. Nevertheless, the work of the industrial training boards has resulted in a marked improvement in the quality and efficiency of training provided, especially in the training of apprentices. In undertakings where Boards' recommendations are implemented by professionally qualified training staff the standards achieved can be very high indeed. (See Sections 6 and 7).

1.4. In the absence of a legislative framework, the initiation and control of apprenticeship schemes has been effected in various ways. For skilled manual workers - the field which includes by far the largest number of apprentices - apprenticeship schemes are normally devised and administered by joint bodies set up by collective agreement between the representative employer associations and trade unions concerned. At other levels and in the whole of the clerical and commercial field, trade union involvement is less common, although it is found in a few cases. In this non-craft field, apprenticeship schemes are administered by a variety of types and combinations of organizations; these

invariably include employer or employer-related bodies and may also include professional or technician societies, industrial technical bodies, group training associations, or a chamber of commerce association. Some individual employers run their own schemes. The nationalized industries have their own apprenticeship schemes at all or most levels and they are usually administered in the context of the industry's arrangements for joint consultation.

1.5. With this diversity in origin and administration of schemes and in the absence of a legislative framework, apprenticeship schemes in the UK show considerable variation in the extent to which they are used by employers for the occupations to which they are related and also in the effectiveness with which they are implemented. A further consequence is that accurate statistics are not available, either for persons referred to by their employers as apprentices (whatever the quality of their training) or for the smaller number who receive systematic training in accordance with a strict interpretation of the terms of the schemes concerned.

2. Statistics - The broad outline

2.1. The most indicative information on the numbers of young persons entering apprenticeship has been collected annually by officers of the careers service when issuing National Insurance cards to school leavers below the age of 18 when they enter their first employment. This information obviously cannot include apprenticeships taken up after a period of employment; it ignores premature terminations of agreements and it also suffers from an inevitable lack of precision in the use of the term 'apprenticeship'. Nevertheless, the very large majority of apprenticeships are taken up as first employment by 16 and 17 year old school leavers, so that the figures obtained are a useful guide. A scrutiny of the figures for Great Britain (i.e. excluding Northern Ireland) shows that :

(a) Overall figures 1974 - school leavers under 18

	Total leavers	Apprentices	%
Boys	274 800	118 200	43
Girls	237 800	15 500	7

(b) Extrapolating these figures and assuming an average duration of apprenticeship of 4 years, there are probably something like half a million apprentices in Great Britain.

(c) Except in 1973 when, because of the raising of the school-leaving age from

15 to 16, numbers were much lower than normal, the numbers entering apprenticeship as first employment have fluctuated between 112 000 and 133 700 since 1969. There has been no marked general trend and fluctuations appear mainly to reflect the level of economic activity, as for example during the current recession.

(d) For boys, nearly two-thirds of entrants to apprenticeship are in engineering and allied trades, construction, motor vehicle servicing and printing and allied trades.

(e) For girls, over two-thirds of the small number of apprenticeships are in hairdressing. Opportunities in other fields are very limited.

(f) There are relatively very few apprenticeships for either boys or girls in clerical, commercial, distributive, financial or catering occupations.

(g) Each year in addition to those referred to above, about 3.5 thousand boys and 4 thousand girl school leavers under 18 enter occupations leading to professional (i.e. high level) qualifications. Many of these are under contractual arrangements analogous to apprenticeship.

2.2. There are unfortunately no collated statistics of apprenticeships or comparable contractual arrangements entered into by school leavers who are 18 years of age and over.

2.3. For technician apprentices, paragraph 8.19 below makes a very approximate estimate of 70 000 $\pm$ 20%. There are far more students in technician level courses of further education (about 350 000), but this is not a helpful guide as the figure includes, besides technician apprentices, adults, evening class students, full-time students and craft apprentices (taking advantage of the opportunity to study at the highest level of which they are capable).

2.4. For student apprentices, the numbers involved in sandwich courses are indicative. In universities there were over 13 300 sandwich course students in 1973/4 and in polytechnics etc. over 36 000 (1972/3). Of this total of (say) 50 000, a little over half are college based, i.e. not having a contractual commitment with one employer, but being placed for industrial training under arrangements made by the college/university. This suggests a figure of about 20 000 student apprentices with a continuing commitment for training with a single employer. However, from the point of view of the quality of training received in the industrial periods, industry-based and college-based students probably fare about equally well on the whole and the question of who is an apprentice and who is not becomes one of terminology.

2.5. An estimate of the number of graduate apprentices - of whom there are much smaller numbers - is almost impossible without a scrutiny of the terms of first appointment of each graduate. As this is felt to be marginal to the study, no special investigation has been made.

3. Types of apprenticeship

3.1. Although there are no official definitions of the various types of apprenticeship, the following terminology is in general use :

(a) Craft apprenticeship - by far the largest field, implying training coupled with related vocational education for a skilled manual occupation. In the UK the term 'craft' applies to such occupations in large as well as small undertakings. (See Sections 4 and 5).

(b) Apprenticeship - as for (a) above, but for skilled occupations for which the terms 'craft' and 'craftsman' are not customarily used (e.g. some occupations in the cotton textile industry).

(c) Technician apprenticeship - systematic training for a technician level occupation, coupled with related technical education aiming at a specific educational qualification at an appropriate level. (Sometimes called 'technical apprenticeship'). (See Section 8).

(d) Student apprenticeship - systematic training for a position of technical or other responsibility, coupled with higher education (usually on a sandwich course basis) in preparation for a specific educational qualification at or about university or professional institution level. (See Section 9).

(e) Graduate apprenticeship - systematic training in an industrial, commercial or professional field for the holder of a university degree or comparable educational qualification, with the object of enabling the trainee to become competent in the particular field and also to qualify for membership of the appropriate professional institution. [1] (See Section 10).

(f) Commercial apprenticeship - systematic training and related part-time education in the commercial administrative or accounting field, leading to an appropriate educational qualification. These apprenticeships are usually for entrants at GCE 'Ordinary' or 'Advanced' level (or equivalent) for occupations at technician and higher technician level respectively; there is often some possibility of progression from one level to the other. This field is relatively small and lacks definition. (See Section 11).

1 - In the UK the term 'professional' is mainly applied to occupations for which higher education is necessary. It does not correspond to the European 'professionnelle'.

4. Craft apprenticeship

4.1. Craft apprenticeship schemes are normally administered by national joint apprenticeship bodies (councils, committees, boards, commissions, etc.) set up by the representative employer associations and trade unions, usually on an industry rather than on occupation basis, so that for some crafts there is more than one scheme. Schemes administered by nationalized industries and public bodies usually follow the general arrangements of those in the private sector and problems of mobility between the two sectors do normally not arise. Most national joint apprenticeship bodies (NJAB) were set up in the period following World War II, on the lines of recommendations made in 1945 by a Joint Consultative Committee at national level, representing the (then) British Employers Confederation and the Trade Union Congress. To a large extent, the patterns of training recommended in NJAB schemes reflected the thinking of that era and they were not very sophisticated. However, following the implementation of the Industrial Training Act of 1964, the industrial training boards (ITB) published training recommendations of a more highly developed character, covering most craft occupations for which apprenticeship schemes exist. The NJABs have continued in existence, with their schemes providing the contractual framework within which the ITBs training recommendations may be implemented. No conflicts have arisen and this would in any event be unlikely since both NJABs and ITBs are representative of the same or very similar industrial bodies.

4.2. The actual functional relationship between NJAB apprenticeship schemes and ITB training recommendations varies. This may be illustrated by three representative examples :

(a) In the case of the Engineering Industry Training Board, its recommendations for trainee craftsmen avoid the use of the word 'apprentice' and are indeed of such a flexible and non-age limited character that they could hardly do so. The apprenticeship scheme has been amended so as to refer to the ITB's function of defining the content of training for craft trainees.

(b) The Construction Industry Training Board's training recommendations are designed for indentured apprentices (who may be adult) and the conditions for an employer's eligibility for a grant in respect of craft training require that apprentices are registered with a nominated NJAB.

(c) The Agricultural Training Board has taken over the whole apprenticeship scheme from the two former joint bodies (for England and Wales and for Scotland) and the training, certification and other provisions of the

board's new entrant (apprentice) training scheme are available only to registered apprentices. The integration here is complete.

4.3. The official Training Services Agency publishes an Information Handbook on national joint recruitment and training schemes. In the latest (1974) edition 92 schemes are listed. Of these, 7 concern only technician training and 3 are no longer fully effective. Of the 82 concerning craft apprenticeship, 52 are administered by joint employer/trade union bodies and a further 11 are administered jointly by the employer associations and trade union concerned. Although a separate joint apprenticeship body is not constituted, three schemes are administered by ITBs, 9 by nationalized industries, 5 by employer associations, 1 by a professional institute and 1 by a private training association. A few NJABs have assessors appointed by government departments (education and/or employment) and many include vocational education advisers from technical colleges.

5. Characteristics of craft apprenticeship schemes

5.1. Craft apprenticeship schemes show strong family resemblances. Nevertheless each is individually designed and administered and, inevitably, reflects the particular features of the recruitment, training and occupational patterns of the industry concerned, so that a wide range of variations can be found. There is even more marked variation in effectiveness of implementation, which can vary from complete application and rigorous administration to what can only be described as 'laisser-faire'. The more important features are as follows :

(a) Written agreement - A written agreement between the employer and the apprentice or his parent/guardian is specified in all schemes, either as an obligatory requirement or as a recommendation. Most NJABs provide copies of a standard proforma - usually referred to as an 'indenture' or 'deed'. Signatures are required from both parties and there is sometimes provision for endorsement on behalf of the NJAB. In some cases apprenticeships are registered centrally by the NJAB. Even in some occupations where an NJAB scheme exists, apprentices may be recruited on the basis of verbal agreements only. For example, this was common in the building industry in the North of England, but is less frequent nowadays owing to the influence of the Construction ITB; it did not necessarily imply that training was inadequate, but mainly reflected local custom. The reverse trend, i.e.,for an increase in non-indentured apprenticeships, is found in some engineering occupations, where some employers who follow the highly effective training

patterns recommended by the Engineering ITB tend to consider that a formal apprenticeship contract has become less relevant.

(b) Normal age of entry - This is predominantly at or very shortly after the minimum school-leaving age (16).

(c) Upper age-limit for entry - Some schemes specify an upper age limit for entry at 17 or 18, or require completion by age 20 or 21, which has the same effect. There may be provision for discretion by the NJAB for entrants 1 or 2 years older than the norm, especially where applicants have had extended education of a relevant kind. In building crafts, the most recent revision of the scheme makes provision for the entry of adults. In practice, entry is overwhelming at the school-leaving age or after some months' preparatory employment in the same undertaking. The practice of relating apprentices' wages to chronological age rather than to length of service is of course a strong inducement to employers to recruit school leavers at the minimum age.

(d) Probationary period - It is normal practice to specify a probationary period, during which the apprenticeship agreement may be terminated by either party. The most usual period is 6 months but it may be 1, 3 or up to 12 months. The probationary period, if satisfactorily completed, is regarded as being part of the apprenticeship proper.

(e) Duration of apprenticeship - The normal duration of apprenticeship - as specified in the schemes - is 4 years in over half the cases (including the important engineering, shipbuilding, printing, vehicle repair and furniture schemes); it is 3 years in about one fifth of the schemes (including building crafts, hairdressing and agriculture) and 5 years in rather less than a fifth. A small number of somewhat untypical schemes have a shorter duration - e.g. 2 years. Many schemes include provision for shortening the duration in the case of entrants with above-average educational qualifications or, in a few cases, for entrants above the normal age. There is no provision for agreements to be extended to enable the apprentice to have a second attempt at a vocational qualification or test of competence.[1] The typical duration of a craft apprenticeship is thus now 4 or 3 years, which compares with 5, 6 or even 7 years in 1939.

(f) Training programme - The majority of NJABs provide guidance to employers on the scope of the training and experience that apprentices should be given. This is normally not of a detailed or structured character, nor is it obligatory. There are however a few schemes in which there is a more

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1 Except in the case of mining engineering craft apprenticeships.

detailed specification of the training to be given and/or a system of surveillance to check that it is provided. In the major fields of craft and technician apprenticeship, the very detailed training programmes and procedures recommended by the ITBs have become the authoritative and accepted guidelines.

(g) Related vocational education - All schemes recommend or require that apprentices attend part-time day or block-release classes of associated vocational education, in working hours without loss of pay. In some cases, additional attendance of one or two evenings per week is required, if this is part of the course provided by the college concerned. Since the end of World War II these provisions have led to a major increase in the number of young persons receiving vocational education and a massive change from evening-only courses to day-time instruction. In the main apprentice training fields, attendance by apprentices in vocational education classes is very high (e.g. 80-95%); however, in some fields, especially where numbers are small, attendance can be much lower as a result of a combination of reluctance by apprentices and employers on the one hand and the non-availability of classes locally on the other. The associated vocational education is provided in colleges of further education maintained by local education authorities (LEA). The LEA receives financial support (about 65%) from the central government under the rate support grant system. The 1944 Education Act laid upon LEAs for the first time a statutory duty in respect of further education (which in the UK includes vocational and technical education). Section 41 of the Act reads (in part) :

> '41. Subject as hereinafter provided, it shall be the duty of every local education authority to secure the provision for their areas of adequate facilities for further education, that is to say :
>
> (a) full-time and part-time education for persons over compulsory school age'

In practice, a LEA will provide part-time vocational classes for apprentices etc., wherever a sufficient demand can be shown to exist subject to the availability of the necessary accommodation and teaching staff. Enormous resources in buildings, equipment and staff have been made available since 1946 for vocational further education.

(h) Completion tests - Except in a small number of atypical schemes (referred to later), apprenticeship schemes in the UK do not provide for a final examination or test or certificate of competence. The apprentice who 'serves his time' is accepted as a craftsman by his employer (although he need not

continue to employ him) and his trade union. All vocational education schemes related to craft apprenticeship lead to final examinations set at the level of the competent craftsman. These are set by educational bodies such as the City and Guilds of London Institute. Although success in these examinations adds to the status and prospects of the apprentice, and may in a few cases lead to earlier completion of training or a supplement to wages, they do not (except in the special cases referred to above) have any bearing on the apprentices' graduation to craftsman status on completion of the appropriate period of time. Similarly, an apprentice may proceed through a systematic training programme on lines recommended by an ITB, with phased tests of competence at various stages and possibly gain a certificate of craftsmanship awarded by the ITB, but whether he does so successfully or not, he will still be able to claim craftsman status when he has served as an apprentice for the specified period of time. This status is denoted by endorsement of the apprentices' indentures by the employer and in some cases by a representative of the body administering the scheme. In some cases a separate certificate is also provided.

(i) Transfers - All bodies administering schemes will assist apprentices and employers when the transfer of an apprentice to another employer becomes necessary or desirable.

(j) Disputes - Serious disputes between employers and apprentices are extremely rare. Most joint apprenticeship schemes make explicit provision for arbitration on disputes relating to the requirements of the scheme. Generally, apprentices are covered as employees by the extensive provisions of the relevant labour legislation, Factories Acts, etc.

(k) Apprentice ratio - Twenty two of the ninety two apprenticeship schemes in the TSA handbook refer to agreements between employers associations and trade unions which specify the maximum ratio of apprentices to skilled workers in an undertaking.

In nine cases the ration is 1:3, in one 1:4, in three 1:5 and one (slaughtering) 1:10, with seven cases in which the ratio is variable. There seems to be no evidence that these ratios have had any restrictive effect in practice. The overall statistics of entry to apprenticeship show, on the other hand, that employers do not recruit excessive numbers of apprentices as a form of cheap labour.

(l) Remuneration of craft apprentices - Apprentices are paid wages on a scale related to age. The scale is normally expressed in terms of percentages of the adult rate for the occupation concerned. The rates are usually not less and may be more those for non-apprentices of the same age (though the actual

earnings of non-apprentices may reflect the greater availability of piecework, overtime etc.). Some representative scales are :

Occupation	Year 1	Year 2	Year 3	Year 4	Year 5
Engineering Shipbuilding Vehicle building	42.5%	59.5%	67.5%	80%	
Building	50%	70%	90%		
Hairdressing	46%	54.3%	63%	74%	87%

(m) Local administration - Only 17 of the joint apprenticeship bodies have arrangements for local or regional bodies. Their functions are primarily to help, rather than to inspect, control or give direct technical guidance. They assist in bringing together intending apprentices and employers, in promotional activities generally, in facilitating transfers, liaising with schools and vocational education bodies, the careers service and so on. However, they do not in general have very substantial administrative or technical resources; the level of activity varies from industry to industry and from district to district in the same industry. In the case of printing, local joint bodies are involved in selection testing of applicants for apprenticeships, this is exceptional.

(n) Approval of employers - Except in agriculture, and electrical installation, joint apprenticeship bodies do not have machinery for the formal approval of employers as eligible to recruit and train apprentices, nor do they lay down any requirements regarding the employment of training officers and/or instructors.

(o) Non-training aspects - Many large employers with a sufficient number of apprentices set up company apprentice associations which undertake social, sports and welfare activities. Apprentices may be sent on 'outward bound' courses and other character building activities. This is of undoubted benefit to the young people concerned, who, besides participating in the activities *per se*, may have the opportunity of acting as chairman, secretary, treasurer, etc., or otherwise assisting in organization and administration.

(p) Operational efficiency - The major review of the effectiveness of apprenticeship schemes is deferred until later (Section 2.3.). It is however appropriate to say here that the operational efficiency with which schemes are implemented is very variable, both within and between industries. Some schemes, effectively implemented in undertakings (both large and small) provide highly organized and professionally conducted training. In the

general absence of statutory or other control systems, this has depended on the degree of commitment of the employer and the expertise of the staff he has provided. Where this commitment is lacking, the quality of training provided can be very poor.

6. The Industrial Training Act

Preliminaries

6.1. Throughout the 1950's, industry in the UK experienced shortages of skilled labour. There was a growing realization that traditional recruitment and training arrangements were both quantitatively and qualitatively inadequate. In the spring of 1956, the National Joint Advisory Council, which, under the chairmanship of the Minister of Labour, advised the Government on matters in which employers and workers had an interest, appointed a sub-committee 'to consider the arrangements for the training of young workers in industry, with particular reference to the adequacy of intake into apprenticeship and other forms of training .....'. The sub-committee's report - known as the Carr report - was authorized for publication in January 1958. The report briefly referred to graduate, student and technician apprentices and to non-apprentices, but was mainly concerned with craft apprentices. The sub-committee's main recommendations (widely regarded in education and training circles as disappointing) were as follows :

(a) Existing facilities for apprenticeship training were inadequate in quantity and, in some cases, in quality as well.

(b) The existing division of responsibility between Government and industry for the education and training of apprentices should be maintained.

(c) The traditional apprenticeship system should form the foundation of future training arrangements, but needed re-examination and should show responsiveness to change.

(d) Training arrangements should be flexible; stereotypes were inappropriate, selection should be improved, age limits should be relaxed.

(e) Training schemes for technicians should be developed.

(f) Detailed syllabuses of training might be of advantage to some industries and should be considered by all.

(g) Completion tests should not be obligatory, but might be of value as conferring an additional qualification on an ex-apprentice.

(h) The training of instructors merited attention.

(i) Reduction of the length of some apprenticeships (then generally 5 or 6 years)

might be desirable. The range of training could be widened in some cases.

(j) Girls should not be discouraged from undertaking craft apprenticeships.

(k) A National Apprenticeship Council (of an advisory character) should be established.

The Industrial Training Council

6.2. The report undoubtedly helped to draw attention to the imminent problem of the post-war 'bulge' in the birth rate and the need to stimulate apprentice recruitment. In the same year (1958) the British Employers Confederation, the Trade Union Congress and the nationalized industries set up the Industrial Training Council, with the backing of and a small subsidy from the Government. The Industrial Training Council's function was 'to provide encouragement and help to industries in the training of workpeople'. It produced some useful publications on apprentices, non-apprentices and the training of girls, but the basically unsatisfactory situation identified in the Carr report was not fundamentally changed. It very soon became clear that a more effective mechanism was required.

The White Paper and the 1964 Act

6.3. In December 1962, the Government published its White Paper 'Industrial Training : Government Proposals'[1]. This made the revolutionary proposal that statutory industrial training boards should be set up for individual industries, with the duty of:

(a) establishing training policies and standards for their industries and promoting their implementation;

(b) paying grants to firms to reimburse all or part of the costs incurred in approved training;

(c) collecting money from establishments in the industry in the form of a levy.

In due course and with almost no political opposition the Industrial Training Act of 1964 received the Royal assent. It had three main objectives :

(a) to ensure an adequate supply of properly trained men and women at all levels in industry;

(b) to secure an improvement in the quality and efficiency of industrial training;

(c) to share the cost of training more evenly between firms.

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1 Cmnd/ 1892

The Central Training Council

6.4. By 1972, there were 27 industrial training boards (ITBs) covering about 15 million employees, i.e., about two thirds of the working population (see Appendix 3). Each ITB consisted of equal numbers of employer and trade union representatives, with a smaller number of educationists; all members are appointed by the Minister of Employment, after appropriate consultation. The 1964 Act also provided for the establishment of the Central Training Council (CTCs) a body representative of both sides of industry, the ITBs and education, with the duty of advising the Minister on the implementation of the Act. The CTC served a particularly valuable function in clarifying and promulgating agreed guidelines and thus coordinating the implementation of the Act. It was however discontinued under the 1973 legislation referred to immediately below and more detailed reference to its activities will be made later.

The Employment and Training Act (1973)

6.5. A review of the operation of the Act in 1971, initiated in part because of opposition to the levy, revealed that, although the quality and efficiency of training had much improved, there was little evidence of any increase in the number of people receiving initial training. It seemed that the impact of ITBs grant schemes was only marginal in affecting the numbers of trainees recruited, whilst the major determinant in this respect remained the employer's expectation of the level of activity over the next few years. The review also highlighted certain deficiences in the Act, first the relative neglect of the non-ITB sector, second, the absence of a mechanism for coping with structural change involving transfers of manpower from declining to expanding sectors of the economy, and finally, it identified a need for greater opportunities for individuals to obtain training related to their personal needs and ambitions. After wide debate, based on a government discussion document 'Training for the Future', published in January 1972, the Employment and Training Act of 1973 was enacted. The new Act made the following main provisions :

(a) it maintained the authority of the ITBs to secure the training position in their industries;

(b) it limited levy to a maximum of 1% of an establishments' emoluments (unless specially approved);

(c) it envisaged the more extensive exclusion of small firms from levy liability (this was an area of some difficulty under the 1964 Act notably because small firms' training needs were often highly specialized and atypical, but also because of the relatively high administrative burden involved in the collection of small amounts of levy);

(d) it provided that firms providing satisfactory training to meet their own needs could be given exemption (or partial exemption) from levy by their ITB;

(e) it provided for the establishment of the Manpower Services Commission (MSC) and its two executive agencies - the Employment Services Agency (ESA) and the Training Services Agency (TSA). The Government handed over its responsibilities for the public employment and training services to these two agencies, whose activities are financed predominantly from public funds; in the case of the TSA, these funds were to be markedly increased.

The Training Services Agency

6.6. The TSA, a statutory corporation in its own right is of direct concern to this account. It has three main areas of responsibility:

(a) meeting training needs in industry by:

(i) stimulating and coordinating the work of ITBs, including the provision of funds to meet their operating expenses and contributions towards the costs of key training activities;

(ii) providing services in non-ITB areas of economic activity to identify and help to meet key national needs.

(b) meeting training needs of individuals, by providing direct training, (with financial support) in Government Skill Centres, colleges of further education and elsewhere, on a greatly expanded programme reaching in due course about 100 000 trainees per year.

The MSC, TSA and ESA are thus able to coordinate and help develop the national training effort as a whole, with the object of ensuring that it meets the nation's needs more effectively than formerly. In the case of the ITBs, the TSA aims to develop a constructive partnership, using 'dialogue teams' which engage in continuous discussion with their respective ITBs - especially in relation to rolling 5-year strategic plans.

Functions of ITBs

6.7. The main operating functions of an ITB in respect of training are laid down in Section 2 of the 1964 Act and may be summarized :

(a) to assess the manpower and training requirements of the industry,

(b) to draw up training recommendations and recommendations (but not programmes) for associated further education,

(c) to ensure that its recommendations are put into effect and continue to remain valid.

The Central Training Council (see above, paragraph 6.4.) published a series of 8

memoranda giving guidance on the way the work of the then newly-established ITBs should develop. It also published more detailed recommendations, e.g. on the training of training staff, which were relevant to all ITBs. A list of the CTC's publications is given in Appendix 4. Of particular relevance to this account are the following CTC memoranda :

No 1 (March 1965) 'Industrial Training and Further Education' - identifies these as 'complementary aspects of a single process' notwithstanding that the former is now the responsibility of ITBs and the latter that of the Education Ministers and local education authorities.

No 4 (March 1966) 'Industrial Training and Further Education - a Further Statement' - elaborates in more detail, explores the purposes and relationships of the two components and stresses the need for liaison and coordination.

No 5 (March 1966) 'Approach to Industrial Training' - an assessment of the main tasks facing ITBs, especially in tackling the preparation of training recommendations for occupations, securing the backing of firm's management for training and encouraging the provision of trained training specialists.

No 6 (July 1966) 'The Selection and Training of Instructors' - emphasizing its importance, giving guidance on suitable courses and promising government support if expansion of training facilities is required.

- A message from the Central Training Council (September 1968) 'Training for Skill, the Time for Change' - an appeal to allow modern training policies and practices to develop without hindrance from outmoded attitudes and restrictions.

7. The ITBs in action

7.1. The ITBs followed closely the guidelines established by the CTC - this was not at all surprising since (a) their representatives played an important role in the Council's affairs, and (b) recommendations were subject to approval by the Secretary of State. The training recommendations they produced for occupations or groups of related occupations were developed on the bases established in CTC Memorandum No 5 and, in particular, provided for :

(a) an occupation title, description and specification;

(b) a personnel specification detailing the essential academic, physical and other requirements a trainee should meet;

(c) a programme of introduction to the undertaking;

(d) a guide syllabus and training programme, based on task analysis;

(e) guidance on the nature and methods of training to be used (e.g. off-the-job instruction, planned and supervised experience etc., surveillance and reporting);

(f) instruction by staff trained in methods of instruction;

(g) associated further education of appropriate type and phasing (recommended by the ITB and to be sufficiently flexible to permit the abler trainee to take a broader and more demanding course);

(h) phased assessment of trainees' progress by objective methods at appropriate stages (permitting reinforcement of training as found necessary);

(i) duration of training to be determined, not by some arbitary framework, but by amount of ground to be covered.

7.2. By 1971, ITBs had published training recommendations for nearly all industrial craft occupations in which significant numbers of apprentices were involved. They set new standards which had rarely been achieved before. They also showed substantial 'structural' differences from the traditional patterns of training that they were designed to replace. Among the more important features usually found were the following :

(a) broad foundations - initial training is broadly based, sometimes it is common to a group of formerly separate crafts;

(b) off-the-job training - in the important fields of the engineering and allied trades, foundry, shipbuilding, motor vehicle repair, iron and steel manufacture, electricity supply, and construction (and more recently in printing), all or most of first year training is in off-the-job training centres [1] under trained instructors;

(c) flexibility - following initial basic training, greater flexibility is introduced, often with a modular pattern permitting both 'vertical' and 'horizontal' extension of training, possibly throughout working life;

(d) phased testing - corresponding to the objectivity that is applied in the job specification, phased, intermediate (i.e., staged) and final training objectives are defined in behavioural terms (i.e., the trainee should be capable of .....). This leads to corresponding objectivity in the drawing up of phased tests which are applied in order to monitor the trainee's progress through the programme. Such tests may be provided by external agencies or drawn up by instructors or on-the-job supervisors (using production work if appropriate) in accordance with test specifications or guidelines provided by or on behalf of the ITB. Some ITBs recommend both phased tests and stage tests;

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1 In the majority of cases in technical colleges.

(e) the use of a progressive series of phased tests of the type referred to above is generally regarded as preferable to comprehensive end tests or final tests of competence. This is because they can :

(i) establish whether a trainee has achieved the desired level of competence in a particular field or needs a further period of instruction before proceeding;

(ii) establish areas in which trainees generally experience difficulty;

(iii) diagnose the activities for which particular trainees are most suited;

(iv) provide information on the efficiency of training;

(v) establish national standards;

(vi) contribute to final certification of performance.

7.3. The ITBs training recommendations have been brought into operation in association with other important developments. These will be referred to in detail later, but it may be mentioned here that they include a substantial increase in the number of off-the-job training centres, and in the number of training officers and instructors, and the concurrent introduction of newly designed courses of associated vocational education. Overall, the new arrangements have, qualitatively, been very successful. Some representative examples of important schemes are described in Appendices.

Training recommendations and apprenticeship schemes

Where training recommendations for an apprentice occupation are now provided by an ITB, no conflict arises with the provisions of the respective apprenticeship scheme. The apprenticeship scheme provides a contractual framework, identifying the young person as a trainee and specifying the conditions of employment, wages, holidays, further education etc. The ITB's training recommendations specify the training the apprentice should be given if the employer is to satisfy the ITBs conditions for award of grant or exemption from levy. The specific relationship between training recommendations and apprenticeship schemes vary from ITB to ITB. Three representative types have been identified in paragraph 4.2. above.

7.4. Further education for craft trainees

Courses of part-time further (i.e. in this case 'vocational') education for apprentices in skilled crafts are provided in colleges of further education administered by local education authorities, as described in paragraph 5.1.(g) above. The syllabuses on which the courses are based are (except for commercial occupations) usually devised by the City and Guilds of London Institute. The

Institute is an independent body founded in 1878 and now operating under a Royal Charter, to promote technical education. It acts as an external examining body, providing schemes and syllabuses for part-time courses and, together with certain regional bodies, conducting examinations for students enrolled in the courses. For the preparation of its schemes and syllabuses, the Institute relies on advisory committees which are comprehensively representative at national level of the industrial organizations concerned and the education service, with assessors appointed by the education departments in England and Wales, Scotland and (if appropriate) Northern Ireland. The 'City and Guilds' advisory committees thus provide an extensive forum for cooperation between industry and the education service in defining, monitoring and developing courses of further education of a kind suitable to be the complement to the industrial training provided by undertakings for apprentices and other trainees.

7.5. Unfortunately, prior to the Industrial Training Act of 1964, the industrial component of apprenticeship training was only very rarely clearly specified and even more rarely was it provided uniformly for all apprentices. Thus, although the committees did their utmost to ensure that the further education courses reflected the training provided by industry, the primary problem was to identify what that training was. Too often, the course of further education was the only systematic training process the apprentice was likely to undergo.

7.6. The setting up of industrial training boards changed this situation. For almost the first time, there was a clear and authoritative statement of training requirements in the form of the ITB's training recommendations; moreover, the levy/grant machinery and associated factors led to a much greater degree of uniformity in the training provided by firms. At the same time, the Central Training Council memoranda referred to in paragraph 6.7. above made it clear that close cooperation with the education service was essential. This situation provided the education service with a new opportunity - it also presented a problem. Many of the new patterns of training recommended by the ITB's had a radically new occupational structure; many were based on an initial period of full-time off-the-job training, the duration was determined by what had to be learned, training programmes now included topics that formerly were mainly dealt with in the educational course so that there was a risk of duplication, and so on. It was clear that a major new phase of curriculum development and syllabus construction was needed. Accordingly, and on the basis of this assessment of the position, the City and Guilds of London Institute proposed to the regional examining bodies and the education departments that a major coordinated approach

should be made to the preparation of new educational schemes, closely tailored to provide appropriate complements to the new training programmes devised by the ITB's. Agreement was readily reached, approved also by the ITB's and officially promulgated as Administrative Memorandum 25/1967 of the Department of Education and Science and AM9/1967 of the Scottish Education Department. Under the agreement, widely representative joint advisory committees of the City and Guilds and the regional bodies were formed. They set new standards in curriculum development in the vocational education field, including the achievement of greater objectivity in defining learning objectives and the design of test procedures, matching the corresponding advances that had been made in the training field. At the same time, the education and training programmes attained a degree of integration and mutual reinforcement that had previously not been possible.

7.7. The degree of close coordination that has now been achieved in the drawing up of education and training programmes has not yet been attained in assessment and certification, which generally though not always, remains separate and without provision for a combined award. This subject is complex and is dealt with more fully in Section 12.

8. Technician apprenticeships

8.1. The word 'technician' is used in the UK as a generic term to identify people doing jobs which involve a higher level of scientific and technical knowledge than that needed by a plant or machine operator or craftsman, but below that of a technologist, engineer or scientist. A technician's training and education enable him/her to exercise technical judgment, based on an intelligent application of the general principles underlying the work involved, as compared to the greater reliance in accumulated skill and experience which is characteristic of the craftsman. The term technician is applied to a wide range of occupations, some only a little more advanced than craft level and others rubbing shoulders with technologists and scientists. Educational courses and qualifications for technicians exist at technician and higher technician levels. Occupations in the commercial field exist at corresponding levels, but the term technician is only very rarely applied. The following account refers to industrial/technical occupations only.

8.2. Although systematic schemes of education and training for technician level occupations have existed for over 50 years, they were for long only very small

beginnings. The principal development in the identification of the technician function in industry and in the explicit provision of appropriate patterns of recruitment, education and training has taken place since the end of World War II. This development has not generally been closely identified with the traditional craft trade unions; consequently the most usual agencies for the administration of schemes have been employer associations or employer related bodies (set up to advise on non-craft training and/or education), professional or technician institutions, nationalized industries, group training associations and individual, usually large, undertakings.

8.3. A convenient way of illustrating the characteristics of a good technician apprenticeship scheme is to quote from the brochure of a firm in the engineering industry :

Extract (slightly adapted) from a company technician training scheme

'Purpose - to provide the company with a team of young men and women who will be capable of holding positions of responsibility in the following areas either mechanical or electrical disciplines :

draughting, design, development, methods, engineering, materials, production control planning, commerce, supervision.

Entry requirements - the applicant must :

(i) be between the ages of 16 and 17½ years, approximately;

(ii) have had a sound basic education and obtained a minimum of four GCE "O" levels (or equivalent), including mathematics and physics;

(iii) satisfy the company that he/she has an aptitude for engineering and the potential to assume a position of responsibility.

(Provision for upgrading of craft apprentices who show special aptitude).

Duration - normally 4 years.

Programme of training - this is in 3 parts as follows :

(i) Basic training - 1 year (9 months off-the-job in the workshop training school ..... 3 months in the drawing office training school).

(ii) General training - 5 elements covering, in various departments,
manufacturing practices; communications;
control techniques; commercial matters;
design appreciation.

(iii) Objective training - (i.e. training in a specific job).

Apprenticeship agreement - after a satisfactory probationary period, a legal covenant is entered into between the apprentice, his parent or guardian and the company. Copies are exchanged on satisfactory completion of the apprenticeship.

Further education - day or block release at a specified technical college is given without loss of pay and attendance is obligatory.

Regrading
(Possibility of regrading to technologist (i.e., student) apprenticeship for a degree or similar course with related training).

Supervision
(by company training officers and instructors).

8.4. The scheme referred to above is one that is designed and administered by the company itself. This is the most usual arrangement in the private sector of manufacturing industry. However, the scheme follows very closely the training recommendations of the Engineering ITB and undoubtedly merits the award of grant or levy exemption by that Board. It is also worthy of note that, within the broad framework of the overall training scheme, the adaptation of the later stages of training to meet the individual needs of the company is well provided for. This is characteristic of most technician training schemes, where of course actual jobs are much more diverse and 'company related' than is the case with the traditional crafts.

8.5. A different type of administrative pattern is found in the scheme for the training of civil engineering technicians and technician engineers (the latter is the senior grade). This scheme is administered on a national basis by a standing joint committee appointed by the Institution of Civil Engineers, the Institution of Municipal Engineers, the Association of Consulting Engineers, the Society of Civil Engineering Technicians and the Federation of Civil Engineering Contractors. The scheme is based on the following requirements :

(a) training with an approved employer ;
(b) associated further education in specified national certificate or diploma courses (i.e., at technician and/or higher technician level);
(c) further broad responsible industrial experience after gaining the educational qualification;
(d) an interview with two experienced interviewers based on a formal report by the candidate on his education, training and experience, together with supporting documentation (drawings, field books, bills of quantities etc.)

on an appropriate range of types of work; the interview procedure is unique to this scheme;

(e) typically, trainees are indentured for at least 4 years. There is however provision for non-indentured participants, who are required to have an extended period of practical experience after gaining their academic qualification (these men would not of course be apprentices as defined for the purpose of this monograph);

(f) qualification is at two levels :

(i) technician - related to success in the Ordinary National Certificate or Diploma course in Engineering, followed by experience as described above,

(ii) technician engineer - related to success in the Higher National Certificate or Diploma course, followed by experience, as described above.

8.6. This scheme also illustrates two further features of the pattern of qualification open to technicians in the UK after satisfactory education, training and experience. The first is generally applicable, the second only in the field of engineering. Trainees who are awarded the certificate conferred by the Standing Joint Committee administering the scheme may :

(a) be admitted to the appropriate grade of membership of the Society of Civil Engineering Technicians;

(b) if so admitted will be eligible for entry to the appropriate section of the composite register of the Engineers Registration Board and use the designatory letters Tech. (CEI) or T. Eng. (CEI) as appropriate.

8.7. Three further features that are generally characteristic of schemes for this level of training are as follows :

(a) upgrading from technician to higher technician trainee - trainees who show sufficient promise on gaining their Ordinary National Certificate or Diploma may take out a supplementary indenture of 4 years leading to the technician engineer interview (making a minimum of 6 years in all);

(b) direct entry to the technician engineer scheme is possible for those with the necessary educational qualification for entry to the Higher National Certificate or Diploma course (i.e., GCE 'A' levels or equivalent);

(c) transfer - outstanding trainees may be transferred at the Ordinary National Certificate or Diploma stage to a sandwich course of higher education leading to full professional qualification, with the object of becoming in due course chartered engineers (C. Eng).

8.8. A somewhat similar scheme for the training and qualification of heating, ventilating and air-conditioning technicians and technician engineers is administered by the Education Council for Heating and Ventilating. The Council was established by the Institution of Heating and Ventilating Engineers and the Heating and Ventilating Contractors' Association to be responsible for technical, commercial and management education in the industry. The Council administers two parallel schemes for indentured technician and technician engineer apprentices respectively, with different entry levels and different forms of associated further education. The duration of training (with an approved employer) is 4 years for technicians and 4 or 5 years for technician engineers. Besides achievement of the appropriate educational qualification, trainees aim to become members in the appropriate grade of the Institution of Heating and Ventilating Engineers and also registered as Tech. (CEI) or T. Eng. (CEI) as appropriate. There are currently about 1 200 technicians and 500 technician engineer trainees in the schemes.

8.9. In the building industry, regional federations of employers administer similar schemes. These provide for standard training agreements based on the provision of appropriate types and phases of industrial training to complement various patterns of further education (f.e.), as follows :

(a) technician traineeships - with part-time f.e.;
(b) pupilships - with part-time f.e. at a higher level than in (a) above;
(c) registered student-pupilships - with full-time or sandwich course f.e. at technician, higher technician or university degree level.

There are currently about 700 such agreements in force, registered with the federations. However, information derived from grant applications by employers to the Construction ITB suggest that the total number of trainees is much greater than this and that most agreements of this kind are made outside the federations' schemes.

8.10. There is only a limited number of nationally administered schemes of technician apprenticeship. The TSA Information Handbook on national joint recruitment and training schemes lists only 15 at technician level. Of these, 7 are in the nationalized industries (rail, waterways, coal, electricity supply (2), steel, post office). Others with significant numbers of trainees include the Foundry Industry Training Committee (a statutory body associated with the Engineering ITB), the scheme for heating and ventilating described above and schemes for shipbuilding technicians, dental technicians and a scheme run by

a private group training association. The remaining 4 are on a very small scale indeed in the fields of asbestos textiles, cast concrete (draughtsmen), shopfitting and furniture design.

8.11. So far as the design and content of technician training schemes are concerned, very important advances have been made in recent years by Industrial Training Boards. Seventeen ITBs have now published training recommendations for the training of technicians. In all cases these have been based on detailed studies of technician functions in the industries concerned, coupled in some cases with major research projects and surveys. On the basis of these investigations, the ITBs have been able to bring a new clarity to the definition of technician functions in their industries and a correspondingly greater objectivity in the design of appropriate training programmes. The characteristics of ITB training recommendations for technicians vary of course from industry to industry; they do however possess some common features. The general picture is well illustrated by the recommendations of the Engineering ITB for technicians and technician engineers, as very briefly outlined below.

8.12. Training of engineering technicians and technician engineers

(a) Schemes of training must be adaptable to meet the needs of
  (i) new entrants
  (ii) promoted craft trainees
  (iii) adults.
  (What follows applies to new entrants).

(b) Selection should take into account - scientific curiosity, mathematical ability, ability to communicate, potential for success in associated further education at technician level.

(c) Programmes of training should cover
  (i) Induction
  (ii) Basic training in workshop technology, given off-the-job by trained instructors (approximately 1 year).
  (iii) General training in a range of functions, i.e.,
    (a) design appreciation
    (b) communication
    (c) manufacturing practice
  and for technician engineers,
    (d) commercial matters
    (e) control techniques
  (iv) Objective training for a particular job.

(v) Associated further education.

(d) Appraisal of trainees' progress to be made individually throughout the programme, using techniques appropriate to the stage of training reached and involving log-books, phased testing, reports and projects completed by the trainee.

(e) Duration is determined by the content of the programme and the trainee's rate of progress. Four years is a usual period.

(f) Individual trainees' programmes should reflect the intended area of employment (e.g. mechanical, electrical, instrument), the particular function and post aimed at (e.g. quality assurance) and at the same time integrate the basic, general and objective training in a meaningful way.

8.13. Most ITBs publish, besides technician training recommendations, helpful illustrative examples of how firms can prepare their own technician job descriptions, based on task analysis, and then go on to develop suitable training programmes which meet their own individual requirements whilst at the same time providing the necessary basic and general training.

8.14. There may in some cases be a lack of clarity in the contractual status of technician trainees. Although some will serve under indentures or a legal covenant, many large firms with established reputations for providing high quality training at technician level do not formally indenture new entrants as apprentices, but use the company's standard form of contract of employment. Nevertheless, the recruitment literature and advertisements of vacancies refer explicitly to the training to be provided, the educational attainments required for acceptance and the vocational qualifications that may be aimed at trainees. There is thus a clear recognition by all parties that the company is seeking a recruit to a systematic training and educational programme. The companies which go to the trouble to operate such schemes are unlikely to jeopardize their considerable investment in training by an irresponsible attitude to their trainees. Nevertheless, the trainee does not always have the formal assurance of a complete training programme that a formal indenture for (say) 4 years would provide. The actual legal position of an unindentured trainee in this situation is difficult to assess and is determined by general labour legislation on contracts of employment, redundancy, etc.

8.15. The situation is made even more confused in occupations in which 'recruitment to do a job' is at least as significant as or more significant than 'recruitment for training'. The recruitment of some laboratory technicians

in the chemical industry is a case in point; there can be found a continuous range from formal apprenticeship, through non-indentured employment in a firm with good training, to employment with only the bare minimum of training to do a particular job. The unsystematic situation in the electrical installation field is illustrated by the tentative nature of the following extract from the Construction ITB's training recommendations for electrical installation technician engineers :

> 'It is recommended that employers introduce written service agreements for technician engineer trainees. They give the trainee an assurance of continuity of training and impress on all parties to the agreement their responsibilities and rights.'

Further education for technicians

8.16. Associated further education for technician trainees is well developed, in the form of part-time, sandwich and full-time courses. The pattern presently in operation, based mainly on 'City and Guilds' technician schemes and Ordinary and Higher National Certificate and Diploma schemes has a long history; it was last codified by the 1961 Government White Papers 'Better opportunities in technical education'[1] and 'Technical education in Scotland, the pattern for the future'[x] The major schemes comprise :

(a) a wide range of 'City and Guilds' technician schemes, each providing for a part-time course of 4 or 5 years' duration related to specific technician occupation(s) in a particular industry. The entry level is set at satisfactory completion of secondary education to age 16, with exemption from the first year for holders of appropriate passes in GCE at 'O' level. Entry may also be from a craft course;

(b) Ordinary and Higher National Certificate schemes, each related to a broad technological field, e.g. engineering, construction, textiles sciences, providing for 2-year part-time courses at each level, based on mathematics, applied science and technology. The entry level is higher than for (a) above, requiring 4 passes in GCE at 'O' level, or the equivalent for entry to the 'Ordinary' level and 'A' level standard for direct entry to the Higher level. Normally, technician trainees take first the Ordinary and then the Higher National Certificate in a total of 4 years;

(c) Ordinary and Higher National Diploma schemes are similar to the National Certificate schemes outlined in (b) above, but with a much broader curriculum, which is covered in sandwich or full-time courses.

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1 Cmnd 1254
x Cmnd 1245

8.17. Following the report in 1969 of the Committee on Technician Courses and Examinations, [1] set up following a request by the Secretary of State for Education and Science, the 'City and Guilds' and the National Certificate and Diploma schemes are to be replaced by a single coordinated and rationalized pattern of technician courses that is currently being proposed by a new body, the Technician Education Council, for which the administration is provided by the City and Guilds of London Institute. In the business studies field an analogous body 'The Business Education Council' has also been established.

8.18. It is an important feature [2] of vocational further education in the UK that trainees should be able to undertake the highest level of course from which they are capable of profiting. Thus, substantial numbers of apprentices who receive industrial training as craft apprentices, nevertheless enrol in technician courses in their day-release classes. This may, indeed, become for them an important indication of suitability for transfer to a technician apprenticeship, or assist them in upgrading to carry out technician duties as an adult. This enrolment of craft trainees in technician courses is on such a scale in engineering and construction - the biggest apprentice recruiting industries - that the statistics of students in these courses are not a reliable guide to the number of technician trainees.

8.19. There are no statistics available which give a reliable indication of the total number of technician apprentices/trainees in the UK. The Engineering ITB reports about 22 000, the Post Office about 8 000, the Construction ITB about 6 000, the Rubber (etc.) ITB about 1 400, the Wool ITB about 800, the Shipbuilding ITB about 450, and the Cotton ITB about 350; these figures, however, suffer from a variety of ambiguities in the definition the terms 'technician' and 'trainee' used in the compilation of the data. Since the figures refer to trainees whose training has satisfied the requirements of the ITB concerned, it can be assumed that they refer to persons undergoing systematic training. It is less certain that the training is given under a mutual contractual commitment recognizable as a form of apprenticeship, even though in the large majority of cases this is probably so. It seems unlikely that there are more than 70 000 + 20% technician trainees in all, whereas something like 300 000 students (of all ages) attend courses of further education at technician level.

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1 HMSO 1969.

2 Explicitly stated in Central Training Council memorandum No 1, see Section 6.7.

9. Student apprenticeships

9.1. Many industrial, business and professional organizations, government departments and public bodies administer schemes to give financial assistance to enable young people of high promise to take higher education courses of a vocational character. The Careers and Occupational Information Centre (see Section 15) publishes annually a list of employers and professional bodies offering awards for higher education. The 1975-6 edition lists 99 such organizations, which offer between them over 1 300 such awards (including 300 by the Armed Forces). Although a few awards are in the form of scholarships with no training element or commitment, the great majority combine training with the employer and academic study at university or college in a contractual and structured relationship which justifies the use of the term apprenticeship as defined by the Commission in its Study Outline.

9.2. The generic term most often applied to award holders of this kind is 'student apprentice', but practice varies, especially in non-industrial organizations (where the term 'apprentice' may be considered inappropriate), and in the Armed Forces (where the term 'cadetship' is used). Other terms used include undergraduate or university apprentice, or scholar.

9.3. Academic qualifications aimed at are primarily :

(a) University degrees;
(b) degrees of the Council of National Academic Awards (obtainable at polytechnics and some colleges of technology);
(c) Higher National Diplomas (obtainable as in (b) above);
(d) and less frequently examinations of professional institutions.

9.4. The main objective of most student apprentices is to obtain a full professional qualification in the form of corporate membership of the appropriate professional institution. This generally has three requirements :

(a) an academic qualification at or about university level;
(b) approved practical training
(c) responsible professional experience

} or a longer period of professional experience.

Accordingly, the training provided by the employer is so arranged that it has the characteristic of breadth, structure and quality that meet the requirements of the professional institution concerned.

9.5. Courses which combine separate periods of academic study with practical training in industry are known as sandwich courses. For university and CNAA degrees they usually last for four years and for Higher National Diplomas for three years. There is no single pattern for interleaving the periods of academic study and practical training; however, 4 patterns cover the great majority of sandwich courses :

(a) 'Thin' sandwich courses in which there are alternate periods of education and training

(i) the original arrangement with periods lasting about 6 months,

(ii) an increasingly popular variant, found in CNAA courses, in which the number of industrial periods is reduced from three of about 6 months to two totalling an equivalent period;

(b) 'Thick' sandwich degree courses

(i) 2 years of academic study, 1 year of industrial training then 1 final year of academic study,

(ii) 1 year of industrial training, 3 years of academic study and a final year of industrial training.

9.6. Much attention is given to the (sometimes difficult) task of ensuring that the training received by students in their industrial periods is directly and effectively related to their vocational objective. Guidance on appropriate programmes and techniques is available from a number of sources, e.g. :

(a) the professional institutions themselves, most of which issue detailed guidelines and regulations;

(b) industrial training boards, most of which have now prepared training recommendations and guidelines of high quality, for technological and professional functions specific to their own fields;

(c) publications of the Department of Employment, prepared by special joint ITB committees, for occupations common to a number of industries (e.g. marketing, purchasing and supply, transport, data processing, personnel etc.);

(d) the Council for National Academic Awards which, in appraising programmes submitted by colleges for approval, examines the overall arrangements for industrial training and subsequently checks in detail each student's record;

(e) staff of polytechnics and colleges who act as 'industrial tutors' and effect liaison with undertakings which have student apprentices.

9.7. Financial arrangements vary. However, by far the most usual arrangement involves the generous UK higher education grant system, with the effect that the student receives a grant from his local education authority (l.e.a.) which meets his living costs and fees during the periods of academic study, he is also paid at employee's normal wage rate for age during his periods in employment and on vacation and he may also be given a small supplementary grant by the employer during college periods up to the maximum (£185 p.a.) allowed without loss of l.e.a. grant. In a small and diminishing number of cases, the undertaking pays the student apprentice a salary as a full-time employee and also meets college fees.

9.8. In April 1975 a report was published of a joint working party of the Committee of Vice Chancellors and Principals, the Committee of Directors of Polytechnics, the Associations of Colleges of Further and Higher Education and the Confederation of British Industry. The working party had examined 'The future development of sandwich courses' in the light of the considerable expansion in the number of courses and students, the broadening that had taken place to include not only technological and other science based courses but also courses in business studies, social sciences and arts subjects. Special attention was given to difficulties that had arisen in finding sufficient training places for the increased numbers of students.
The working party concluded :

> 'Given its unique advantages, the sandwich system deserves and needs the full support of all the parties concerned.'

The report showed that there were over 13 000 undergraduate students on sandwich courses in universities and over 33 000 students in sandwich courses in polytechnics and other colleges. Many of these students, probably a little over half, are college-based, i.e., not having a continuing relationship with a particular employer and relying on the college to arr[illegible] the training periods. College-based students are, of course, not apprentices. The others, referred to as industry-based or industry-sponsored students, are involved in a contractual commitment analogous to apprenticeship. There are no statistics showing the number of industry-based sandwich course students.

9.9. The range of subjects covered in sandwich courses which student apprentices can take is now very wide. This is especially so in the case of CNAA degrees, where the Council encourages colleges wherever appropriate to suit their

courses to the needs of industry, commerce and the professions. The current list of CNAA degree awards has over 50 subject headings in the fields of engineering, science, construction, architecture and planning, business studies, arts and social studies, law, art and design and education.

9.10. As one of the measures devised to augment the number of training places for sandwich course students, the Engineering ITB has promoted the development of training groups. There were, in 1975, 27 such groups with 295 participating firms and 398 trainee engineers following training programmes on the lines recommended by the EITB as part of their sandwich courses. The EITB has also recently introduced a training certification scheme for both student and graduate engineers who complete their industrial training to approved standards in preparation for their first substantive appointment.

10. Graduate apprenticeships

10.1. Many large undertakings have schemes for the recruitment and training of men and women with university degrees and comparable academic qualifications. This practice mainly originated and is still most often found in the technical departments of undertakings in manufacturing and extractive industries and public utilities; it is however now also found to an increasing extent in the commercial and administrative departments of these undertakings and in the commercial field per se. In many cases, the arrangements made can fairly be described as matching the definition of apprenticeship given in the study outline; they provide for a given period of systematic training which prepares the graduate for his or her first substantive appointment and at the same time meets the requirements in respect of training of the professional institution in which the graduate wishes to qualify. This applies in particular to the fields covered by the 14 engineering institutions that are in membership of the Council of Engineering Institutions.

10.2. In general, it is possible to identify 4 patterns of entry of a graduate to employment in industry :

(a) a graduate apprenticeship/traineeship lasting up to 2 years, for new entrants who need first a broad general training, leading to an informed selection of a particular field and then training for a specific appointment. Most engineering graduates from full-time courses (i.e., with little or no industrial experience) take up such apprenticeships under a formal agreement and follow training programmes recommended by

the appropriate ITB, but individually designed. Graduates from sandwich courses may have similar but shorter apprenticeships which take into account their prior industrial training during the course. To satisfy the revised membership requirements of the major professional engineering institutions an overall period of 2 years supervised and approved training is necessary, followed by suitable responsible experience;

(b) a graduate traineeship for a particular function.
Graduates who have a clear idea of what they want to do are given systematic training of a more specialized kind for a particular function and for an anticipated vacancy. This may or may not be an apprenticeship;

(c) an appointment with training.
A less precise pattern, for those who have the necessary theoretical knowledge but need training to apply it to the responsibilities of a particular vacancy. Generally, such appointments would be under a normal contract of employment and not regarded as an apprenticeship (even though excellent opportunities might well be made available for training and associated further education);

(d) a direct appointment to do a job - obviously not an apprenticeship.

10.3. The professional bodies and the ITBs have made much progress in recent years in designing training programmes of a character and tempo to suit the needs of graduates. These have in particular had regard to the desirability of early involvement of the trainee in productive work, with a measure of personal responsibility and the need for decision making. There have also been some interesting developments in the provision of special educational courses on new and advanced technology.

11. Commercial apprenticeships

11.1. The British Association for Commercial and Industrial Education's Training Manual No 3 entitled 'A Training Officer's Guide to Commercial Apprenticeship' begins as follows : -

> 'Commercial apprenticeship and in particular further education in the commercial field has for some time been regarded as the "Cinderella" of British industrial education and training.'

These words were written in 1968 and are still true today, although some advance has been made in commercial education, especially at the higher levels, in higher national diploma and CNAA degree courses.

11.2. The only national commercial apprenticeship scheme is the one administered by the Association of British Chambers of Commerce. Unfortunately, although this scheme has been in existence since 1958, there are currently less than 100 apprentices registered under it. [1] There are in fact many more young people receiving systematic training and associated further education in the commercial field than this figure suggests, but even so the number and the proportion of young people in such employment who get broad training are very low. As a further illustration of the unsatisfactory state of affairs, the Central Training Council's Commercial and Clerical Training Committee found that in 1965 only 7% of young people in a sample survey of younger office staff were released by their employers for part-time further education and only 8% had formal training in the undertaking.

11.3. The Committee concluded :

> 'If the evidence from our survey is any guide, the great majority of firms in the medium-sized bracket have no formal training arrangements. Without doubt the position is worse in the smallest undertakings.'

That this situation has remained largely unchanged can be deduced from the statistics for girl new entrants under 18 into employment. As a large proportion of girls enter clerical and commercial occupations, any improvement in the apprenticeship situation would have a marked effect on these figures; in fact, the percentage becoming apprentices has remained static at about 7% (1974), with the occupational pattern much as before.

11.4. The general attitude of British employers to training for work in the clerical and commercial field appears to be governed by factors such as the following :

(a) there is no tradition of broadly-based training for routine commercial occupations. Such training as is given tends to be on-the-job, limited to the immediate duties to be performed and short-term. An effective training environment is rarely created and trained instructors are seldom found;

(b) short-hand typists usually gain basic skills at school or in full-time courses in private commercial schools or technical colleges. A high rate of labour turnover, especially of girls, discourages employers from investing in their own training systems;

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1 New entrants are no longer being accepted.

(c) the absence of a sufficient number of apprentices has meant that no effective demand has been made on the local education authorities to provide part-time further education day courses analogous to the extensive and successful range of such courses in the craft field;[1]

(d) at the higher (professional) level (e.g. as in accountancy), the traditional pattern of qualification has been for the articled trainee to undertake a period of some years individual guidance by the principal of a professional firm and to study in the evenings and at week-ends by means of a correspondence course. This pattern is only now giving way to more modern procedures.

11.5. Despite these gloomy observations, many industrial undertakings which have an established general training policy and well developed systems have extended their provisions from the technical to the commercial side of their businesses and introduced their own patterns of recruitment, training, associated further education and qualification for young people in the form of commercial apprenticeships. Similar schemes have also been introduced by non-industrial organizations in the fields of distribution, finance, insurance etc. The book 'Commercial Training Schemes' published in 1973 by the Independent Schools Career Organization lists about 200 such schemes for school leavers at 16 and 18 years of age; these schemes are almost equally divided between industrial and non-industrial undertakings. There is a lack of uniformity in the terminology used. Industrial organizations use the terms 'commercial apprentice', 'commercial trainee', 'student apprentice (commercial)', or just 'trainee' to indicate involvement in the undertaking's formal training scheme. The term 'apprentice' is less favoured in the non-industrial field and advertisements use terms such as 'entrant', but making it clear that the appointment offered is for entry to a systematic training programme.

11.6. Almost all commercial training schemes of 2 or more year's duration require the entrant to have a good general education to the 'Ordinary' or 'Advanced' level of the GCE, or the equivalent. This corresponds to the levels required for technician and student apprenticeships in industrial occupations. There are also formal training schemes for graduates analogous to graduate apprenticeships, but generally less formally structured than those in (say) the engineering field.

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1 There are very large enrolments in evening courses in the clerical/secretarial field. These are taken mainly as single-subject courses unrelated to a formal training programme.

11.7. Although quantitatively unsuccessful, the scheme administered by the Association of British Chambers of Commerce served a valuable purpose in promulgating the essential requirements for a satisfactory commercial apprenticeship scheme, i.e. :

(a) a standard letter of appointment or an indenture (for either two or four years) is required, with a 3 month probationary period;

(b) planned, comprehensive and supervised practical training is provided by the employer, with concurrent attendance at an appropriate educational course;

(c) systematic progress reports are asked for;

(d) the practical training is controlled by the employer concerned;

(e) some supervision is called for from the employer, the college providing the educational courses, the local chamber of commerce and the Association of British Chambers of Commerce.

11.8. Good practice in respect of commercial apprenticeships currently being offered by an individual industrial undertaking may be illustrated by the following extract from the guidance material published by an engineering company :

Commercial training scheme (abbreviated)

'Objective

To provide the company with young persons of ability who will be trained in office procedures and techniques in a variety of departments so that they may fill responsible clerical appointments on completion of their training. The all-round training which trainees receive should fit them to develop into Section Leaders in due course.

Entry requirements

Age 16 - 19½; Education - at least 4 passes at GCE 'O' level including mathematics and English (or equivalent).

Training

2 years. Movement through several departments. Main areas : sales, purchasing, production control, cost accounting, sales accounting.

Further education

Day release, with pay, to study for the Ordinary National Certificate in

Business Studies. Further study in 3rd and subsequent years where appropriate.

Upgrading

Exceptional progress may lead to enrolment in a sandwich course for a degree, higher national certificate or professional qualification.

11.9. As the last section indicates, the scheme as a whole also includes provision for entrants with higher educational qualifications i.e. either GCE 'A' level, or the Ordinary National Diploma in Business Studies (a 2-year full-time course post GCE 'O' level) or by transfer from the scheme described above. The academic objective of the higher level scheme will be a higher national certificate, (by part-time study) or a higher national diploma or degree (by sandwich course) in business studies.

11.10. The range of commercial apprenticeship schemes can be further illustrated by the following extract from the more comprehensive scheme of another large industrial firm :

> 'The commercial apprenticeship scheme is designed to afford systematic and comprehensive training for work in one of the financial or commercial departments of the company. Each apprentice becomes an articled commercial apprentice and has an individually planned training programme. This is designed to give him a good overall picture of the company's policies and practices in the commercial field with varied experience in such activities as accounting, cost accounting, distribution, purchasing, commercial sales and marketing, methods and procedures, data processing and systems analysis.
>
> Recruitment is from all appropriate educational sources. The schemes offered therefore include :
>
> 1. A 5-year apprenticeship - for GCE 'O' level entrants, for training with day release for study for ONC and HNC in Business Studies.
> 2. A 3-year apprenticeship - for GCE 'A' level entrants at about 18 years of age - training with day-release for HNC in business Studies.
> 3. A 3 or 4-year apprenticeship - for GCE 'A' level entrants for training with sandwich course study for a degree or HND in Business Studies or the examinations of a professional accountancy body.'

Chartered accountants - England and Wales

11.11. The Institute of Chartered Accountants in England and Wales is the largest body of accountants in the UK and recruits annually over 5 000 new entrants at GCE 'A' or university/CNAA degree level. Entry to the profession is possible only by serving a period of at least 3 years (for graduates) or 4 years (for non-graduates) under a registered training contract with an 'authorized

principal', i.e. a member of the Institute in public practice in the UK who is authorized by the Institute to train. The authorized principal undertakes by the terms of the training contract to the best of his ability to provide the student with the approved training necessary for the purpose of enabling him to qualify for admission as an associate of the Institute. The Institute issues guidelines on the training to be provided; the principal is required to maintain records of the training given and to make it available for inspection if required - this is normally only called for in cases of difficulty.

11.12. On the educational side, the training contract provides for :

(a) one full academic year (9 months) attendance at a polytechnic or technical college leading to the Institute's Foundation Examination, prior to the commencement of the training contract;

(b) not less than 22 weeks leave for full-time study during training prior to the Institute's Professional Examinations I and II.

These provisions are of recent origin. Formerly, reliance was mainly placed on study outside working hours by commercial correspondence courses. These still continue, with the full-time study mentioned above acting as a supplement. Only in a small but growing numbers of cases is day or block-release provided for attendance at a college as the principal mode of study outside the full-time periods. University and CNAA degrees and Higher National Diplomas in relevant (i.e., accounting) subjects exempt from the Institute's Foundation Examination, either wholly or subject for subject.

Chartered accountants - Scotland

11.13. The Institute of Chartered Accountants of Scotland requires entrants to apprenticeship for the profession to have a university or CNAA degree (followed in certain cases by a 1 year post-graduate course in professional subjects) or a Higher National Diploma in Accounting. Thereafter, a course of approved training with a principal is followed for 3 years (for graduates) or 4 years (for non-graduates), during which attendance is obligatory for three 3-week periods of block release for study prior to the Institute's Part I examination, and two similar 2-week periods before the Part II examination.

The Institute of Cost and Management Accountants

11.14. This institute is of special relevance to commercial apprentices in industrial

undertakings, since full professional qualification is open to them whereas in the case of the two bodies referred to above this can only be obtained in public practice with a Chartered accountant. The Institute does not require its student members to be articled or indentured. However, its relevance to this account is that it administers a registration procedure for training schemes. The Institute has prepared an 'Employer's Guide' on training schemes for Student cost and management accountants. To date, some 211 undertakings have registered training schemes which meet the requirements of the Institute. Thus, by cooperation between these undertakings and the Institute, commercial apprentices in company schemes are enabled to obtain the comprehensive experience and training required to qualify. Entry is at GCE 'A' level or above. Students prepare for the Institute's five-stage examinations by part-time day, block-release, sandwich course study or by correspondence courses. Increasingly, preparation for the first two 'foundation' stages is by full-time attendance at a college or polytechnic.

The Association of Certified Accountants

11.15. Membership of the Association of Certified Accountants is open to qualified persons working either in public practice or in the financial departments of industrial or commercial undertakings. Its qualifications are sought by many commercial apprentices working in this field. Membership is obtained by passing the Association's examinations and undergoing a period of approved accountancy experience. Students may but do not necessarily need to serve under articles or a training contract in order to obtain approved experience, but may obtain it in salaried employment. However, the Association encourages systematic training schemes and publishes an employers' training guide and a personal training log. With the help of these publications a trainee is enabled to obtain :

(a) a broad understanding of the operations of the employing organization;
(b) detailed practical experience in as full a range as possible of accountancy;
(c) increasing responsibility;
(d) appropriate experience to qualify for membership of the Association.

However, the Association does not formally approve or register the training programmes of individual undertakings, so that its effect is persuasive rather than regulatory.

Accountants in the public service

11.16. The Chartered Institute of Public Finance and Accountancy is the professional body for accountants in the public service. As might be expected, the relevant recruitment and training arrangements are systematized. At the professional level, all graduate and non-graduate entrants must undertake a professional education and training programme for a minimum of 3 years. Non-graduates must also complete a 9 months full-time foundation (education) course before embarking on their programme. During the training programme, study for the Institute's examinations is by block release courses at polytechnics or colleges.

The Institute has recently (January 1975) introduced the Accounting technician scheme to provide support staff for professional members. Entry is at GCE 'O' level. A 3 year period of training is accompanied by further education in day-release classes for the Ordinary National Certificate in Business Studies or Public Administration (2 years) and the Stage 2 examination in accounting in the public service (1 year).

Other professions in industry, commerce and finance

11.17. Within industry and commerce in the UK there are many business occupations which are recognized as separate professions and for which there are professional associations which act as qualifying bodies. Examples are found in the fields of actuarial work, advertising, banking, building societies, company secretaryship, computing, export, insurance, organization and method, office management, patents, purchasing etc.

In banking, new entrants are not formally indentured, but are given systematic training combining planned experience on the job, formal courses at bank training centres and, in recent years and in most banks, the opportunity for day release to a technical college. Study is initially normally for the Ordinary or Higher National Certificate in Business Studies, then the examinations of the Institute of Bankers. However, only an initial period of day release is given as a right and subsequent opportunities depend on progress. Every encouragement is given to trainees to study and gain qualifications, but the degree of contractual commitment to training by the employer is difficult to determine and varies from bank to bank. It is therefore not easy to decide whether new trainee appointments can be properly defined as apprenticeships in the sense used in this monograph. Until recently, most trainees studying for the examinations of the Institute of Bankers did so by correspondence courses and out of working hours, but reliance on formal day-time courses in technical colleges is increasing rapidly.

11.18. In most other cases, and especially where the profession concerned relates to a specialist function within an undertaking (e.g. company secretaryship), the professional association does not make it obligatory for a formal training programme to have been completed and it is unusual for this to be the case. Instead, the requirement for qualification is usually satisfied by :
(a) passing the institution's examinations and
(b) appropriate experience in the exercice of the profession.

In these fields, apprenticeships are found only in those undertakings which provide commercial apprenticeships as part of their own overall recruitment and training arrangements. The infrequency of closely structured training schemes, together with the professional bodies' requirement of several years responsible experience in the profession concerned mean that the majority of those qualifying for corporate membership of the institutions are mature adults, well out of the initial training phase such as is associated with an apprenticeship. A further consequence of the arrangements is that there is generally a very high failure rate in the professional institutions' examinations.

11.19. General guidance on training for commercial and administrative occupations has been prepared by joint ITB committees set up by the Department of Employment and published as a series of booklets by the Department. A list of these booklets is given in Appendix 4.

12. Assessment of performance and certification

The traditional pattern

12.1. In the traditional pattern of apprenticeship in the UK, there is no provision for formal assessment of performance or certification of competence on completion of the training period. The countersignature of indentures by the employer is often merely a formality, indicating that the apprentice has 'served his time' and has participated in the training arrangements provided, whatever these might be. It is not necessary that the apprentice should have attended the appropriate course of associated further education or, if he has, he does not need to have passed the final examination. A pass in such an examination is an optional and valuable additional qualification. A consequence of the general lack of compulsion, rigorous surveillance or legal

enforcement is that there are all possible gradations of quality of training, from the very bad to the excellent, both within and between industrial sectors.

Exceptions to the traditional pattern

12.2. There are some apprenticeship schemes which are exceptions to the traditional pattern :

(a) gas fitters. All apprentice gas fitters in the nationalized gas industry follow courses of block-release further education combined with planned off-the-job training in regional training centres. This is followed by supervised planned experience 'on-the-job'. The 'City and Guilds' examinations for gas fitters are specially devised to cover the total programme of theoretical and practical work and the grading of employees in the national gas classification scheme is related to success in these examinations;

(b) mining engineering craftsmen. The National Coal Board's apprentices must undergo a practical test at the end of each year of training and a final test of proficiency. Those failing the final test may have their apprenticeship extended to allow a retake of the test;

(c) agriculture and horticulture. The new entrant (apprentice) training scheme of the Agricultural Training Board requires all apprentices to pass specified proficiency tests (besides completing a closely defined training and further education programme) in order to obtain the craftsman qualification and the related wages premium;

(d) foundry. Almost all foundry craft apprentices (patternmakers and moulder/coremakers) are also registered under the craft training scheme of the Foundry Industry Training Committee (set up under the 1964 Industrial training Act). The Committee's training scheme involves phased testing and progressive assessment monitored by the Committee's craft assessment officers. A Certificate of Craftsmanship is awarded to trainees who complete the programme of training with satisfactory assessments. A special Seal of Merit is awarded to those who also successfully complete the associated course of vocational education and pass the 'City and Guilds' examination;

(e) hospital cooks. The national training scheme for cooks in hospitals leads to certification of the Department of Health and Social Security of registered trainee cooks who complete part I and/or part II of the training scheme and pass the corresponding City and Guilds examination(s);

(f) hotel and catering. The Hotel and Catering ITB operates a registration

scheme which enables trainee cooks, housekeepers, receptionists etc. to obtain a Joint Certificate of the HCITB/City and Guilds of London Institute. Trainees who satisfactorily complete a programme of training which has been approved and registered with the Board, attend a day - or block-release course of further education and pass the appropriate 'City and Guilds' examination are awarded the Joint Certificate;

(g) heating and ventilating fitters welders. Apprentice Fitters in the NJIC scheme must have a satisfactory assessment of practical work in the 'City and Guilds' basic craft fitting course to qualify for the certificate of craft competence. They must also pass the industry's practical test in welding in order to receive a Provisional Certificate of Competency in welding as Fitter Welders;

(h) electrical installation. The training scheme of the Joint Industry Board for apprentice craftsmen and technicians provides for registered indentured apprenticeship, associated further education, systematic and recorded training and annual training progress reports from the employer to the JIB; it leads to the categorization of employees into various grades according to qualifications obtained. The grades are : electrician, approved electrician and technician electrician. Each grade is based on possession of the appropriate City and Guilds certificate (or equivalent) together with appropriate experience. The basic qualification for a JIB Graded Approved Electrician is the 'City and Guilds' Electricians' Certificate; it is awarded on the attainment of (a) the Electrical Installation Work Course B Certificate and (b) the Employer's Certificate of Practical Competence (minimum age 20). Corresponding requirements apply at a lower level for 'electrician' and a higher level for 'technician electrician'.

12.3. In the individual schemes briefly outlined above, certification of competence is an essential element in the training scheme. In the case of motor vehicle repair, there has been since 1946 an optional arrangement whereby apprentices in the scheme of the National Joint Council for the motor vehicle retail and repairing trade may qualify for the award of the National Craft Certificate for a motor vehicle service mechanic. To obtain this award a trainee must :

(a) be an indentured apprentice in the NJC scheme;

(b) satisfactorily complete an approved course of associated further education;

(c) pass the 'City and Guilds' examination for a motor vehicle service mechanic;

(d) in his last (4th) year of apprenticeship pass a 1-day series of practical tests. At present, these are organized on behalf of the NJC by the Skills Testing Service of the 'City and Guilds'. It is possible that in future they may be arranged by the Road Transport ITB using the extensive facilities now available in the Board's Multiple-Occupational Training and Education Centres (MOTEC) and certain other facilities.

Over 30 000 National Craft Certificates have been awarded; currently about half the apprentices in the relevant trade qualify. There are plans to extend the scope of the scheme to cover light vehicle mechanics, heavy vehicle mechanics and auto-electricians. This enlightened pioneering scheme was at one time looked upon as the possible precursor of similar arrangements for other craft occupations; however, despite the urgings of vocational and training authorities and enthusiasts, industry failed to follow the example, except in the case of the foundry industry. Today, new patterns of assessment of performance involving phased testing are superseding or at least supplementing the exclusive reliance on major end-tests, as described below.

The new pattern

12.4. The industrial training boards developed new concepts for the identification of training needs for particular occupations, the specification of the training standards to be aimed at and the design and validation of the respective training programmes. Boards' conclusions concerning the role of assessment of trainees' performance and the appropriateness of particular techniques were therefore profoundly influenced by their views on the relationship of assessment to the overall training process. The account which follows represents a summary of the more important features found generally in the training recommendations of ITBs, with particular reference to craft trainees.

12.5. The procedures to be employed for the assessment and certification of job competence are considered and determined towards the end of a logical sequence of analysis. This involves the following :

(a) specifying the job - the identification and description in objective and behavioural terms of the job or task for which training is to be provided. This calls for the preparation of

(i) a job title,

(ii) a job description listing the responsibilities and tasks involved,

(iii) a job specification, based on skills/task analysis, listing in

detail the knowledge and skills required,

(iv) a statement of the standards required for acceptable performance;

(b) training programme and specification - a statement of the training to be given, in the form of a phased programme of training and associated further education, defining the nature and detailed content of each phase and the standards to be achieved;

(c) assessment procedure - the selection of the appropriate forms of assessment for each phase. This will have the dual purpose of

(i) monitoring the progress of trainees through the programme and giving early warning of any need for remedial or reinforcement training,

(ii) identifying satisfactory achievement of the specified performance standards.

The techniques and procedures commonly used for assessment include appropriate combinations of the following :

(a) Practical tests
(b) Written tests
(c) Oral tests [1]

} in the form of phased, stage and/or final tests;

(d) Training records
(e) Trainees' log-books
(f) Trainees' projects/reports
(g) Formal appraisal
(h) Interviews
(i) Educational examinations.

12.6. Reference has already been made (See Section 7 above) to the important place that is given to phased tests, to the way in which they can serve a variety of purposes and how the achievement of a high degree of objectivity in job and training specifications makes it much easier to design and mark phase tests with greater validity and reliability than would otherwise be the case. These characteristics are of course important in any training situation, but they are of particular value where training is proceeding 'on-the-job' in the context of a particular undertaking's requirements and procedures and where marking may be carried out by production supervisors with only limited expertise in performance testing. ITBs have gone to considerable lengths to prepare phased testing systems suitable for general use and to prepare guidance material for their implementation.

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1 Oral tests are generally regarded as unreliable and are not used to any great extent in formal situations in the UK.

Phased tests and stage tests (i.e., tests at the end of a short sequence of phases) are important features of the training recommendations for craft trainees published by the engineering, electricity supply, iron and steel, shipbuilding, road transport, chemical and allied products, petroleum, and air transport and traffic ITBs and the Foundry Industry Training Committee. The Agricultural Training Board's use of proficiency tests is an analogous arrangement. The Construction ITB is cooperating with the 'City and Guilds' Skills Testing Service in devising test batteries for trainee building craftsmen that are intented for use in a similar manner in due course. The ITBs mentioned here cover a high proportion of all craft apprentices in the UK.

12.7. Generally speaking therefore, in order for an apprentice on an ITB training programme to be eligible for his completion certificate, it is necessary for the following conditions to be satisfied :

(a) the overall training and education programme provided by or on behalf of the employer must have been approved by the ITB.

(b) the records maintained by the employer and the trainee must show that the trainee has proceeded satisfactorily through the various stages of the training programme.

(c) the phased tests and stage tests used to establish appropriate standards of performance must have been approved by the ITB,

(d) the trainee must have achieved a satisfactory standard of performance in a specified range of phased tests and/or stage tests.

Except in some of the special cases referred to in paragraph 12.2. above, success in the vocational education examination is not an obligatory requirement for satisfactory completion of training at craft level. A 'certificate of craftsmanship' is awarded by the engineering, road transport, chemical and allied products, shipbuilding and agricultural ITBs and the Foundry Industry Training Committee, to craft trainees who satisfactorily complete the training programme in the terms outlined above, (such trainees need not necessarily be apprentices, except in the case of the Agricultural Training Board).

12.8. It is not customary for ITBs to award special certificates on completion of technician or other training above craft level. In these cases, the relevant educational qualification assumes a greater significance and this and the trainee's record of training, log-book and completion certificate

from the employer are regarded as sufficient. In cases where the trainee becomes eligible for membership of a technician or professional institution (and in engineering for registration in one of the sections of the Engineers Registration Board's Composite Register), this too provides appropriate evidence of qualification. However, a warm welcome has been given to the Engineering ITB's relatively new scheme for the certification of students and graduates who complete their training in industry to standards approved by the Board and this may well lead to similar developments in other industries.

Wage rates and certification

12.9. As described in paragraph 5.1.(m) above, apprentices are normally paid on a rising scale, expressed as percentages of the adult worker's rate, depending on the apprentice's age (not length of service). Progression up the scale is not normally influenced by success or otherwise in training or associated further education. However in some of the exceptional schemes outlined in paragraph 12.2. above in which performance testing is obligatory, success in the required tests/examinations may lead to early completion of the training programme and payment of the adult rate. The assimilation of new ITB training programmes and certificates of craftsmanship within existing apprenticeship schemes has not materially altered the application of 'wage for age' scales. The ITBs have avoided involvement in wage negotiations and apprentices' remuneration is still determined by the terms of the apprenticeship contract. This is so even when, because of the effectiveness of an ITB training programme, an apprentice completes his minimum training requirement in a materially shorter period of time than is provided for in the apprenticeship scheme. When this happens, it is customary for the employer to continue the training of the apprentice; for example, in an engineering undertaking an additional 'broadening' or 'specialized' module of training or a phase of specially planned experience might be provided.

12.10. It will be apparent from the foregoing that a craft trainee may complete his training in one or more of the following categories :

(a) verbal agreement only, with poor training;
(b) verbal agreement only with good training;
(c) indentured agreement with poor training;
(d) indentured agreement with good training (traditional);
(e) indentured agreement with good training (ITB or equivalent);
(f) certificate of craftsmanship/competence;

(g) vocational education certificate, at craft level;
(h) vocational education certificate, at technician level;
(i) combined training/vocational education award.

13. Careers education in the schools

13.1. Secondary schools in the UK do not, in general, provide specialized vocational education. Although there is a growing provision for courses of a pre-vocational character - e.g. in commercial subjects, technical drawing, workshop practice of various kinds, cookery and so on - this is only within the context of a broad general education, at least up to the school-leaving age. Such courses do not lead to a vocational qualification. The emphasis in the schools is on the broad intellectual, moral, spiritual and social development of the pupil. So far as selective schools are concerned, the timetable and the curriculum have been strongly influenced - and heavily loaded - by the pressures of external examinations at 16+ and 18+. In this situation, careers education has developed slowly and with relatively low priority. In England and Wales provision for careers education is very uneven, depending on the attitude of the local education authority and, even more, on that of the headmaster or headmistress and individual teachers. In a few schools it is excellent; in others it is ineffective through lack of appropriate direction, planning or resources.

13.2. In 1973 the Department of Education and Science published Education Survey 18 'Careers Education in Secondary Schools' - the report on a sample survey carried out by HM Inspectorate of careers education in English and Welsh secondary schools in 1971 and 1972. The following extract from the introduction provides a useful summary of the general situation

> 'it is only in the last decade that the significance of careers education as a continuous process has gained anything approaching general recognition. After World War II, the Employment and Training Act of 1948 established the Youth Employment Service out of which grew, over a period of some 25 years, a partnership between the youth employment officer, based outside the school, and members of the teaching staff within the school. The youth employment officer is now called the "careers officer", and has become an increasingly significant figure for successive generations of young people entering the world of work. In the early days, vocational guidance was something to be given near the end of school life. During the decade of the sixties which saw expansion and diversification both in secondary education and in higher and further education, it became increasingly apparent that vocational guidance was only the last stage of what must properly be regarded as a continuous process

beginning for all boys and girls not later than the age of 13. It was also realized that, in parallel with the expertise which the careers officer brought into the school, there must be complementary expertise in the staff room. Hence there arose growing consciousness of the importance of the role of the careers teacher.'

13.3. From the survey, HM Inspectors found that although 94% of the schools sampled had designated at least one member of staff as a careers teacher and 46% had more than one, the status and functions of these teachers and the proportion of their total time they spent on careers work varied considerably. In only 14% of schools was the careers teacher given head of department status solely on account of his/her careers work. In nearly a third of all schools no lessons at all were devoted specifically to careers education and, generally, 'the concept of careers education as a continuous process for all pupils from the age of 13 was in no sense realized'. As regards the careers implications of curricular choices made in the third year (age 13 - 14), 82% of schools declared that these were discussed with both pupils and parents (but not necessarily by careers teachers).

13.4. Typically, careers teachers combine this work with normal teaching duties. A few heads of department in large schools spend their whole time in careers work and counselling. Training for teachers in careers work is usually in the form of short courses lasting one to five days and 81% of schools reported that a careers teacher had received such training. A few careers teachers (in 11% of schools) had attended a course of 1 term or longer. There is at present a vigorous development of short courses provided by consortia of local education authorities and other bodies and the provision of longer courses is expanding. The National Association of Careers and Guidance Teachers has attained a membership of around 1 500.

13.5. One of the problems that careers teachers face is that it is not easy for them to acquire an adequate knowledge of industry or form sufficiently close contacts with employers. The Confederation of British Industry and the Schools Council cooperate in a scheme whereby teachers are seconded for short periods to industrial and commercial undertakings and several LEAs operate their own schemes. However, these probably involve a few hundred teachers a year.

13.6. The facilities available to careers teachers in their schools vary widely in nature and quality. The survey reported only 38% of schools as having rooms set aside for careers work and facilities ranged from a suite of rooms

for administration, interview, reference, browsing, storage etc. down to almost nothing. Provision overall was assessed as pointing to 'grave inadequacy'. The amount of published material available for careers education is enormous. Authoritative guidance on the range, quality and arrangement of this material is given to schools by the Careers and Occupational Information Centre, as referred to below.

13.7. The full range of activities that may be undertaken in careers education includes the following :

(a) talks
  (i) in school time
  (ii) after school
  (iii) timetabled;
(b) individual interviews
  (i) with teachers
  (ii) with careers officers;
(c) information displayed;
(d) meetings with parents;
(e) work experience
  (i) in school time
  (ii) in holidays;
(f) work observation (visits);
(g) visits to technical colleges;
(h) link courses with technical colleges;
(i) careers conventions/exhibitions;
(j) library study.

13.8. Scotland

The policy of the Scottish Education Department (SED) is that the three main fields of pupil guidance - curricular, vocational and personal - are very closely linked. Guidance teachers are concerned with pupils' personal problems in the round which are often related to moral and social issues as well as with curricular and vocational guidance. Although some teachers may develop specialized aspects of vocational guidance, there is generally no distinct group of careers teachers. Guidance work in Scottish secondary schools has developed steadily in recent years partly because of the lead given in the SED booklet 'Guidance in Secondary Schools' published in 1968 and partly because of the Department's Regulations and recommendations on

the staff structure of schools as set out in the 1971 memorandum 'The Structure of Promoted Posts in Secondary Schools in Scotland' and circular No 826 (May 1972). The circular gave guidance inter alia on the number of promoted posts (i.e., posts with salary allowances for responsibility for specific functions) in the social/guidance/leisure field for schools of various sizes, as follows :

Promoted posts in social/guidance/leisure	No of Pupils in School						
	100-300	301-600	601-900	901-1200	1201-1500	1501-1800	1801-
Principal teacher	1	2	3	4	5	6	7
Ass. Prin. teacher	-	1	2	3	4	5	6

This new structure places the responsibility for guidance work squarely in the overall management context and provides a secure and uniform basis for the guidance function. About 2 500 promoted posts with specific guidance functions had been created in Scotland by 1974 and a considerable number of assistant head teachers have responsibility for organizing guidance teams. In the meantime, a vigorous in-service teacher training programme has been organized in colleges of education and elsewhere. In 1971/2 and 1972/3 over 2 600 teachers attended short courses on guidance ranging from a few days to 10 weeks duration. Nevertheless, there remained a sizeable minority who had received no basic training and there is also a constant need for follow-up courses.

13.9. The SED publication 'Guidance in Scottish Secondary Schools' recommended that schools should develop comprehensive programmes of careers education and vocational guidance. This should begin for all pupils in the first two years of the secondary courses (i.e., from age 12) with talks, films, visits etc., leading up to a more specific programme of vocational guidance in pupil's final year. Much progress has been made in adapting the curriculum so as to provide more adequate preparation of pupils for work, leisure and membership of the community and special attention has been given to the needs of average and less able pupils. The aim is not only to help pupils to make an informed choice about their future career, but also to give them some familiarisation with the demands, freedom and disciplines of working life

and an understanding of the techniques of modern industry and its social and economic importance.

13.10. At the present time, the lack of suitable accommodation and difficult staffing situations are limiting factors affecting the effectiveness of the guidance service in some schools, but the general picture is one of progress.

13.11. To conclude this section, it seems appropriate to quote from the DES Education Survey 18 on Careers Education in Secondary Schools, when it lists the 10 features that a school providing good careers education may be expected to display. The features may be taken as representative of the objectives of schools in the UK as a whole, not solely in England and Wales.

Features of good career education

(a) a policy of careers education for all pupils;
(b) a curriculum that 'keeps doors open';
(c) a pastoral system of which careers education forms an integral part;
(d) careers work coordinated by a nominated teacher with the necessary training, experience and status;
(e) active involvement of other members of staff in careers work, and effective communication between all concerned with the curriculum and pastoral care;
(f) time made available both for teachers and pupils;
(g) an effective working relationship with the careers office, with higher and further education, and with the world of employment;
(h) adequate collection and storage of information about all pupils;
(i) effective discussion between the pupil and all concerned with guidance - parents, teachers and careers officers;
(j) adequate accommodation and resources, well used.

13.12. Work experience schemes

Schemes to enable school pupils to spend short periods in actual work experience began with a few pioneering ventures towards the end of the 1950's. In its 1963 report 'Half our Future' [1] on the education of 13 to 16 year old pupils of average or less than average ability, the Newsom Committee

1 'Half our Future' A report of the Central Advisory Council for Education (England). HMSO 1973.

having considered these developments, recommended in the following cautious terms : -

> 'experiments enabling some pupils over the age of 15 [1] to participate to a limited extent, under the auspices of the school, in the world of work in industry, commerce, or in other fields, should be carefully studied.'

Thereafter, development proceeded steadily and by 1971-2, the Inspectorate's survey in careers education found that nearly 1 900 secondary schools in England and Wales (38% of all such schools), had a work experience scheme for at least some (perhaps a small minority) of volunteer pupils. Schools generally arrange for pupils to spend periods of from a few days up to about six 1 weekly staggered periods. The pattern of attendance, the mix of different types of occupations and the arrangements generally vary from school to school. Increasingly, LEAs are preparing guidance notes for schools.

13.13. The school-leaving age was raised to 16 in 1973. This made work experience for 15 year olds unlawful. The Education (Work Experience) Act 1973 restored the situation by authorizing local education authorities to approve schemes whereby pupils may take part, without pay, in work experience and schemes in the last year of their compulsory schooling. The Act removed the prohibition that would otherwise have applied to such schemes under the legislative restrictions on the employment of children. The Act requires that all schemes for pupils of compulsory school age must form part of an educational programme. Circular 7/74 of the Department of Education and Science gives general guidance. The principle which should underline any work experience scheme is that pupils should be given an insight into the world of work, its disciplines and relationships. There should be provision in the school curriculum for prior preparation and subsequent follow-up. Schemes should be devised in consultation with officers of the careers service (who have excellent industrial contracts), managements and worker representatives and where possible with parents, so that all concerned may be fully informed of the objectives. Special attention is given to questions of safety and insurance. Pupils above the school-leaving age may, of course, participate.

13.14. There seems no doubt that, where a school believes in work experience and makes appropriate arrangements it can be a valuable and stimulating reinforcement to a programme of careers education. It is not possible to -

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1 15 was then the school leaving age.

estimate accurately the proportion of pupils who take part in such schemes. It seems unlikely that it is more than 10% and may be not more than 5% of the age group.

13.15. Work obeservation schemes

The opportunity to visit firms to see working conditions at first hand is provided by most schools. HM Inspectors in Education Survey 18 found that 26% of schools arranged for all their pupils to make such visits and 69% for some pupils to do so.

13.16. Linked courses

'Linked courses' provide opportunities for school pupils in the age range 14-18 to attend for (say) half a day to two days per week at their local technical college over one or two years. Such courses have developed as a result of local initiatives over the last ten years or so and there are now probably over a quarter of a million pupils involved. The following extract from DES circular 8/71 gives the general picture :

> '.... linked courses, i.e., courses in which pupils still at school attend a college for part of their education, generally for one, but sometimes for two days a week. The majority of linked courses have a vocational element, being based on subjects such as commerce, engineering, catering, applied science or building, but they are neither full nor complete vocational courses and do not in themselves lead to vocational qualifications. The aim is to introduce young people, within the context of a continuing general education, to vocational knowledge and techniques. The students gain an idea of what certain occupations would be like and sample the type of related full- or part-time further education course they might decide to follow after the age 16....'

13.17. Linked courses are planned, coordinated and jointly organized by the college and schools concerned. They take a wide variety of forms, of which the following are the more frequently found :

(a) sampling courses, short courses (e.g. 6 half days at weekly intervals) for those who are not vocationally committed. Each course give experience of a work situation by permitting the guided use of materials, equipment and processes in a particular industrial or commercial field. Pupils take a succession of such courses;

(b) introductory vocational courses, vocationally oriented education with an introduction to skills;

(c) appreciation courses and complementary studies, courses in subjects such

as computer work, surveying, navigation or astronomy (which also complement mathematics);

(d) academic studies, subjects for which the college has resources which the school does not possess (e.g. in languages, science or technology);

(e) examination courses, subjects from any of the groups (b) to (d) above may lead to examinations within the framework of the Certificate of Secondary Education, the General Certificate of Education (at 'O' or 'A' level), commercial examinations of the Royal Society of Arts, the London Chamber of Commerce or the Certificate of Office Studies.

13.18. Clearly, linked courses provide a valuable reinforcement to careers education and guidance in schools, quite apart from their value in establishing closer links between schools on the one hand and the worlds of work and vocational further education on the other.

14. The careers service

14.1. The provisions of the Employment and Training Act 1973 made it mandatory on all local education authorities to provide careers guidance and employment services for young people attending or leaving educational institutions. Prior to the implementation of this Act, such provision was made under the Employment and Training Act 1948 either by local education authorities or by the Department of Employment. Vocational guidance functions are performed and assistance in placement is given by appropriately trained and qualified 'careers officers' within the Careers Service. The aims of the Service are:

(i) to act as a bridge between full-time education and the world of employment;

(ii) in partnership with schools and colleges, to help pupils and students reach informed, realistic decisions about their careers;

(iii) to help pupils secure employment and/or training in line with those decisions and to offer help and guidance on all related problems;

(iv) to establish close links with industry and the Agencies of the Manpower Services Commission.

14.2. In the performance of their functions, careers officers:

(a) pay regular, frequent visits to schools and colleges and cooperate in the development of careers education and give individual guidance to pupils within those institutions;

(b) seek to promote knowledge of the Service in their localities and

especially to enlist the interest of parents;

(c) establish good relations with local industry, commerce etc. and training institutions and build up a stock of knowledge of employment and training opportunities;

(d) offer help and advice to individual young persons on problems connected with their settlement in employment;

(e) keep up-to-date on vocational guidance matters;

(f) cooperate with the officers of the Training Services Agency, the Employment Services Agency, the Health and Safety Executive, industrial training boards and other relevant organizations;

(g) hold open evenings to which young school leavers are invited for follow-up discussions.

14.3. In October 1973 there were 2 310 careers officers in the Service, with 2 194 supporting staff. The ratio of careers officers to the number of young people reaching the age of 15 was 414.

14.4. The normal method of training for full professional recognition as a careers officer in service with a LEA is a one-year full-time post-graduate course at a recognized centre, based on recommendations of the Youth Employment Service Training Board and leading to the award of the Board's Diploma. There are 14 such centres in the UK. Recruits for training may be newly graduated or may come from some years experience in teaching, training or other employment. There are also equivalent part-time courses. There are also in-service courses for serving careers officers, for specialist careers officers and for management training of senior staff. Some of these courses are provided by LEAs and others by the Institute of Careers Officers, the (independent) Careers Research and Advisory Centre, the National Institute for Careers Research and Counselling and some universities.

14.5. In their survey of careers education, HM Inspectors found that, of 87 schools to which visits were made, 54 provided clear evidence that careers officers and members of staff had established an effective partnership, whereas in the other 33 schools contacts were described as 'tenuous'; of the 54 schools in the first group, careers officiers were fully involved in programmes of careers education and in the process of educational and vocational guidance in 11 and they were well on the way to achieving this position in a further 27; in the remaining 16 the situation was described as 'adequate'.

14.6. For most pupils, their primary contact with their careers officer is first one or more general talks and/or group discussions in class, followed by an individual guidance interview, possibly including the use of an interests guide and/or a vocational assessment test. The majority of pupils also have a subsequent interview. The careers officer aims to make clear and firm recommendations to pupils, to inform them of all relevant aspects of possible careers decisions and to enable them to secure such additional information from reliable sources as may be required. Many young people are warmly appreciative of the help the careers officer provides but it is perhaps inevitable that adolescents, faced with a multiplicity of pressures and aspirations, do not always fully appreciate the worth of objective and informed advice - especially when in some cases it may necessarily reflect some inadequacy of educational achievement in school. All school leavers are invited to attend a follow-up discussion with the careers officer at an 'open evening' and well over half take up the opportunity.

14.7. The Employment and Training Act of 1973 extended the Service into further and higher education and the present time is one of pressure and development as the additional finance and specialist manpower required for older and more highly qualified students are sought.

14.8. Since the implementation of the 1964 Industrial Training Act, careers officers have been brought more and more into consultation by firms, group training associations and the local officers of industrial training boards in the recruitment and selection of craft apprentices. A greater awareness of the advantages of careful selection has meant that the careers officer's knowledge of school leavers capabilities and his/her expertise in selection have been eagerly sought by those responsible for apprentice recruitment.

15. The Careers & Occupational Information Centre

15.1. The Careers and Occupational Information Centre (COIC) is an official organization under the control of and financed mainly by the Employment Services Agency. It has established a reputation as a well known and nationally respected centre for accurate and impartial careers and occupational information. Its functions are :

(a) to prepare material for the public (pupils and adults) to help them make occupational and related educational decisions;

(b) to inform and guide the public on material provided by other organizations and facilitate access to it;

(c) to provide staff of the Careers and Employment Services, schools and colleges with relevant support material and to give information on such material produced by others;

(d) to help organizations to prepare objective material in appropriate forms;

(e) to prepare material to enable occupations and workers to be classified for the purpose of economic intelligence, manpower planning, employment, placing etc.;

(f) to assist others researching in all these spheres.

15.2. COIC prepares and distributes the following categories of material :

(a) interest stimulators (for school pupils)

(i) 'signposts' - a card index providing brief information on hundreds of occupations,

(ii) 'work Scenes' - wallcharts,

(iii) photoposters;

(b) classroom material

(i) 'if I were' leaflets,

(ii) games and simulations,

(iii) overhead transparencies on choosing and finding a job,

(iv) film strips 'looking at jobs',

(v) film strips with tape presentation,

(vi) films,

(vii) catalogue of careers films and visual aids;

(c) advisers' material

(i) careers Officers Handbook & Job Information Manual,

(ii) classification of occupations and Directory of Occupational Titles,

(iii) bibliography for careers libraries, including wall charts and games,

(iv) summary of Higher Education Awards (by firms etc.),

(v) Schools Liaison Services (universities etc.),

(vi) newscheck - a newsheet on topical developments,

(vii) Careers Bulletin (Dept. of Employment) - a specialist quarterly journal on vocational guidance,

(viii) careers specials - articles written by outside experts on particular careers,

(ix) careers information briefs - Information for Advisers from COIC;

(d) reference works

(i) Careers Guide - an annual encyclopaedia on careers open to pupils at GCE 'O' level (or equivalent),

(ii) choice of careers booklets - 60+ titles each on a particular career,

(iii) careers handouts - for issue after guidance interviews;

(e) distribution service - a free distribution service to all schools and careers offices, not only for official careers publications, but also approved material produced by employers, professional bodies, and other organizations.

16. Other sources of careers and guidance information

Careers and recruitment literature and films

16.1. Many employer associations, national joint apprenticeship bodies, industrial training boards, professional institutions, the armed forces, nationalized industries and other large undertakings prepare material to inform and attract possible recruits for employment and training. This material is sometimes referred to in somewhat derogatory terms as 'glossies', reflecting the fact that in some cases the primary purpose is recruitment. In fact however, a great deal of it is of good quality, especially publications that have been prepared with the benefit of advice from the Careers and Occupational Information Centre. The Centre provides a free distribution service of approved material to schools.

Classroom materials

16.2. The Schools Council has had in hand since 1974 a major £0.25 million project to produce classroom materials for use in careers education and guidance for the age range 13 to 18. After local trials the Foundation Course, (for age 13-14) is expected to become generally available during 1976. Subsequent 'continuation courses' A (14-16) and B (16-18) will follow. These are designed for timetabled courses of careers education.

16.3. The Schools Council also published in 1970 'Working Paper 40-Careers Education in the 1970s' which discussed general principles involved in careers education and offered practical ideas for work in schools.

16.4. In cooperation with the Confederation of British Industry and the Trade Union Congress, the Schools Council is also exploring means of improving school pupils' knowledge and understanding of industry.

16.5. The Confederation of British Industry set up in April 1975 the project 'Understanding British Industry' aimed at 13-16 year old pupils in all British

secondary schools. A main objective will be the provision of a resources centre and teaching and teacher study materials.

Radio and television

16.6. Both the BBC and the Independent Television Broadcasting Authority include careers education material in their schools broadcasting programmes. The survey of careers education in schools showed that 60% of schools made some use of this material, either direct or recorded.

The Careers Research and Advisory Centre

16.7. This Centre, universally known as CRAC, is an independent non-profit making body of the highest repute. Its principal activities are :

(a) publications - a very wide range of reference guides to further education, university courses, training opportunities, etc.
  (i) careers education materials, books, games and simulations, for pupils,
  (ii) materials to help the careers adviser, including interest guides, questionnaires etc. and recording systems,
  (iii) British Journal of Guidance and Counselling;
(b) short courses for careers teachers;
(c) TI Business Careers Education Unit (financed by Tube Investments Ltd) to promote a better understanding of careers opportunities in business;
(d) graduate schools vacation courses to acquaint science and technology research students with some of the problems and challenges they may meet in careers in industry, commerce or the public service (financed by the Science Research Council).

16.8. In cooperation with the Hatfield Polytechnic, CRAC established in 1975 the National Institute for Careers Education and Counselling, to undertake programmes in the fields of :

(a) education and training of careers and guidance teachers;
(b) provision of training materials and information on training materials provided by others;
(c) consultancy and course design;
(d) research;
(e) publications.

Commercial publications

16.9. There is an enormous range of commercial publications on careers. Inevitably

they are of varying quality and up-to-dateness. The COIC bibliography is a reliable guide to the ones of most value.

17. Personnel for the training function in industry

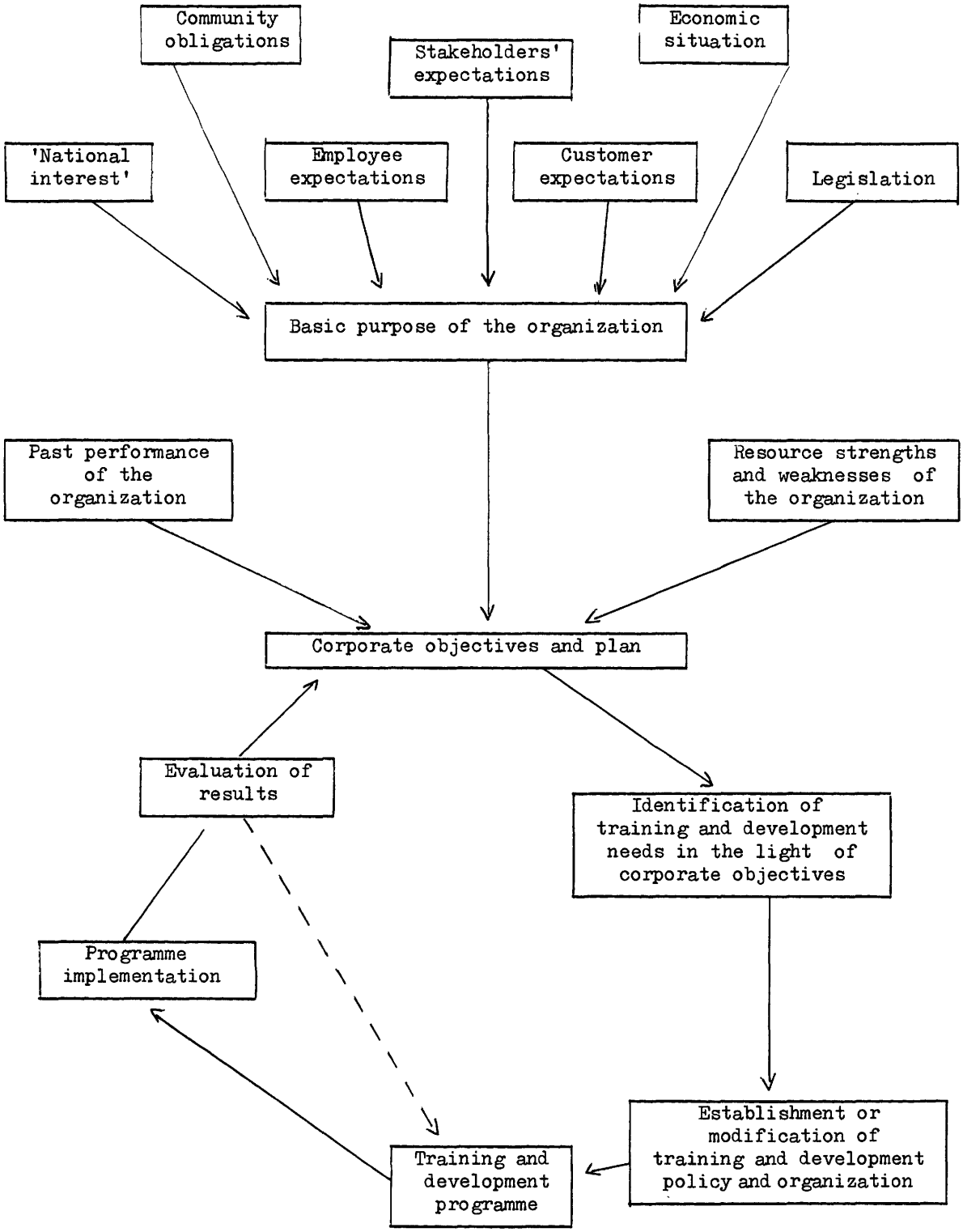
Status of the training function

17.1. The Industrial Training Act 1964 focused attention on the importance of the training function as one of the means of enabling an undertaking to achieve its corporate objectives and enhance its efficiency. Developments arising from the Act led to a clearer understanding of the range of duties that training staff need to undertake - and to be properly trained for. At the same time, the policies of ITBs regarding monetary grants to firms for the employment and training of training officers, the employment of qualified instructors, the expansion of off-the-job training, and the formation of group training associations with shared training staff, all led to a major expansion in the numbers of training staff employed and a marked improvement in their qualifications. More recently, much attention has been paid to the employment of particularly highly qualified and selected personnel as 'management development advisers' in ITB's and the larger, more training-oriented, undertakings. These are people who have the standing and expertise to advise on the individual and collective development of the managerial staff of the undertaking, so that its capability matches the demands of the corporate plan and provides for succession. The relationship of the training function to corporate planning is illustrated in the diagram on page 67, which is taken from the document 'The Role of Training and Development' published in 1975 jointly by the Institute of Personnel Management and the Institution of Training Officers. Nevertheless, despite the very real progress that has been made, in many undertakings - especially the smaller ones - training is not given the priority or prestige that its protagonists feel that it deserves.

Designation of Training Staff

17.2. The following titles are those most usually employed for the various categories of staff involved :

(a) Personnel and/or Training Director;
(b) Personnel and/or Training Manager;
(c) Group Training Manager;
(d) Chief/Senior Training Officer;
(e) Principal Training Officer;
(f) Training Officer;



Systematic training and development
in relation to organizational purpose

Fig. 1

(g) Assistant Training Officer;
(h) Training Assistant;
(i) Apprentice Supervisor;
(j) Chief Instructor;
(k) Senior Instructor;
(l) Instructor - full-time/part-time.
and in ITBs (in addition to many of the above);
(m) Module Instructor - (usually part-time);
(n) Management Development Adviser;
(o) Training Development Officer;
(p) Training Adviser;
(q) Craft Assessment Officer;
Needless to say, in most undertakings, only a few of these designations and appointments are found.

17.3. There are estimated to be about 25 000 training officers employed in the UK. Some idea of the growth in numbers in recent years may be gained from the data provided by the Engineering ITB in its annual report for 1974 - 1975 as follows :

Engineering ITB - training staff [1] 1965 - 1974

	1965	1974
No of training officers		
- Full-time	1 532	3 334
- Part-time	1 597	5 480
No of instructors or lectures		
- Full-time	3 620	6 207
- Part-time	2 168	19 129
Totals	8 917	34 150

[1] Excluding administrative and supporting staff.

Central Guidance on the Training Function

17.4. A good deal of central guidance has been made available on the functions and

training of training staff. The more important publications include the following :

(a) 'The Training Specialist in Industry' - by the Industrial Training Council, 1962;

(b) 'The Selection and Training of Instructors' - Memorandum No 6 of the Central Training Council, 1966;

(c) 'Training of Training Officers - Introductory Courses' - a report by the Central Training Council's Committee on the Training of Training Officers, 1966;

(d) 'Training of Training Officers - A Pattern for the Future' - a report by the CTC's Committee on the Training of Training Officers, 1967;

(e) 'The Management of Human Resources' - a joint ITB report published by the Department of Employment, 1972;

(f) 'Training Officers in the Engineering Industry, 1973' - A research report of the Engineering ITB;

(g) 'The Role of Training and Development' - a joint publication of the Institute of Personnel Management and the Institution of Training Officers, 1975.

In addition, 18 ITBs have published training recommendations or guidance material for the training of training staff of firms within their scope. This is of high quality. Good examples are the following publications of the Chemical and Allied Products ITB -

(h) 'Training of Training Staff' - Training commendation No 28, June 1973;

(i) 'Basic Instructional Methods, Techniques and Aids' - Information Paper No 14, February 1974.

17.5. Current thinking on the activities to be undertaken by training officers is well set out in the Department of Employment (DE) publication 'The Management of Human Resources' (See (g) in paragraph 17.3. above), where the two functions 'Manpower planning, recruitment and selection' and 'manpower training and development', are dealt with in the overall context of the management of human resources. The table on page 70 is taken from the Engineering ITB report listed at (f) in paragraph 17.4. above. It lists the training job description items given in the DE publication and also shows against each item percentage of training of training officers who were found in the EITB's sample survey to be undertaking each activity. The table thus not only identifies the duties of a training officer, but also illustrates the extent to which these duties are recognized in a particular industry.

Functions of training officers in the engineering industry

(Data from a sample survey, 1972 - 1973)

Percentage of training officers undertaking each activity

Job description item [1]	Percentage		
	Full-time training officers	Part-time training officers	All training officers
Advising on, establishing and using procedures and techniques for the induction, appraisal and development of employees	84	83	83
Organizing the training and development of particular categories of staff throughout an organization, and securing the cooperation of all concerned	87	77	83
Designing and preparing programmes of training and development, based on requisite job, tasks and/or skills analysis, performance assessment or appraisal specified training objectives, and appropriate learning methods and aids, available internal and/or external resources	91	65	80
Identifying and assessing long and short term training needs at organizational, job and individual levels	78	68	74
Establishing training priorities, developing appropriate strategies and plans, and securing the resources necessary to meet these	79	62	72
Understanding the constraints and opportunities presented by the national education and training environment, and using available external sources such as those arising from the education system, government policies, the Industrial Training Act, professional and other organizations	71	64	66
Identifying the purpose and place of training and development in an organization	68	60	65
Recommending, establishing and using appropriate procedures and techniques for recruitment, selection, promotion, transfer and termination of employment of staff	54	71	61
Analysing, describing and specifying job, preparing personnel specifications	52	71	60
Developing methods of validating and evaluating training and development activities within the organization	67	43	57
Preparing and working within agreed training budgets	63	46	56

Job description item [1]	Full-time training officers	Part-time training officers	All training officers
Identifying and assessing the organization's present and future manpower requirements	31	60	43
Making and/or using forecasts of likely manpower supply and demand and preparing budgets	28	46	36
Assessing the cost-effectiveness of manpower planning, recruitment and selection services	14	39	24

[1] Training for Management of Human Resources. HMSO. 1972.

Taken from the Engineering ITB's research report 'Training Officers in the Engineering Industry, 1973.' Based on a sample of 500 training officers.

Recruitment and training of training officers

17.6. Training officers are recruited from a wide variety of sources. The more important include :

(a) People promoted within the organization, after prior experience in the personnel or training department, supervision, line management or a specialist function such as work study. Some will enter at relatively junior levels; others, particularly graduates, will come in at higher levels, perhaps as part of their planned experience under management development schemes.

(b) From related professions, especially technical college teaching or the training or technical branches of the armed forces.

(c) From higher education, with or without a bias towards the social/behavioural sciences.

With this diversity in origin, there can be no single pattern of training for training officers, nor is there a specific minimum level of educational attainment required for entry, however, it is generally considered that at least a Higher National Certificate (a broadly based higher technician qualification) or the equivalent is desirable and many have university or CNAA degrees or equivalent professional qualifications.

17.7. The DE publication 'Training for the Management of Human Resources' recommends the following as appropriate learning experiences for a trainee training officer :

(a) induction - to the undertaking and/or personnel and training department;
(b) attending an education/training course
    (i) further education and other external courses,
    (ii) internal courses;
(c) planned work experience, including job rotation;
(d) secondments and attachments to other departments or organizations;
(e) project work;
(f) membership of working groups;
(g) guided reading;
(h) visits to companies, exhibitions, government departments, colleges etc.;
(i) simulation - i.e., case studies, role playing etc.;
(j) counselling - by his superiors;
(k) appraisal and control of training.

Of course not all trainees are fortunate enough to cover the whole of such a programme, but the combined effect of central guidance, technical and financial backing from government bodies and ITBs and the initiative of individual training officers and trainees has been that the process of improvement of training officers' expertise has attained considerable momentum.

17.8. External courses for training officers include the following :
(a) university and CNAA first degree courses in the behavioural sciences;
(b) post-graduate course in behavioural sciences of 1 or 2 years duration;
(c) full-time or part-time courses leading to the qualifications of the Institute of Personnel Management;
(d) introductory courses for training officers, conducted in universities, polytechnics etc., duration 6 - 12 weeks, usually including an interval of 2 to 4 weeks for a project in the trainee's undertaking. The courses were mainly introduced from 1966 onwards, following the first report of the Central Training Council's Committee on the training of training officers. They have made a major contribution;
(e) specialized courses provided by universities, polytechnics, consultancy bodies, professional institutions, employers' associations, training boards, government agencies and private organizations. Some of these may be used as modules in a systematic training programme. Relevant subjects include :
    (i) recruitment, selection and interviewing techniques,
    (ii) skills analysis,

(iii) performance standards, training targets, tests and assessments,
(iv) training records,
(v) instructional techniques,
(vi) adult retraining,
(vii) validation evaluation and costing,
(viii) training for specialized group;

(f) A course of 6 months duration for management development advisers at the Ashridge Management College;

(g) The ITBs arrange a wide variety of formal courses, seminars etc. For example, the Engineering ITB in 1974 - 1975 ran 18 courses for 225 management development advisers and supported those with 122 seminars for 1 571 managers to introduce them to management development systems. Other courses provided or sponsored were for technologist trainers (of student and graduate apprentices), for training officers in group associations, and in systematic analytical techniques (of training needs). Furthermore, the Board decided to extend its centre for research and training of instructors to become a focus for the advanced training of training officers in the engineering industry.

17.9. The professional bodies catering for training officers are the Institute of Personnel Management (IPM) and the Institution of Training Officers (ITO). The IPM is a long-established body which covers the whole of the personnel function and provides an option within its examination scheme for training specialists. Membership is open only to those who have had relevant practical experience at the appropriate level and have passed the Institute's Part I and Part II examinations (there is some provision for part exemption). The Institution of Training Officers is exclusively concerned with the training function. It was founded in 1964 and has expanded rapidly to about 5 000 members. The ITO does not yet have its own membership examination but plans in due course to introduce a scheme for a diploma in training management. Meantime, the minimum basic requirements for membership are :

(a) an appropriate Higher National Certificate with an endorsement, or a higher qualification;
(b) 2 years practical experience in a productive capacity; plus
(c) 2 years practical experience in a responsible position in training.

Instructors

17.10. As in the case of training officers, with the passing of the Industrial Training Act, 1964, the Ministry of Labour, the Central Training Council and

the ITBs made a special drive and provided financial and technical resources in an effort to increase the number of instructors in industry and to improve the general level of their efficiency. In 1966 the Central Training Council published its Memorandum No 6 'The Selection and Training of Instructors'. The memorandum emphasized the need, in a period of expansion in numbers, 'to select the right people and to teach them how to instruct'. As ITBs published their training recommendations and their grant schemes, it also became evident that in most cases in which direct instruction was involved - whether by part-time or full-time instructors - the conditions for award of grant would not be met unless the instructors had attended an appropriate course of instruction - say of 1 or 2 week's duration. The table following paragraph 17.3. on page 68 indicates the scale of the expansion in the numbers of instructors in the engineering industry; similar developments have taken place in other fields.

17.11. Training courses for instructors include :

(a) Courses in instructional techniques provided by the Training Services Agency at its two instructor training colleges and its four instructor training units,

(i) basic course - 2 weeks

(ii) advanced course - 1 week

These courses are normally given to mixed groups of full-time instructors from several industries. On request they can be specially adapted to meet the individual needs of a company or ITB, and can be given on a firm's premises.

Over 3 000 men and women complete these courses annually.

(b) Courses of about 1 to 3 weeks in duration provided by ITBs for trainee and experienced instructors in firms in their industries. The Engineering, Wool, Cotton, and Electricity Supply ITBs have been active in this connection. The Engineering ITB offers six different courses for instructors engaged in first year off-the-job, machine/assembly/process operator, and part-time on-the-job instruction and for different levels of responsibility.

(c) Courses similar to those referred to in (a) and (b) above are offered by a few technical colleges, the Industrial Training Service, the British Association for Commercial and Industrial Education, consultancy bodies and other organizations.

(d) The scheme 'Training Within Industry' run by the Training Services Agency. This is intended primarily for supervisors who need to act as part-time

instructors, but is also relevant to the needs of operator-instructors as well as to training officers and line managers who will themselves need to pass on the training to other employees. The scheme as a whole, which attracts over 20 000 participants each year (besides those trained later 'in-company' by the training officers etc.), covers the following courses :

Training and communication skills

(i) for training officers and line managers - 25 hours

(ii) for TWI group leaders and course presenters - 5 days

(iii) Job relations

for supervisors - 10 hours

for training officers 5 days

(iv) Job instruction and communication

for supervisors - 15 hours

for training officers - 5 days

(v) Job methods

for supervisors - 15 hours

for training officers - 5 days

(vi) Job safety

for supervisors - 15 hours

for training officers - 5 days

(vii) Office supervision

for supervisors - 30 hours

for training officers - 5 days

(viii) Retail distribution

for supervisors - 28 hours

for training officers - 5 days

(ix) Operator - instructors

for senior management - 3 hours

for supervisors - 3 hours, followed by the course for operator-instructors.

for operator - instructors - 4 or 5 days

for training officers - 5 days

(x) Clerk - instructors

for senior management - $2\frac{1}{2}$ hours

for supervisors - $2\frac{1}{2}$ hours, followed by some days later by the course for clerk - instructors - 5 days

for training officers - 5 days

(xi) Export training

export office procedure - 4 days

aligned documentation $3\frac{1}{2}$ day seminars.

18. Selection of apprentices

18.1. Systematic selection of young people for employment (in the sense understood by occupational psychologists) is a difficult task which calls for professional skills and knowledge and much application. Although it has been practised in industry in the UK on a small scale for many years, it is only relatively recently that, with the increased numbers of professionally qualified personnel and training officers following the Industrial Training Act 1964, it has become more general. The technical support and encouragement of the ITBs have been an important factor in this development.

18.2. The beginnings of systematic selection for a school leaver are found - in the form of self-selection - at the guidance stage in the Careers Service. Since 1969, the Service has been using the Occupational interests guide developed by the Applied Psychology Unit at Edinburgh. The Service is also now introducing generally a battery of psychometric tests designed to give measures of different aspects of a young person's aptitudes and abilities. The tests - known as DEVAT (Department of Employment Vocational Assessment Tests) - are designed for use in vocational guidance as an additional source of information to help youngsters formulate their own occupational plans. Their introduction follows a series of field trials held in 1971 - 3 in three areas of southern England. The present battery consists of a series of six tests - (1) arithmetic - 5 min, (2) shapes - 15 min, same words - 5 min, reasoning - 15 min, mechanical - 15 min and mathematic - 10 min. There are also four research projects involving the use of a computer to match personal characteristics and attainments to occupational requirements.

18.3. Selection for recruitment to employment and training, as carried out by professionally qualified personnel or training officers in the UK, is usually based on the following information and procedures :

(a) an application form;
(b) biographical details;
(c) school headmasters'/ headmistresses' report;
(d) careers officer's recommendation;
(e) educational qualifications (examination results);
(f) selection test results;
(g) interview data;
(h) medical reports.

18.4. In considering applicants, recourse is generally made to the 'Seven Point Plan' published by the National Institute of Industrial Psychology, which provides a broad framework for the assessment of occupational potentialities under the headings :

(1) physical make-up;
(2) attainments;
(3) general intelligence;
(4) special aptitudes;
(5) interests;
(6) disposition;
(7) personal circumstances.

18.5. It is widely understood that interviewing can be and often is an unreliable guide to selection and the literature on the subject gives advice on the particular types of information that can be usefully sought and how the interview should be constructed and recorded to improve effectiveness and consistency.

18.6. Selection tests are widely used in the situations referred to above in which qualified personnel are available (this of course still leaves many firms which lack the necessary expertise). As already noted, they are used in association with other information and not as the sole criteria for selection. The tests used are almost always group pencil and paper tests.[1] A wide range of validated tests is available including tests of :

(i) general ability or intelligence (verbal and non-verbal);
(ii) specific attainment, especially in arithmetic/mathematics and vocabulary;
(iii) mechanical ability;
(iv) spatial ability;
(v) perceptual ability.

In almost all cases, tests are available only to graduate psychologists or people who have completed an approved course (e.g. 3 weeks) in the application of tests and interpretation of test results. The National Foundation for Educational Research plays a major role in the central provision of tests from UK and American sources and in the training of people in their use.

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[1] A few firms use practical exercises for final selection, often to assess the candidate's attitude and response in a training situation.

18.7. Generally, the battery of tests used for a technical occupation includes an omnibus intelligence test, an arithmetic/mathematics attainment test, a spatial or mechanical ability test, and a perceptual accuracy test; for a non-technical occupation a vocabulary test usually replaces the spatial or mechanical ability test.

18.8. A particularly useful contribution to the literature on selection was the publication in 1975 by the Training Services Agency of Training Information Paper No 8 entitled 'Selecting the younger trainee'. This provided a helpful and authoritative guide to good practice, not only in the application of selection tests but also in their continuous validation in particular situations.

18.9. Besides their continuing role in acting as centres of expertise and guidance in selection testing, several of the ITBs particularly concerned with craft apprenticeships - engineering, construction, road transport, shipbuilding and foundry - have over the last 2 years applied the techniques referred to above in the selection of over 11 000 apprentices for what are known as 'training award schemes'. These schemes are designed to increase the recruitment of apprentices during the current period of depression, to make good short falls in recruitment and provide training opportunities for school leavers who would otherwise have been unable to obtain apprenticeships. The ITBs offer places for first year off-the-job training with a view to subsequent placing into firms for completion of the apprenticeship period. The schemes are funded jointly by the ITBs and the Manpower Services Commission, through the Training Services Agency. As recruitment to the schemes normally takes place only after firms have made their own selection of apprentices, selection from the remaining applicants is a matter of importance and refined techniques are of special value. Preliminary indications suggest that award holders hold their own with those recruited in the normal way. In the case of the Construction ITB, nearly all apprentices (i.e. both normal recruitment and training award holders) in the new Standard Scheme of Training are now selected with the aid of selection tests and preliminary reports show that wastage during the first year of off-the-job training has been much reduced (to the low figure of 4%). A corresponding development has been introduced by the Road Transport ITB in the setting up of twelve centres at which specially selected and trained ITB staff, in cooperation with employer and trade union representatives, will provide a recruitment and selection service to companies wishing to

make use of it. The Shipbuilding ITB offers assistance to small firms in their apprentice selection and provides trainability tests at its own boatbuilding training centre and a selection testing service for companies wishing to send trainees to its off-the-job training centre for boatyard workers.

19. Group training schemes

19.1. The idea of a number of firms associating together to employ their own professional training staff and share training facilities which they individually could not provide at an economic cost found expression in the development of group training schemes. Orginating mainly in the 1950's, such schemes received substantial support after 1964 from the government, the Central Training Council and individual ITBs; they were seen as a means of enabling small firms to provide the highly developed patterns of training recommended by the ITBs (and, incidentally, to benefit from the Boards' grant provisions). In 1964 there were about 60 groups, mostly in engineering; in 1975 there were some 750, covering firms employing 1.67 million work people (about 10% of total employees within the scope of the ITBs). Most schemes are set up by firms within a single industry and the majority are from engineering (163), construction (133), agriculture (123), road transport (117), hotel and catering (39) and furniture and timber (39). About 125, mainly in engineering and road transport, have their own training facilities in the form of workshops and vehicles, the remainder have only one main resource - the training officer. In the engineering industry, group training workshops provide about 12% of off-the-job training places (used mainly for first year apprentice training). The smallness of the proportion of groups which have their own training workshops is largely a reflection of the availability of off-the-job training places in colleges of further education and in training establishments run by some ITBs.

19.2. Financial support available to approved group training schemes is substantial. The pattern varies somewhat in different ITBs. Originally, Department of Employment grants were available for initial developmental costs; later ITBs took over. Many of the purely advisory services are totally supported by the relevant ITB. In some cases (e.g. Construction ITB) the training officer, offices and car were provided by the Board. In others, the ITB met the costs on an agreed budget; still others made a block grant, or provided development grants covering the first two years of operation. Under the policy now

adopted by the Manpower Services Commission, there is a move towards the eventual transfer of costs to member companies, as the benefits of membership become self-evident, subject to :

(i) some external funding by ITBs of developments which promote the boards' objectives;

(ii) MSC funds being available to ITBs which have insufficient resources to support group development plans designed to advance schemes nearer to the goal of self-support, or to move groups through certain critical phases of expansion.

19.3. Initially, most group training schemes were concerned primarily with apprentice and/or operative training; indeed, some schemes still operate on this basis. The current approach, strongly recommended by the Training Services Agency and the ITBs, has a much broader objective, i.e., to help identify and meet the manpower and training needs at all levels, arising from the business policies of the member firms. This of course is a challenging task for any training officer, especially one employed by a group of small firms and working without the support of the personnel department and managerial assistance that could be expected in a larger organization. To help identify the duties of a group training officer and define his personal training requirements, the Training Services Agency has published a document 'The Training of Group Training Officers', prepared by a working party of representatives of 15 ITBs, the TSA, the Department of Education and Science and the Industrial Training Service. The job description and list of key activities for a group training officer given in the document are worthy of reproduction here, not only in relation to group training schemes, but also as illustrating the current UK concept of the nature of the training function in a business entreprise, as conducted by a professional training specialist.

'Group training officer

A - Job description

1. Overall scope and purpose of job

To provide for member firms a specialist service of a high professional standard on all matters relating to training and recruitment in particular by :

(a) identifying the individual needs of each firm arising from its corporate policy.

(b) developing and providing training and associated services

for member firms to meet their needs and to the standards recommended by the appropriate training board.

(c) make recommendations about the effectiveness of the training and opportunities for further development of the group.

2. Responsible to :

The Management Committee through the chairman.

B - Key activities in each area of responsibility

1. Liaison with group members

1.1 Maintain close and regular contact with group members.

1.2 Gain commitment of group members to systematic training.

1.3 Help group members to derive the manpower requirements, arising from their business policies, and identify their training needs.

1.4 Advise on the range, nature and availability of facilities able to meet the training needs.

1.5 Assist group members with the selection and recruitment of new employees.

1.6 Assist group members in setting up and maintaining appropriate systems for recording training.

1.7 Prepare for group members periodic reports on their trainees and state-of-training in their firm.

1.8 Assist and advise group members on matters relating to Training Board grants and provisions.

2. Managing the training

2.1 In each firm, taking into account business objectives, labour turnover, organizational changes and other relevant factors, assist in the determination of its training requirements in terms of the objectives to be achieved and the numbers to be trained.

2.2 Establish priorities and draw up training plan.

2.3 Prepare individual training programmes using job analysis, performance appraisal, training board recommendations and guides etc. bearing in mind the cost/benefit of the training and available training methods.

2.4 Recommend the use of external and inter-firm training facilities when appropriate.

2.5 Give instruction, coaching when required.

2.6 Ensure that training programmes are implemented to the agreed standard, with special attention to safety and health matters.

2.7 Ensure that adequate records of training are maintained.

2.8 Evaluate the training and recommend appropriate revisions.

2.9 Support firms staff responsible for the implementation of the

training programmes by provision of advice and training material and aids.

2.10 Seek to improve the quality of instruction given by group members employees by appropriate training of those giving instructions.

2.11 Promote the joint use of facilities in order to improve the efficiency of training. This might include arranging courses, visits, exchange of trainees.

2.12 Recommend appropriate associated further education.

2.13 Keep member firms advised on training board policies, changes in legislation producing training needs.

3. Group development

3.1 Implement the group development plan as agreed by the management committee.

3.2 Evaluate the effectiveness of group activities.

3.3 Identify opportunities for improvements in group activities.

3.4 Recommend to the management committee changes in the range of services provided, improvements to existing services and extension of group services to new firms.

3.5 Draw up and implement development plan for own training staff.

4. Liaison with external bodies

4.1 Maintain a close liaison with training board staff so as to be familiar with developments in its policy.

4.2 Liaise with industry related bodies, such as employers associations, trade unions, health and safety inspectorates and professional societies on matters affecting group activities.

4.3 Establish and maintain contact with further education colleges in order to advise and assist group members in the use of educational facilities.

4.4 Main contact with local schools and careers advisory service.

4.5 Maintain appropriate level of contact with employment services and other sources of employees.

4.6 Liaise with appropriate providers of off-the-job training in order to advise group members on suitability of such training for their employees.

4.7 Maintain contact with training officers and others so as to keep abreast of developments in training methods and techniques.

5. Group administration

5.1 Organize personal administration activity.

5.2 Prepare and submit to the management committee group budgets and plans.

5.3 Operate within the agreed group budgets and plans.

5.4 Maintain group records.

5.5 Produce periodic statements of group activity.

5.6 Supervise group staff.

5.7 Arrange management committee meetings.

20. Special measures to boost apprentice recruitment

20.1. Since 1971, the Government and ITBs have been particularly concerned about the decline in the numbers of apprentices recruited in the main apprentice-training industries. This decline had been taking place since about 1968, but was accelerating as the level of industrial activity fell. The level of recruitment generally fell well below that needed for maintenance of the skilled labour force; at the same time, large numbers of boys and girls were unemployed or in jobs well below their capability. Discussions between the Department of Employment and the ITBs led to the introduction and progressive development of what eventually became a package of 'special measures', designed to strengthen training opportunities by the provision of government funds for grants to employers. That such a package should be necessary is, of course, a commentary on the inadequacy of traditional recruitment arrangements to maintain the nation's stock of skilled personnel. The measures for the year 1975 - 1976 included the following :

(a) The training award scheme. This enabled ITBs to offer unemployed young people craft and technician training places for first year off-the-job training, with a view to being placed subsequently into a firm for completion of apprenticeship training. In addition, 'premium grants' were made available to employers who recruited additional apprentices above their normal numbers for first year off-the-job training. Over 11 000 awards were made available, mostly jointly funded by the Manpower Services Commission, through the Training Services Agency and the ITBs. The maximum award or grant is £1 750 per capita. The ITBs concerned were : engineering, construction, road transport, shipbuilding and foundry. Training takes place in colleges and ITB training centres.

(b) Supplementary grants for the construction industry. The Construction industry has been hard hit by the depression. Over 6 000 grants were made to employers for the recruitment of additional apprentices. TSA funds supplement grants made by the Board.

(c) Training by selected employers. 2 000 grants were available wholly from TSA funds, to enable selected firms with good training centres to use under-utilized capacity by training first- and second- year apprentices over and above their own needs. The TSA granted £3 500

towards the cost of first and second-year training for each extra trainee.

(d) Sandwich course students. Where ITBs expected a shortfall in training places for college-based students, the TSA was able to provide grants to employers of £25 per week for up to 6 months for each additional place made available. 1 500 grants were offered.

(e) Premium grants for off-the-job training. This scheme was originally designed to enable ITBs to offer grants to employers recruiting additional apprentices for first-year off-the-job training and associated further education. It was funded jointly by the TSA and ITBs. The scheme has now been extended to include a wider range of occupations, e.g. clerical and commercial, with approved training schemes lasting a year or more. Grants now come wholly from the TSA.

(f) Redundant apprentices. A scheme to enable ITBs to continue the training of apprentices made redundant. One option was the payment of a grant of £750 to an employer engaging a redundant apprentice. This was jointly funded by the TSA and the ITB.

(g) Upgrading training for craftsmen. A small scheme (100 grants) to contribute to wage costs whilst craftsmen attend colleges of further education for technician courses.

20.2. The package of schemes had a significant effect on the number of training opportunities for young people. In engineering and the foundry industry, the intake of craft and technician trainees was higher than for some years. In construction, although the total number fell, the expansion in the number participating in the new standard scheme of training (involving first-year off-the-job training) maintained its planned impetus and was higher than ever before. The merits of such schemes have also had a bearing on more fundamental discussions, stimulated by the TSA's discussion paper 'Vocational preparation for young people' which recommended that some form of central funding should be introduced generally for first-year off-the-job training of young people, and that decisions about the numbers of young people recruited for training should be subject to considérations going beyond the short-term outlook of individual employers.

Proposal for collective funding of first-year training

20.3. The idea of collective funding for the first-year training of certain categories of craft apprentices (see paragraph 20.2 above) has recently been taken a stage further. In June 1976 a joint Government/MSC consultative

document entitled 'Training for Vital Skills' was issued. This put forward the possibility of a collective fund, contributed to by employers and public funds in approximately equal proportions, being established for the purpose of meeting the cost of first-year apprentice training. It further suggested that only certain crafts, mainly in the engineering, shipbuilding and construction industries, should be covered by the fund. Comments have been invited from a wide range of education authorities, training institutions and employers by October 1976. No firm Government commitment to collective funding has however yet been made.

Other training arrangements

20.4. Facilities are being developed to enable some 5 000 to 6 000 unemployed school leavers and other young people to attend short industrial courses (SICs), occupational selection courses (OSCs), and wider opportunities courses (WOCs) at TSA skill-centres, colleges of further education or employers' establishments. SICs normally provide short periods of training (usually 10, 12 or 13 weeks) in several related skills together with some terminal assessment of capacity, and aim to improve prospects for employment at about semi-skilled level. OSCs have been developed from this concept with the needs of young people in mind. They combine an initial 2-week assessment period with around 4-14 weeks more concentrated technical instruction in the selected area and training in social and life skills relating to job-getting and employment generally. WOCs are a new concept aimed at the person who finds it difficult to get and then keep a suitable job or is uncertain that the type of work would suit him or her. WOC courses use discovery learning methods to permit sampling of a variety of tasks and also provide instruction in social/life skills to further help motivation. They are still experimental and at present operate only on a small scale.

21. Associated further education - craft apprentices

Where provided

21.1. Part-time day or block-release courses of associated further education for craft apprentices are provided in colleges of further education, as described in paragraph 5.1. (g) above. The titles of the individual colleges vary; they may be termed 'college of further education', 'technical college', 'college of technology', 'college of building', or 'college'. For technical (i.e. non-commercial) occupations, the courses are designed to lead to the examinations of the City and Guilds of London Institute (CGLI) or, at lower

levels, to the examinations of regional bodies which are coordinated with those of the CGLI. The CGLI in 1974 examined 200 000 + candidates in craft and 126 000 in technician course examinations in the UK (besides others at centres overseas). These candidates were not of course all apprentices.

How determined

21.2. The CGLI publishes examination syllabuses, regulations, and sometimes, notes for guidance of teachers. It is the responsibility of the teaching staff of the colleges to devise their own teaching schemes, based on the examination syllabuses. Increasingly, regional groups of teachers come together voluntarily under various auspices to collaborate in the development of teaching schemes and methods, student project work etc.

Advisory committees

21.3. CGLI syllabuses are prepared, monitored and periodically revised by standing advisory committees. These committees are widely representative of the education service (at national and regional level), employer associations, trade unions and industrial training boards.

Scope of craft courses

21.4. There are minor differences in the scope, emphasis and terminology adopted in the schemes prepared for different industries/occupations, but the content of the syllabuses falls generally under the following headings :

(i) craft theory (principles and applications);

(ii) practical activities in workshop and laboratory (of an educational/investigatory character rather than as skill training);

(iii) associated subjects (i.e. drawing and/or sketching, applied science calculations/mathematics, safety);

(iv) industrial studies (introduction to the industry as a whole, its organizations, education and training etc.);

(v) general studies (to develop students' ability to absorb, interpret and transmit information in spoken or written form and to contribute to their general education and personal development).

Duration

21.5. The normal duration of a part-time day course up to craft certificate level is 3 years, with about 300 hours study per year. Of this, about 240 hours is devoted to the main subjects - i.e. craft theory, practical activities and associated subjects. A growing proportion of apprentices spend all or

part of the first year in a full-time off-the-job course in a college, in which case the associated further education in the CGLI course and the theoretical and practical content of the ITB training programme are wholly integrated. In the case of construction, this may so accelerate the course that trainees are ready for examination after two years instead of three.

Overall educational objectives

21.6. There is sometimes a CGLI (or regional) examination (known as Part I) at the end of the first year, in which case the craft level (third year) examination is designated Part II. There is in nearly every case a further stage - Part III or 'advanced craft' for the more able and ambitious student. The overall aims of the further education course are well described in the new schemes for building crafts, i.e. to :

(a) provide the knowledge and appreciation of techniques and materials which a craftsman will need to do his job with efficiency and understanding;

(b) provide a broad understanding of relevant science and technology, with background industrial studies so that the student craftsman

  (i) acquires an understanding of the principles of his own craft;

  (ii) appreciates the work and problems of craftsmen engaged in associated occupations and the relationship of his work to theirs;

  (iii) is better equipped to adjust to changes in the nature of his work caused by technological development, changes in industrial conditions, change of job within his own industry or transfer to a similar occupation in another;

(c) provide opportunity for continued study in preparation for advancement in the industry;

(d) widen the student craftsman's understanding of the industry in which he works and the society in which he lives;

(e) provide opportunity for the development of responsible attitudes to quality of work and to costs;

(f) introduce a study of the elements of supervision and job organization;

(g) develop the student craftsman as a person, so as to encourage the growth of mature attitudes in industry and society in general, of powers of thought, reasoning and communication, and of his appreciation of the value of learning.

(N.B. The objectives do not include the attainment or testing of practical craft competence - this objective is achieved by means of the programme of industrial training specified by the ITB or other authority).

Grouping of crafts and structure of courses

21.7. In the engineering, electricity supply, road transport, shipbuilding, iron and steel and printing industries, and for engineering craftsmen in the chemical and petroleum industries, initial training of craft apprentices (as recommended by the ITBs concerned) is broadly based. It takes the form of basic training common to a number of crafts for which training was formerly separate. In most of these cases this initial basic training is in off-the-job training centres, either technical colleges or centres run by firms, groups of firms or ITBs. The duration of these initial basic training courses varies from about 6 months (road transport and construction) to 1 year (the remainder). In the one year courses, there is usually provision in the last 3 or 4 months for trainees to select (or be selected for) one of a small range of optional fields of specialization - for example, in engineering, this could be : electrical, mechanical or fabrication. Subsequent stages of training provide a wider range of opportunities for specialization. The courses of associated further education are designed with a modular structure which makes it possible to provide courses for individual students which correspond broadly with the elements of the ITB training programme in which they participate (subject of course to there being sufficient applicants for a particular module to form a viable class). In the case of engineering crafts, a particularly difficult problem arose in that there were some differences in the patterns of training recommended by the engineering, iron and steel, electricity supply and shipbuilding ITBs.

Syllabus content

21.8. In principle, the syllabus content of a course of associated further education is derived mainly from the job specification for the occupation concerned and, more directly, is based on the training and skill specification and the training programme developed from it. As mentioned above (paragraph 7), this was only rarely possible before the implementation of the Industrial Training Act 1964, but since that time the ITBs have published training recommendations which cover most - though not all - of the apprenticeship trades. Paragraph 7 above describes in greater detail how new course structures and new syllabuses were prepared to complement the new training programmes and to satisfy the broader educational objectives of helping to meet trainees' personal as well as occupational requirements. Where detailed and professionally prepared job or training specifications are not available, the first task of an advisory committee in preparing a

syllabus for a course of further education is to reach agreement on the scope of the activities involved in the practice of the occupation concerned.

21.9. Syllabuses in craft theory have normally been set out in traditional 'content' form (e.g. 'Principles of basic woodwork joints'). Increasingly in recent years they are coming to be expressed in behavioural terms (e.g. 'The student should be able to explain and illustrate the principles involved in the construction of basic joints'). In the case of the relatively new schemes for the building crafts, syllabuses in traditional 'content' form are preceded by statements in behavioural terms of the 'course objectives'; on the other hand, the most recent schemes - for printing crafts - have syllabuses exclusively in the form of 'course objectives', i.e., in behavioural terms. This is still an area of experimentation and development and there is a good deal of variation in style.

Subject relationships

21.10. Syllabuses for 'associated subjects' and 'practical activities' are directly related to corresponding items in craft theory. Thus, the laboratory and workshop provide learning situations which complement theoretical instruction in the classroom and indeed may even provide the most appropriate location for it. In this way, it is hoped that any tendency to divorce 'theory' from 'practice' can be avoided. The close relationship between these three components is sometimes illustrated by printing them side by side on the same page, with related items horizontally aligned e.g.

Craft principles & applications	Associated studies	Practical activities
Materials inspection	Physical properties of non-metallic materials	Hardness tests, notched bar tests- .....

Examinations

21.11. Examinations are set externally by the CGLI or other examining body, although they may include a component of internal assessment by the students' teachers, especially of the programme of practical activities carried out during the course. There is also some provision for the CGLI to approve college examinations based on specially devised local syllabuses. Some representative examination patterns (up to craft level) are given below.

(a) Engineering craft studies

Part I general - multiple-choice paper - 2 h.

special (mech. elec.etc.) - multiple-choice - 2 h.

Part II first paper - multiple-choice - 2 h.

second paper [1] - written & drawing - 2½ h.

appraisal of craft project work (by college)

(b) Carpentry & joinery

Portion 1 craft theory & associated subjects - multiple-choice - 2 h.

Portion 2 in-course assessment of four assignments, based on CGLI specifications to test - planning, measurement, setting out, communication and fault diagnosis (including prevention and cure).

Portion 3 in-course assessment of performance in practical activities under the headings

(a) tools & workshop procedures
(b) construction items and procedures
(c) powered hand tools
(d) woodworking machines
(e) safety.

— doors, windows, stairs, floors, roofs, walls, joinery items.

(c) Hairdressing

Paper 1 theory & associated subjects - multiple-choice - 2 h.

Portion 2 in-course assessment (design).

Portion 3 in-course assessment (practical hairdressing).

(d) Motor vehicle craft studies

Part 1

Paper 1 multiple-choice - 1½ h.

Paper 2 multiple-choice - 1½ h.

Part II

Paper 1 general - multiple-choice - 2 h.

Paper 2 light vehicles [2] - written - 2½ h.

21.12. In general, the examination procedures are highly refined. They are designed to use the form of test or assessment that is the most appropriate for the measurement of the particular type of ability under consideration, and to do so in the context in which it can most suitably be applied, whether in the examination room, in class, or in the laboratory or workshop. One of the fullest accounts of current thinking is given in the booklet at Appendix 15 'Carpentry and joinery, Craft Certificate - The Pattern of Craft Certificate

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[1] Available in several specialisms.
[2] Or other specialism (e.g. heavy vehicles, electricians).

Examinations'. Important advances have been made in the use of objective testing in the form of multiple-choice examination papers. As mentioned in paragraph 7.4 above, the achievement of greater objectivity in the specification of learning objectives and in the measurement of their achievement has been a coordinated process; an illustration of this is given in Appendices B and C contained in the booklet on carpentry and joinery examinations mentioned earlier in this paragraph.

22. Further education for technician apprentices

A time of change

22.1. The current range of further education courses for technician apprentices and trainees is to be replaced in its entirety over the next few years, beginning in September 1976 in England and Wales and 1977 in Scotland. This change is the consequence of the implementation of the 1969 report [1] of the Committee on Technician Courses and Examinations, set up by the National Advisory Council on Education for Industry and Commerce, at the invitation of the Secretary of State for Education and Science. It is necessary, therefore, to refer to both the current and the proposed new courses and qualifications.

Present provision

22.2. The chart on the following page is an updated version of the diagram in the 1961 government White Paper Cmnd 1254 'Better Opportunities in Technical Education'. The White Paper codified the then existing types of course for operatives, craftsmen and technicians and introduced certain new elements and modifications to produce a more coherent system. It provided the framework within which substantial development proceeded over the next fifteen years. For the purpose of this monograph, the main features are :

(a) The existence of two main systems of technician courses

(i) Over 70 CGLI technician courses - designated T1-T5 in the diagram - each based on a specific technician occupation or related group of occupations.

(ii) About 20 schemes of a broader and more academic character leading with award of 'national certificates' and 'national diplomas' in branches of technology, science and business studies - designated 01 - HC2/HD3 in the diagram.

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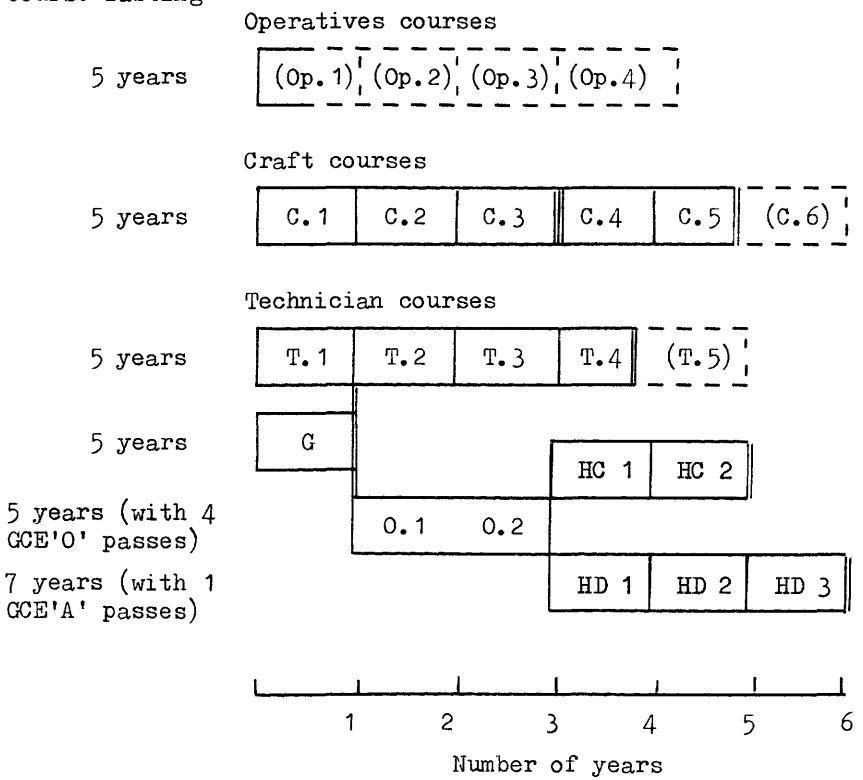
[1] Report of the Committee on technician courses and examinations. HMSO 1969.

Outline of the 1961 pattern of courses (adapted from the White Paper)



Op. Operatives Course (These courses vary greatly in length).
C. Craft Course.
T. Technician Course.
G. General Course.
O. Ordinary National Certificate or Diploma Course (The certificate courses are part-time; the diploma courses full-time or sandwich).
HC Higher National Certificate Course (part-time).
HD Higher National Diploma (full-time or sandwich).
Denotes an intermediate or final stage associated with an examination.
*.. Students leaving secondary school after 5-year course will normally take a one-year General Course.

Notes :
(1) Courses for degrees, diplomas in technology or other qualifications leading direct to technologist status are not shown. Students gaining Higher National Diplomas or Certificates may also reach technologist status by further study; such further courses are not shown.
(2) This outline does not show all the possible routes open to the individual. For example, there will be opportunities for same students to transfer from a course of one level to an appropriate point in a higher course.
(The original diagram has been amended to take into account the subsequent raising of the school-leaving age by 1 year.)

(b) So-called 'general courses' - designated G in the diagram - in which students without the necessary entry qualifications may be prepared and selected for entry to one of the two streams mentioned in (a) (i) and (a) (ii) above.

(c) The CGLI technician courses are designed for part-time day attendance. National certificate courses are also designed for part-time classes; the corresponding national diploma courses have a much broader curriculum and are designated for full-time or sandwich course attendance.

'City and Guilds' technician courses

22.3. The structure and content of representative CGLI technician courses is illustrated by the diagrams on the two following pages for subject No 255 - Mechanical engineering technicians and subject No 271 - Telecommunication technicians. Salient features are :

(a) entry at the age of 16 after satisfactory completion of lower secondary education to that age;

(b) alternatively, entry to the second year (T2) on passing the examination for the General Course in Engineering or possession of appropriate passes in the General Certificate of Education (GCE) at 'Ordinary' level;

(c) a first stage (Part I) of 2 years duration, largely or wholly common for all students;

(d) a second 2-year stage (Part II), with provision for some technical specialization, leading to the Part II examination at technician level;

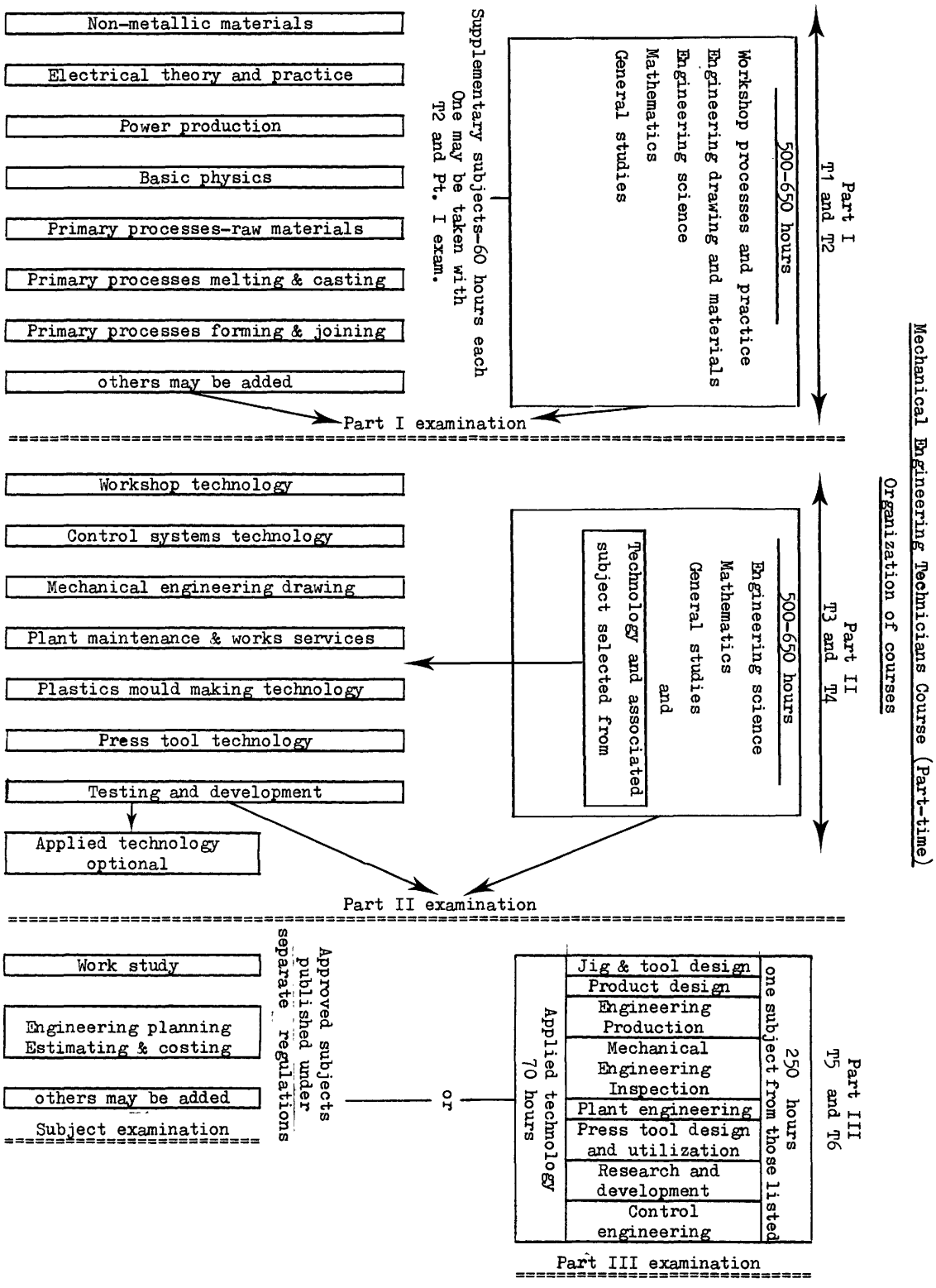
(e) a third 1 or 2 year stage, leading to the Part III examination and the award of the Full Technological Certificate - a higher technician qualification. At this level the degree of specialization is high.

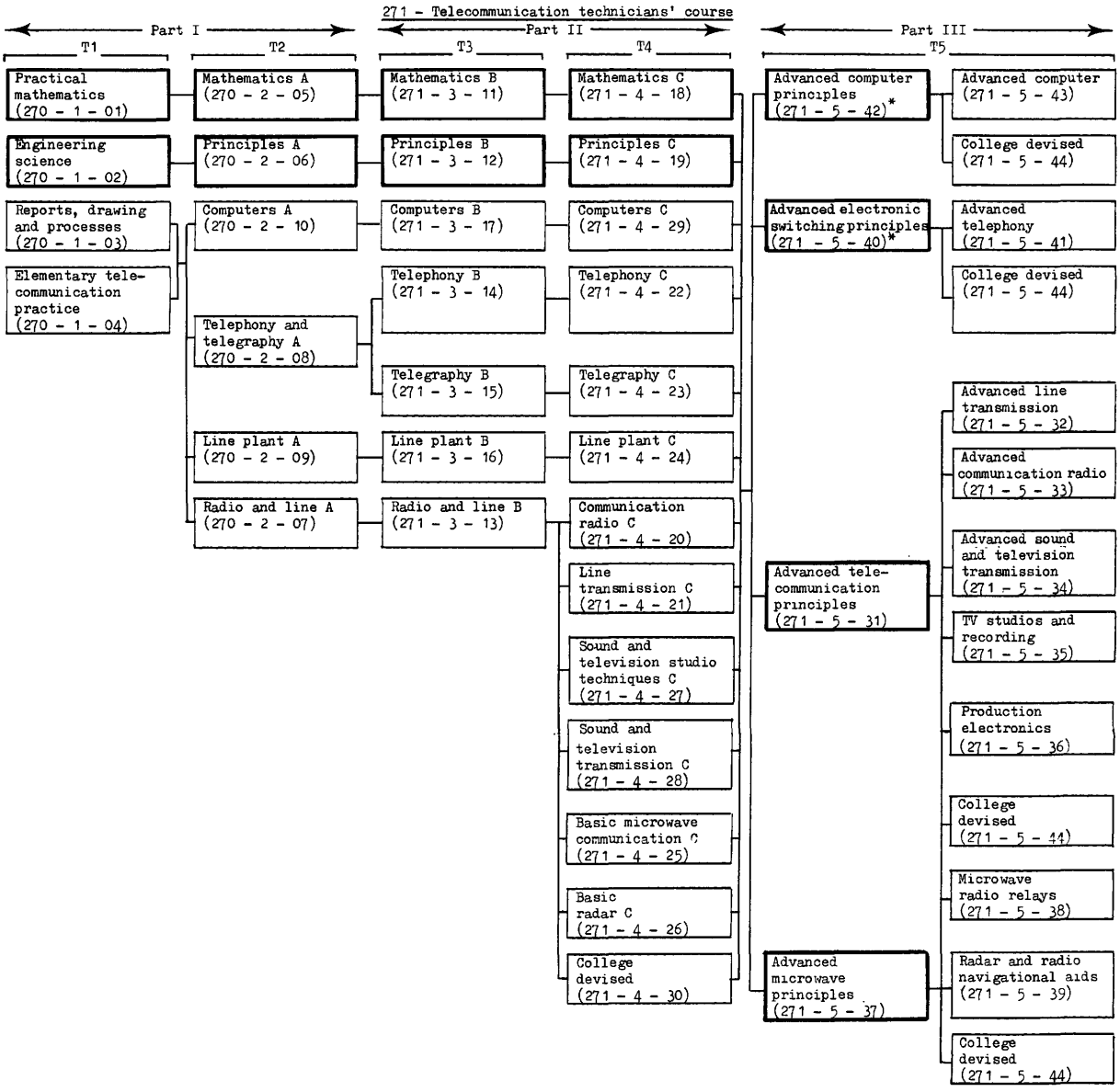
National certificate and diploma schemes

22.4. National certificate and diploma schemes are administered by 'joint committees' set up by the government education departments and the professional institution(s) associated with the occupational field concerned. The committees also include teacher representatives nominated by the appropriate national educational associations and sometimes industrial representatives. Salient features are :

(a) There are two levels 'Ordinary' and 'Higher' entry to the first level is at GCE 'O' level (or the equivalent) in 4 appropriate subjects.

(b) A 2-year part-time course leads to the Ordinary National Certificate : the corresponding full-time or sandwich course leads to the Ordinary National Diploma. These awards are regarded as technician qualifications.


City and Guilds of London Institute
Mechanical Engineering Technicians Course (Part-time)
Organization of courses
Part I
T1 and T2
500-650 hours
Workshop processes and practice
Engineering drawing and materials
Engineering science
Mathematics
General studies
Supplementary subjects-60 hours each
One may be taken with
T2 and Pt. I exam.
Non-metallic materials
Electrical theory and practice
Power production
Basic physics
Primary processes-raw materials
Primary processes melting & casting
Primary processes forming & joining
others may be added
Part I examination
Part II
T3 and T4
500-650 hours
Engineering science
Mathematics
General studies
and
Technology and associated subject selected from
Workshop technology
Control systems technology
Mechanical engineering drawing
Plant maintenance & works services
Plastics mould making technology
Press tool technology
Testing and development
Applied technology optional
Part II examination
Part III
T5 and T6
250 hours
one subject from those listed
Applied technology
70 hours
Jig & tool design
Product design
Engineering Production
Mechanical Engineering Inspection
Plant engineering
Press tool design and utilization
Research and development
Control engineering
Part III examination
or
Approved subjects published under separate regulations
Work study
Engineering planning
Estimating & costing
others may be added
Subject examination


271 - Telecommunication technicians' course
Part I
Part II
Part III
T1
T2
T3
T4
T5
Practical mathematics (270 - 1 - 01)
Engineering science (270 - 1 - 02)
Reports, drawing and processes (270 - 1 - 03)
Elementary telecommunication practice (270 - 1 - 04)
Mathematics A (270 - 2 - 05)
Principles A (270 - 2 - 06)
Computers A (270 - 2 - 10)
Telephony and telegraphy A (270 - 2 - 08)
Line plant A (270 - 2 - 09)
Radio and line A (270 - 2 - 07)
Mathematics B (271 - 3 - 11)
Principles B (271 - 3 - 12)
Computers B (271 - 3 - 17)
Telephony B (271 - 3 - 14)
Telegraphy B (271 - 3 - 15)
Line plant B (271 - 3 - 16)
Radio and line B (271 - 3 - 13)
Mathematics C (271 - 4 - 18)
Principles C (271 - 4 - 19)
Computers C (271 - 4 - 29)
Telephony C (271 - 4 - 22)
Telegraphy C (271 - 4 - 23)
Line plant C (271 - 4 - 24)
Communication radio C (271 - 4 - 20)
Line transmission C (271 - 4 - 21)
Sound and television studio techniques C (271 - 4 - 27)
Sound and television transmission C (271 - 4 - 28)
Basic microwave communication C (271 - 4 - 25)
Basic radar C (271 - 4 - 26)
College devised (271 - 4 - 30)
Advanced computer principles (271 - 5 - 42)*
Advanced electronic switching principles (271 - 5 - 40)*
Advanced telecommunication principles (271 - 5 - 31)
Advanced microwave principles (271 - 5 - 37)
Advanced computer (271 - 5 - 43)
College devised (271 - 5 - 44)
Advanced telephony (271 - 5 - 41)
College devised (271 - 5 - 44)
Advanced line transmission (271 - 5 - 32)
Advanced communication radio (271 - 5 - 33)
Advanced sound and television transmission (271 - 5 - 34)
TV studios and recording (271 - 5 - 35)
Production electronics (271 - 5 - 36)
College devised (271 - 5 - 44)
Microwave radio relays (271 - 5 - 38)
Radar and radio navigational aids (271 - 5 - 39)
College devised (271 - 5 - 44)

They are also recognized by most polytechnics and universities for the purpose of entry to higher education courses in related subjects (i.e., on a par with GCE at 'advanced' level).

(c) Further 2-year courses lead to the award of Higher National Certificates and Diplomas. These awards are recognized as higher technician qualifications. In most cases, there are pathways whereby additional study can lead to full professional qualification. Higher National Diploma sandwich courses are of special relevance to student apprentices, who may have entered employment direct from school at age 18+ with GCE 'A' level passes.

(d) The joint committees publish rules for the conduct of the courses and examinations and also in many cases guide syllabuses. Within these frameworks colleges may either devise their own schemes and examinations or take external examinations conducted by regional examining bodies (except in Scotland, where all the examinations are external).

22.5. In order to illustrate the character of the courses, representative curricula are given below for :

(a) Ordinary and Higher National Certificate in Engineering;

(b) Ordinary and Higher National Diploma in Engineering;

(c) Ordinary National Certificate - Business Studies;

(d) Higher National Diploma in Business Studies.

The new pattern

22.6. The 1969 Report of the Committee on Technician Courses and Examinations recommended that the existing arrangements should be rationalized. It proposed the creation of two new bodies - The Technician Education Council and the Business Education Council - with the responsibility for planning, coordinating and administering technician and comparable courses, examinations and educational qualifications of a national character - for England and Wales. It envisaged that the Councils would replace the existing systems with a single coordinated, rationalized and nationally recognized pattern of awards which could be easily understood and would be widely accepted. The report was accepted by the Secretary of State for Education and Science and in due course the following bodies were established :

(a) the Technician Education Council (TEC) - (March 1973);

(b) the Business Education Council (BEC) - (May 1974).

Similarly in Scotland the two following bodies were established by the Secretary of State on the recommendation of the 'Mason Report' :

National Certificate Courses in Engineering

Ordinary National Certificate

Stage	Reference	Subject
01	1.01/001	Mathematics I
	1.01/004	Engineering Science I
	1.01/007	Engineering Drawing
02	1.02/002	Mathematics II
	1.02/005	Engineering Science II
		and either
	1.02/008	Elements of Design
	1.02/010	Manufacture and Materials Science
		or
		(for civil engineering students)
	1.02/014	Mechanics of Structures and Materials I
	1.02/015	Surveying I
		or
		(for foundry engineering students)
	1.02/010	Manufacture and Materials Science
	1.02/016	Foundry Technology I

Higher National Certificate

H1	1.H1/003	Mathematics III
	1.H1/006	Engineering Science III
	1.H1/011	Principles of Manufacture and Control
H2	1.H2/009	Design
		Technology
		Project or
	1.0H2/012	Manufacture
		Technology
		Project
		or
	1.HD2/013	Plant
		Technology
		Project
		or
	1.H2/017	Foundry Technology II
		Technology
		Project
		or
	1.H2/018	Instrumentation and Control
		Technology
		Project

National Diploma Courses

Ordinary National Diploma in Engineering

Stage	Reference	Subject
OD1	1.OD1/101	Mathematics I
	1.OD1/153	Science I
	1.OD1/155	Engineering Drawing
	1.OD1/156	Mechanical Engineering Science
	1.OD1/160	Electrical Engineering Science
		Workshop practice
		Library
		Private study
		Liberal studies
		Recreational activities
OD2	1.OD2/102	Mathematics II
	1.OD2/154	Science II
	1.OD2/157	Applied Mechanics
	1.OD2/158	Applied Heat
	1.OD2/159	Production Processes
	1.OD2/161	Electrical Engineering
		Library
		Private study
		Liberal studies
		Recreational activities

Higher National Diploma in Engineering

Stage	Reference	Subject
HD1	1.HD1/201	Mathematics I
	1.HD1/204	Engineering Science I
	1.HD1/206	Manufacture and Materials Technology
	1.HD1/210	Engineering Drawing and Design
	1.HD1/213	Electrical Technology I
	1.HD1/217	Industrial Organization
		and Economics
		Complementary studies I
HD2	1.HD2/202	Mathematics II
	1.HD2/205	Engineering Science II
	1.HD2/207	Manufacture and Control
	1.HD2/209	Materials Technology
	1.HD2/211	Elements of Design
	1.HD2/214	Electrical Technology II
	1.HD2/218	Industrial Organization
		Complementary studies II
		Any two major options from
HD3	1.HD3/208	Manufacture
	1.HD3/212	Design
	1.HD3/215	Plant
		together with
	1.HD3/216	Project
	1.HD3/219	Industrial Management
		Complementary studies III
		and one minor option from
	1.HD3/203	Mathematics and Computer Studies
	1.HD3/220	Control and Automation
	1.HD3/221	Work Study
	1.HD3/222	Operational Research
	1.HD3/223	Environmental Engineering
	1.HD3/224	Marine Engineering
	1.HD3/225	Automotive Engineering
	1.HD3/226	Engineering Computing
	1.HD3/227	Oil Drilling Technology

Ordinary National Certificate in Business Studies

2 - year part-time course

1st year	2nd year
Structure of Commerce	Economics English
and three from	and two from
Accounting I General Principles of English Law Economic Geography Economic History British Constitution or Central and Local Government Modern Languages I Elements of Statistics or Mathematics or Mathematics and Statistics I Elements of Computers I	Accounting II or + Principles and Interpretation of Accounts + Mercantile or Commercial Law + Elements of Insurance + Transport + Functions and Organization of the Office Modern Languages II Mathematics and Statistics II Elements of Computers II or any subject not taken in the first year - other than Accounting I or Modern Languages I

Higher National Diploma in Business Studies

3 - year sandwich course

1st year	2nd year	3rd year
Economics and 4 of the following	Applied Economics and 4 of the following	Business Finance and 4 of the following
Accounting	Advanced Accounting	Cost Accountancy
Principles of English Law	Mercantile Law	Company Law or Industrial Law
Distribution - Raw Materials Industry, Markets (home and overseas)	Transport Marketing (general)	Marketing Marketing (specialized commodities)
	Sociology of Industry and Commerce I	Sociology of Industry and Commerce II
Elements of Statistics	Applied Statistics	Market Research
	Advertising I	Advertising II
Structure of Business	Office Organization	Secretarial and Administrative Practice
Language Stage I	Language Stage II	Language Stage III

(c) the Scottish Technical Education Council (SCOTEC) - (June 1973) substantially a continuation of the former Scottish association for National Certificates and Diplomas;

(d) the Scottish Business Education Council (SCOTBEC) - (June 1973) (substantially a continuation of the former Scottish Council for Commercial, Administrative and Professional Education).

TEC awards

22.7. The Technician Education Council is farthest advanced in its plans and this account will in the main outline its proposals as an indication of the general pattern which will progressively come into operation over the six or so years from 1976 onwards. To replace the existing 'City and Guilds' and National Certificate and Diploma awards, TEC will award the

TEC	Certificate	Technician awards
TEC	Diploma	
Higher	TEC Certificate	Higher Technician awards
Higher	TEC Diploma.	

Unlike the current schemes, the terms 'certificate' and 'diploma' will not relate to part-time and full-time/sandwich courses respectively and it will be possible to prepare for both types of award by either part-time, full-time or sandwich course study or a combination of these. The essential difference between a 'Certificate' and a 'Diploma' award is that the latter relates to a substantially broader course of study.

Modular structure

22.8. TEC decided very early to arrange all its awards on a modular or 'unit' basis. The term 'programme' is used to describe a scheme of study leading to an award. The programme will have a title related to an occupational activity (i.e. a technician job) or area of study. The 'unit' is a self contained and significant component of a programme which can be separately assessed and which, if successfully completed, counts for credit towards the award. The unit size is, for design purposes, regarded as requiring normally about 60 to 75 hours study. The TEC Certificate calls for a programme of at least 12 units and a maximum of 15, covering 900 hours of study. The Higher TEC Certificate requires a further 8 units covering 600 hours. The corresponding diplomas and higher diplomas require 25 units (1 800 hours) and a further 16 units (1 200 hours) respectively.

22.9. A student who obtains a 'certificate' award may convert this to a 'diploma' by successfully completing the necessary additional units. The modular structure, the relationship between TEC Certificate and Diploma programmes and other features are illustrated in the diagrams on the following pages, taken from the TEC Policy Statement of June 1974.

22.10. Representative TEC programme committees will lay down guidelines for the structure and content of programmes. TEC will also provide syllabuses in the form of 'standard units' for colleges wishing to use them : alternatively TEC will approve unit syllabuses prepared by individual colleges or groups of colleges. Syllabuses will normally be expressed in behavioural terms in the form of general course objectives and specific learning objectives. Assessment of students' performance will normally be made by individual colleges, working to approved schemes of assessment approved by TEC, moderated by an external assessor appointed by TEC and with long-term monitoring by TEC. However, external assessment may also be made available.

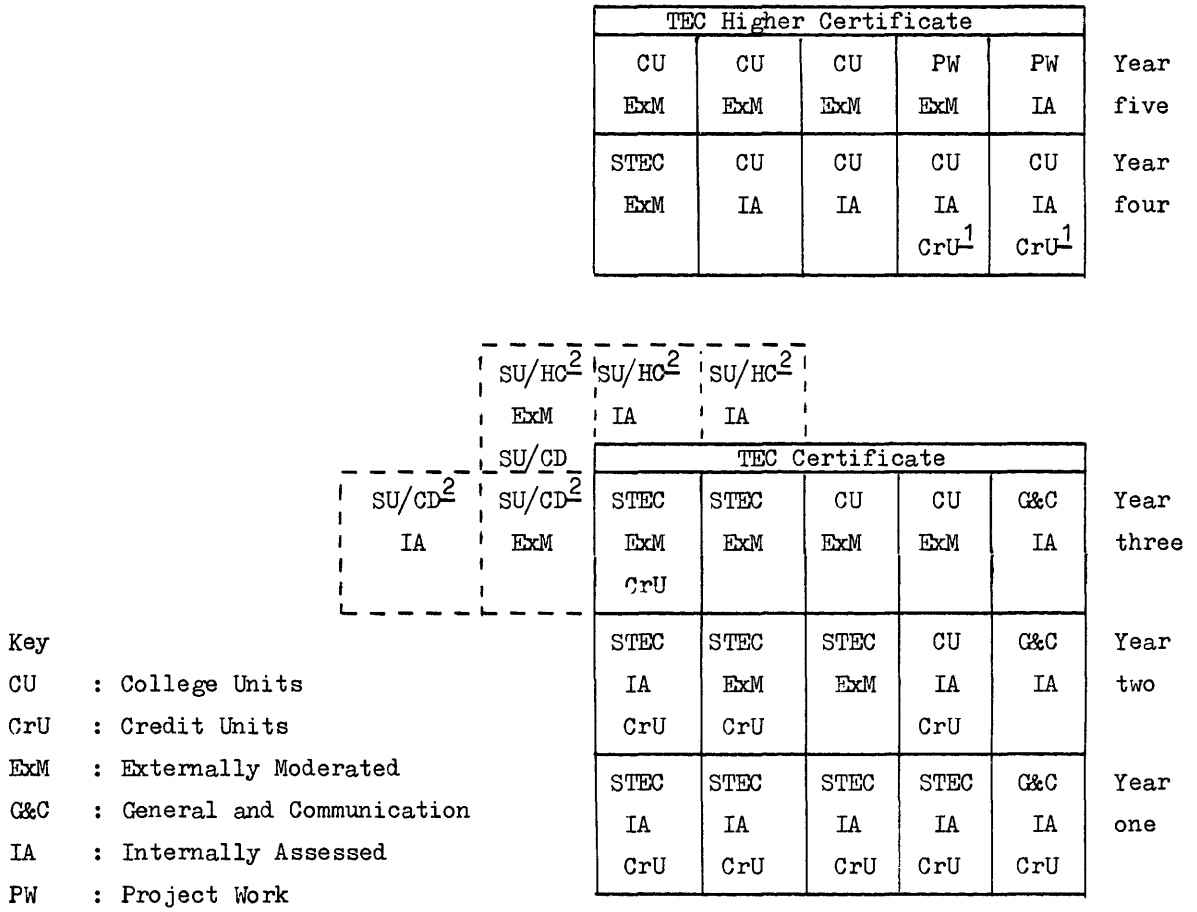
Rationalization

22.11. Some 22 TEC programme committees will in due course replace about 90 'City and guilds' advisory committees and national certificate/diploma joint committees. There is also a major rationalization in courses, not only through the integration of the 'City and Guilds' and national certificate/diploma systems, but also through the optimum utilization of common units in several programmes. As an illustration, the diagram on page [105] demonstrates the proposed common use of units in technician certificate programmes for building, quantity surveying, building surveying, architecture, structural engineering, civil engineering and highway engineering.

SCOTEC

22.12. SCOTEC is responsible in Scotland for the whole of that area of technical education which lies between craft courses and degree courses. It shares the same aims and responsibilities as TEC and the two bodies maintain close contacts. SCOTEC however has taken over the examining functions of its predecessor the Scottish Association for National Certificates and Diplomas (SANCAD) and will continue its practice of basing its work exclusively on syllabuses prepared by its own committees. SCOTEC certificate and diploma courses replacing existing SANCAD and 'City and Guilds' technician courses will be introduced progressively from 1977 onwards.

Example of TEC Certificate and Higher Certificate by day-release study



Key

CU : College Units
CrU : Credit Units
ExM : Externally Moderated
C&C : General and Communication
IA : Internally Assessed
PW : Project Work
STEC : TEC Standard Units
SU/CD : Supplementary Units (Certificate/Diploma)
SU/HC : Supplementary Units (Certificate/Higher Certificate)

Notes

1 These units might represent such studies as quality assurance, costing, elements of supervision, work study. Students on sandwich, block-release or day-release courses could receive credit for them if they had appropriate training and experience in industry.

2 The units within broken lines indicate how supplementary units, taken separately, could contribute to another award.

Example of TEC Diploma by day-release study

(end-on to a day-release certificate programme)

TEC Diploma[1]					
BU[2] ExM					
			PW BU ExM	PW BU IA	Year four
BU ExM	BU ExM	BU ExM			
TEC Diploma					
STEC ExM CrU	STEC ExM	CU ExM	CU ExM	G&C IA	Year three
STEC IA CrU	STEC ExM CrU	STEC ExM	CU IA CrU	G&C IA	Year two
STEC IA CrU	STEC IA CrU	STEC IA CrU	STEC IA CrU	G&C IA CrU	Year one

Key

BU : Broadening Units

CU : College Units

CrU : Credit Units

ExM : Externally Moderated

G&C : General and Communication

IA : Internally Assessed

PW : Project Work

STEC : TEC Standard Units

Notes

[1] Units for general studies and communication studies are not included in part-time studies for a Diploma end-on to a Certificate programme, as day-and block-release students employed in industry would receive credit for those units as Diploma level.

[2] This envisages that students who followed a Diploma programme end-on to a Certificate programme would not normally be able to complete it in one additional year of one day per week release.

Example of TEC Higher Diploma by full-time study

TEC Higher Diploma [1]										
CU ExM	CU ExM	CU ExM	PW ExM	PW IA	BU ExM	BU ExM	BU ExM	PW ExM	PW ExM	Year two
STEC ExM	CU IA	CU IA	CU IA CrU[2]	CU IA CrU[2]	BU ExM	BU ExM	BU ExM	PW IA	PW IA	Year one

Key

BU : Broadening Units

CU : College Units

CrU : Credit Units

ExM : Externally Moderated

IA : Internally Assessed

PW : Project Work

STEC : TEC Standard Units

Notes

1 In this example successful completion of the units within the thick line could lead to the award of a Higher Certificate. The second year of the Higher Diploma is shown as including the complete second year of the day-release Higher Certificate programme in figure 1.

2 These units (which might represent such studies as quality assurance, costing, elements of supervision, work study) would be taken in college by full-time students. Those on sandwich, block-release or day-release programmes could receive credit for them if they had appropriate training and experience in industry.

The Business Education Council (BEC)

22.13. BEC's primary role is to establish, promote and maintain a structured set of awards which have a national and international currency, to devise and approve courses leading to these awards and to promote advances in Business Education at sub-degree level. The Council's role is also to simplify, unify and rationalize the present provision of courses in Business Education, in particular the national certificate/diploma schemes in business studies, public administration and distribution and the multifarious schemes of the professional institutions in these fields.

22.14. BEC has decided that there should be three progressive levels of awards, namely :

(a) BEC General Certificate/General Diploma
(Related to the present Certificate in Office Studies);

(b) BEC National Certificate/National Diploma
(Roughly equivalent to the present Ordinary National Certificate/Diploma in Business Studies, with vocationally oriented subject matter within a broad educational experience);

(c) BEC Higher National Certificate/Higher National Diploma
(Roughly equivalent to the present Higher National Certificate/Diploma in Business Studies, with vocationally relevant subject matter and providing not only a qualification at higher technician level in its own right, but also a progressional route to appropriate professional and other higher educational qualifications.

The Scottish Business Education Council (SCOTBEC)

22.15. SCOTBEC continues the work as an external examining body of its predecessor, the Scottish Council for Commercial, Administrative and Professional Education. In addition, it is now concerned specifically with the evolution of the pattern of business education in Scotland on the same lines as and in concert with the Business Education Council for England and Wales.

General

22.16. Besides the schemes being developed by TEC, SCOTEC, BEC and SCOTBEC, there is now also the new (1975) scheme for the (non-vocational) Diploma in Higher Education (Dip.HE) which is administered by the Council for National Academic Awards and the committee of Vice-Chancellors and Principals (of universities). These schemes are all concerned with post-compulsory education below university degree level and close contacts have developed between the

Technician Education Council

Commonality of units for differing categories of technicians

Technician Certificate		Building	Quantity surveying	Building surveying	Architecture	Structural engineering	Civil engineering	Highway engineering	Remarks
Subject	Level								
Construction Technology	1	E	E	E	E	E	E	E	Level 1 to be completed by the majority of technicians.
	2	E	E	E	E	E	E	E	Levels 2 and 3 have some commonality, leading to specialist disciplines.
	3	E	E	E	E	E	E	E	
Mathematics	1	E	E	E	E	E	E	E	N - numerical A - analytical
	2	N E	N E	N E	N E	N E	N E	N E	
		A O	A O	A O	A O	A O	A O	A O	
	3	N O	N O	N O	N O	N O	N O	N O	
		A O	A O	A O	A O	A O	A O	A O	
Science & Materials	1	E	E	E	E	E	E	E	
	2	E	E	E	E	E	E	E	
	3	O	O	O	O	O	O	O	
General & Communication Studies	1	E	E	E	E	E	E	E	Level 1. General Studies ~~Level 2. Communications~~ Balance of 15% of course included in Technicians Studies
	2	E	E	E	E	E	E	E	
Site Surveying & Levelling	2	E	E	E	E	E	E	E	

Note : 1. Essential units common to all technicians shown thus - [E]

2. Essential units common to some technicians shown either [E] or [E]

3. Optional units common to all technicians shown thus - [O]

4. Optional units common to some technicians shown either [O] or [O]

responsible bodies. It seems possible that the current period of innovation and rationalization will lead in due course to a more closely coordinated pattern of provision for this sector. This might well lead to better opportunities for the technician apprentice, a clearer recognition of his place within the education system as a whole, and a gradual move towards the integration of technical and general education awards at this level into a unified system.

23. Review and appraisal

Major labour market and social inadequacies of the system

> 'The current system, the (Training Services) Agency argues, is failing in two main ways. First, it does not ensure adequate investment in training for craft and technician skills especially in times of economic recession. Secondly, the nation is failing to provide adequate vocational preparation for some 300 000 youngsters who enter the labour market each year and get little or no training for their work. This is wasteful and hard to justify in comparison with the sums spent on the academically more able.'
>
> 'At present, craft and technician training for young people is largely the responsibility of employers. Though in recent years there has been a considerable improvement in the quality of training in craft skills, the quantity of training has remained inadequate. Even in normal times individual employers do not collectively train enough craftsmen. In times of economic recession employers tend to cut back on training in these skills and when the economy picks up are prevented by skill shortages from taking full advantage of the opportunities offered. The Agency suggests that the best hope for improvement would be through measures which enable individual employers to be refunded the full cost of all training off-the-job, at any rate in the first year, through a collective funding arrangement of some kind.'

23.1. The above quotation is taken from the official press release of 20 June 1975 on the publication of the Training Services Agency's discussion document 'Vocational Preparation for Young People'. The assertions made in the quotation have not been seriously challenged. Support for the idea of some form of collective funding of first year off-the-job training for broad-based skills has since become widespread and as reported in paragraph 20.3 the proposal is under further consideration in official and other quarters.

23.2. Besides its observations on the two major problems of (a) meeting labour market requirements and (b) giving all school leavers adequate preparation for work, the discussion document suggested that there was a need for a

general improvement - sometimes a levelling up to the standard of the best current practice - in the following areas :

(a) careers education in schools (including curriculum development);
(b) careers guidance and familiarization with industry;
(c) the careers service (more resources);
(d) induction courses in first employment;
(e) more flexibility in age requirements for apprenticeships;
(f) more widespread provision of further education for young school leavers;
(g) more complete implementation of ITB training recommendations.

23.3. The TSA's major criticism of the operation of the UK occupational training system is made in the light of the fact that persistent shortages of skilled workers have been experienced at all phases of the economic cycle and have been particularly acute and harmful in times of a high level of activity. The Agency's conclusion was that 'since it is in principle open to employers to let others go to the expense and trouble of providing training in long-term transferable skills and then to recruit ready trained workers when needed, the present system carries the risk of a chronic short-fall in quantity'. The further comment is made that the levy/grant mechanism of the 1964 Industrial Training Act has proved in practice to be only a minor and marginal factor in employers' decisions on how many to train and that the modified levy-related provisions [1] of the 1973 Employment and Training Act will probably make matters worse. The Agency's awareness of the dangers of the situation has been demonstrated in practical terms by the support it has given to Training Award Schemes, whereby unemployed boys are supported jointly by the TSA and ITBs for first-year off-the-job training and then given special help in placement with an employer for completion of apprenticeship training.

Too few 'training occupations'

23.4. With relatively few exceptions, systematic training of any breadth and duration and with associated further education is limited to occupations at craft level and above. Since in the UK the definition of a craft - level occupation is sharply drawn - especially at its lower limit - this excludes a large number of occupations, such as many of those in the clerical, commercial, distributive and services fields, industrial 'operative' occupations categorized as 'semi-skilled' and a high proportion of occupations

[1] Limitation of levy to 1% of payroll; exemption from levy of employers providing good training for their own needs; exclusion of small firms.

that have characteristically been performed mainly by women and girls. Some of the ITBs have published training recommendations for operatives; many of them (19) have also prepared recommendations for clerical, administrative and commercial functions, based on joint - ITB proposals published by the Department of Employment. However, even in the most favourable situations (e.g. the nationalized industries) progress has been relatively slow and the Agency draws special attention to the 300 000 or so boys and girls under the age of 18 who receive little or no training from their employers.

Inadequate further education opportunities

23.5. The unfortunate situation of non-apprentices as regards training is paralleled in almost all cases by lack of provision for their part-time further education. The Education Acts of 1918 and 1944 for England and Wales and the corresponding legislation for Scotland and Northern Ireland, provided for day-release for further education for all young persons below the age of 18 not receiving full-time education. This provision has not yet been implemented. The enormous expansion of day-release for young people that has taken place since 1946 has been confined in the main to apprentices and comparable trainees; even for these categories it is not 100%, since in most cases it is 'recommended' rather than 'essential' in the apprenticeship scheme. Overall, of all young persons in employment in 1971, only 36% of boys and 9% of girls attended day-release classes. The table in Appendix 24 shows how the percentage of young people given day-release varies from industry to industry, ranging from 91% (Public administration and defence) to 3% (distributive trades, clothing & footwear). Despite the fact that the Minister of Labour announced in the House of Commons on 26 July 1965 that he would not approve proposals of an ITB unless they made it a condition of grant to employers that day-release is provided for young people in occupations requiring a year or more's training, the expansion in day-release that was then expected has not materialized - in fact it has slightly declined. All of these factors, both occupational and educational, combine to the special disadvantage of young women workers.

Recognition of the need for change

23.6. The inadequacies referred to above have in recent years become the subject of widespread public debate. A few of the more important among many public expressions of concern are the following :

May 1973 - 'The Education of the 16-19 age group - Part-time' - a policy statement by the Association of Teachers in Technical Institutions, proposing the setting of a target date for the introduction of compulsory day-release, with a practical programme of implementation.

June 1974 - 'Day Release for Further Education' - a major discussion paper prepared by the Trades Union Congress, submitted to the Secretary of State for Education and Science, with emphasis on continued general education as a long-awaited major educational reform.

October 1974 - 'Untrained, Unqualified and Unemployed' - Report of a Working Party set up by the National Youth Employment Council, including CBI, TUC, teacher and careers officer representatives. This was a powerful and evocative analysis of the multiple disadvantages affecting below-average school leavers seeking employment. These were seen to be the result of a complex of factors, including :

(i) inadequate careers education, vocational guidance and placement services;

(ii) the non-availability of courses of planned preparation (and where necessary motivation) for employment;

(iii) lack of training opportunities for employees below craft level;

(iv) the absence of opportunities to improve basic education in day-release further education;

(v) limitation of the TSA's Training Opportunities Scheme to those above 18 years of age;

(vi) the effect of cyclical variations in the number of employment opportunities at craft level, especially in economically less-favoured localities.

May 1975 - 'Vocational Preparation for Young People' - a very important discussion document by the TSA. This reviewed all the inadequacies in UK vocational preparation arrangements that have been referred to in this chapter. The 'Summary of conclusions' in the document is reproduced

at Appendix 12. In particular, the TSA proposed that :

(i) a new initiative is necessary to avoid a worsening of the shortfall in the supply of skilled personnel;

(ii) first-year off-the-job training should be centrally funded and provided on a scale to meet long-term labour market needs;

(iii) widely based 'gateway' courses of vocational preparation for broad occupational bands should be provided as pre-entry or initial training courses, especially for those who now receive little or no training. About 3 months is suggested.

ITBs should encourage the development of systematic training for a far wider range of occupations than now.

Although no general extension to young people of the training opportunities scheme seems practicable (because of trade union opposition), the TSA should explore other means of catering for young people with special training needs.

March 1976 - Gateway 'Vocational Preparation' Courses - A conference called by the Secretary of State for Education and Science entitled '16-19 : Getting Ready for Work'. One of the discussion papers set out a plan related to the 300 000 or so young people who receive no further education or systematic training on leaving school. The plan, evolved in consultation with the Scottish Education Department, the Department of Employment and the TSA, proposed pilot courses of training and further education planned and provided on a unified basis at ten centres, involving 300 young people initially, rising to at least 1 000 after five years. Although it was recognized that current financial restraints made new development difficult, the general public response to the scale of the plan is reflected in the newspaper headline 'Ten Small Mice'. In general however, it is considered that the proposals are very much on the right lines and that they should be progressed actively.

July 1976 - Unified vocational preparation - the publication of a

Government Statement related to the proposed pilot courses referred to immediately above. The Statement announced a programme of twenty experimental schemes of 'unified vocational preparation' to begin in Autumn 1976. The schemes will embody a new approach, the essentials of which are that :

(i) vocational preparation should be jointly planned and provided by the education and training services and should combine education and training inseparably;

(ii) the provision should be clearly seen by young people entering work and by employers to be relevant to their needs and should be focussed on the working situation.

June 1976 - Collective Funding of Apprentice Training - The publication of the Joint MSC/DE Consultative Document entitled 'Training for Vital Skills' (see paragraph 20.3 above). This document argues consistently for a system of collective funding as an appropriate means of promoting a high and stable intake, matching long-term economic needs, into training schemes of high quality for those skills which are transferable between employers and industries and which require lengthy training. Although there is no Government commitment as yet, the fact that this is the first Government/MSC joint initiative emplasizes its importance. Adoption of such a system could hardly fail to have profound repercussions on the industrial, training and educational aspects of apprenticeship schemes in the sectors in which it was applied. It would also lead to a further enhancement of the role of the respective ITBs in deferring and controlling the training involved and in active man-power planning in cooperation with the TSA.

Traditional national joint apprenticeship schemes

23.7. As described in Chapter 4, about 90 apprenticeship schemes are administered by national joint bodies, normally established by the employer and trade union organizations concerned, on lines recommended by a national joint consultative committee in 1945. The MJABs have, at the very least, preserved the concept of apprenticeship in the sectors with which they are concerned. They have, in particular, supported the idea that occupational training and

associated further education are essential elements in the vocational preparation of young people for skilled occupations, and their contribution towards the development of the present volume and high standard of part-time vocational education has been noteworthy. At best, in some schemes where employers have a strong sense of corporate identity and a special enthusiasm for craft training, and a few others where the trade unions take a particular interest in training and standards of competence, the specific requirements of the respective schemes and the enthusiasms of the administration and controlling bodies have resulted in effective implementation of on-the-job training.

Regretfully, however, the daily work of the average apprentice has been relatively little influenced by the terms of the NJAB apprenticeship programme, and he has been mainly engaged on whatever work came along that was within his capacity, receiving instruction (if any) from whoever he was working alongside. In the undertakings where apprenticeship training has been of high quality, this has been due primarily to the policy of the management, rather than to the character of the official apprenticeship scheme. In the nationalized industries, craft (and other) training is very good.

23.8. A succession of events has demonstrated that reliance on NJABs failed to ensure an adequate volume of good quality training - e.g. the Carr Report (on Training) of 1958, the setting up of the Industrial Training Council in the same year, the White Paper of 1962 and the Industrial Training Act of 1964, together with the continued shortages of skilled personnel that have already been referred to. It is fair to say that the Industrial Training Boards have shown that the typical non-statutory national joint apprenticeship body does not have and could hardly be expected to have the professional, technical, administrative or financial resources, or recourse to adequate sanctions, to design, promote and monitor training schemes as they are currently conceived. In the industries for which Industrial Training Boards now have statutory responsibility, they have effectively taken over the specifically 'training' aspects of the work of the NJABs, leaving to the latter the promotional, contractual, industrial relations and sometimes registration, placement and welfare functions.

23.9. The assumption by ITBs of key responsibilities formerly discharged by NJABs has caused some employers to question whether formal apprenticeship still retains any validity, provided of course that ITB recommendations are

conscientiously followed. On the other hand, the successful New Entrant (apprentice) Training Scheme administered by the Agricultural Training Board demonstrates the advantages of a continuation of the traditional apprenticeship system in combination with a modern training scheme, operated in this case solely by the training board.

23.10. In apprenticeship schemes where an ITB is not involved, the fundamental weaknesses of NJAB schemes generally remain - i.e. training based narrowly on a single occupation with a technically inadequate training specification, lack of effective surveillance and sanctions, absence of training and terminal standards, few trained instructors, day-release at the whim of the individual employer, and inadequate precision for really effective coordination with further education. Again, there are some exceptions.

23.11. It was of course because of these qualitative inadequacies and the quantitative considerations discussed earlier, that the Industrial Training Act was adopted in 1964, to replace what might be described as the 1945 system. At the same time, the Act extended the application of the training concept to all levels and categories of an undertaking's staff, from managing director to office boy, in the context that 'the management of human resources is concerned with the optimum of deployment and development of people within an organization in order that the objectives of the organization may be met and effectively adapted to changing circumstances'. This quotation is taken from the Department of Employment publication 'Training for the Management of Human Resources',[1] the report of a joint - ITB sub-committee. The quotation illustrates two features relevant here :

(a) the high degree of professionalism now associated with the training and personnel function;

(b) the limitations of any policy which regards training as being mainly concerned with a single category of employee.

The impact of the industrial training boards

23.12. In its preparations for the revision of the 1964 Industrial Training Act, the Department of Employment published in 1972 a discussion document 'Training for the future'. This contained an assessment of the work of ITBs, the main conclusions of which are as follows :

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[1] HMSO, 1972.

'24. The Boards have important achievements to their credit. They have focussed the attention of industry on training and associated further education to an extent much greater than was the case in 1964. New thinking about training has been stimulated and new initiatives taken in many fields. Senior management now recognize the value of training far more widely. A large number of firms now have specialist training officers and trained instructors. Systematic off-the-job training has increased substantially. These improvements in training have arisen directly from the work which has been done by the chairmen and members of Boards and by their staff. The Central Training Council and its committees have also made a real contribution.

25. Most Boards have done valuable work in developing and introducing new programmes of training related to modern requirements. An example is the module system of training for apprentice craftsmen and technicians pioneered by the Engineering Industry Training Board and followed up by many other Boards. The Boards' work in establishing sound standards of training for particular occupations has improved the quality of training in many fields. They have also done much to publicize good training practices and to promote their adoption in industry.

26. Most Boards have sought to encourage the establishment of group training schemes for smaller firms and have given financial support to them in their early years. Since 1964 the number of groups has risen from about 60 to over 700 : they now cover 10 000 firms with 1.4 million employees. They have proved to be a valuable way of giving smaller firms access to training facilities and skilled training staff.

27. Many of the Boards are giving increasing weight to the work of their professional training staff in offering advice to individual employers about their training programmes. Boards were spending nearly £9 million a year on this kind of work in 1970-71 (though at present a good deal of it is closely tied up with the consideration of applications by firms for grants). Some Boards are developing consultancy services.

28. A few Boards have established their own training centres for use by firms in their industries. These facilities are however, on a relatively modest scale, and there does not seem to be a major need for external training facilities of this kind.

29. The implementation of the Act has involved a constructive partnership between industry and the education service. Employers, trade union officials and educationists have all played important parts in the work of the Boards, the Central Training Council and their respective committees. The education service has also made an essential contribution to the work of the Boards by expanding and developing the provision of further education and by providing a significant volume of training. The universities have also contributed. Over the years a system of collaboration has been built up for the joint planning and integration of training and further education. New courses have been devised and existing courses modified. The Act and the work of the Boards have thus led to important changes and developments in the education service itself.'

23.13. Since the assessment was made, development has continued. Today, substantial numbers of craft trainees in the engineering, foundry, iron and steel,

shipbuilding, road transport, construction, chemical and petroleum industries have broadly-based initial off-the-job training, with related further education, followed by further modules or stages of training and job experience. In other industries, such as printing and knitting, training on these lines has been introduced more recently and has not yet had time to take root so firmly. Experience shows, however, that in most of these industries, a minority of firms - mainly small firms with specialized activities and training needs - prefer to continue with traditional patterns of training (which some of them do very well). For example, in engineering, about a quarter of all craft and technician apprentices do not get broad initial off-the-job training and this proportion is remaining constant. This has created problems in relation to further education, where the newly introduced courses are no longer compatible with traditional training programmes (however well they are organized) since much of the subject matter dealt with in the educational course has no relevance to a traditional (narrow) training programme.

23.14. For technician, student and graduate trainees, the ITBs in which these categories are numerically important have introduced training recommendations and/or other material which is helping firms to achieve an advance in these fields corresponding to that in the craft field.

23.15. The fields in which the ITBs generally have made least impact are in promoting systematic and (reasonably) broadly based training for operatives and/or clerical, commercial and administrative occupations. In view of the priority tasks the ITBs have tackled successfully since their formation, this is perhaps better described as 'unfinished business' rather than as a failure. The setting up of the Business Education Council and the purposeful character of its First Policy Statement (March 1976), coupled with observations by the Confederation of British Industry on 'a varied group of office and commercial occupations that are certainly transferable and require training over a varied scale of time',[1] give some hope that new progess in the commercial field may soon be attempted. In this connexion, the TSA has set itself the task of promoting training in the non-ITB sector, including important sectors of private industry and commerce such as banking, insurance, finance, port

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[1] In its observations of November 1975 in the TSA document 'Vocational Preparation for Young People'.

transport and shipping, fishing, freight forwarding, hairdressing and laundries. As a first step, the Agency will make an early study of training needs in these areas and establish close relations with the associations and professional bodies concerned.

Conclusion

23.16. The UK is a country in which the full-time school system plays a relatively minor role in direct vocational preparation for industrial occupations. Training by or on behalf of the employer is therefore the principal means by which a skilled labour force at the various levels is provided. Apprenticeship has been and remains the normal means of vocational preparation for the skilled crafts in firms of all sizes, with schemes on a national basis administered by joint bodies set up by collective agreement between employer bodies and trade unions. Apprenticeships and analogous contractual and semi-contractual arrangements apply to training of technicians, higher technicians, student engineers/technologists/ administrators etc; but in these fields the administering bodies do not usually include trade union representatives; many schemes are administered by the individual undertakings concerned.

23.17. The apprenticeship system in the UK is not determined by legislation, but represents the continuation and adaptation of social and industrial customs and traditions derived from medieval times. These have ensured that there is a crucial relationship between the young person and employer which also involves parents, a responsible industry attitude and even an implied interest on the part of society at large in the apprenticeship concept. In addition, the 'system' with its emphasis on age of entry, makes available each year a range of employment and training opportunities to young people - and only young people. Arguments which suggest that modern training methods make apprenticeship irrelevant risk a weakening of this practice. Nevertheless, the absence of standards set and enforced by a legislative framework has led to a lack of professionalism, considerable variation in the quality of training provided and an undue narrowing of the range of occupations involved.

23.18. The joint apprenticeship bodies' lack of professional and technical resources and of legislative authority or other powers of compulsion (except in a few cases) has meant that the quality of training has in the past been left largely to individual employers. Some was excellent, some deplorable and

much mediocre. This situation is being progressively transformed through the work of industrial training boards set up under the Industrial Training Act 1964. It is unlikely that the standard now achieved in the more progressive firms is excelled in any other country. This is in part due to the quality of the apprentice training programmes themselves and in part the result of the infusion of new professionalism into the training function as a whole. It is supported by the fact that the relationship of further education courses to ITB training programmes is very close.

23.19. The major tasks for the years ahead are, in the view of the writer :

(a) To promote the continued improvement in the quality and efficiency of apprentice training, through an increase in the volume of initial off-the-job training, the improvement of on-the-job training (especially through the employment of more trained instructors), and the further development and extension of the expertise of instructors and supervisors in phased testing and assessment of trainees' performance. (This may also permit a reduction in the apprenticeship period and a move in the direction of a greater measure of uniformity in the time taken to reach acceptable standards of competence).

(b) To extend the range of occupations for which systematic training with related further education are provided. This may prove difficult and involve new concepts of the scope of training for particular occupations, (e.g. job enrichment), but the experience of some of the UK's Community partners show that such concepts are not impracticable.

(c) To bring training for the whole clerical/commercial/distributive/administrative sector into line with the best practice in the industrial field. This too is likely to be a long-term and difficult task, but here again there are examples which show that it is not insuperable.

(d) To ensure that the scale of recruitment and training is adequate to meet the current and long-term needs of the labour market. In this connexion, current proposals for collective funding are promising.

(e) To enable <u>all</u> new entrants to employment to profit from a suitably designed (and preferably unified) educational and training experience. This is an enormous task, success in which would require major changes in employers' attitudes. The proposed pilot courses of unified vocational preparation sponsored by the Departments of Education and Employment, and the TSA represent a small but encouraging step in this direction, aimed mainly at the non-apprentice entrant to employment.

23.20. With the Manpower Services Commission, the Training Services Agency and the Industrial Training Boards, and with the assistance of the bodies administering apprenticeship schemes, the UK has, for the first time in its history, machinery that is able - indeed is charged - to look to national and long-term needs. For the first time too, the resources necessary for these tasks appear to be being made more readily available through the Manpower Services Commission. Despite the present problems of the economy, overall, there seems good reason to believe that revivified vocational training will make its contribution to economic recovery in the years ahead.

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Appendix 1

Apprenticeship in the UK - a brief historical perspective

1. Apprenticeship has a long and (very largely) an honourable history in the UK. It originated with the medieval craft guilds. The word 'apprentice' is derived from the Norman French, suggesting that it was probably in use in the 11th Century. It is mentioned in an Act of Parliament of 1383 and is deeply embedded in social history and folk-lore - for example in Chaucer's (14th Century) 'Cook's tale of an Apprentice' in the Canterbury Tales and in the story of Dick Whittington (d. 1423) the apprentice (albeit the son of a Knight) who three times became Lord Mayor of London. The medieval structure of guilds, masters, journeymen, craftsmen and apprentices was thus established, with control of entry to the craft and enforcement of standards of workmanship - a system that was well in tune with the times.

2. As in other European countries, the master undertook to instruct the apprentice, to enable him to become a journeyman and ultimately a master. The apprentice, for his part, undertook to work diligently, soberly and honestly in his master's interests. He usually lived with the master as a member of the family and - in all the best stories - had a good chance of marrying his daughter!

3. In the 16th Century, the influence of the guilds declined. New towns in the Midlands and the North and new industries grew up outside their control. The increasingly powerful State under Queen Elizabeth I enacted the 'Statute of Artificers' (1563) for the national regulation of apprenticeship. The Act provided for :
   (a) 7 years as a minimum for apprenticeship;
   (b) a ratio of one apprentice to every three journeymen;
   (c) a system of preference for the sons of craftsmen;
   (d) making it illegal for a non-apprenticed craftsman to exercise his trade;
   (e) local magistrates to have jurisdiction over apprentices.
   The Act remained nominally in force until it was repealed in 1814. It was however for many years ineffective; its fatal weakness was that it specified the 61 trades to which it applied and it was held not to be applicable to the many 'new' trades which the vigorous industrial and commercial development of the time brought into being.

4. After the repeal of the Statute, any man could exercise any craft or trade, whether he had been apprenticed or not. Apprenticeship was henceforth a pr vate matter between master and man, without intervention by the State. This absence of control by legislation or the guilds coincided with the industrial revolution and these two factors effectively destroyed the apprenticeship system, except in a few favoured situations. Conditions for the employment and training of children and young people became deplorable. Such safeguards as were developed came from general social reform legislation on age of employment, hours and conditions of work etc., rather than from the now defunct apprenticeship system. The term 'apprentice' was itself debased and came to be applied to categories of young workers for whom training was minimal. Apprenticeship as a period of supervised instruction in preparation for a broadly skilled occupation survived only in a small number of occupations in which training of this kind was fundamental to skilled performance.

5. The evils of the industrial revolution came to be appreciated in the second half of the 19th Century. There was at the same time a growing interest in public education; the first Education Act (1870) was introduced providing for universal education and, in 1878, the City and Guilds of London Institute for the Advancement of Technical Education was set up by the Corporation and certain of the livery companies (descendants of the guilds) of the City of London. Over this period too, the power of the trade unions grew, especially in factory based industries and in some cases this led to pressure - not always effective - for improved apprenticeship arrangements. In these circumstances great divergences developed in the effective application of apprenticeship systems between different industries, localities and firms. However, a net result was that the apprenticeship system was slowly and unevenly reborn. Unfortunately, the circumstances of this fragmented renewal meant that the promotion of industrial training on the one hand, and of vocational education on the other, came from quite separate and unofficial sources: governmental support - in so far as it was reluctantly and parsimoniously afforded - also came from separate departments of labour and education, with little evidence of coordination. In this way, the rebirth of the system was handicapped by a dichotomy between industrial training and vocational education which is only now being overcome as a result of the impact of the 1964 Industrial Training Act. The contrast with the 'dual system' being developed contemporaneously in Germany was most marked.

6. By the 1920's, after the severe labour shortages of the First World War, there were four recognized means of training for skilled occupations :

(a) Apprenticeship in the traditional sense, with or without written agreement, usually without formal provision for associated vocational education. This was found almost exclusively in a narrow range of traditional craft occupations in engineering and allied trades, shipbuilding, building, woodworking, printing and a few others.

(b) Learnership. A looser form of agreement, usually verbal, for a shorter period of training (e.g. 2 years) in which a young person is afforded the opportunity to pick up an occupation by 'exposure'. Learnerships were found in textile, clothing, boot and shoe and papermaking industries for narrowly-skilled occupations characteristic of large-scale repetitive production.

(c) Upgrading or promoting unskilled or semi-skilled workers to jobs requiring greater/broader skills. The enhanced skill was obtained by working in association with a more highly skilled person.

(d) Accelerated vocational training of adults. Systematic off-the-job training of an intensive character, provided on a small scale in Government Training Centres, especially for ex-service and unemployed men, for skilled occupations in which long-term labour shortages existed (especially in engineering and building).

7. In the mid 1920's, the Ministry of Labour found that in those occupations in which apprenticeship was supposed to be the rule, less than a quarter of all employers had any apprentices to train. Generally, apprentices were found more frequently in small firms, partly, it seems because of the organization of the work, and partly because many small employers looked benevolently on the apprentice as 'himself when young'. However, in certain large and technologically advanced firms in which an abundant supply of highly trained men was fundamental to survival, major advances were made in the quality of apprentice training, with the setting up of apprentice schools, the appointment of qualified training officers and instructors and the forging of close relations with the educational system. It was in these firms too that the concepts of technician, engineer, graduate and commercial apprentices were developed.

8. In the middle of World War II, the Government gave much consideration to the problems of post-war reconstruction. It was during this period that the great Education Act of 1944 was devised. On the training front, the Ministry of Labour and National Service agreed with the major national employer and trade union bodies that a fundamental review of recruitment and training for young people should be undertaken. In due course,(in December 1945) the Joint Consultative

Committee of the British Employers' Confederation and the Trades Union Congress issued its 'Report on the Recruitment and Training of Juveniles'. This recommended that each industry should establish a national joint apprenticeship and training council to foster and supervise the introduction of training schemes in the firms within their scope. The Ministry of Labour gave powerful support to the recommendation by issuing a Memorandum which made clear the fundamental principles that it felt should be kept in mind, including the establishment of district joint councils to promote the implementation of schemes at local level.

9. This bring us to the point at which the main text deals in more detail with subsequent developments. For the sake of completion the major highlights are listed below :
   (a) The Report of the 'Carr Committee' (1958), which advocated improvement of the apprenticeship system, but largely by bigger doses of 'the mixture as before'.
   (b) The setting up of the (advisory) Industrial Training Council (1958) to provide help and encouragement to industries in the training of workpeople.
   (c) The revolutionary government White Paper 'Industrial Training : Government Proposals' (Cmnd 1892), which led to the Industrial Training Act of 1964 and the setting up of the statutory Industrial Training Boards and the levy/grant system. This gave clear recognition to the inadequacy of the traditional arrangements.
   (d) The 1973 Employment and Training Act, which modified the levy/grant provisions of the 1964 Act and provided for the establishment of the extremely important Manpower Services Commission and its executive organs the Training Services Agency and the Employment Services Agency.

10. Over the whole period, the normal duration of apprenticeships has declined. It was initially 7 years, ending at age 21, considered as the minimum age for responsible adulthood. Apprenticeships have tended to shorten as the average school-leaving age has risen. After World Warr II the typical period was 5 years (16-21). More recently, account has been taken of the greater efficiency of modern training techniques - especially full-time initial off-the-job training. The most usual period is now 4 years (16+ to 20+), with only 3 years in most crafts in the building industry. There is also now evident a distinction between the time needed to achieve required skill standards and the duration of apprenticeship; the latter may be longer in order to provide for experience and maturity, which only time can provide.

Appendix 2

National joint recruitment and training schemes

(From TSA Information Handbook, 1974)

Note. Craft level training (except where otherwise stated)

1 Agriculture and horticulture
2 Agricultural machinery
3 Animal gut
4 Architectural, engineering and monumental stone (England and Wales)
5 Asbestos manufacturing (textile section) - technicians
6 Bacon curing
7 Baking (England and Wales)
8 Blacksmithing, farriery and agricultural engineering
9 British Rail (craft and technician)
10 British Waterways (craft and technician)
11 Builders' merchants
12 Building and civil engineering (building occupations) (England and Wales)
13 Building and civil engineering (building occupations) (Scotland)
14 Cast stone and cast concrete products-draughtsmen
15 Chemical and allied industries (obsolescent)
16 Civil engineering contracting-maintenance mechanics and contractors' plant mechanics
17 Coalmining (craft technician and student)
18 Commercial apprenticeship
19 Cooperage
20 Cotton-spinning mills
21 Cotton-loom overlookers
22 Cutlery and silverware
23 Dental technicians
24 Dental technicians in hospitals and local authority establishments

25 Display producing, screen printing, sign writing and kindred trades (England and Wales)

26 Display producing, screen printing, sign writing and kindred trades (Scotland)

27 Electrical contracting (England and Wales)

28 Electrical contracting (Scotland)

29 Electricity supply (England and Wales) } (craft technician student and commercial/administration)

30 Electricity supply (Scotland) }

31 Engineering distributive trade

32 Engineering

33 Engineering industries group apprenticeship (all levels)

34 Fire service-junior fireman

35 Flour milling

36 Footwear manufacture (obsolete)

37 Foundry (craft and technician)

38 Foundry (central Scotland)

39 Furniture draughtsmen and designers

40 Furniture and upholstery

41 Gardeners and groundsmen in local authority parks and gardens (England and Wales)

42 Gas industry-gas fitters

43 Glass-glass tableware (high grade) manufacture

44 Glass-the flat glass industry

45 Glove making

46 Golf greenkeepers

47 Granite (Aberdeen area)

48 Hairdressing

49 Hand frame knitting (shawl section)

50 Heating, ventilating and domestic engineering (craft and technician)

51 Hospital cooks

52 Hotel and Catering

53 Iron and steel (all levels)

54 Ironmongery and hardware trade

55 Iron ore mining and quarrying

56 Junior journalists and press photographers

57 Jute industry-powerloom overlookers (Scotland)

58 Leather goods manufacture (London and District)

59 Leather goods manufacture (North West Region)

60 Leather goods manufacture (Walsall area)

61 Leather manufacture
62 Mastic asphalt
63 Motor vehicle retail and repairing
64 Orchestral and musical instrument making
65 Paper box
66 Papermaking and boardmaking-process workers
67 Plumbing mechanical engineering services industry (England and Wales)
68 Plumbing trades (Scotland)
69 Post Office-apprentice mechanic
70 Post Office-trainee technician
71 Printing and bookbinding
72 Printing ink and roller making
73 Process engraving
74 Radio & television servicing (England and Wales)
75 Radio & television servicing (Scotland)
76 Retail bespoke tailoring (England and Wales)
77 Retail jewellery
78 Retail meat and pork butchery (England and Wales)
79 Retail stationery
80 Roadworkers (England and Wales)
81 Saddlery
82 Shipbuilding and ship repairing (craft and technician)
83 Shopfitting technicians
84 Slaughtering (England and Wales)
85 Surgical dressings
86 Thermal insulation
87 Truck and ladder manufacture
88 Vehicle building
89 Watch and clock repairing
90 Wholesale clothing
91 Wire working (Scotland)
92 Woollen and worsted

Appendix 3

Industrial Training Boards

Agriculture
Air transport and travel
Carpet
Ceramics, glass and mineral products
Chemical and allied products
Clothing
Construction
Cotton and allied textiles
Distributive
Engineering
Food, drink and tobacco
Footwear, leather and fur skin
Foundry Industry Training Committee
Furniture and timber
Hotel and catering
Iron and steel
Knitting, lace and net
Man-made fibres producing
Paper and paper products
Petroleum
Printing and publishing
Road transport
Rubber and plastics processing
Shipbuilding
Wool, jute and flax

Non-statutory or allied bodies

British Gas Corporation (Training Dept.)
Electricity Supply Industry Training Committee
Local Government Training Board
Merchant Navy Training Board
National Water Council Training Division

Northern Ireland industrial training boards

Catering
Clothing and footwear
Construction
Distributive
Engineering
Food and drink
Man-made fibres producing
Road transport
Textiles

Appendix 4

Some official training publications

A - Central Training Council

Memorandum No 1 'Industrial Training & Further Education', 1965
No 2 'Industrial Training & Training in Safety', 1965
No 3 'The Use of Programmed Instruction in Industrial Training', 1966
No 4 'Industrial Training & Further Education - a further statement', 1966
No 5 'Approach to Industrial Training' (ITB's tasks) 1966
No 6 'Selection and Training of Instructors', 1966
No 7 'Training Standards for Occupations Common to a Number of Industries', 1968

A Message : 'Training for Skill, the time for change', 1968

Booklet 'Training of Training Officers - Introductory Courses', 1966
'Training of Training Officers - A Pattern for the Future', 1967
'Supervisory Training - A New Approach for Management'
'Training for Commerce and the Office', 1966

B - Department of Employment

Unified Vocational Preparation, a Pilot Approach (with other Departments)
Training for the Management of Human Resources, 1972
Training of Computer Operators
The Careers Service (Guidance to Local Education Authorities in England and Wales), 1975
The Training of Systems Analysts (Commercial)
Computer Appreciation Courses for Managers
Training for Work Study Practice
Training of Computer Programmers
Training for Office Management
Training for Purchasing and Supply
Training for Marketing
Training for Transport and Physical Distribution

C - Training Services Agency

Training Information Paper 8 - 'Selecting the Younger Trainee', 1975

Group Training Schemes, 1975

Vocational Preparation for Young People, 1975

Training Opportunities for Women, 1975

Training for Vital Skills, 1976

Technicians - a Possible Basis for a Programme, 1976

D - Acts of Parliament

The Industrial Training Act, 1964

The Employment and Training Act, 1973.

Appendix 5

Organization of the Manpower Services Commission, Employment Service Agency, and Training Services Agency

1. The Manpower Services Commission was established on 1 January 1974 and has taken over responsibility for the Department of Employment's employment and training services. The actual running of these services is carried out through two agencies - the Employment Service Agency and the Training Service Agency.

2. The Commission is both representative and operational. It has a full-time chairman and nine part-time members, three appointed after consultation with the CBI, three after consultation with the TUC, two after consultation with the local authority associations and one after consultation with professional education interests.

3. Establishment of the Commission makes it possible for the operation of the manpower services to be based on the direct experience of the organizations represented on it. The Secretary of State is not involved in the day-to-day management of the Commission or its agencies, but he retains his general responsibility for manpower policies. The Commission itself has an important voice in the formation of these policies and it works in close touch with the Department of Employment.

The Employment Service Agency

4. The ESA has about 13 000 staff. It is progressively developing a three-tier employment service :
   (1) self-service vacancy displays for those clients who simply want information about the jobs available to enable them to make their own choice;
   (2) advisory interviews with experienced staff;
   (3) Occupational Guidance Units for those who are uncertain what type of employment would suit them best and need counselling based on a deeper study of their qualities and needs.

5. The specialist services for the disabled will continue as before and new arrangements are being introduced to enable the Agency to assist young people effectively. The Agency has control of the Employment Rehabilitation Centres (formerly Industrial Rehabilitation Units), and it also operates the employment transfer scheme. Professional and executive recruitment, the service for appointments in the managerial, professional, scientific and technical fields, is separately managed within the Agency and has its own network of about 40 offices.

6. The Agency has established 18 employment service areas in Great Britain, each headed by an area manager. For operational purposes there is a further division of the country into 106 districts, each under a district manager. The main front-line services of the ESA are provided by a network of about 900 local employment offices. A programme of re-housing and re-styling these offices has been started. The new offices are known as 'Jobcentres'.

The Training Services Agency

7. The TSA has a total staff of about 6 000. Its aims are :
   (1) to help through training to secure the efficiency and effective performance of the country's manpower;
   (2) to help individuals through training to fulfil the needs and aspirations they have for their own employment;
   (3) to increase the effectiveness and efficiency of training.

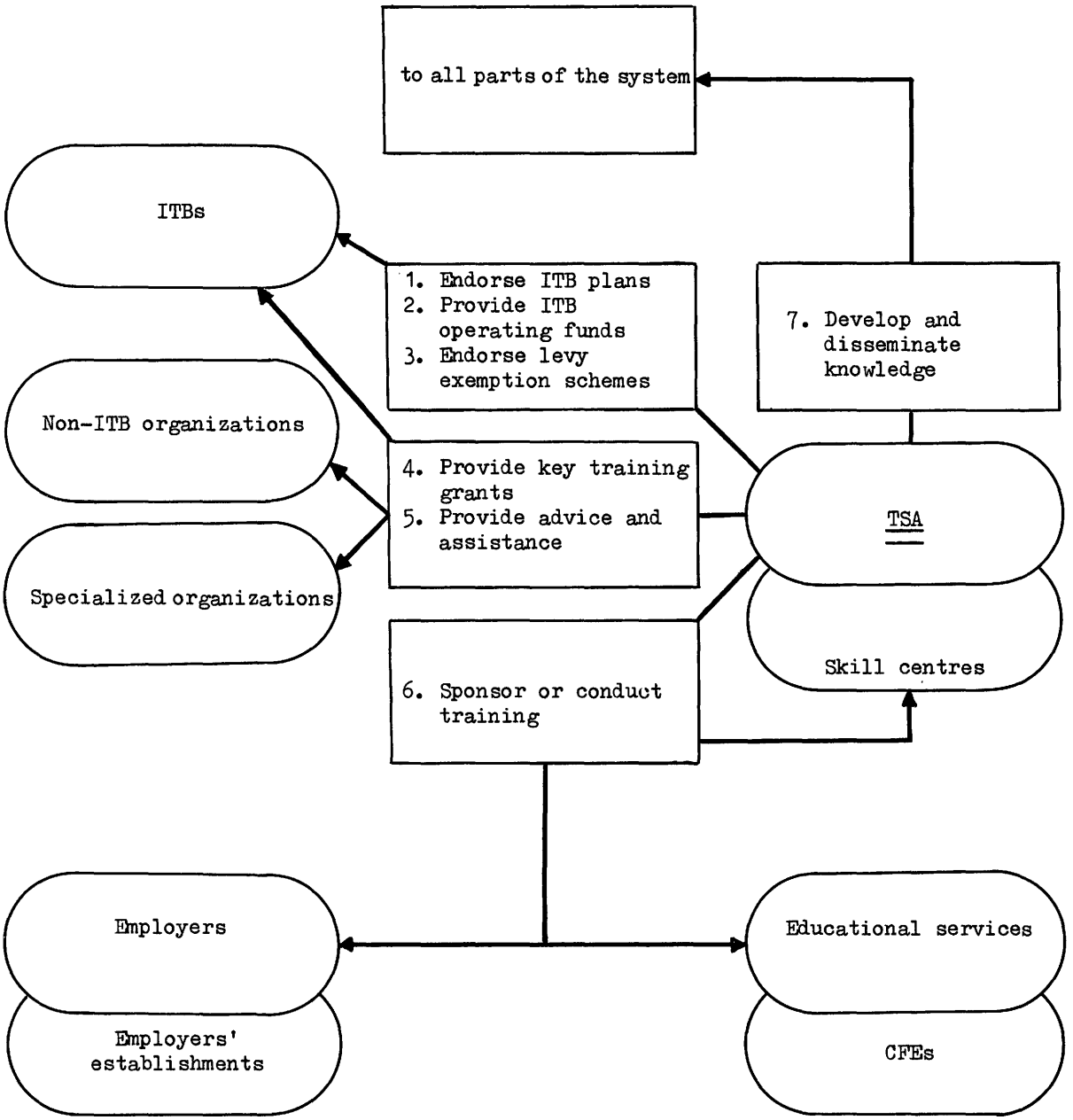
8. Important features of the Agency's activities are the continued rapid expansion of the training opportunities scheme, the provision of a range of direct training services, and the coordination of the work of the 24 industrial training boards.

9. The TSA has seven regional offices : each region will cover either two or three of the Employment Service Agency's areas, and is under the control of a regional general manager.

10. The Agency is also setting up district offices in conurbations and the larger towns. Their primary purpose will be to act as focal points for the discharge of the TSA responsibility for providing training opportunities for individuals.

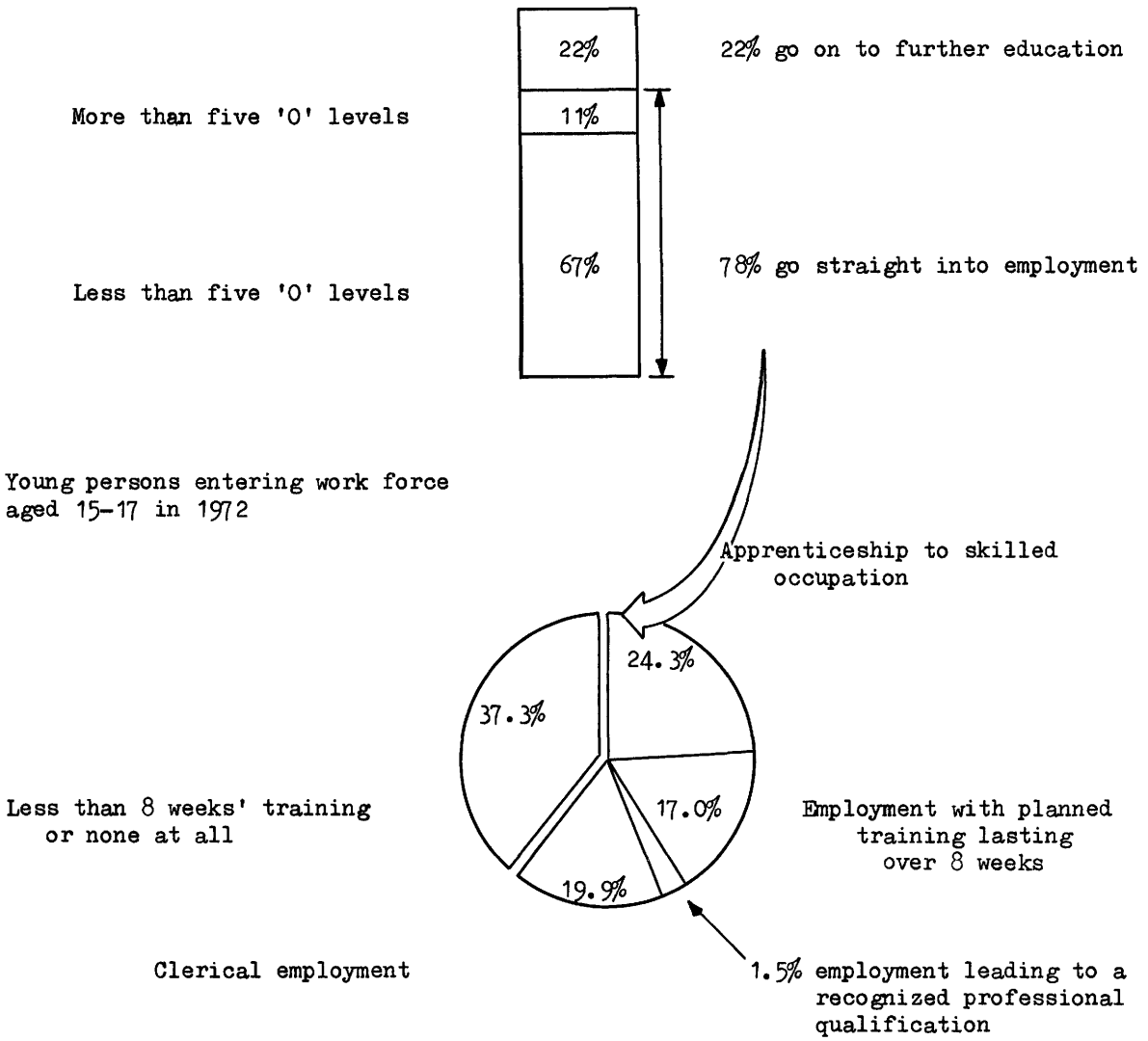
11. To this end they will work closely with ESA offices and careers offices. Within their localities district offices will maintain day-to-day liaison with TSA Skillcentres (formerly Government Training Centres), colleges of further education and other training establishments. They will deal with members of the public interest in training, whether referred by ESA or careers offices, or on direct approach. It will be their task to promote training opportunities for individuals, process applications, and act as necessary across the whole range of TSA functions as a point of contact for both employees and employers.

Appendix 5


to all parts of the system
ITBs
1. Endorse ITB plans
2. Provide ITB operating funds
3. Endorse levy exemption schemes
7. Develop and disseminate knowledge
Non-ITB organizations
4. Provide key training grants
5. Provide advice and assistance
TSA
Specialized organizations
Skill centres
6. Sponsor or conduct training
Employers
Educational services
Employers' establishments
CFEs

Appendix 6

Destination of school leavers in England and Wales, 1971-72



Note : The populations covered in each part of the figure differ slightly.

Source : Department of Employment Gazette Social Trends, 1973.

Appendix 7

Destination of school leavers under 18 entering employment

Analysis of boys and girls entering employment by class of employment entered

Boys	1964		1970		1972		1974 [2]	
Employment entered [1]	000s	%	000s	%	000s	%	000s	%
Apprenticeship	114.5	36	104.9	42	100.2	39	118.2	43
Professional	5.2	1	3.3	1	3.4	1	3.5	1
Clerical	34.0	11	19.8	8	18.4	7	19.2	7
Employment with planned training over 12 months	30.5	10	20.7	8	23.8	9	26.4	10
Employment with planned training 8 weeks-12 months	16.5	5	14.6	6	18.8	7	20.5	7
Other employment	114.2	36	85.0	34	94.3	36	86.9	32
Total	314.8	100	248.2	100	258.9	100	274.8	100
Girls	1964		1970		1972		1974 [2]	
Employment entered [1]	000s	%	000s	%	000s	%	000s	%
Apprenticeship	16.9	6	15.8	7	18.0	8	15.5	6
Professional	5.0	2	4.1	2	3.9	2	4.2	2
Clerical	114.9	39	89.5	40	78.3	34	96.3	40
Employment with planned training over 12 months	13.3	5	11.0	5	12.6	6	13.5	6
Employment with planned training 8 weeks-12 months	24.4	8	23.0	10	28.0	12	27.5	12
Other employment	119.0	40	80.4	36	87.5	38	80.9	34
Total	293.5	100	223.8	100	228.2	100	237.8	100

[1] The classification embraces training of all types - off-the-job, on-the-job and simple experience training - and includes provision for further education in some instances.

[2] Provisional (analyses by age, region and industry not yet available). The figures for the year are probably affected by the raising of the school leaving age in 1973.

Source : Careers Service Statistics.

Appendix 8

Boys - Industrial analysis of new entrants in 1974

Industry (SIC Order Group)	Cat. 1		Cat. 2		Cat. 3		Cat. 4a		Cat. 4b		Cat. 5		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Agriculture, forestry etc.	2 222	19	29	-	46	-	927	8	777	7	7 709	66	11 710	100
Mining and quarrying	2 207	58	24	1	124	3	765	20	363	10	307	8	3 790	100
Food, drink and tobacco	1 024	13	35	-	318	4	320	4	519	6	5 827	72	8 043	100
Coal and petroleum products	193	63	7	2	30	10	30	10	9	3	35	12	304	100
Chemicals etc.	1 007	36	83	3	199	7	353	12	250	9	971	34	2 863	100
Metal manufacture	3 673	54	92	1	414	6	678	10	608	9	1 398	20	6 863	100
Mechanical engineering	11 633	70	79	-	497	3	1 270	8	1 064	6	2 077	12	16 620	100
Instrument engineering	744	46	18	1	67	4	265	17	189	12	320	20	1 603	100
Electrical engineering	4 562	53	61	1	319	4	932	11	786	9	1 942	23	8 602	100
Shipbuilding etc.	3 525	89	9	-	47	1	78	2	58	1	224	6	3 941	100
Vehicles	4 594	74	41	1	168	3	350	6	328	5	750	12	6 231	100
Metal goods n.e.s.	5 807	45	61	-	351	3	1 339	10	1 340	10	3 944	31	12 842	100
Textiles	932	17	33	1	199	4	588	11	1 115	20	2 632	48	5 499	100
Leather goods etc.	106	13	2	-	16	2	87	10	151	18	470	56	832	100
Clothing and footwear	436	13	16	-	115	4	561	17	784	24	1 321	41	3 233	100
Bricks, pottery etc.	919	25	33	1	154	4	325	9	577	16	1 687	46	3 695	100
Timber, furniture etc.	2 724	37	20	-	163	2	823	11	749	10	2 926	40	7 405	100
Paper, printing etc.	3 636	45	47	1	494	6	950	12	667	8	2 221	28	8 015	100
Other manufacturing	867	25	17	-	131	4	306	8	452	13	1 737	49	3 510	100
Construction	28 854	69	289	-	647	2	2 151	5	1 433	3	8 335	20	41 709	100
Gas, electricity and water	2 140	73	37	1	452	15	152	5	64	2	103	3	2 948	100
Transport and communication	4 644	41	151	1	2 047	18	1 244	11	812	7	2 538	22	11 436	100
Distributive trades	5 662	14	171	-	1 549	4	4 386	11	4 021	10	25 210	61	40 999	100
Insurance, banking etc.	465	6	307	4	5 443	75	356	5	179	2	476	7	7 226	100
Professional and scientific services	1 427	27	735	14	1 120	21	910	17	227	4	791	15	5 210	100
Miscellaneous services	16 270	55	202	1	690	2	2 842	10	1 820	6	7 930	27	29 754	100
Catering, hotels [1]	1 977	33	71	1	58	1	915	15	497	8	2 413	41	5 913	100
Motor repairs etc. [1]	12 241	71	47	-	273	2	1 278	7	865	5	2 550	15	17 254	100
Hairdressing [1]	809	86	4	-	10	1	38	4	19	2	60	6	940	100
Public administration and defence	7 912	40	944	5	3 396	17	3 455	17	974	5	3 037	15	19 918	100
Total	118 185	43	3 543	1	19 196	7	26 443	10	20 516	7	86 918	32	274 801	100

1 Included in Miscellaneous services.

Categories :

1 - Apprenticeship or learnership to skilled occupation (including pre-apprenticeship training in employment)
2 - Employment leading to recognized professional qualifications
3 - Clerical employment
4a - Other employment with planned training lasting more than 52 weeks
4b - Other employment with planned training lasting 8 - 52 weeks
5 - Other employment with planned training lasting less than 8 weeks

Source : Careers Service Statistics.

Appendix 8

Girls - Industrial analysis of new entrants in 1974

Industry (SIC Order Group)	Cat. 1		Cat. 2		Cat. 3		Cat. 4a		Cat. 4b		Cat. 5		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Agriculture	124	8	4	-	221	11	140	9	100	6	1 022	63	1 611	100
Mining and quarrying	7	3	1	-	183	86	6	3	7	3	7	3	211	100
Food, drink and tobacco	89	1	29	-	1 990	26	184	2	517	7	4 706	63	7 515	100
Coal and petroleum products	1	1	2	1	163	86	5	3	4	2	13	7	188	100
Chemicals etc.	79	2	44	1	1 986	41	261	5	347	7	2 124	44	4 841	100
Metal manufacture	41	2	8	-	1 336	78	34	2	43	3	246	14	1 708	100
Mechanical engineering	73	2	12	-	3 360	75	110	2	220	5	680	15	4 455	100
Instrument engineering	18	1	10	1	489	36	57	4	148	11	631	47	1 353	100
Electrical engineering	67	1	8	-	2 211	29	271	4	1 135	15	3 929	52	7 621	100
Shipbuilding etc.	28	11	-	-	213	80	3	1	7	3	15	6	266	100
Vehicles	37	3	6	-	1 001	72	44	3	54	4	244	18	1 386	100
Metal goods n.e.s.	66	2	3	-	2 258	52	109	3	251	6	1 667	38	4 354	100
Textiles	64	1	21	-	1 419	16	652	7	3 916	44	2 742	31	8 814	100
Leather goods etc.	10	1	2	-	117	16	48	6	269	35	307	41	753	100
Clothing and footwear	132	1	16	-	1 082	6	2 047	12	9 000	53	4 763	28	17 040	100
Bricks, pottery etc.	22	1	2	-	809	42	166	9	450	23	485	25	1 930	100
Timber, furniture etc.	34	3	3	-	725	53	45	3	119	9	433	32	1 359	100
Paper, printing etc.	204	3	26	-	2 455	36	577	8	798	12	2 782	41	6 842	100
Other manufacturing	31	1	7	-	905	26	70	2	396	11	2 059	59	3 468	100
Construction	73	2	21	1	3 069	90	60	2	51	1	140	4	3 414	100
Gas, electricity and water	17	1	8	-	1 611	88	71	4	49	3	66	4	1 822	100
Transport and communication	69	1	16	-	5 230	70	682	9	966	13	488	7	7 451	100
Distributive trades	812	1	105	-	12 863	21	2 587	4	5 654	9	39 390	64	61 411	100
Insurance, banking etc.	87	-	162	1	26 787	95	371	1	275	1	475	2	28 157	100
Professional and scientific services	1 247	6	3 164	16	9 320	47	2 839	14	1 042	5	2 020	10	19 632	100
Miscellaneous services	11 596	41	169	1	5 220	18	1 244	4	1 326	5	8 831	31	28 386	100
Catering, hotels[1]	304	4	22	-	908	13	424	6	599	8	4 829	68	7 086	100
Motor repairs, etc.[1]	77	3	14	1	2 028	78	44	2	52	2	375	14	2 590	100
Hairdressing[1]	10 858	92	58	-	150	1	311	3	114	1	253	2	11 744	100
Public administration and defence	455	4	342	3	9 250	78	829	7	379	3	604	5	11 859	100
Total	15 483	7	4 191	2	96 273	40	13 512	6	27 519	12	80 869	34	237 847	100

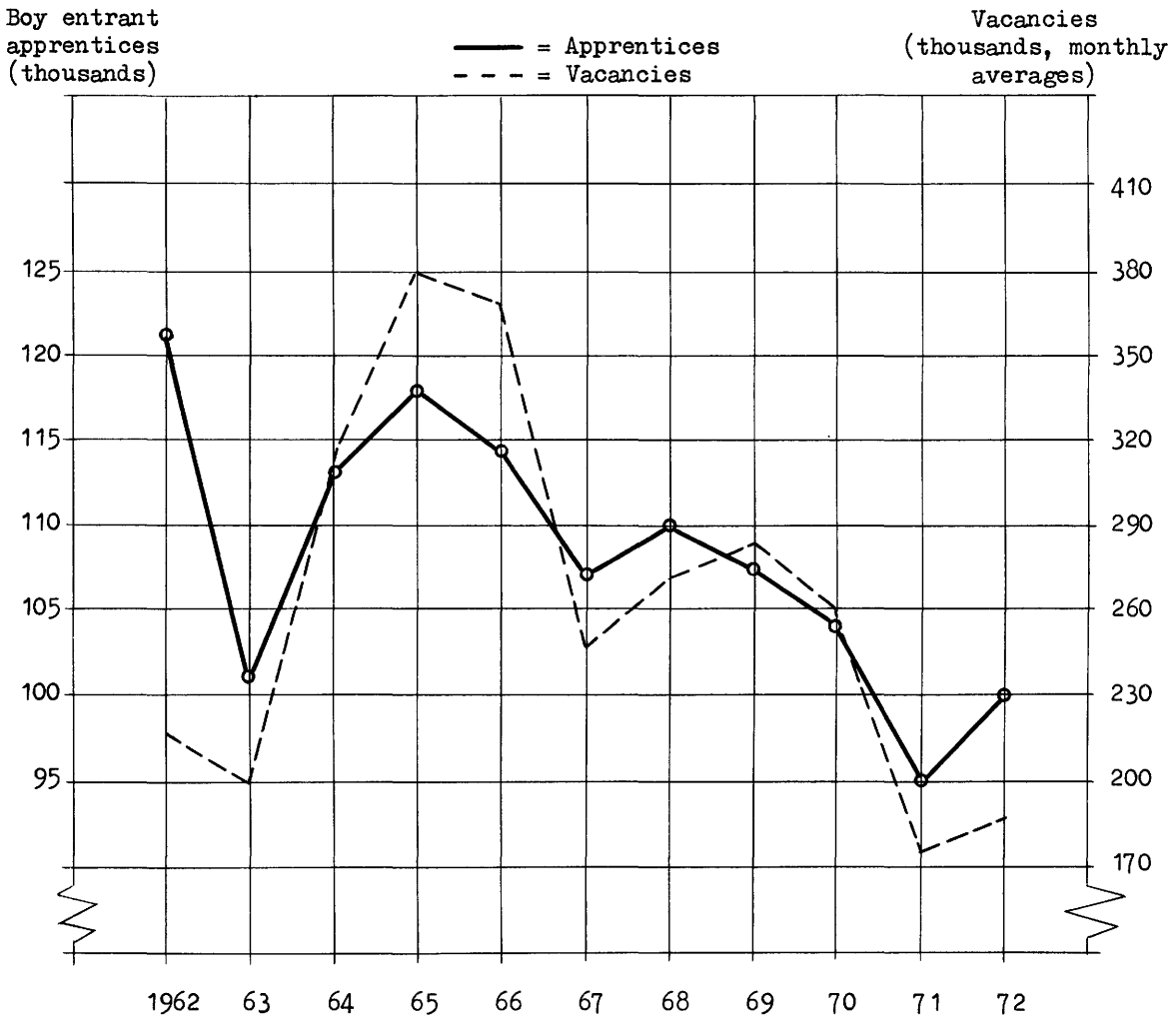
1 Included in Miscellaneous services

Categories : 1 - Apprenticeship or learnership to skilled occupation (including pre-apprenticeship training in employment)
2 - Employment leading to recognized professional qualifications
3 - Clerical employment
4a- Other employment with planned training lasting more than 52 weeks
4b- Other employment with planned training lasting 8-52 weeks
5 - Other employment with planned training lasting less than 8 weeks

Source : Careers Service Statistics

Appendix 9

Cyclical variations in apprentice intake and total notified vacancies (all industries and services)



Source : TSA document 'Vocational Preparation for Young People'

Appendix 10

Comparison by industry of number of employees under 18 and those released by employers for further education at grant-aided establishments

Industry (SIC Order Group)	Estimated number of employees under 18 (June 1971) (A)			Students under 18 released by employers for FE (November 1971) (B)			% receiving FE (B)		
	Male	Female	Total	Male	Female	Total	Male %	Female %	Total %
Agriculture, forestry etc.	18 200	3 800	22 000	6 441	314	6 755	39	8	31
Mining and quarrying	11 500	*	11 500	6 094	127	6 221	53	-	55
Food, drink and tobacco	21 400	26 700	48 100	3 134	1 257	4 391	15	5	9
Coal and petroleum products	*	*	-	565	69	634	-	-	-
Chemicals etc.	5 800	8 400	14 200	2 938	1 174	4 112	51	14	30
Metal manufacture	13 000	4 100	17 100	8 830	1 629	10 459	68	40	61
Mechanical engineering	35 900	10 600	46 500	26 793	2 284	29 077	75	21	63
Instrument engineering	4 000	3 300	7 300	1 363	209	1 572	34	6	22
Electrical engineering	15 900	17 600	33 500	13 922	1 230	15 152	85	7	45
Shipbuilding etc.	7 400	1	7 400	5 283	123	5 406	71	-	73
Vehicles	17 200	4 500	21 700	10 102	839	10 941	59	19	54
Metal goods n.e.s.	22 800	10 000	32 800	4 103	866	4 969	18	9	15
Textiles	14 500	23 800	38 300	1 316	764	2 080	9	3	5
Leather goods etc.	2 200	1 700	3 900	69	67	136	3	4	4
Clothing and footwear	9 100	45 200	54 300	954	798	1 752	15	2	3
Bricks, pottery, etc	8 600	3 800	12 400	1 364	369	1 733	16	10	14
Timber, furniture etc.	18 000	4 200	22 200	3 878	156	4 034	22	4	18
Paper, printing etc.	13 900	17 900	31 800	5 069	626	5 695	36	3	18
Other manufacturing industries	7 300	8 500	15 800	1 580	502	2 082	22	6	13
Construction	56 200	5 900	62 100	26 054	458	26 512	47	7	43
Gas, electricity and water	6 000	3 200	9 200	5 566	967	6 533	93	30	71
Transport and communication	21 100	11 700	32 800	9 488	2 214	11 702	45	19	36
Distributive trades	10 900	204 000	313 000	6 156	3 828	9 984	6	2	3
Insurance banking, etc.	9 800	38 100	47 100	927	805	1 732	9	2	4
Professional and scientific services	12 900	35 600	48 500	4 806	8 695	13 501	37	24	28
Miscellaneous services	60 800	59 300	120 100	22 744	13 903	36 647	37	22	30
Public administration and defence	10 800	11 400	22 200	11 638	8 464	20 102	100	74	91
TOTAL	533 300	563 300	1 096 600	191 159	52 737	243 896	36	9	22

1 Less than 1 000.

Sources : (A) DE Gazette, February 1972
(B) DES Statistics of Education, Volume 3, 1971
Scottish Educational Statistics 1971

Appendix 11

Reprinted from On Course No 26, Summer 1973;
(Department of Education and Science)

National Certificates and Diplomas
a guide to the courses

We last produced a round-up of ONC/OND courses in the spring of 1971 and a list of HNC/HND courses in the autumn of the same year. We are therefore combining both lists in this issue in an effort to help careers teachers advise their students of the options open to them if they have still not decided what to do and need some last minute advice before leaving school at the end of this summer term.

ONC is a national award granted to students who have satisfactorily completed a part-time course in any of the subjects listed in the chart. The course lasts about two years.

OND is a similar national award but is for full-time or sandwich courses usually of two years or maybe longer for a sandwich course.

Entry qualifications are the same for both - usually four passes at GCE 'O' level or Grade 1 CSE. The chart gives more details.

HNC is awarded on completion of a course including both specialist and general studies with a minimum time content of about 600 hours normally spread over two years. Entry qualifications are an appropriate OND or ONC or the equivalent in GCE 'O' and 'A' levels, or at the discretion of the college.

HND, too, is a national award, but with some important differences. The course is usually two years of full-time study or the equivalent within a three-year sandwich course and the resulting qualification approaches that of a pass degree. Entry qualification is ONC or OND in an appropriate subject and many courses can be entered via GCE 'A' level, generally by having passed one subject and studied another to that standard.

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Appendix 11

Course subject	Specified entry qualifications	Subjects studied
Agriculture OND in Agriculture or in more specialized subjects i.e. Poultry, Husbandry, Amenity Horticulture. Commercial Horticulture or Forestry.	Four passes at GCE 'O' level or CSE Grade 1, including two specified science subjects and a subject testing command of English; any other qualifications which are equivalent to the above. Normally one year of practical training.	Dependant on the local pattern of farming, but likely to include animal production; cattle; applied sciences; crop production; soils; drainage; fertilisers; rotations and cultivations; cereal growing and cash crops; grassland; accounts; farm management; machinery; buildings; general studies; glass house production; nursery practice.
HND in Agricultural subjects (agriculture, horticulture, or poultry husbandry).	One relevant GCE 'A' level pass, and one subject studied to 'A' level, plus 4 'O' level passes, including maths and one of the following : English language; English literature; history, geography, economics, religious knowledge; or ONC or OND in biology, chemistry, or physics. In certain cases, may be permitted via an OND in Agriculture. A period of practical experience is an essential pre-requisite for entry.	Precise subjects will largely depend on the bias of the course taken but will possibly include agricultural chemistry; crop production; grassland production; agricultural biology; animal production; engineering and farm machanisation; farm management.
Business Studies ONC and OND in Business Studies and ONC in Public Administration.	Aged 16 or over, and possessing four passes at GCE 'O' level or CSE Grade I ; including English Language and English Literature and preferably mathematics or possessing the Certificate in Office Studies with credits in English and general studies, clerical studies and one other subject or possessing other qualification of equivalent standard. For the ONC in Public Administration established civil servants of clerical grade or above are eligible; as are also people who have passed the Clerical Examination of the Local Government Board.	Varies from college to college but probably including accounting: general principles of English Law; economic geography; economic history; British constitution or central and local government; a modern language; mathematics and/or statistics; commercial law; insurance; transport; economics.
HNC and HND in Business Studies	ONC or OND in Business Studies, or ONC in Public Administration; or (for HNC) 2 relevant GCE 'A' levels or any 2 'A' levels plus a Conversion Course in Economics, Accounts and Law; or (for HND) at least one GCE 'A' level.	As well as basic subjects (eg economics; law; statistics; languages; organization; accountancy; marketing; market research, etc); there is a very wide range of specialist options available. Consult Compendium of advanced courses in technical colleges for details.
Building and construction ONC in Construction or OND in Building.	Four passes at GCE 'O' level or CSE Grade 1. including mathematics, an appropriate science subject, and a subject demonstrating facility in the use of written English; or passes in at least three subjects in the General Course in Construction, of which mathematics and one other must be at credit level, and which must include science (at pass or credit level).	Building technology; science; mathematics; elements of surveying and construction drawing; materials and structures; administration; elementary accounting; general studies.

Course subject	Specified entry qualifications	Subjects studied
HNC and HND in Building	ONC in Construction or Building or (for HND) OND in Building; or 4 relevant GCE passes including one at 'A' level; or (for HNC) City and Guilds Full Technological Certificate in Building Crafts. Certificate in General Foremanship Studies, or Construction Technicians' Certificate (Part II) or specified bridging exams.	Building technology; building services and equipment; measurement and economics; theory of structures; mathematics; design procedures; properties of materials; structural design and detailing; supplementary subjects.
Chemistry HNC and HND in Chemistry and Applied Chemistry.	ONC or OND in Sciences with specified passes; or GCE 'A' level in chemistry, plus (for HNC) 'A' level in mathematics or physics, or (for HND) mathematics or physics studied to ONC standard.	Physical chemistry; organic chemistry; inorganic chemistry; technical subjects for Applied Chemistry awards.
Computers HNC and HND in Computer Studies	One GCE 'A' level from mathematics and 3 other subjects passed; or 3 GCE passes plus City and Guilds Certificate for computer Personnel (with 'O' level standard in maths); or ONC/OND in Sciences, Engineering, or Business Studies (with 'O' level standard in maths).	Computer hardware; programming; data processing; business organization; mathematics and its applications; equipment and logic design; operational research techniques.
Engineering ONC and OND in Engineering (sandwich). OND in Technology (full-time).	Four passes at GCE 'O' level or GSE Grade 1 including mathematics and a science, e.g. physics, mechanics, engineering science etc; satisfactory completion of the General Engineering Course; or any other equivalent qualification.	Mathematics; mechanical engineering science; electrical engineering science; workshop processes and communications or physics or physical science; engineering drawing; English and general studies. In the second year of the course, more specialised subjects are taken, e.g. applied mechanics; applied heat; instrument technology, etc.
HND in Chemical Engineering	ONC or OND in Sciences with specified passes; or GCE 'A' level in chemistry, physics or mathematics. Other qualifications of similar standard will be considered.	Maths, inorganic / organic / general chemistry; physical chemistry; fuel and power technology; properties and strength of material.
HNC and HND in Civil Engineering; and HND in Structural Engineering.	ONC or OND in Engineering, with (for HNC) passes in materials and structures, and in elementary surveying; or ONC in Construction, with (for HNC) passes in materials and structures, and in maths at 0.2 level; or OND in Building, with (for HNC) passes in maths at 0.2 level, materials and structures, and in surveying; or (for HND) 5 GCE passes, including one subject passed at and one studied to 'A' level from maths, physics, and chemistry.	HNC : maths; theory of structures; soil mechanics; civil engineering; construction; hydraulics; structural design and detailing; engineering quantities; surveying; properties of materials. HND : basic sciences; applied sciences; specialist options, including highway engineering; public health engineering; photogrammetric techniques; maintenance; structural analysis; design and detailing; foundations; plus an engineering project.

Course subject	Specified entry qualifications	Subjects studied
HNC and HND in Electrical and Electronic Engineering	ONC or OND in Engineering, with pass in Electrical Engineering (Principles); or (for HND) 5 GCE passes including mathematics and physics (one passed and one studied to 'A' level) or CGLI Certificate.	Engineering drawing; mechanics; mathematics; physics; electrotechnology; physics or thermodynamics; specialist subjects.
HNC in Engineering; and HNDs in Mechanical Engineering, Production Engineering, and Aeronautical Engineering.	ONC or OND in Engineering, Mechanical Engineering or Electrical Engineering; or (for HND) 5 GCE passes including maths and Physics (one passed and one studied to 'A' level).	Mathematics; mechanical technology; properties and forming of materials; engineering measurements; plus one from : aerodynamics / aero structures / electrical technology / engineering design / fluid mechanics / industrial administration / instrumentation and control / jig and tool design / machine tools / metallurgy / metrology / thermodynamics.
Food technology OND in Food Technology	A Certificate of the General Course in Science with passes in three appropriate subjects, including two at credit level; or four passes at GCE 'O' level or CSE Grade 1, including one subject demonstrating facility in English, and two science subjects; or any equivalent qualification.	Chemical and biological sciences; physics and mathematics; food science and technology, including special subjects, e.g. baking, meat, milk, fish, vegetables and fruit, food analysis, etc; business studies; general studies.
HND in Food Technology. HND Baking	OND in Food Technology; or 4 GCE passes including one at 'A' level, Chemistry must be studied to 'A' level.	Chemical and biological sciences; physics and mathematics, microbiology; food process engineering; quality control; business organization; general studies.
Foundry Technology HNC and HND in Foundry Technology.	ONC or OND in Sciences or Engineering; or ONC in Metallurgy; or (for HNC) 2 GCE 'A' levels from physics, maths, chemistry, or an engineering subject (if a course has been completed in 3 of them); or (for HND) an 'A' level in physics, maths, chemistry, or engineering (if a course has been completed in 3 of them).	Foundry metallurgy; foundry engineering; foundry process technology; foundry science.

Course subject	Specified entry qualifications	Subjects studied
Hotel and Catering OND in Hotel and Catering Operations.	Four passes at GCE 'O' level including English or any other subject demonstrating facility in the use of English, and two of the following : mathematics, sociology, geography, history, a modern or a classical language, and up to two approved sciences; or any other equivalent qualification.	Technical studies, e.g. food and beverage preparation and service, accommodation operations (including planning, organization and maintenance); related studies, e.g. applied science, business studies, general studies, e.g. English, liberal studies, possibly a foreign language.
HND in Hotel and Catering Administration	OND in Hotel and Catering Operations; or 5 GCE passes (including one at 'A' level, and one testing command of English) from English language, English literature, maths, science subjects (not more than 2), economics, history, geography, modern language, classical language, sociology.	Food and beverage operation; accommodation operations; business administration (accounting); business administration (including management techniques); plus one from applied science; financial management, tourism, or other approved subject.
Institutional OND in institutional Housekeeping and Catering.	Four passes at GCE 'O' level or CSE Grade 1 passes, including English or any other subject demonstrating facility in the use of English, and two of the following : mathematics, geography, history, a modern or a classical language and up to two approved sciences; or any other equivalent qualification.	Technical studies, e.g. catering, food preparation and service, institutional housekeeping; related studies, e.g. applied science, business studies; general studies, e.g. English, liberal studies, possibly a foreign language.
HND in Institutional Management.	OND in Institutional Housekeeping & Catering; or 5 GCE passes (including one at 'A' level, one science subject, and one subject testing command of English) from English language, English literature, maths, sociology, geography, history, science subjects (not more than 2), modern language, classical language.	Applied science; business studies; management studies; food services; house services.
Mathematics HNC and HND in Mathematics, Statistics and Computing.	ONC or OND in Sciences with passes in basic and elective mathematics, GCE 'A' level in mathematics together with 3 other subjects at 'O' level. Any qualification deemed by the Committee to be equivalent to the above.	As for HNC and HND in Computer Studies.
Measurement and Control HND in Measurement and Control.	ONC or OND in Engineering or Applied Physics, with good passes in maths and 2 other subjects; or ONC or OND in Sciences, with good passes in maths, physics and one other subject; CGLI Certificate No 800 (Overseas Technician's Diploma in Mechanical and Electrical Engineering); or 5 GCE passes, including maths and physics (one passed at and one studied to 'A' level).	Maths and computation; experimental investigation and data analysis; physical science; electrical and electronic applications; graphical communication and data presentation; instrumentation science; instrument technology; applied electronics; automatic control of systems; specialist subjects and technical assignment.

Course subject	Specified entry qualifications	Subjects studies
Medical Laboratory Subjects HNC in Medical Laboratory Subjects.	ONC or OND in Sciences (with a pass in medical laboratory sciences or in basic or elective biology); or 4 GCE passes including chemistry, plus one science or maths subject at 'A' level or biology plus another science or maths subject passed at (and chemistry studied to) 'A' level.	Medical laboratory science; specialist study of one from clinical chemistry, haematology and serology, histopathology and cytology, medical microbiology, physiological measurements and radiation technology.
Metallurgy HNC and HND in Metallurgy	ONC or OND in Sciences with passes in chemistry, maths and physics; or completion of 'A' level courses in chemistry, maths and physics, with (for HNC) passes in 2 of them, or (for HND) a pass in one of them.	Properties and applications of metals; applied physics; inorganic and physical chemistry; physical metallurgy; engineering for metallurgists; extraction chemistry and applied physical chemistry; principles of furnace technology.
Mining ONC in Mining.	Normally aged 16 or over, with four passes at GCE 'O' level, including mathematics and one of the following subjects : physics, mechanics, physics with chemistry, engineering science; or passes in mathematics, engineering science, mining science, and engineering drawing in the examination held on the completion of the G course in Mining, with credit in the first subject; any other equivalent qualification.	Mathematics, mining science, mining technology, including geology, mechanical and electrical engineering, surveying, drawing, general studies.
HNC and HND in Mining.	ONC or OND in Mining; or (for HND) 4 GCE passes including maths and physics (one passed at and one studied to 'A' level).	Geology; surveying; mechanical engineering; electrical engineering; mining technology; coal preparation.
Nautical Sience ONC and OND in Nautical Science.	The completion of a short induction course followed by about nine months' sea service, as well as four passes at GCE 'O' level or CSE Grade 1, including mathematics or physics, and English or a subject involving the use of English, or other qualification at the discretion of the college principal.	Mathematics, including algebra, vector geometry, and trigonometry; applied science including mechanics, gases, heat, sound, electricity and meteorology; sea transport, ships' structure and equipment; seamanship; boatwork; communications; complementary studies including the shipping industry; navigating; general studies.
HND.	ONC or OND in Nautical Science or 5 GCE passes including one at 'A' level. Other qualifications at the discretion of the college principal.	Navigation; marine geography; naval architecture; applied sciences; engineering; seamanship and safety; management studies; liberal studies.

Course subject	Specified entry qualifications	Subjects studied
Naval Architecture and Shipbuilding ONC and OND in Naval Architecture and Shipbuilding.	Four passes at GCE 'O' level or CSE Grade 1 including mathematics and one of the following : physics, physics with chemistry, mechanics, mechanical science, engineering science etc.; or satisfactory completion of the General Engineering Course or the General Shipbuilding Course; or any other equivalent qualification.	In the first year these are common to the first year of the ONC in Engineering. In the second year there are also more specialised courses in shipbuilding and naval architecture.
HNC and HND in Naval Architecture and Shipbuilding.	ONC or OND in Naval Architecture or Engineering (with acceptable standards in mathematics, naval architecture and applied mechanics); or (for HNC) CGLI Certificate No 293 Part II (Mechanical Engineering Technicians' Certificate) or No 289 (Shipbuilding Technicians' Certificate); or (for HND) 5 GCE passes including mathematics and physics (one passed and one studied to 'A' level).	Mathematics; mechanical technology; properties and forming of materials, naval architecture; ship production; plus one from ship hydrodynamics; mechanical technology; engineering measurements.
Printing ONC and OND in Printing.	A certificate of the General Course in Printing with passes in three appropriate subjects including mathematics; four passes at GCE 'O' level or CSE Grade 1, including mathematics and at least one science subject; or any other equivalent qualification.	Mathematics; applied sciences including physics, chemistry, engineering principles, printing techniques and materials; design for printing; general studies.
HNC and HND in Printing.	ONC or OND in Printing; or (for HND) ONC or OND in Sciences or Engineering; or 4 GCE passes including chemistry, mathematics and physics (one passed and one studied to 'A' level).	Technology of printing materials; general printing technology; plus (for HND) design and production; and 2 from (for HND) or one from (for HNC) technology of photographic reproduction for printing; technology of printing surfaces; machine printing technology; finishing technology and a project in industrial administration or a specialised field of printing technology.
Science ONC and OND in Sciences.	A certificate of the General Course in Science with passes in three subjects including two at credit level; or passes in four appropriate subjects at GCE 'O' level or CSE Grade 1, or a relevant Technician's Certificate; or any other equivalent qualification.	Biology; physics; mathematics; chemistry; applied sciences; medical laboratory sciences; metallurgy; general studies; if possible, physical education. Colleges will offer a particular bias, but the course as a whole will be treated as an integrated one.
Applied Biology HNC and HND in Applied Biology.	ONC or OND in Sciences with pass in either biology or medical laboratory science; GCE 'A' level in a biological and one other science subject, plus study of chemistry to 'A' level, with 'O' level physics, mathematics and a subject testing English.	Quantitative biology; animal physiology; entomology; microbiology; parasitology; pharmacology; plant pathology; plant physiology; with (for HND) basic physical sciences.

Course subject	Specified entry qualifications	Subjects studied
Applied Physics HNC and HND in Applied Physics.	ONC or OND in Sciences, Applied Physics or Engineering with passes in specified subjects, or GCE 'A' levels in physics and mathematics, plus 'O' level in 2 other subjects.	Physics; applied physics (including electronics); mathematics; and related fields of study (e.g. materials science); workshop technology.
Surveying, Cartography, Planning ONC in Surveying, Cartography and Planning.	Four passes at GCE 'O' level or CSE Grade 1, including mathematics and English (or any other subject demonstrating facility in the use of English); or any other equivalent qualifications.	Mathematics and statistics; environmental science; principles of surveying; principles of cartography; elements of cartography and surveying; elements of planning; general studies; practical work, e.g. in a planning studio.
HNC in Surveying. Cartography and Planning.	ONC in Surveying, Cartography and Planning.	Mathematics, statistics, measurement and information science; surveying; photogrammetry; cartography, planning; geography.
Textiles ONC and OND in Textiles.	Normally four passes at GCE 'O' level or CSE Grade 1, including English and at least two science subjects, e.g. mathematics, chemistry, biology, physics; or satisfactory completion of the General Course in Textiles with passes in three technical subjects including two at credit standard; or any other equivalent qualification.	Fibre technology; yarn technology, fabric technology,.e.g. bleaching; drying and finishing; aspects of textile, design etc; English and general studies.
HNC and HND in Textiles.	ONC or OND in Textiles; or 5 different GCE passes including one 'A' level from chemistry, mathematics or physics; one of the 'O' level passes must be in another subject following an 'A' level examination; the 'O' level passes must include 2 from chemistry, mathematics, physics, physics with chemistry, general science, biology, botany, zoology, science (engineering),and one subject testing command of English; plus (for HND) a relevant pre-Diploma course; or a Part I pass for Associateship of the Textile institute.	(for HNC) fibre technology; yarn technology; bleaching, dyeing and finishing; (for HND) fibre technology; textile science and testing; plus 2 from yarn technology; fabric technology (woven fabrics or knitted fabrics or carpets); bleaching, dyeing and finishing; fabric design; plus (as ancillary subjects) mathematics with statistics; engineering and control. Management studies or an approved alternative may also be included. There is also a project.

Appendix 12

Training Services Agency

Extract from

discussion paper 'Vocational Preparation for Young People' May 1975

Part 5

Summary of conclusions

It would be useful if the MSC, in consultation with the organizations concerned, can arrange for a study to be made of the statistics at present available, leading to proposals for improvement in the future (paragraph 2.17).

The TSA would wish to pursue the question whether it might assist in any way in promoting developments in the field of careers guidance (paragraph 4.8).

The TSA hopes that the development of work observation and work experience courses for young people will be promoted (paragraph 4.10).

Linked courses appear to the TSA to be a useful way of easing the transition from the school to the working environment (paragraph 4.11).

It would if at all possible be desirable for the emphasis of the careers service to be concentrated on those pupils most in need of help and advice (paragraph 4.14).

The TSA proposes to discuss with the ITBs and other bodies concerned how employers can be encouraged to promote the improvement of industry's links with schools and with the whole process of advice about careers and jobs (paragraph 4.15).

The existing arrangements for induction training for young people would be significantly improved by the more widespread adoption, particularly among medium and smaller-sized firms, of the standards recommended by many ITBs for new entrants of any age (paragraph 4.18).

But the limited form of induction training recomended by ITBs may not be sufficient by itself in the case of young people : what is needed rather is a personnel policy specifically for young entrants which recognizes the problems arising from the transition to working life at a time when they are also experiencing the personal problems of growing up (paragraph 4.19).

There is an urgent need to find more reliable means of identifying and forecasting real demand for skilled labour, particularly on an industry or economy-wide basis. Some ITBs already seek to take account of the needs of their industry as a whole as well as of the individual firms in it and it is to be hoped that ITBs generally will adopt this approach (paragraph 4.24(b)).

There is a case for the joint bodies concerned with craft training agreements to discuss ways of introducing more flexibility into the aspects of the agreements which relate to maximum age requirements and those under which wages are tied to age (paragraph 4.25).

In the view of the TSA the fundamental reason for the persistent shortages in occupations requiring long-term transferable skills is that employers are reluctant to train enough new entrants firstly because some might leave for another employer after training and secondly because it is generally possible to recruit trained workers when they are needed. The present system thus carries the risk of a chronic short-fall in quantity and the position is made worse by the effect of cyclical swings in the economy (paragraph 4.27).

In the view of the TSA, there is a real risk that in the absence of a new initiative the short-fall in the amount of training of adequate standard for young people in occupations requiring long-term transferable skills will actually get worse following the Employment and Training Act, 1973 (paragraph 4.29).

The TSA suggests that the best hope for improvement in the supply of young persons with long-term transferable skills would be through measures which enable individual employers to be refunded the full cost of all training off-the-job, at any rate in the first year, through a collective funding arrangement of some kind, and which make decisions about numbers subject to some form of influence going beyond the short-term outlook of individual employers (paragraph 4.29).

Although there are no very reliable statistics it would probably not be far off the mark to suggest that some 300 000 boys and girls entering employment each year receive little or no training. This contrasts sharply with the practice of other countries in Western Europe and the TSA considers it a profoundly unsatisfactory position, for both economic and social reasons (paragraphs 4.30 - 4.32).

The TSA considers that no lasting solution to this problem can be looked for under the existing system and that a more radical solution will almost certainly be needed (paragraphs 4.33 - 4.34).

The TSA's view is that the following lines of development need to be pursued :

(a) widely-based 'gateway' courses of a recognized national standard, inculcating knowledge relevant to jobs within broad occupational bands, need to be developed to enable young people to undergo vocational preparation off-the-job;

(b) such courses should be available as pre-entry courses or as part of the initial training given by an employer;

(c) ITBs should encourage the development of training for young entrants which systematically provides vocational preparation to approved standards going far beyond what most employers are at present prepared to give (paragraph 4.36).

There is a good case for providing the resources needed to meet the cost of 'gateway' courses on a collective basis (paragraph 4.37).

No single pattern of 'gateway' course will be found to suit everyone, but it seems likely that a well-designed and implemented induction element will be particularly important (paragraph 4.39).

It seems necessary to examine carefully where the balance should be struck between the responsibilities of secondary education and the role of industrial training as regards the vocational preparation of young people (paragraph 4.42).

The TSA intends to extend its range of short industrial courses for unemployed young people and evaluate the results of different types of course (paragraph 4.45).

There will always be some young people who are slow to settle down in work for reasons of personality or background or both. The most hopeful approach for help in such cases is the development of initiatives like the Wider Opportunities Courses (paragraph 4.46).

Although no general extension of TOPS to young people seems practicable the TSA would however wish to consider a wider range of training opportunities for young people with special needs (paragraph 4.49).

The proposals in the paper have implications for the training resources needed and the funds required (paragraph 4.52).

As regards training resources the problem will in part be one of ensuring that

existing facilities are fully used and in part the building up of additional facilities (paragraphs 4.53 - 4.54).

If collective funding of off-the-job training in the first year of employment were introduced, the initial cost might be of the order of £150 million a year, at a first rough guess (paragraph 4.56).

The TSA intends to study further the possible range of 'second chance' training opportunities (paragraph 4.58).

Appendices 13, 14 & 15

These appendices, listed below, are printed publications of the City and Guilds of London Institute. They have not been reproduced in copies of the report. Copies of the 3 booklets may be obtained from the Institute at 76 Portland Place, London WIN 4AA.

City and Guilds of London Institute

(App. 13) - List of Publications and Candidate's Guide

(App. 14) - Pamphlet 585 - Carpentry and Joinery

(App. 15) - The Pattern of Craft Certificate Examinations in Carpentry and Joinery

Supplement

Apprentice training in Northern Ireland

Contributed by the Department of Manpower Services for Northern Ireland

Apprentice training in Northern Ireland

Preface

Apprenticeship in Northern Ireland broadly speaking follows the UK pattern, in part because the trade unions are part of the national trade union movement. However, in 1964, before the passing of the Industrial Training Act (Northern Ireland) 1964, only 16% of boys had an opportunity of craft training compared with 42% in Great Britain. The report which follows has been prepared by the Department of Manpower Services for Northern Ireland, with the help of the nine industrial training boards set up under the 1964 Act.

The report describes how the work of the Department and the ITBs has resulted in a considerable expansion in training opportunities and a marked improvement in the quality of training provided in the industrial fields for which the Department and the Boards have direct responsibilities. The nine ITBs are :

(i) engineering;
(ii) construction;
(iii) road transport;
(iv) catering;
(v) clothing & footwear;
(vi) textiles;
(vii) distribution;
(viii) food and drink;
(ix) man-made fibres producing.

In industrial fields in which the Department and the ITBs do not have training responsibilities, apprenticeship continues mainly on traditional lines. These fields include : furniture making, hairdressing, mineral products (quarrying etc.), printing and publishing, shipbuilding etc.

Apprentice training in Northern Ireland

The work of the Department of Manpower Services and the industrial training boards

1. This report on apprentice training arrangements in Northern Ireland is in three parts. Part I (paragraph 2-9) deals with the background to the growth of apprentice training opportunites in Northern Ireland since 1964. Part II (paragraph 10-24 and Appendices I-IV) considers aspects which are the responsibility of the Department of Manpower Services, either directly or in association with Industrial Training Boards, whilst Part III (paragraph 25 & 26 and Appendices V-XIII) relates to areas which are the sole responsibility of the Boards.

Part I

Growth of apprentice training

2. The Department of Manpower Services presently provides industrial training for unemployed adults and young persons in Northern Ireland under the Employment and Training Act (NI) 1950 mainly through the medium of 14 Government Training Centres providing some 3 200 training places. About two-thirds of the places are occupied by apprentices in the engineering, construction and road transport industries undergoing first-year off-the-job training.

3. After the passing of the Industrial Training Act (NI) 1964 the first two industrial training boards to be established were for the engineering and construction industries. Both boards, as a first step towards devising and implementing training policies for their industries carried out comprehensive manpower surveys of firms in both industries.

4. The boards, from these surveys, recognized that there were serious existing and potential shortages of craftsmen in both industries. They concentrated on the training aspects necessary to combat the shortages and apprentice training schemes were devised with the recommendation that first-year practical training

should take place off-the-job in a works school, Government Training Centre or technical college.

5. Under these schemes, the boards recruited apprentices for first-year off-the-job training and endeavoured to place boys in suitable employment at the end of the training period, taking into account the need to ensure that the employment should be such as would permit the apprentice to continue his training. In addition firms in both industries which recruited boys were encouraged to sponsor those boys for off-the-job training. Apprentices from both groups were trained side by side in Government Training Centres or technical colleges.

6. The expansion in the Government Training Centre service which took place between 1964 and 1975 resulted in the gradual lessening of dependence on technical colleges until at the present time only 2 classes are college-based. However it has always been a feature of the training that apprentices are required to undergo appropriate day-release studies which are invariably carried by the colleges.

7. Largely as a result of these initiatives, the percentage of boys leaving school in Northern Ireland who were afforded an opportunity of craft training rose from 16 in 1964 to 40 in 1969/1970. The equivalent figure in Great Britain at that time was 42%. In the summer of 1970 the Northern Ireland Government published the 1970-1975 Development Programme for the Province. This stated that the minimum aim in providing apprenticeship opportunities must be rapid attainment of the Great Britain position - briefly termed 'parity of opportunity'. It was recognized at the same time that achievement of this target was a matter of community development rather than an industry responsibility to be discharged by training boards. It was decided therefore that after December 1970 in the case of engineering apprentices and March 1971 in the case of construction boys, the then Ministry should assume responsibility for direct recruitment of engineering and construction apprentices and should also undertake the placing of these boys. (The difference in dates was connected with differences in intake dates and administrative reasons). Arrangements were also made to continue the system of sponsoring apprentices through boards, (board-sponsored boys) and greater opportunities were given to firms outside the scope of either Board to sponsor boys directly for off-the-job training in engineering and construction skills. (Non-board sponsored boys).

8. In addition to engineering and construction apprentices, facilities in Government Training Centres have also been made available for training apprentices in motor vehicle repair, commercial vehicle repair and vehicle body building. Boys in these trades are sponsored by employers through the Road Transport ITB whose declared policy is that all apprentices should receive 6 months off-the-job training at the outset. The board has introduced a registration system to encourage employers to sponsor apprentices. The Department does not undertake direct recruitment of apprentices in this industry, but the training provided in the GTC is in accordance with the board's recommendations.

9. The length of an apprenticeship in Northern Ireland varies with the trade it is four years in the case of engineering, electrical installation, plumbing and motor vehicle repair, and three years for bricklaying, joinery, painting and plastering. This follows the national agreements since Trade Unions in Northern Ireland generally are a part of the national Trade Union movement.

Part II

Financial arrangements

10. As will be seen from Part I, there are 3 categories of apprentice - directly recruited apprentices, board-sponsored apprentices and non-board sponsored apprentices. The financial arrangements governing the training of these boys vary according to category.

11. Directly recruited boys are paid by the Department the wage appropriate to the trade in which they are being trained. They also receive assistance towards the cost of travelling and subsistence, including where relevant the cost of lodgings. No charge is made for training and no charge is made to employers when a boy is placed at the completion of his training.

12. In the case of board-sponsored boys, the employing firm notifies the board of its intention to sponsor. After interview the board arranges with the Department to have the boy placed in a GTC. During the period of training the board pays wages, travelling and subsistence and lodging costs above, and also pays the Department's training charge. The Department subsequently makes a grant to the board of 60% of the costs incurred. This arrangement applies to apprentices sponsored by the engineering, construction and road transport ITBs.

13. Firms outside the scope of the engineering or construction industry training boards wishing to have apprentices trained in a GTC in either discipline may do so by direct arrangement with the department. In this instance the employing firm pays the wages, travelling, subsistence (and if necessary lodgings), but the training is provided free.

Direct recruitment

14. The number of boys to be recruited directly each year is determined after consultation between the Department and the 2 boards concerned - engineering and construction - and targets are set after taking into account the intakes planned by each industry. Recruitment is effected through advertising, and with the help of schools, employment offices and careers officers (formerly youth employment officers).

15. The selection procedure adopted by the Department for engineering apprentices

takes the form of aptitude testing, using the National Institute of Industrial Psychology Apprentice Selection Battery, followed by interview. For construction apprentices, a modified NIIP Battery is used to aid selection of electrical installation and plumbing apprentices, again followed by interview. Applicants for other construction trades (joinery, bricklaying, plastering and painting) are selected following an interview alone.

16. Interviewing panels for all trades (engineering and construction) are chaired by a training service officer of the Department, and representatives from both sides of industry are invited to assist on the panel. A careers officer is also in attendance to provide any additional relevant information.

17. Although no academic qualifications are required for either industry, applicants for construction apprenticeships must be under 18 at the date of commencement of the course, and for engineering under 18 on the first of the month in which training commenced.

Training

18. Successful applicants receive a period (one year for engineering and from 6 months to 1 year for construction depending on the trade involved) of practical training in an 'off-the-job' situation at a GTC, with day release for associated further education at a technical college on one day per week. On completion of the course apprentices are placed with firms to complete their apprenticeships. Any boys remaining unplaced on completion of their initial training are given continuation training at the GTC until suitable employment is found.

19. Should an apprentice, after starting a course, find it unsuitable, and providing he has made every effort to benefit from his training, help and advice can be obtained from the Department's vocational guidance unit.

20. On the engineering side, although apprentices are streamed into mechanical, fabrication or electrical classes according to individual aptitude, they all follow a common course for approximately the first 9 months before specializing in the remaining 3 months. The syllabus for the course is that laid down in the engineering ITB's training manual. In addition to the City and Guilds day release course and written examination, the Phase Tests devised by the C & G skills testing service and monitored by them provide a continuous assessment

of practical ability throughout the year. Each apprentice also has a log-book of his work in the GTC and carries this with him into his subsequent employment.

21. On the construction side, all apprentices receive training in their trade which follows the training recommendations of the Construction ITB. These include a short period of 'common training' to give the boys an appreciation of the skills of the various crafts. A system of phase tests (again monitored by the skills testing service) has been introduced for joinery, bricklaying and plastering and is being extended to the other trades.

22. Regardless of whether a boy is a direct recruit, a board-sponsored boy or a non-board sponsored boy, no difference is made between them in the GTC classes and there is no question of keeping the three categories separate for training purposes. Although the majority of boys fall in the directly recruited category it is quite normal to find a mixture from all three categories in the same training class or the same day-release class, where indeed boys undergoing GTC training may well be mingled with boys who have been released from their employing firm for the day.

23. It is worth noting that the Department regularly attempts to identify apprentices who have become unemployed for reasons outside their own control, e.g. redundancy or illness, so that they may, if willing, receive suitable training in a GTC until such time as they can be placed in employment.

24. Attached at Appendices I and II are the engineering and construction apprentice training agreements used by the Department. Details of numbers who started training in various trades since 1965 are shown in Appendix III (Engineering apprentice recruitment since 1965) and Appendix IV (Construction apprentice recruitment since 1965).

Part III

Industrial training boards

25. In addition to the three industrial training boards to which reference has already been made, six further boards have been established in Northern Ireland under the 1964 Act. They are :

(i) catering;
(ii) clothing and footwear;
(iii) man-made fibres producing;
(iv) textiles;
(v) distributive;
(vi) food and drink.

26. These, together with the construction, engineering and road transport ITBs have each supplied a resumé of apprenticeship training in the industries for which they are responsible. These are attached in the form of Appendices to this paper :

(i) Appendix I — Engineering;
(ii) Appendix II — Construction;
(iii) Appendix VII — Road Transport;
(iv) Appendix VIII — Catering;
(v) Appendix IX — Clothing and Footwear;
(vi) Appendix X — Man-made Fibres Producing;
(vii) Appendix XI — Textiles;
(viii) Appendix XII — Distributive;
(ix) Appendix XIII — Food and Drink.

Appendix I

Department of Manpower Services
Apprentice training agreement (engineering)

Training agreement dated _____ day of _____ 197____ between the Department of Manpower Services for Northern Ireland (hereinafter referred to as the Department).

And

_____ (Apprentice)
of _____ (Address)

And

_____ (Parent or Guardian)
of _____ (Address)
Whereby it is agreed as follows : -

1. The Department will provide training and the apprentice will serve and be bound to the Department for the term hereinafter provided.

2. The apprentice will as from _____ (date) avail himself of training provided by the Department for the term of one year or such other period as the Department may determine having regard to the nature of the course and will observe and be subject to the conditions of training laid down by the Department and to the rules and regulations from time prevailing in the training centre.

3. The Department will, subject to paragraph 5, provide for the apprentice such training and instruction as is necessary to enable him to acquire a practical knowledge of his trade to such an extent as is practicable having regard to the period of training and the conditions and organization from time to time prevailing in the training centre.

4. The Department will observe the conditions of employment and pay to the apprentice during the period of training wages at the rates agreed for the industry and summarized in the schedule to this agreement.

5. (i) The apprentice shall during the period of training diligently attend and make satisfactory progress in such course of technical instruction as may be approved by the Department and shall apply himself to and complete the

Department's syllabus of practical instruction.

(ii) If, in the opinion of the Department, the apprentice is considered to be unsuitable to complete the course of training, the Department may upon the giving of one week's notice or payment in lieu thereof discharge the apprentice, in which event this Agreement shall forthwith be at an end.

(iii) In the event of any unlawful conduct or action or any flagrant misbehaviour on the part of the apprentice during the period of training, whether alone or in conjunction with others and whether or not such conduct, action or misbehaviour takes place at a training centre or whilst travelling to or from a training centre, the Department may without notice discharge the Apprentice, subject to the payment of such accrued sum (if any) as may then be due, in which event this agreement shall forthwith be at an end.

(iv) In the event of the apprentice failing, without satisfactory cause certified in writing by a responsible person, to present himself for training on any day or days during the period of training, the Department may upon the giving of one week's written notice or payment in lieu thereof discharge the apprentice, in which event this Agreement shall be at an end.

Signed by and on behalf of _____ (Apprentice)

_____ (Parent or Guardian)

_____ (Witness)

_____ (Address)

_____

_____ (Department of Manpower Services)

Schedule

Wages, allowances, holidays etc. (paragraph 4.)

1. Wages and allowances

Payment of wages and any allowances applicable will be made weekly, one week in arrears.

(i) Starting wage will be at one of the following rates per week -

Age	Wage
16	£17.85
17	£24.15
18	£28.35
19	£33.60

(ii) Boys living at home will receive allowances to help pay their travelling expenses to and from the centre daily.

2. Hours

Apprentices work a 40 hour week and in general commence training at 8.30 a.m. finishing at 5.00 p.m. with a half-hour lunch break. Commencing and finishing times may vary slightly from training centre to training centre but the actual hours worked per week will remain constant.

3. Holidays

(i) Annual holidays in accordance with agreements in the trade will be granted normally at the rate of two weeks in the summer and one on the completion of the course of training. In addition the following Public and Bank Holidays will be given : - New Year's Day, Saint Patrick's Day, one week at Easter, Spring and Autumn Bank Holidays and one week at Christmas.

(ii) An apprentice who is in training immediately prior to the customary July holiday fortnight (August in Londonderry) shall receive two weeks basic pay.

(iii) On termination of training an apprentice shall receive accrued holiday pay calculated at one-twelfth plus one-third thereof for each week of service excluding annual holidays less any holiday pay already received.

4. Periods of sickness or injury

During periods of sickness or injury medical certificates should be sent to the training centre. There are no provisions for payment of wages during such periods.

5. Notice

One week's notice will normally be given by the Department before terminating an apprenticeship. However cases of misconduct or indiscipline may render an apprentice liable to summary dismissal.

6. Employment on completion of training

While no guarantee can be given by the Department that an apprentice accepted for training will be placed with a firm for the continuation of his apprenticeship, on the completion, to the Department's satisfaction, of the agreed period of training, every effort will be made by the Department to place him in suitable employment. Should the apprentice refuse to attend an interview with an interested employer or to accept an offer of suitable employment the Department may without notice terminate training except in such special circumstances as it may determine.

Appendix II

Department of Manpower Services
Apprentice training agreement (construction)

Training agreement dated _____ day of _____ 197 between Department of Manpower Services for Northern Ireland a

And

_____ (Apprentice)
of _____ (Address)

And

_____ (Parent or Guardian)
of _____ (Address)
Whereby it is agreed as follows : -

1. The Department will provide training and the apprentice will serve and be bound to the Department for the term hereinafter provided.

2. The apprentice will as from _____ (date) avail himself of training provided by the Department for the term of one year or such other period the department may determine having regard to the nature of the course and will observe and be subject to the conditions of training laid down by the Department and to the rules and regulations from time to time prevailing in the training centre.

3. The Department will subject to paragraph 5 provide for the apprentice such training and instructions as is necessary to enable him to acquire a practical knowledge of his trade to such an extent as is practicable having regard to the period of training and the conditions and organization from time to time prevailing in the training centre.

4. The Department will observe the conditions of employment and pay to the apprentice during the period of training wages at the appropriate rates agreed for the industry and summarized in the schedule to this agreement.

5. (i) The apprentice shall during the period of training diligently attend and make satisfactory progress in such course of technical instruction as may be approved by the Department and shall apply himself to and complete the Department's syllabus of practical instruction.

(ii) If, in the opinion of the Department, the apprentice is considered to be unsuitable to complete the course of training, the Department may upon the giving of one week's notice or payment in lieu thereof discharge the apprentice, in which event this agreement shall forthwith be at an end.

(iii) In the event of any unlawful conduct or action or any flagrant misbehaviour on the part of the apprentice during the period of training, whether alone or in conjunction with others and whether or not such conduct, action or misbehaviour takes place at a training centre or whilst travelling to or from a training centre, the Department may without notice discharge the apprentice, subject to the payment of such accrued sum (if any) as may then be due, in which event this agreement shall forthwith be at an end.

(iv) In the event of the apprentice failing without satisfactory cause certified in writing by a responsible person to present himself for training on any day or days during the period of training the Department may upon the giving of one week's written notice or payment in lieu thereof discharge the apprentice, in which event this agreement shall be at an end.

Signed by and on behalf of _____ (Apprentice)

_____ (Parent or Guardian)

_____ (Witness)

_____ (Address)

_____

_____ (Department of Manpower Services)

Schedule

Wages, allowances, holidays etc. (paragraph 4.)

1. Wages and allowances

Payment of wages and any allowances will be made weekly one week in arrears.

(i) Starting wage will be at one of the following rates per week :

First year apprentices

Joiner Bricklaying Plasterer Painter Plant fitter		£23.00 per week
Plumber Electrician		£15.20 per week
	Age 16	£20.00 per week
	Age 17	£22.30 per week

(ii) Boys living in lodgings will receive allowances to help pay their travelling expenses home at week-ends and to and from the centre daily.

(iii) Boys living at home will receive allowances to help their travelling expenses to and from the centre daily.

2. Hours

40 hours are worked each week from Monday to Friday, Courses at Boucher Rd Craigavon, Springtown, and Maydown start at 8.00 a.m. and finish at 4.30 p.m. with a break of one half hour for lunch. All courses at other centres start at 8.30 a.m. and finish at 5.00 p.m. with a similar lunch break.

3. Holidays

(i) Annual holidays with pay for the time being in force in the trade for which training is being provided will be granted but normally at the rate of two

weeks in summer and one week at Christmas per year together with statutory and other public holidays normally observed at Government Training Centres including New Years Day, St Patrick's Day, Good Friday, Easter Monday, Spring and Autumn Bank Holidays.

(ii) An apprentice who is in training immediately prior to the July holidays (August in Londonderry) shall receive two weeks basic pay.

(iii) Where a 'winter' week holiday (at Christmas or any other time) is given, apprentices in training at that date will as at present receive a week's holiday with pay.

(iv) On termination of training apprentices will receive accrued holiday pay calculated at three forty-ninths for each week of training in the holiday year excluding annual holidays less any holiday pay already received.

4. Periods of sickness or injury

There are no provisions for payment of wages during periods of sickness or injury although the Department may at its discretion pay an allowance to a boy for periods of illness in lodgings and otherwise in exceptional circumstances.

5. Notice

One weeks notice will normally be given to the Department before terminating an apprenticeship. However cases of misconduct or indiscipline may render an apprentice liable to summary dismissal.

6. Employment of completion of training

While no guarantee can be given by the Department that an apprentice accepted for training will be placed with a firm for the continuation of his apprenticeship, on the completion to the Department's satisfaction of the agreed period of training every effort will be made by the Department to place him in suitable employment. Should the apprentice refuse to attend an interview with an interested employer or to accept an offer of suitable employment the Department may without notice terminate training except in such special circumstances as it may determine.

Appendix III

Engineering apprentice recruitment since 1965				
Training year	Board[1] Dept	Board - Spons	Non-board-spons	Totals
1965/66	290	43	-	338
1966/67	401	39	49	489
1967/68	290	55	31	376
1968/69	364	35	42	441
1969/70	525	54	60	639
1970/71	514	51	54	619
1971/72	605	96	45	746
1972/73	616	59	59	734
1973/74	398	32	69	499
1974/75	603	32	141	776
Grand totals	4 606	501	550	5 657

[1] The Department took over responsibility for recruitment from the board in December 1970.

Appendix IV

Construction apprentice recruitment since 1965

Year	Joinery			Bricklaying			Plastering			Painting			Plumbing			Electrical			Plant fitt			Total		
	[1]B/DEPT	BS	NBS	B/DEPT	BS	NBS	D	BS	NBS	D	BS	NBS	D	BS	NBS	D	BS	NBS	D	BS	NBS	D	BS	NBS
1965/66	187	9		110	9		23	3		21	5		23			55						419	26	
1966/67	199	73	1	86	23		16	4		25	4		66	9		24	22	7				416	135	8
1967/68	152	100		103	28		30	5		37	8		26	15		15	23	6				363	179	6
1968/69	164	122		115	24		35	3		53	12		50	21	1	39	31					456	213	1
1969/70	170	149		129	49		34	15		48	19		29	49		45	50		7	16		462	347	
1970/71	157	208	2	160	22		58	3		48	1		49	41		32	74		4	19		508	368	2
1971/72	145	155	4	158	43		49	5		42	12		51	70		44	37		4	21		493	343	4
1972/73	147	130	9	133	42		53	7		41	5		60	50		30	41		*7	1		478	300	9
																			7	24				
1973/74	164	90	1	162	26		55	3		36	4		62	16		66	44		1	11	1	546	194	2
1974/75	232	111	18	196	43		57	1	1	54	4	3	87	12	8	68	53	5		18	3	694	242	38

[1] The Department took over responsibility for recruitment from the board in March 1971.

* Ceramic floor and wall tilers

BS - Board-Sponsored

NBS - Non-board-sponsored

Engineering ITB Appendix V

The total number of apprenticeships is 2 400 of which 830 are first year. As explained later, these figures include an undefined number of technician apprentices.

Of the first year craft apprentices, 450 are trained off-the-job in Works Training Schools, the Lisburn and District Group Training Scheme and by sponsorship via the Board to Government Training Centres.

Note : Sponsorship was introduced in 1966 so that the smaller firms, which could not justify a works training school for first year off-the-job training, could make use of similar facilities in Government Training Centres and technical colleges. The cost of such training is borne by the Board and Department of Manpower Services, provided the apprentice is acceptable to the Board.

The number of technicians in the industry is augmented by an annual Board recruitment of 20 trainees who undergo a two-year full-time course of practical training and further education in selected Technical Colleges. They are then placed in the industry for completion of training and further education.

Note : **Annex 3 - Board trainee technicians scheme.**

Board policy and methods of training

1. Craft

Since the inception of the Board in 1964, encouragement has been given to the industry to adopt systematic training in an off-the-job situation and to follow the Board's policy for first year practical training namely nine months common training and three months specialist training. It has been possible to carry out this training in the following locations :

(i) Works Training Schools.
(ii) Lisburn and District Group Training Scheme.
(iii) Government Training Centres, by sponsorship via the Board.

An alternative has been to recruit from the pool of first year apprentices trained by the Department of Manpower Services in Government Training Centres and to Board specification.

This scheme has attracted increasing acceptance by the industry due mainly to its flexibility and providing a sound base on which to build the necessary skills for the modern craftsman.

First year apprentice training should be off-the-job and the programme based on the concept of common training for the first nine months.

In the post first year period, encouragement has also been given to the adoption of systematic training by using the modular approach devised by EITB in Great Britain for use in works training schools and group training schemes.

Again this carefully planned and controlled training has been increasingly adopted in the off-the-job situation by the industry - albeit to a much lesser extent than for first year training - and over the last five years has proved to be the best method of completing the apprentice's training.

On-the-job modular training has also grown in strength (especially in the smaller firms), since the introduction of the Board's levy/remission scheme in 1975/76.

Note : Annex 1 - Further Education for Craft Apprentices
Annex 2 - The Modular Training System.

2. Technician

Over the past nine years, the Board has been encouraging the industry to adopt a diagnostic approach in the identification of technician jobs and a more formal approach to the training necessary to fill such jobs. This involves much more than merely following a technician course of further education while undergoing 'normal' craft practical training.

At present, the normal training of apprenticeship period is four years, and this is not necessarily the only facet common to craft training.

In general, the necessary training will depend on :
(i) the job to be filled at the end of four years training;
(ii) the education and experience background at the time of recruitment.

Sources of Recruitment

(1) School leavers

Not only must applicants have the necessary qualifications to enter a technician's course of further education to meet the firm's needs, but also they must show by interview and by undergoing tests that they have the necessary aptitude to fill the posts after training.

(2) Board trainees - see Annex 3.

(3) Craft/technician trainees

It is the policy of many of the larger firms not to recruit technicians as such, but to ensure that in the total craft recruitment there will be those with the necessary educational background and aptitude to stream off into technician training and further education.

This policy has obvious advantages and should continue to be recognized by the Board, provided that the necessary conditions of selection and training are met.

Training

(1) First year

It is a widely accepted practice that first year training is similar to, or the same as, that for craft apprentices, and is therefore based on nine months common training. The final three months may be the same as for craft training, if the final job content requires it. Alternatively, and more generally, these months may be spent on project work incorporating the wide range of basic skills acquired in the first nine months.

First year training should be off-the-job and should follow the Board's policy for first year craft training (i.e., based on nine months common training). Alternatively, sponsorship to the Board's two-year broad based mechanical/electrical engineering course should be used.

(2) Post first year

Due to the wide variety of technicians' jobs it is not possible to lay down a detailed standard practical training programme. From a detailed analysis

of the final job content, the firm must plan a systematic training scheme based on:

(i) preliminary skills;
(ii) advanced skills;
(iii) special skills.

In the immediate post first year period, it may well be that one of the Craft Modules would provide suitable training e.g. Machining for Toolmaking and Experimental Work (H1) or Maintenance of NC Machine Tools (J27).

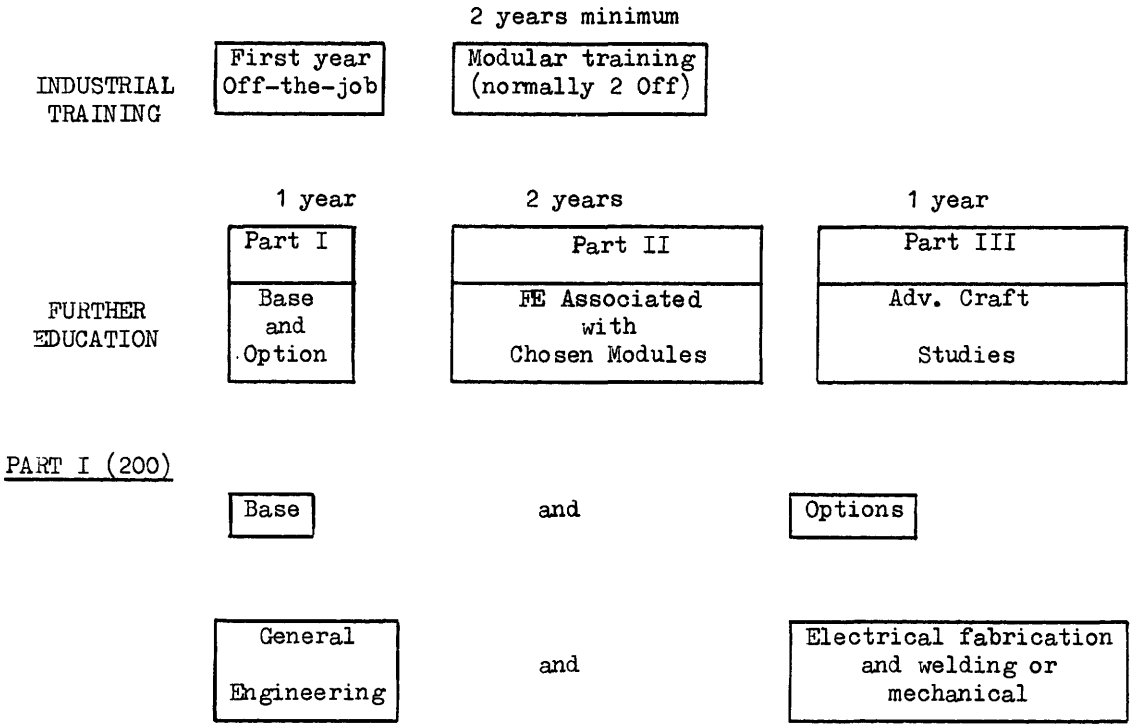
Further education

When a trainee is recruited specifically to fill a technician job eventually, he should immediately follow a relevant technician course of further education. Otherwise he should follow the special craft course of further education (City and Guilds 200) and transfer to the relevant technician course when this need is identified (preferably at the end of first year training).

Annex 1

Further education for craft apprentices

This is an essential complement to all practical craft training schemes. A special set of courses on Engineering Craft Studies - the City and Guilds 200 Series - has been specially designed to match the new structure of craft training. The scheme, as applied to engineering trades over a four-year period, is shown below :



PARTS II and III

Electrical	231 - Electrical and electronic craft studies
Fab. and Weld.	215 - Welding craft studies
	216 - Sheet metal and thin plate craft studies
	217 - Structural and thick plate craft studies
	218 - Pipework engineering craft studies
Mechanical	205 - Mechanical engineering and mech. eng. maintenance

Annex 2

Modular training

Modular training can be carried out off-the-job, on-the-job or by a combination of both. In any case, it must be so planned and controlled as to cover the skill specification and at the same time, make a useful contribution to the firm's production. It is a flexible system which at the same time minimizes the necessary training for the apprentice's final trade.

The following two methods of training (or a combination of both in some cases) will be recognized by the Board.

1. On-the-job (planned)
   This bears little or no similarity to the previous ad hoc or traditional approach.

   Usually, a training officer has to be engaged full-time on modular training and his first task is substantial preparatory work in the formalization and control of the modules being undertaken. The work undertaken and skills involved in each shop have to be analysed in detail, and the specifications matched item by item to the work in various shops. In this way, a detailed programme for the modules covering location, movement, duration and trainee loading in each shop is evolved. This approach avoids many of the disruptions caused by pressures of production and ensures a proper learning sequence. The trainer is the supervisor.

2. Off-the-job (controlled)
   Training is carried out in an off-the-job area close to production, or in a sheltered controlled production area. The latter has the advantages of off-the-job training and is also meeting the requirements of modular training. The area is designated and identifiable as a training area, and the trainer is either a full-time craft instructor, or the supervisor.

   All work undertaken is strictly controlled and planned to meet the specifications of the module.

   Forward planning is necessary and in this, liaison with production control is invaluable. This approach can also be used in contributing to stock where this is feasible and suitable, but excessive repetitive work is to be avoided if the specifications are to be covered adequately.

Comparison

In the on-the-job situation approximately six months are allowed to cover the training specification and care has to be taken to distinguish between training and experience.

In the off-the-job situation, it has been demonstrated that training times can be reduced by 50%, leaving additional time for the experience content. However, this method requires additional facilities, and it is not always feasible to supply such facilities for some of the 'heavy' modules.

Annex 3

Board trainee technicians scheme

'A technician carries out a function between that of a professional engineer or other technologist on the one hand and a craftsman or operative on the other. He needs a higher level of technical knowledge than a craftsman and he should have practical knowledge and experience to permit him to carry out one or more of the following duties :

(a) diagnose problems;
(b) work out details of a task or operation;
(c) carry out the work himself;
(d) perform supervisory and advisory duties.'

Some typical posts for technicians in the industry are :

(i) development technician engineer;
(ii) estimator;
(iii) work study technician engineer;
(iv) maintenance technician engineer (NC Systems);
(v) technical sales representative;
(vi) technical buyer.

Each year the Board recruits a number of students with appropriate qualifications for two-year full-time courses at selected technical colleges. The course covers subjects in mechanical engineering, electrical engineering and industrial measurement and control at technician level, and leads to a recognized qualification in the engineering industry.

At the end of the two-year course, trainees should qualify for the award of the Part I Certificate of the City and Guilds of London Institute in :

Mechanical Engineering Technicians (Course 255)

and

Electrical Engineering Technicians (Course 281).

Some may also gain exemption for Part I examinations in Industrial Measurement and Control(Course 275).

In addition to studying for these qualifications, trainees undergo a programme of

broad practical training in the college workshops, and some training in the industry.

Each year of the course consists of :

(a) 36 weeks of technical education including a minimum of 2 days per week practical training in various workshops;

(b) 7 weeks full-time practical training in workshops.

In addition, trainees must undergo 6 weeks vocational training in selected firms at the end of the first year.

At the successful conclusion of the course, trainees are placed by the Board in suitable employment in the industry when they will continue studying on a day-release basis over 2 years for the Part II Certificate of the course relevant to their employment.

A fifth year (Part III) is available for successful trainees whose employment requires a year of specialized study in such areas as design, production, inspection, control, industrial electronics, instrumentation, etc.

Success in the Part III examination leads to the award of the Full Technological Certificate which is accepted nationally, and indeed leads to registration by the Council of Engineering Institutions as technician engineer (T. Eng.).

Entry qualifications

Applicants should :

(a) Be not older than 17½ years on 1 September 1976.

(b) Have a MINIMUM of 2 subject passes, including mathematics and preferably a relevant science subject in the following :

(i) the General Certificate of Education at 'O' level;

(ii) the Certificate of Secondary Education at Grade 1 level;

(iii) the General Course in Engineering (250) of the City and Guilds of London Institute.

Appendix VI

Construction ITB

The total number of apprenticeships in the 15 trades is around 3 400, of which over 1 000 are first year.

As far as possible, the Board encourages off-the-job training in the first year. Facilities are available for such training in 7 trades in Government Training Centres and a group training scheme, and over 200 apprentices are sponsored by the industry each year. The total cost of sponsorship is shared by the Board and Department of Manpower Services.

In the remaining years of apprenticeship, the Board gives grant aid to encourage continuance of day-release to complete a relevant course of further education.

In the technician field, the Board provides 60 scholarships annually for the following full-time courses in technical colleges :

Ordinary National Diploma in building;
Construction Technician's Certificate (City and Guilds 626);
Heating, Ventilation and Air Conditioning Technicians (City and Guilds 632);
Day release grants are available for technicians employed in the industry.

Appendix VII

Road Transport ITB

(i) Number of apprenticeships

The total number of craft and technician apprenticeships is 1 730, and although the number of technician apprentices is undefined, the reason is given later.

The average annual intake of first year apprentices is 385, and of these, 330 receive off-the-job training in Government Training Centres.

(ii) Craft training policy

(a) First year

The Board does not recognize on-the-job training carried out in the traditional sense of attachment to a skilled craftsman, and this policy has the full support of Trade Unions and the Motor Agents Association. It is admitted, however, that some apprentices in country garages are trained on-the-job. This should disappear over the next few years as these apprentices will have great difficulty in being recognized as craftsmen if attempting to move from their present employers.

This policy is somewhat different from that in Great Britain where some areas of on-the-job training are recognized.

(b) Post first year

Short specialist courses of off-the-job training are provided by the Board and various manufacturers to meet the needs of both the apprentice and his employer. The Board's own Training Centre and two Works Training Schools are used for these courses. Again this policy differs from that in Great Britain where periods of off-the-job training are recommended during the second and third years. However, the end result is the same in both schemes - the award of the National Craftsman's Certificate.

(c) All years

The in-company periods of on-the-job experience are carefully planned and controlled, and there is a system of progressive assessment to ensure that Board standards are achieved.

Note : See Annexes 1 and 2 for the total training system.

(iii) Technician training policy

As in some other industries, apprentice technicians are not always identified as such at the beginning of apprenticeship.

It is possible to transfer from a craft to a technician course on gaining Part II of the City and Guilds Course, and by day release to gain the Full Technological Certificate.

Alternatively, some apprentices, normally destined for supervision or management, are recruited with the necessary 'O' Level G.C.E. qualification to enter directly to a technician course.

Approximately 50 apprentices gain Part II each year, and the Board arranges a special block release course for Part III as necessary.

Note : See Annex 3 for details.

(iv) Registration

The Board has introduced a registration scheme which is in one form of an indentureship involving the employer, the apprentice, parents and the Board which controls the scheme.

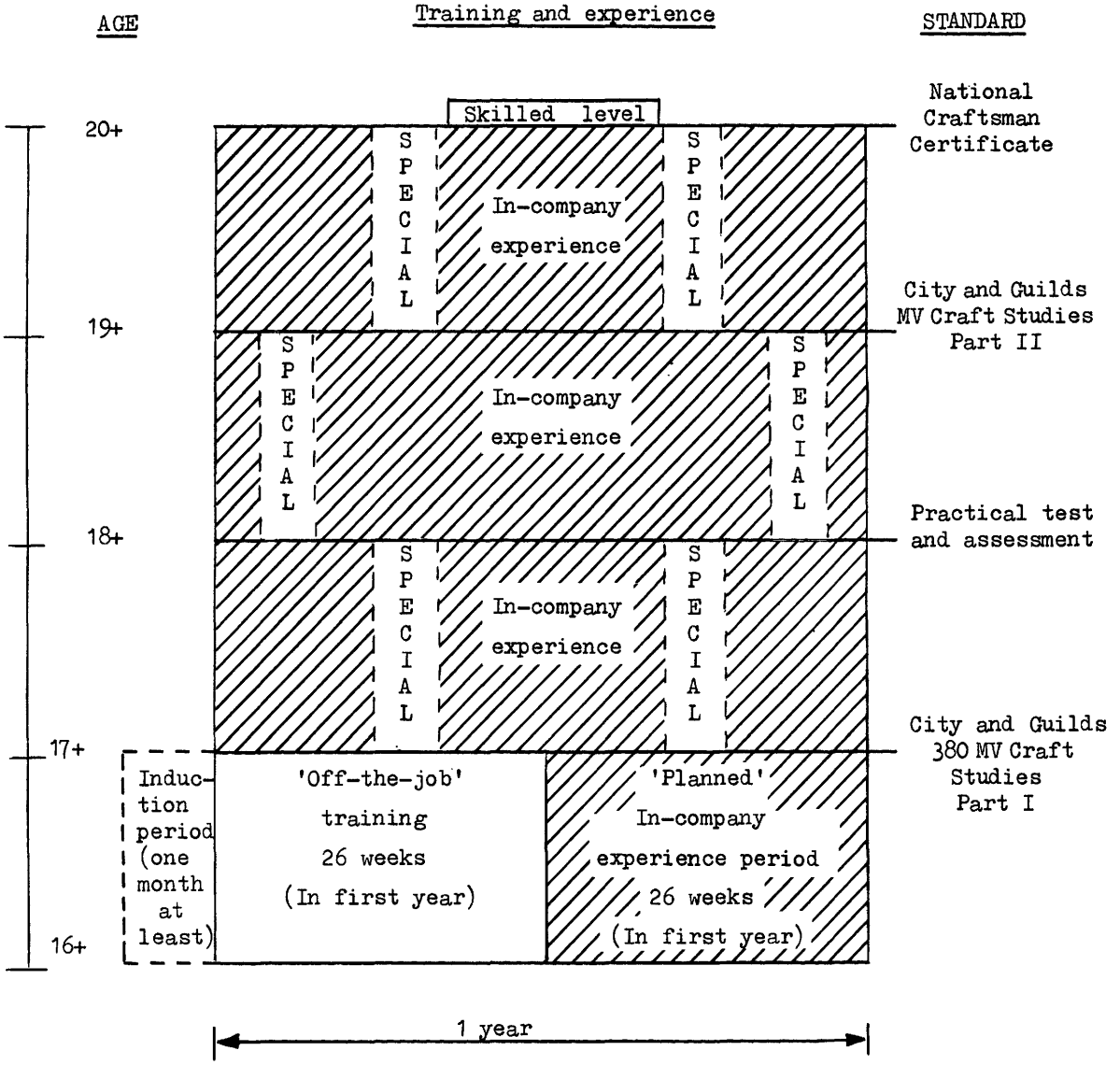
There is no similar scheme in Great Britain, although some employers do have apprentice agreements.

Note : See Annex 4 - Apprentice Registation Agreement.

Annex 1

MV Craft Apprentice Training

Training and experience



'SPECIAL' means short practical training modules provided by manufacturers and board.

FURTHER EDUCATION continues to City and Guilds Part II level which is normally taken during 3 rd/year.

Annex 2

MV Craft apprentice training

Standards and training plan

During the past five years the Board has been mounting courses of training for MV Craft Apprentices. After consideration and critical examination of the various types of courses it has become clear that the 26 week course taken during the first year of apprenticeship has been the most successful and the course which has received most acclaim from the industry.

First year training includes a basic in-company induction period of a minimum of one month's duration followed by attendance at an 'off-the-job' training centre for 26 weeks where the apprentice is instructed in the basic skills and knowledge of motor engineering. This 'off-the-job' training is followed by a period of 26 weeks 'Planned in-company experience' for which the Board provides a programme which is simple to operate.

Further education on a day release basis is integrated throughout and the apprentice will attempt the City and Guilds 380 MV Craft Studies Part I examination during his first year.

The remaining three years of apprenticeship are spent gaining in-company experience with short specialist courses of training which can be designed to meet the requirements of both the apprentice himself and that of his employer. These short specialist courses are provided by manufacturers and the Board.

Further education continues on a day release basis, the apprentice taking a practical test and assessment at the second year stage, the City and Guilds 381 Part II examination at third year stage and the National Craftsman's Certificate in his fourth year.

The National Craftsman's Certificate is the objective for a skilled MV repair craftsman.

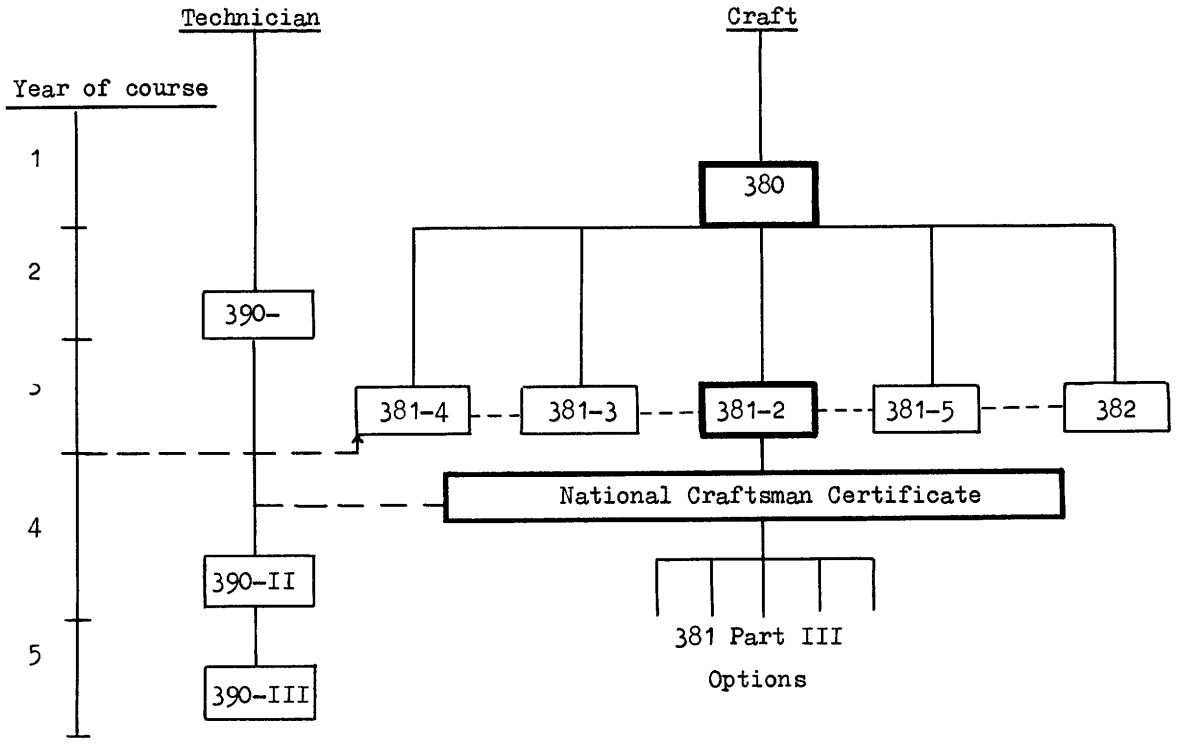
The scheme with modifications also provides for the other specific craft fields i.e. :

Apprentice MV Body Repair Man;
Apprentice Automobile/Electrician;
Apprentice Partsman, and if necessary Apprentice Salesman.

Annex 3

Road Transport Industry Training Board
(Northern Ireland)

Automobile Engineering
City & Guilds of London Institute
further education courses



Course No		Duration
380	Motor Vehicle Craft Studies Part I	1 year day release
380-2	Light & Heavy Vehicle Mechanics further Part II	2 years day release
381-3	Vehicle Electricians Part II	2 years day release
381-4	Light Vehicle Body Repairs Part II	2 years day release
381-5	Vehicle Partsmen Part II	2 years day release
381-8	Motor Vehicle Craft Studies Part III	1 year day release
382	Motor Vehicle Salesmanship Part II	2 years day release
390-1	Motor Vehicle Technicians Certificate Part I	2 years day release
390 II	Motor Vehicle Technicians Part II	2 years day release
390 III	Motor Vehicle Technicians Part III	1 year day release

Road transport apprentice recruitment

1968/69	126
1969/70	170
1970/71	145
1971/72	165
1972/73	150
1973/74	177
1974/75	228
1975/76	150 (1st intake)
	166 (2nd intake)

* * *

Students normally attend a technical college on a part-time day or block release basis or as part of an integrated course of further education and training.

Craft courses are in three stages -

Part 1 (normally 1 year's duration) gives a basic introduction to the technology of motor vehicle maintenance.

Part 2 (normally 2 years' duration) provides for further study in one or more specializations and can lead to a Part 3 course or to a second Part 2 course or possibly to a technician's course.

Part 3 provides for advanced study in greater depth in one or more specialized subjects.

The National Craftsman's Certificate (normally taken after Part II (381-2) level is made up of a series of tests devised to measure the candidate's ability to diagnose faults and suggest suitable remedies within the competence of a skilled mechanic and which are representative of the tasks regularly performed in the majority of Service and repair establishments.

Technicians courses are also in three stages -

Part 1 (normally 2 years' duration) gives a broad introduction to the theoretical and practical aspects of motor vehicle maintenance and is appropriate to the needs of apprentices and junior technicians.

Part 2 (normally 2 years' duration) provides a means for the above average mechanic to study in greater depth the operating principles of the motor vehicle, and to become more conversant with diagnosing and testing techniques.

Part 3 (normally 1 year's duration) is designed to enable the student, on completion of his technical studies and concurrently with suitable experience to study basic organization and administration of the three main departments within the business, i.e. parts, sales and service.

March 1973

Annex 4

ROAD TRANSPORT INDUSTRY TRAINING
BOARD (Northern Ireland)

Apprentice Registration Agreement

Agreement of ..... Apprenticeship made on the ..... day of .....19.... between :

The Employer .....
of .....
The Guardian .....
of .....
The Apprentice .....
of .....
whose date of birth is .....19....

The Road Transport Industry Training Board (NI)
of 33 Church Road, Newtownabbey BT36 7LH.

It is Agreed

1. That the period of the Agreement of Apprenticeship shall be ..... years from the ..... day of ..... 19....
2. That the signatories agree to observe and fulfil the several conditions and obligations set out in the Agreement.

	The Employer	The Guardian	The Apprentice	The Training Board
Signature	.....	.....	.....	.....
Witnessed by	.....	.....	.....	.....
of	.....	.....	.....	.....
	.....	.....	.....	.....

Transfer of Agreement

On and after the ..... day of .....19.... the rights and obligations of the employer are transferred to

.....
.....

Signed by the First Employer	Signed by the Second Employer	Signed by Guardian (if necessary)	Signed by Apprentice
.....	.....	.....	.....
.....	.....	.....	.....

Conditions of apprenticeship registration agreement

A. The employer agrees :

1. To teach the apprentice the skilled occupation specified by affording the apprentice such opportunities of learning it as may be obtained by employment in appropriate parts of the employer's premises, and during the first year of the apprenticeship to allow the apprentice to attend a ..... week off-the-job ..... course at ..... Government Training Centre and after completion to implement the on-the-job planned experience programme drawn up by the Training Board.

2. During the second and subsequent years of the apprenticeship to allow the apprentice to attend short practical training modules provided by manufacturers and the Board.

3. During the period of the Agreement of Apprenticeship to afford the apprentice day release with pay for the purpose of receiving further education appropriate to his occupation and to give all reasonable assistance and encouragement to the apprentice to obtain a National Craftsman's Certificate.

4. To pay at least minimum basic wages as laid down by the appropriate negotiating body and to implement conditions laid down by that body.

5. To report to the Guardian in writing any instances of major misconduct by the apprentice.

6. That in the event of the employer becoming bankrupt, or ceasing to carry on his business, then he shall endeavour to procure the assignment of this Agreement to some other suitable employer and in the event of the employer dying then his personal representative should endeavour to procure such an assignment.

B. The apprentice agrees :

1. To serve the employer diligently in the occupation specified and to conform to rules made by the employer as necessary for the proper conduct of his establishment(s).
2. Not to leave or be absent from the service of the employer without reasonable cause or the approval of the employer.

3. Not to be accessory to or conceal the loss of or damage to any of the employer's property.

4. To engage in productive work within his capacity to ensure that the training he has received is supported by practical experience.

5. To equip himself with such personal hand tools and overalls as may be required for the occupation in which training is offered insofar as these are not provided by the employer.

C. The apprentice and guardian agree:
To make good any loss of/or damage to the employer's premises or property or to property in the custody of the employer arising from wilful or reckless conduct on the part of the apprentice.

D. The guardian agrees :
To encourage the apprentice in any matters relating to his learning the occupation specified in and to the fulfilment of his obligations under this Agreement.

E. The Road Transport Industry Training Roard (NI) agrees:
1. To provide appropriate off-the-job training and an on-the-job planned experience programme. That the training staff of the Board will monitor the progress of the apprentice during the first year of his apprenticeship.

2. To provide short practical training modules during the second and subsequent years of the apprenticeship.

3. The Board will act as a Registration body during the apprenticeship and will endorse the apprentice's record card as each standard is achieved.

F. It is agreed by all parties to the agreement that :
1. The first three calendar months of the period of the Agreement shall be regarded as a probationary period. In certain cases where there is doubt as to suitability of the apprentice the probationary period may be extended for a further three calendar months as the discretion jointly of the employer and the Board. At the six month stage a final decision will be made.

2. The following may be valid reasons for termination of the Agreement :
   (a) Mutual consent of the parties.
   (b) Illness or injury necessitating the absence of the apprentice for a period in excess of 26 consecutive weeks.
   (c) Illness or injury which in the opinion of an agreed medical practitioner renders the apprentice permanently unfit to resume employment at any time in the occupation specified in this Agreement.
   (d) Persistent misconduct by the apprentice.
   (e) Inability of the apprentice to benefit from the practical training and further education provided for him and agreed by his employer and the Board.
   (f) Persistent refusal by the apprentice to attend a nominated College or Training Centre for instruction during or after working hours.
   (g) Neglect by the employer to provide adequate and suitable training and practical experience in the occupation specified.

CERTIFICATE OF

SERVICE OF APPRENTICESHIP

WE HEREBY CERTIFY that the apprentice to whom this Agreement relates served his apprenticeship in accordance with its terms.

Signed by or on behalf of the Employer

.....19.....

.....

(Employer)

On completion of the apprenticeship this certificate must be completed by the employer and handed to the apprentice in exchange for his copy of the Apprentice Registration Agreement.

Appendix VIII

Catering ITB

There are no formal indentured apprenticeships in the catering sector of the industry, and the licensed sector has its own recognized apprenticeship scheme. A formal career pattern in catering is generally recognized as an apprenticeship.

Catering sector (cookery)

A total of 240 are undergoing training and further education culminating in City and Guilds 706/2 Certificate in Cookery for the Catering Industry.

Two methods of training are used :

(i) a four-year period of on-the-job training;

(ii) a two-year sandwich course of on-the-job training and block release for further education.

All career trainees must be registered with the Board and all in-company training schemes must include associated further education.

Licensed sector

Training policy is decided by the Licensed Vintners Association. Training is on-the-job for a period of two years for males and one year for females.

Approximately 150 apprentices are in training.

Appendix IX

Clothing and Footwear ITB

(i) Number of apprentices

The following figures are taken from the last Manpower Survey and adjusted in the light of recession.

Sector	Apprentice Cutters	(Other)	Maintenance Apprentices	Total
Clothing	148		78	226
Footwear		2	3	5
Hosiery & Knitwear		3	27	30
				261

(ii) Methods of training

(a) Training has been done mainly on-the-job by means of demonstration and practice, with only about 25% attending associated day release courses in technical colleges.

(b) Technical colleges are used both for day and block release further education, usually to City and Guilds standards.

In the case of sewing machine mechanics, the Board has a block release format for sponsored apprentices from companies. This scheme has led to a significant increase in the quality and quantity of training in this area.

Firms occasionally take on GTC apprentices for training, usually on machine maintenance work. Apprentices often attend short Board courses on specific aspects of their jobs.

(iii) Board policy

The Board has raised the general standard of recruits and standards of training through its block release scheme for mechanics, and is devising a comparable scheme for cutters.

The standard of on-the-job training for apprentices is taken into account when firms' levy remission is calculated, and so an attempt is now under way

to raise standards systematically, as well as devising special courses with appropriate content and national examinations.

(iv) Technicians

This industry does not in general differentiate between craft apprentices and technicians, but the Board is considering this along with the implications of TEC.

Appendix X

Man-made fibres producing ITB

The total number of craft and technician apprenticeships is 215 and in the ratio 3 : 2.

The first year intake varies from 40 - 45 and all are sponsored to Government Training Centres for off-the-job engineering training.

In the post first year period, between 40 and 50 apprentices receive periods of off-the-job training in Works Training Schools, a group training scheme or Government Training Centres.

All apprentices are granted day release to technical colleges to follow relevant courses of further education.

Appendix XI

Textiles ITB

The industry employs 120 craft and technician apprentices in the ratio 7:5. (It should be noted that in the mechanical and electrical engineering trades, EITB would not accept this industry's definition of 'technician').

The annual intake of first year apprentices is around 35, and no off-the-job training is provided.

Day release is granted to 65% of all apprentices.

In the course of the last few months the Board has taken a more positive approach to the training of apprentices and trainee technicians. A scheme of training for apprentice tenters (loom tuners) has been developed involving periods of block release to the College of Technology, Belfast.

These blocks are :

Year 1	-	1 week
Year 2	-	2 x 4 weeks
		1 x 2 weeks
Year 3	-	2 x 4 weeks
		1 x 2 weeks
Year 4	-	Special modules as required.

The Board will be employing an instructor who will :

(a) agree practical in-plant training programmes;
(b) assist the company to carry out the programme;
(c) liaise with the College staff and the company;
(d) where appropriate conduct specialist courses during year four of the apprenticeship.

At technician level the Board is grant aiding eight students on a 26 week block release course leading to the Technicians Certificate (C & G 431) - Dyeing of Textiles.

Appendix XII

Distributive ITB

There are no apprenticeships in this industry at the present time.

In the 1976/77 training year a new scheme for Radio and TV apprentices is being considered, the target being 20 apprenticeships; overall strategy is being reviewed in order to prepare an operational programme for an industry wide apprenticeship scheme.

Appendix XIII

Food and drink ITB

(i) Number of apprenticeships

The total apprentice force is 345. 180 of these are butchery apprentices and 86 are apprentice bakers. 21 are apprentice motor vehicle mechanics. The remaining 58 are engineering or other apprentices employed on factory maintenance work.

(ii) Methods of Training

The vast majority of apprentices are trained on-the-job with release for associated further education. The Board are now encouraging full-time or block release training for selected apprentices in bakeries and meat plants. This is carried out in the Belfast College of Business Studies (Food Science Department). This only applies to a small number who have the potential for continuing to technician level.

An apprenticeship scheme is currently being re-introduced as part of the group training scheme for the bacon curing industry. This is a mixture of on- and off-the-job training. Sponsorship to GTC's and Works Training Schools are both non-existent.

(iii) Board policy for each year of apprenticeships

All apprentices are expected to follow a planned training programme for each year of apprenticeship. These programmes vary to some extent due to the wide variety of products or processes in different sectors of the industry. Bakers, however, follow the standard City and Guilds course as part of their training. Butchers are encouraged to follow Institute of Meat programmes but these are not available outside Belfast. The Board has found it impracticable to insist on a standard programme for each year. This is also the case in Great Britain.

(iv) Technicians

A special programme is currently being launched to train food technicians through the City and Guilds (130) course and associated industrial experience. Potential technicians will be sponsored in addition to those now being trained specifically in the bakery and meat trades. The range of jobs classed as 'technician' is very wide, including laboratory technicians, quality control technicians, etc. The total number for the entire industry is 155. These are mainly in the dairy, brewery and soft drinks, animal feed and meat sectors.

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