The decline of the craft apprenticeship system with particular reference to the construction industry

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Thesis submitted for the degree of MPhil

Faculty of Education Studies
November 1994
This study considers the historical development and growth of the English apprenticeship and follows the transition of a broad-based system towards a modular-based, vocational structure. In so doing it clarifies the distinction between trainees and apprentices. The resulting analysis distinguishes three distinct training methodologies and three apprenticeship models.

A clear agenda existed between government and industry to replace the apprenticeship system. As a result there evolved a positive move away from the indentured apprentice towards a non-indentured trainee structure which was encouraged within the construction industry by an agreement between the Manpower Services Commission (MSC) and the Construction Industry Training Board (CITB).

A detailed examination is undertaken of the historical evolution of technical vocational education together with an analysis of the post-war provision prior to the era of new vocationalism. The position of the apprenticeship within in the new vocational setting, with particular reference to the construction industry, is then quantified. An analysis is made of the number of building apprentices between the period 1953 to 1992, which enables trends in apprenticeship decline in the industry to be established by industrial sector both regionally and nationally.

An effort is made to establish a rationale for the resultant decline in apprenticeship training with specific reference to the demise of the construction apprenticeship system. My thesis suggests that a consistent failure by both government and industry to sustain an effective system of vocational training resulted in the loss of a sound skills base. But although I show there was a serious reduction in the number of apprentices during a period of growing youth unemployment, I conclude that the interventionism of the MSC and its new vocationalism had no significant impact on the construction apprenticeship figures. I suggest, within this industry, the growth in self-employment was a significant contributory factor, and the lack of a compulsory system added to industries apathetic indifference towards training.
Thesis Title: The decline of the craft apprenticeship system with particular reference to the construction industry

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Acknowledgements

I am indebted to my tutor Michael Erben for the assistance and guidance provided throughout the progress of this work.

In addition I would like to acknowledge the assistance given to me by many individuals, including Katherine Minchin, in the gathering of background information relating to the guilds and indentures. In particular I would like to thank Phillip Mead, a Liveryman of the Worshipful Company of Plumbers and Freeman of the City of London, for his personal documents relating to Guild membership and to my former tutor Anthony Hoskin, a Liveryman of the Worshipful Company of Goldsmiths and Freeman of the City of London, for his family documents of Guild membership and Freedom of the City of London, also to Lawrence Townsed and Andrew Snodin for allowing me to view and make use as I saw fit of their indenture documents. I would also like to acknowledge the assistance provided by the County Archive staff at Chichester.

Finally I would like to thank the staff of department SSD E1 of the Employment Department, Moorfoot, in attempting to supply apprenticeship statistics, Tony Webb of the Construction Industries Training Board and to the National Joint Council for the Building Industry who provided me with invaluable statistical information regarding construction apprentices.

Without the help of those named above and the many others, unnamed, the production of this work would have been that much more difficult.
Introduction

1. This study endeavours to establish an identity for the term apprentice and considers the development and transition of a vocational concept which has moved from a system of skilled craft training to one of a codified scheme for job training. In the course of the work an effort is made to establish a rationale for the resultant decline in apprenticeship with specific reference to the demise of the construction apprenticeship system. Later an attempt is made to quantify (in relation to the construction industry) the magnitude of this decline. An important aspect, for obtaining statistical information in terms of apprenticeship numbers has proved difficult. In a personal reply from the Employment Department it was stated "There is no single comprehensive source for such statistics and there has been little effort to collect them ...". As much relevant information as is available, however, is supplied in this study.

2. Chapter One considers the apprenticeship system's historical development and there follows a detailed discussion of the craft guilds which formed an essential element of the economic fabric and early development of this country's occupational base. What is relevant and dealt with in this chapter is the impact the guilds had on the educational provision, development and growth of the English
apprenticeship system. Guild formation developed as a system of occupational association and as a means to protect skills and trades (Dunlop, Thrupp). And although Sylvia Thrupp (Thrupp 1963) states that the guilds were predominant in the area of collective association of the artisan after the thirteenth century, I indicate that Merchant Guilds were well established within the City of Chichester prior to the Norman conquest.

3. Chapter One further considers the suggestion of Dunlop (Dunlop 1912) that the guilds through their dominant positions, maintained restrictive guild cartel arrangements and were able to limit the numbers employed within particular trades. In the fifteenth century the problem of an abundance of labour in the capital was combated by the development of the principles of specialisation and detailed craft training (Thrupp 1963). Thrupp suggests, however, that little over half of the apprentices completed their seven year apprenticeship. Further, there is discussion of the decline in the seventeenth century brought about by the growth of the cotton industry and the resultant impact of industrialisation. Essential to the apprenticeship system was the deed of indenture, Chapter One, therefore, concludes with a discussion of the parish apprenticeship system with illustrations of indentures adopted over the past one hundred years.
4. The purpose of Chapter Two is to establish the distinctive nature of the apprenticeship system within its modern setting prior to contextualising, in chapters three and four, the historical developments of an educational system that became a necessary part of the training process.

5. Chapter Two begins by considering the stratified structure which existed within the modern apprenticeship system. It goes on to suggest that when the voluntary efforts of industry were not effective in reducing the skill shortages of the early 1960s, a major development took place when the Industrial Training Act enabled the establishment of Industrial Training Boards and allowed an element of compulsion to be placed on industry to provide training. Training periods for apprentices had been reduced to 3-4 years, but industry still complained about the structure of the apprenticeship system. So it was, that during a period of rising youth unemployment the Manpower Services Commission was established, radically altering the structure of vocational education.

6. It is indicated in Chapter Two that there was a positive move away from the indentured apprentice towards a non-indentured trainee structure. Encouraged by an agreement between the Construction Industry Training Board (CITB) and the MSC. This was again reinforced when, in conjunction with the Further Education Unit, the CITB re-aligned the training structure with those of the developing National Vocational
Qualification system. Such developments are then followed by a consideration of the process by which individuals reached the level of craftsperson and it is shown that within the terms of indenture there was the stipulation for the individual to undergo formalised training. This is confirmed by the Working Rule Agreements of the National Joint Council for the Building Industry. The Chapter is concluded by defining the term apprenticeship in the modern context and three distinct apprenticeship models are distinguish.

7. Chapter Three traces the evolution of vocational education from the eleventh to nineteenth-century emphasising the essential role it played in apprenticeship training. Although many of the organised guilds established schools for this very purpose, for the poorer working classes education was limited in the main, to the workshop. What is evident is that the various religious organisations were responsible for most of the educational developments relating to the lowest sections of the working class and among these developments there was a slow but increasing vocational element.

8. A central feature of technical education and training in England was the limitation of provision compared with that of France and Germany. Technical education in continental Europe was seen as a vital element in the reinforcement of economic growth and industrial stability. In England the predominant class structure prevented such developments from taking
place. Braudel (1983) suggests the Industrial Revolution had a significant limiting affect on the progress of technical education within England. England's main problem was that its educational reform did not stem from the 'national élite' and although, as Wiener (1985) argues, it played the central role in Britain's power, it was also responsible for its failures. Even the Great Exhibition of 1850, the high point of industrial achievement, failed to overcome this élitist culture. Twait (1882) writing just thirty years after the Exhibition, highlighted the apathetic indifference which existed regarding the provision of technical education. The lack of state technical education is central to my discussion, for it is a major factor in the demise of the apprenticeship system; a system that had no state origin.

9. Chapter Four continues the examination of technical vocational education with an analysis of the provision prior to the era of the New Vocationalism. Emphasis is placed on the importance of evening education which was a major source of further education in apprenticeship training. It is argued, however, that the most significant development this century was the establishment of the technical schools of the early 1920s, which provided for the first time a firm foundation for the academic aspect of apprenticeship training. This Chapter quantifies certain twentieth century educational trends and provides a detailed comparison of the numbers of apprentices and non-apprentices over the period.
1950 to 1968. An analysis is also made of the number of building apprentices from 1953 to 1992, enabling trends in apprenticeship decline to be clearly established.

10. The underlying suggestion of Chapter Four is that the socio-economic conditions after the Second World War resulted in the loss of wage differentials between adults and juveniles, presenting a further decline in apprenticeships. In the 1950s the nation faced a shift both in social and spending power amongst the working population. Crowther had shown that while the economic compulsion to leave school had diminished the economic attraction to do so had increased. It was also at this time that a modularised system of vocationalism was visualised, where the broader categories of occupation would be divided into individualised areas requiring specialisation and specific qualification.

11. Chapter Four further highlights the indifference of industry towards training. Even though it has been generally agreed that employers bear the major responsibility for training, the majority of industry has never felt the need to train on any significant scale. The literature (Cotgrove 1958, Carr 1958, More 1980, et al.,) points to evidence suggesting that the lack of co-operation between industry and education was mainly the fault of industry. Even the Industrial Training Council, formed in 1958 considered training to be the responsibility of the employer. The building industry in particular was considered not to be training enough
apprentices. No adequate response, however, was made. The chapter concludes with an examination of the development of the Further Education sector.

12. Chapter Five quantifies the situation regarding apprenticeships in the modern setting of the New Vocationalism. In the recession of the 1970s and 1980s apprenticeships were cut by half, training falling from 7% in 1974 to 4% in 84 (Hall 1990). Most individuals apprenticed in the early 1970s were found in industries in decline. Considerable debate followed James Callaghan’s Ruskin speech of 1977 in which it was suggested that the education system had failed industry. Brown and Ashton (1987) indicated the education sector was unable to counter the argument.

13. Thus in a climate of industrial and economic unrest there was a move towards interventionism. The MSC and its New Vocationalism was the result. The White Paper, Agenda for Action 1981 set a target for the replacement of the apprenticeship system by 1995. In 1983 with the introduction of YTS, a system was developed to provide vocational training for all unemployed 16 year olds but the serious reduction in the number of apprentices continued. My conclusion is that the MSC had no significant impact on the construction apprenticeship figures. I suggest, that while between the period 1976 and 1989 growth amongst the 16 to 18 year olds in full-time education was stable, within the
construction industry, apart from a short respite between 1979 and 1980, there was a continued decline in the number of construction apprentices. What was significant was the ratio of apprentices to those employed, which remained constant between 0.7 and 0.8.

14. A theme running through Chapter five is the important distinction to be drawn between trainees and apprentices. The figures would have us believe that while the bound apprenticeship system had all but disappeared, trainees were to be viewed as the "new apprentices". It becomes obvious that there was an agenda established between government and industry to replace the apprenticeship system (which they both considered outmoded) with a new form of trainee training which would develop a skills base through a modularised programme of vocational instruction. My thesis suggests that both the modern and the new trainee training system failed to nurture and sustain any effective system of vocational training. What had been missing was the government's will to provide for proper, structured, career apprenticeships that could be seen as educationally sound, morally workable and economically beneficial.
Chapter One

Establishing an identity for the term apprentice and the antecedence of the apprenticeship system

Introduction

The work ethic, its socio-economic, historical and psychological aspects are features that, together with industrial development and its associated vocational training, have intrigued and stimulated research for some considerable time. In the search for a better understanding of the vocational training methodology I have made a close observation of the construction craft apprenticeship system and its apparent decline. This work addresses the issue and attempts to formulate a rationale for the causal effects and in the overall context of mapping this decline I later attempt to distinguish the relevance of an apprenticeship structure in a modern vocational setting and to establish whether such a decline has any lasting effects within a modern industrial culture.

The craft apprenticeship system has very well founded historical roots, and to understand some of the reason for the changes that have taken place it is necessary to cover an element of this historical background. It is not my intention however, to elaborate extensively on the history of the English craft apprenticeship system as this subject has been adequately covered by more eminent sources elsewhere, for example Dunlop in "English apprenticeship and child labour". This first chapter attempts
to provide a definition for the term craft apprentice and traces the development of the apprenticeship system. In doing so it becomes necessary to consider the relevant historical aspects that help to clarify the craft apprenticeship as an important element of vocational training, enabling its place within a modern vocational training framework to be established.

Prior to providing a definition for the term craft apprentice and placing it within this modern context it may help if I consider the terminology and establish its derivation.

Defining the term 'apprentice' and 'craft'

Apprentice

A fourteenth century word coming from the Old French apprentis, of which the Middle French derivative was apprentiz. The Middle to Early French variation apprentis evolved into the modern French apprendre, meaning 'to learn'. And the form prentice can be found to occur in the late Middle English. These terms have their roots etymologically tied to the Latin and are contracted from the verb apprehendere 'to lay hold of'. Thus one could speculate that originally potential trainees were apprehended by the master to learn something. A truer meaning for the term would be 'to grasp with the mind'.
Craft

Craft is a term derived from the Old English 'craeft', and an original notion contained in the word was that of strength, (it was also the meaning of its relatives in other Germanic languages, such as the German or Swedish Kraft). This interpretation however, had largely died out by the sixteenth century, although, it had developed some other meanings which were not shared by its Germanic cognates; 'skill' and 'trade or profession'. The word gradually evolved into the Middle English 'creft', which by the seventeenth century was associated in the sense of 'ship' and the sailors craft or profession but how this developed is not certain. It did, however, retain this meaning in the sense of profession, skill or trade.

The term apprentice can therefore be defined as meaning "to learn, or grasp with the mind" and we see the development of the word craft coming to mean skill, trade or profession. It follows that a craft apprentice is one who learns or grasps hold of the perceptual and motor skills required to undertake a trade or profession.

The Encyclopædia Britanica (1970) however, provides the definition of apprentice as:

...the learning of an art trade or other calling by practical experience under the guidance of a master perhaps also with some classroom study. ...
And the Shorter Oxford English Dictionary (1964) also defines an apprentice as:

A learner of a craft; one who bound by a legal agreement to serve an employer for a period of years, with a view to learn some handcraft, trade, etc., in which the employer is reciprocally bound to instruct him.

(vol.1, pg.87)

It was this binding element which I discuss later, that distinguished the apprenticeship from other forms of vocational training. Essentially a contractual arrangement evolving from an important and powerful guild system, a system out of which the apprenticeship structure grew.

The development of the guilds

Placing an actual date on the formation of the guilds has proved difficult for the historians, as the records of that early period are somewhat obscure, although it is generally accepted that craft guilds gradually emerged at a local town level within England some time between the eleventh and twelfth century. Even so, the English guild system was not a new structure, for research on the guilds of Italy attempts to place the origin of their formation within the Roman administrative structure, with evidence suggesting that they had been drawn into this system in the fourth century mainly as a 'fiscal expedient', (Thrupp, 1963). The research also indicates that building, along with others, was known to have been among the most widely organised of the trades in Roman towns long before the fourth century.
It is possible to speculate therefore, that at the time of the Roman conquest of England the organisational structure of a guild system would have been brought over with the prevailing Roman administration system, as it is without doubt their own craftsmen operated within such a framework. The fact that a metal work guild (collegium) was established within Sussex, at Chichester, towards the end of the first century, confirms this thesis (Asa Briggs 1991). Asa Briggs goes on to suggest that the Romans would have established mints across Britain at various times and unpublished accounts from the Canal Society of Chichester indicate that the amount and type of Roman coinage found after dredging suggests the existence of just such a mint somewhere within the city. The army also placed a considerable demand on the need for pottery and several workshops were founded under military control during this period. New workshops soon followed but this time they were established without military supervision. It is also confirmed that merchants had a well organised guilds system, for England was certainly trading with France in the sixth and seventh century.

It is not surprising therefore, that Ballard’s work on the History of Chichester (1898) suggests some form of Merchant Guild may have been in operation within the City over a thousand years later, just prior to the Norman conquest of 1066. Even though there are no references to the guilds establishment, it is thought one based on a voluntary structure was in existence at this time. Without doubt, one did exist from at least the time of Henry I (1100), and later gained approval of the Crown in the
form of a legal Charter from King Stephen (1135), the earliest such Charter granted to the City. Ballard goes on to provide a translation of this Charter which in part states:

Stephen, King of England, to the Bishop of Chichester and the bailiffs, greeting. I ordain that my burgesses of Chichester well and honorably and quietly possess their customs and rights of Borough and Merchant Guild in the best and most honorable and quietest manner ......

(Ballard 1898, pg.18)

Although no date is ascribed to the Charter it has been assumed from other sources, it comes from 1135, the year in which King Stephen was placed on the throne and the Bishop of Chichester was known to be at court. The details contained in the Charter clearly indicated that the elements of municipal institution were obviously in existence in the form of this Merchant Guild, considered to be one of the oldest in the country; the records showing that older guilds only existed at Burford, Beverley, Leicester and Wilton.

A further two important Charters relating to trade and the guilds were granted to the City, this time by Henry II after his accession in 1154. The second of these, a year later, clarified the position as the first was considered too vague. In this second Charter, the King stated:

........ no one in the City of Chichester shall sell cloth by retail unless he be of the Merchant Guild ...........
Wherefore I will firmly ordain that they shall have and hold their guild with all the liberties and customs to it ........

(Ballard 1898, pg.20)
There must have been a considerable upsurge in the formation of guilds or at least their ratification at this time for Owens, (1992), indicates that a Charter was granted for Preston in 1179 by Henry II and considers that one may have been in existence as early as 1100. It has also been found that the wording on both the Preston and Southampton charter, is very similar to that of Chichester’s suggesting that the granting of Merchant Charters was becoming a common occurrence across the country.

Such evidence provides a definite indication of the strength and firm hold the guilds were developing or already possessed in towns and Cities across the nation during this period; and still hold today, within London at least, where the Livery companies play a very important role in the government of the City in respect of the election of its Lord Mayor and Sheriffs. This growing strength was not always consistent for there were times when the guilds were not in favour, as Thrupp indicates when she suggests that the guilds were banned in Norwich during 1256 as they were 'detrimental to the royal interest.

Approximately one hundred years later, some time near the middle of the reign of Edward III, changes took place as the true influence of the guilds as important economic contributors to the wealth of the nation was seen and a company of merchants called the Merchants of the Staple was formed in England, (Hay 1804, 274). These were very powerful autonomous organisations which were beyond the jurisdiction of the ordinary magistrates, only coming under the control of Staple Mayors and constables who were
elected on an annual basis by the Staple town, in which there were six mediators; two German, two Lombards and two Englishmen. The Lombards would possibly have been present because of their financial expertise, having well founded monetary and merchant guilds in the north of Italy, pre-dating those of England (van Werveke 1963).

The setting up of such a system lends support to the theory that the City of Chichester was itself a very important merchant centre and must have had a long and well established antecedent history of Merchant Guilds, for along with London, York, Canterbury, Winchester, Bristol and Exeter, Chichester was itself a Staple City. Together they formed a monopolistic Merchant organisation whose purpose was to gather together all the important surplus commodities of the Kingdom, of which wool, wool-felts, lead and tin were typical. These goods were then placed in regulated stores to which foreign merchants had access and who in turn exported them in return for bullion or other products. The significant factor here being that Chichester had a thriving wool staplers and tannery, and therefore would have developed a well established system of skills training, as tanning in particular required a very high level of skill, only attainable after a long period of training.

A further hundred and twenty years were to pass before the earliest dates of contracts in the form of indentures, established between the Corporation of the City of Chichester and
the City Companies, were to be recorded, the first such indenture being with the Weavers Guild, for which a date of 1479 has been attributed; (appendix 1.1 provides details of the guilds formed in the City between this date and 1698). The very existence of these skilled occupations suggests some form of organised training structure must have been well developed to allow the trade to prosper. Things had obviously improved within England, for it would appear belonging to a craft guild in the thirteenth and fourteenth century was fraught with problems, many in Europe were subjected to frequent attack and in certain instances banned (Hibbert 1963).

From the Patent Rolls of Henry VI in the mid-fifteenth century, it has been established that the Guild at Chichester had for some time been governed through the important structure of a master and four wardens, who were elected annually by the "brethren and sisters" of the guild; women having also been recorded as being associated with the guilds of blacksmiths, carpenters, coopers and other crafts across the country. This was particularly so after the national labour shortages of the fourteenth century, which, as Campbell indicates, were due to the Black Death of 1348 and the violent but short lived Peasants revolt of 1381 (Campbell 1945). The situation was so serious that it resulted in a statute of Labour being passed forbidding workers from leaving their employment and severe penalties being placed upon runaways. It was a statute that would be embodied within major legislation to come almost two hundred years later. Asa Briggs suggests the Black Death caused the destruction of between a third to a half
of the population, which at the time may have been in the order of only 4.75 million. By the end of the century it had been reduced to something like 2 million (Briggs 1991). In certain cases whole villages are known to have died, in others, land owners having lost all their working staff had no alternative but to request their estates be set out as parks, for they no longer had the staff to work the land. It was a situation that caused problems for apprentices, as the act passed in 1388 prevented any individual who had worked on the land until the age of 12 from leaving and taking up any other form employment, or apprenticeship.

It was also during the early part of the fourteenth century that England faced what was considered by some as the 'worst agrarian crisis since the Norman conquest'. Thus a second act passed in 1406 was even more restrictive in as much as no child was to serve an apprenticeship in any craft:

\[
\text{or other labour within any city or borough, except he[master] have land or rent to the value of twenty shillings by the year at least.}
\]

(Lipson 1929, pg.289)

Initially the membership of the guilds that had been established was on a voluntary basis and the Tanners and Cord wainers (leather and boot makers) guild of 1504 indicates that they were to have:

\[
\text{...by there Comayn eleccion, honest discreete Wardens...}
\]

(DLACC 1949, pg.22)
The guilds as Dunlop suggests (1912, pg. 28) and confirmed in the Descriptive List of the Archives of the City of Chichester (DLACC) were originally formed as associations, not only to secure trading positions but also for humanitarian and religious purposes, money from the guild being set aside for generally looking after the welfare of the individual members. In a number of cases the guild would provide alms houses for their needy members and it was also common practice for candles to be lit in the local Church or Cathedral, where the guild might have its own chancel. In the case of the Tanners and Cordwainers of 1504, members of the guild in Chichester were to keep:

a lyght afore oure blessydy lady Saynt Marye the Virgyn, Within the Cathedrall Church of Chichester yn the Subdenery for evermore.

(DLACC 1949, 22)

When the rules of a particular guild were broken, for example failure to attend a meeting, a payment had to be made, usually for the upkeep of the candle. In the above guild one pound of "polyn waxe" was the recognised fine. Ballard goes on to indicate that apart from this the main duties of the guild were also to organise and:

... generally to represent the trading body of the town.

(Ballard 1898, pg.20)

It is important at this point to establish that a distinction can be drawn between three types of guild; the merchant guild, the monastic guild and the craft guild. At which point in time the divergence between these three took place is not clear nor is it important for the purpose of this work, suffice to say that
occur it did and at some time around the late twelfth or early thirteenth century. What is clear is that there were associations between the guilds, but as Thrupp indicates the merchant guilds which did form an alliance, tended to look down upon what is referred to as the subordinate artisan guilds, (Thrupp, 1963).

Gradually over a period of time the position occupied by the trade guilds replaced by the craft guilds which did not share the same interest as the merchant guilds and by the fourteenth and fifteenth century these had become the dominant institutions. Within such craft guilds there evolved a distinct stratified structure of master, warden, liveryman, and master 'out of clothing'.

These last two terms warrant further explanation. The term livery derives from the medieval practice of the distribution of clothing, food and money to the servants of the Lord or Baron. Later this became confined to the 'livery' or clothing worn by the domestic staff of the particular household. The term then became applied to the costume worn by the freemen of the particular guilds which in turn distinguished their individual social status. 'Out of clothing' is interesting in that gaining the freedom to a guild did not, as of right, always lead to the wearing of the livery and obtaining the necessary voting powers. The new freeman had, in many cases, to wait until a vacancy occurred, at which point a payment would be made on election to the livery and they would be 'clothed', a practice still in
operation. The masters' shop would also have its own recognised structure of master, servant, journeyman, yeoman and apprentice.

Such structures were important for they also distinguish the rank of the freemen within this society. In the social system that prevailed the master would be considered, along with the merchants, as the highest ranking freeman without title, below that of the knight and esquire, although it was considered and in fact expected in the middle ages, for the freemen to rise to the rank of knight providing they could show they had wealth enough to purchase the position. The Yeoman was also free-born and could rise to the same position under similar condition but as Campbell indicates they were;

in the main an inarticulate group. They were better judges of sheep and seed corn than of words and fine phrases. (Campbell 1945)

The apprenticeship system was one way the freeman without skill or trade could gain a foothold in the social order and aspire to higher office. Similarly it was the only route for those not free-born but from the "peasantry" to gain the position of freemen and thus eventually be in a position to own land.

Essentially though, as was the case in Europe at the time, entry to the guild was only open to the free-born individual. In a culture that was at that time agrarian it would have been logical to adopt this route, to become a freeman and purchase a small section of farm land, and become a master in their own right.
The masters of the guilds, those skilled and practiced in a specific art or craft, who owned their workshop employing and training others, became the artisans and as such held a prominent position in society. Technically these artisans did not usually adopt the term guild, preferring instead to use the terms fraternity or brotherhood, because of its religious and benevolent roots.

Limiting the number of apprentices

The original rules of the guilds tended to be prescriptive and went on to indicate that no master was permitted to take on more apprentices, usually the son of freemen, than he could adequately train, as confirmed by Ballard when referring to the patent Rolls of Henry VI:

  to see that no brother had more than his allotted number of apprentices,

  (Ballard 1898, pg. 20)

There were obvious reasons for such actions, which appear more protectionist than restrictive, which, without doubt, they were, as it was important for the guilds to maintain the strong trading positions they held in towns that had populations which, until the revolution in the cotton industry, remained relatively low.

Lipson shows us that the craft guilds were against the growth of industrialised capitalism among their own members. They did not encourage ideas of progress and expansionism, but rather, required order and stability and it is clear they were against
rapid change. He provides an example from the Girdlers of 1435 who alleged:

that nowadays there is so great abundance of apprentices in the said craft, that many freemen of the craft (have) become water-bearers and labourers, and some of them [have] gone home again to their own country and gone to cart and plough and left this city for ever.

(Lipson, 1929)

It was a situation that would later reverse itself in the sixteenth century when there would be complaints about the general absconding of apprentices and the lack of time served apprentices taking up their right to become freemen, particularly within the London and Bristol area.

If one also considers that the fourteenth and fifteenth centuries were periods when the nation was in the grip of an economic recession it is possible to have a better understanding of the importance guilds placed on securing some form of cartel arrangement; the consequence of such action being to provide some level of economic security for the individual locality, (Thrupp 1963). In addition, too many trades following too few people was not good practice, nor did it make economic sense, for as Cunningham (1892) indicates, even in 1688, the combined population of England and Wales was only 5,500,520 and did not rise above 10,000,000 until 1811.

One means of trade control was, therefore, to limit the number of individuals entering the crafts. And, in the 15th century, within the craft trades, where the trainee was bound to a master for a given period, learning the "misterie" (mastery), usually lasted
anything from 7 - 13 years. There was also a restriction placed upon the number of apprentices which was strictly limited to between 1 and 4 depending upon not only the particular craft, but also those already working within that trade. In addition the quantity of apprentices taken on was also dependent upon the individual’s standing within the guild; if the position of upper warden was held, as in the London Founders, then four apprentices could be taken on, a past warden could hold three, a liveryman two and a master ‘out of the clothing’ could hold one or two.

An alternative approach adopted was to limit numbers to particular crafts on a 7 year basis, which obviously provides some indication of the average length of an indenture at this time, although, Lipson suggests initially there was no set period for the term of indenture, it being generally left to the discretion of the master. He goes on however, to indicate through the example of the Girdlers of York, how the lengthening of the apprenticeship period increased from four years in 1307 to seven in 1417 (Lipson, 1929).

The age at which apprentices were indentured also varied considerably, with the Worsted Weavers of Norwich not being allowed to take on apprentices below the age of fourteen, while a similar rule is thought to have also applied in London, where the Carpenters of the city commonly took on apprentices at eighteen or nineteen. An attempt was made by the London authorities to combat the problem in 1556 by allowing apprentices to be indentured at any age provided that they were not less than
The number of apprentices that any master could take on became a very controversial issue between the fifteenth and sixteenth centuries and two towns, York and Coventry in 1519 and 1524 respectively, removed all restrictions on numbers, a factor that obviously led to abuse amongst many guilds, although some were restrained in this approach; the Fishmongers of London, the Weavers of Hull and the London guild of Founders being typical.

In certain cases the journeymen would hold out against an unlimited number of apprentices being taken on but in one case highlighted by Lipson, it is indicated that at an inquiry into such a dispute in 1424 they lost the day and the masters won. It was obvious that the journey-men wanted to restrict apprenticeship numbers so that they might be better placed to gain employment and thus earn the capital to establish themselves as independent masters. He does go on to show, however, that in a number of cases, rules were gradually drawn up regarding specific ratios and that licences for taking on apprentices were being established by certain companies. In addition, an act passed in 1497 prevented worsted weavers from employing more than two apprentices at a time and the Statute of Apprentices passed in 1563 made it necessary for the clothing and tailoring industries, where three apprentices were employed, to have one journeyman as well (Lipson 1929).
The element of restraining numbers would again be legally determined in 1834 by means of the Chimney Sweep Act, which indicated that masters could not take on more than six apprentices at a time. The reasons for the implementation of this act were, however, very different, as I will indicate later.

Absconders and the failure to complete apprenticeships

The previous work record of a potential trainee was another factor a master had to consider, as they were not permitted to adopt an individual if there was any doubt about their previous work record. Any thought to have been absconders were returned by the local guild to their previous masters. This form of treatment to suspect apprentices continued until the 1850s, as indicated in the descriptive account from a master regarding his apprentice who absconded in 1827 (appendix 1.2). Like many of the rules and regulations of the time, this was another that proved difficult to enforce.

It is a factor that also brings into question the failure of apprentices to complete their indentures, which, in the sixteenth century, was a problem of some concern, for as Ben-Amos indicates, London had a 50 per cent failure or termination rate between the sixteenth and seventeenth century and, citing the London Carpenters company, he suggests that between 1540 and 1590 approximately 45 per cent did not complete their apprenticeship (Ben-Amos 1991).
I indicated earlier that there also existed the problem of those having completed their apprenticeships not taking up the right to become freemen, and in this respect Ben-Amos intimates that in centres such as Norwich and Bristol the figure was almost as high as 66 per cent. Making certain allowances, he goes on to suggest, that of the enrolled apprentices in these cities, 50 per cent were un-accounted for. The general theory is that many apprentices migrated elsewhere due to economic failure and impoverishment and that guild regulations were not such an influential factor. He does suggest, however, the length of service and the need in most cases to become journeymen was a factor that would have been taken into account. He goes on to show that in Bristol, in the mid-sixteenth century, only 20-21 per cent of apprentices took up freemanship and that by the beginning of the seventeenth century it was still only in the order of 25 per cent, rising by just another 10 per cent towards the middle of the century.

Ben-Amos carried out an extensive study on this problem as it related to the Bristol area between 1600 and 1630, in the process carrying out an analysis of the socio-occupational profile of a large sample. Social background he found, was not a major factor nor were geographical origins, suggesting instead there may have been a deliberate choice made to leave the area and migrate elsewhere.

Dunlop (1912), indicates a fixed fee was payable to become a freeman, although it is generally accepted that this was usually
paid by the master (Ben-Amos). It was not, in fact, this fee which caused financial problems for some, but the fact that additional payments were required in the form of large celebratory lunches and breakfasts for members of the guild.

Having gained their apprenticeship in the larger conurbations the other problem facing them was the cost of living and operating premises, of tools and equipment. Craftsmen obviously moved out to become independent tradesmen in the surrounding region but attempting to be independent in the large towns was becoming too competitive. Within the major seafaring towns as well, many were faced with the possibility of emigration to the new colonies of America and are thought to have adopted this option, particularly in Bristol as this was the main point of departure. Many masters having also embarked upon this journey along with skilled craftsmen rather than face the economic competition. Others, it is thought, may have just returned to where they originated and set up shop there, while some elected to go tramping and become journeyman.

From Freeman to Journeyman

I have already shown that it was impossible to sell cloth within the City of Chichester without being a member of the guild and it is documented that no one could practice the craft of Tanner and Cordwainer either, unless they were a guild member.
Such features and restrictions are evident from the histories of other regions where the majority of Cities and Towns had their own organisation of guilds, each holding a monopolistic trading position. If an individual wished to work or trade, then such guild membership was essential. Admission also conferred the important right upon the individual master to teach others, much in the way that the meister system of Germany operates today. But even as late as 1921 the rules of trade unions, such as the National Union of Gold Silver and Allied Trades, placed conditions on members in that "No member under 25 years of age shall teach or take an apprentice."

Membership of guilds and thus the right to become freemen could be obtained in one of three ways: the main and initially obvious method was by patrimony (the apprentice being introduced to the guild by his father), a system still practiced today, although the individual being introduced need not have been an apprentice and for which the title 'Freeman' is hereditary for both men and women; redemption (the payment of a large sum of money) as indicated by the indentures of Thomas Pelham in 1716-17 where the sum of £860 was paid, although in this case it is thought the payment was also to take account of a share in the masters business on the completion of the indenture (Rice, 1924).

Finally, there was the method that came to be the main route, the very well controlled trading mechanism of the apprenticeship. The common fee indicated in the records at Chichester for the
eighteenth century amounted to a few pounds and, in the exceptional case, a few pence. In appendix 1.3i - 1.3v I provide an example of a fathers entry to the Goldsmiths guild via the apprenticeship route and the fee paid and his sons entry to the same guild through the means of Patrimony.

Once the apprenticeship had been completed the master took the apprentice before the guild court and for a small fixed sum, usually paid for by the master, the freedom of the guild could be obtained and his or her name would be entered onto the rolls of freemen. A further appearance had to be made, this time before the local council on the next court day so that municipal freedom could be conferred upon them, thus providing the right and privilege to practice their craft, to trade in the town and own property. The fact that the local council were involved was very significant, in-as-much as it stems from a period when the municipal authorities began to recognise that by establishing specific codes and by-laws, they were able to become more instrumental in enforcing greater control over the guilds (Lipson, 1929, Thrupp 1963).

This form of municipal registration was seen as one way of controlling the number of apprentices and their length of service. Because it proved difficult to enforce such enrolment, in certain cases financial penalties were imposed both on the master and more often than not on the apprentice for non-registration.
Even having mastered his craft, it was still difficult for the apprentice to actually rise to the position of master and thus obtain the all important position of status, with the possibility of associated wealth, if he was not a member of the master’s family. One method often used was to marry into the family. If this was not possible when the time had been served, the apprentice, in many cases, had no option but to leave his employer and, more often than not, the area. The consequence of such action resulted in them turning to tramping and becoming journeymen.

In only a very few instances were these journeymen then able to establish a workshop in their own right, as in many other situations the cost was too great. Instead, as they moved from town to town, they were employed by a master usually on a daily basis. The word ‘journey’ comes from the Old French ‘journee’, which derives from the Late Latin ‘jornata’, a day’s work (Skeat 1910, Ayto 1990). Thus a journeyman was usually a qualified individual who undertake work on a daily basis.

In the sixteenth century, a proposal was put forward in London compelling journeymen to work for their master for a period of three years after completing the apprenticeship before being admitted to the freedom of the city, a practice that was common amongst the Carpenters and Paviours of London. In addition, no one was allowed to take on a new apprentice until three years had elapsed after the end of the old apprenticeship. Alternatively some guilds would not accept a former apprentice as a master
unless he had first served as a journeyman for three years. And later in the fifteenth, although more commonly in the seventeenth century, the requirement also included the making of a 'master-piece' that would be presented before the wardens (Dunlop, 1912). Having died out at one stage it has been re-vitalised and re-instituted in modern times by some of the remaining guilds.

The consequence for the journeyman in not becoming a master in his own right was the fact that he could not become a full member of his own craft guild. There is evidence however, that certain guilds would admit journeymen who had not served an apprenticeship in the particular trade of the guild;

    for a reasonable fine any honest person being a good workman, although he hath not been apprenticed to the same craft
    (Lipson 1924, pg292)

but, then, it was a condition of some guilds not to pass on to such journeyman all the secrets of the trade as they would to their own apprentices, an event re-occurring today as I indicate in chapter five.

By the sixteenth century, it was only the masters who could become members of a particular guild, and they, in turn, elected new members to their ranks from amongst their own (Hall and Miller 1975), a cyclical nepotistic-type process that formed a distinct class divide and a structure which could be viewed as containing the elements of the closed shop. This was a system that was, without doubt, the birth-place of the trade unionist
movement that came to emerge later. Although later, when the guilds suffered a serious decline in standing, the door was re-opened to patrimony to provide new life and much needed finances, especially among the poorer of the guilds, for even here there was a division of rich and poor.

**Dishonourable trades and rough workshops**

The nineteenth century became a period that saw a dramatic change in the employment of individuals into various trades, for which they had been neither trained or apprenticed. It was a system typified by the example of William Lovet, who, although apprenticed as a rope maker sought employment as a cabinet maker when he arrived in London in 1821. He eventually gained a position by winning the men of the workshop over at a shop floor meeting by means of drink and persuasive talk, and in a similar fashion was able to pick up his skills by buying drinks for those who taught him. It is ironic that later the Cabinet-Makers Society, (of which he actually became president), shut the door to this method of entry to the trade and insisted that only those apprenticed as cabinet makers could carry on the craft (Thompson 1991).

It was a factor that obviously stems from the considerable influx of what came to be known as the dishonourable trades and rough or garret workshops. Here un-apprenticed workers or those out of their training but without the means, would produce and sell
goods that were cheap and of low quality. This was a feature that came about as one result of the repeal of the Statute of Artificers in 1814.

There was little distinction at this time between the honourable and dishonourable trades, as during the eighteenth century there was a considerable demand for quality items that could only be produced by the skilled craftsmen in shops where they could afford the materials seldom, if ever, to be found in the garret workshops producing the goods required by the working class. And, while there was reasonable employment, this situation was not a problem; for as the wages of the dishonourable men were determined by competition, if such competition was marginal and the economic structure sound, then both were able to co-exist. But this was not to be, for as Thompson indicates, there was a serious deterioration in both the status and, more importantly, the living standards over the next thirty years.

An expansion of the dishonourable trades took place, many garret masters employed and "apprenticed" their own families to make shoddy goods and those unemployed would try to scrape together materials to make items to hawk on the streets. Thompson continues to give several descriptive accounts of the situation prevailing at that time and there are a number of complex reasons, all interrelated, why such turbulent changes, for turbulent they were, came about. These included changes within the cotton industry, unemployment, the rise of trade unionism and
war, to name a few, but such events are outside the scope of this chapter; similar events, however, were to emerge again and have an influence in the twentieth century. The one overriding factor at this time which did bring about changes altering the whole fabric and structure of society in the process and is important in terms of apprenticeships, was that of industrialisation. The whole of Europe was in a state of readiness for industrialisation. Although it could have taken place in any one of a number of nations, it occurred and flourished, as we know, in England.

Industrialisation

i The Statute of Artificers

Prior to the industrial revolution, England had at least two hundred years of fairly continuous economic growth and development (Hobsbawm, 1990) and it is now well established in the historical literature, that almost all trades and manufacturers in England by the end of the sixteenth century were under the powerful control of the various guilds, which had a well established central trade position of national importance.

This had provided the country with the base it required to move forward. The status of this position was confirmed in the fifth year of Queen Elizabeth's reign when the Statute of Artificers (craftsmen) was passed (1563). Known as 'Betty's law' it was one
that made apprenticeships, (which, by 1450 was a system of training that had been adopted by most guilds and guild towns), a necessary requisite for all those wishing to follow a craft or trade, thus making this form of training a compulsory element of belonging to that craft. According to Cunningham it was 'the most monumental work of the Elizabethan age', as it constituted 'a great system for controlling both the employed and the unemployed'. The legislation was so well constructed it remained in force for more than two hundred years.

The statute actually defined those to whom it applied and who might be forced to work;

those who neither had lands of the annual value of forty shillings, nor who had ten pounds' worth of personal property, and who were not retained in the household of any noble or gentleman, and who were not tenants of a farm holding, who also were unmarried and of less than thirty years of age must accept offers of work at the trade in which they had been brought up. If not otherwise employed they were to serve in husbandry, and all persons up to the age of sixty were liable to be compelled to labour at tillage;

(Cunningham 1892, pg 40)

While this was very similar to the statute of Labour passed in 1349, it was an act that contained very important apprenticeship clauses. Amongst other things, already mentioned, it stipulated that anyone with 'half a plough-land in tillage' might take an individual as an apprentice until they reached the age of twenty one. It is interesting to note that, after the civil war, Cromwell allowed demobilised soldiers to take up land and enter protected trades without any form of apprenticeship (Wilson, 1965).
The Act was not one in favour of social justice but more of a limiting Act, in-as-much as it caused, yet again, like the guild membership election system, a great deal of social division by providing skill rights to an elite few who already possessed them or who could purchase them. For example, those in industries which served agriculture, (wheelwrights, smiths and the like), could take on any apprentices they could find. Artisans in corporate towns, on the other hand, could only take the sons of freemen, who were not drawn from the land. Market towns were under similar but slightly more restrictive conditions;

merchants or shopkeepers in corporate towns might take the sons of forty-shilling freeholders, but in market towns they were restricted to the sons of sixty shilling freeholders.  

(Cunningham 1892, pp.41-42)

It was to be a further two hundred and fifty years before the Act was repealed.

ii The growth of the cotton industry and decline of the apprenticeship system

There was, however, an exception to this condition, as Mathias indicates (1989). The nation was at the dawn of a new era of change and the emerging cotton industry of the seventeenth century was one for which no guild or apprenticeship system had been established, for it was founded after the Act had been passed. It had been accepted by the wealthy industrialists therefore, in such cases, the Statute could not be held to apply, resulting in its escape from the grip the guilds had over the employment and training of its necessary labour force.
Such industries and trades that emerged after the Act had been passed were outside this labour law, which only applied to those in existence at its passing. Known as incorporated trades, these nascent industries did much to break up the apprenticeship system. Although it was, as Thompson suggests, not the cotton-mill which caused the change but the loom. Placed in every available location within home and barn, it attracted immigrant workers in their thousands. Towns across the north of England doubled in size.

As demand for cotton outgrew this cottage industry, the spinning mill system, brought about by the introduction of Arkwright's cotton mill, rapidly took its place, with the largest in 1816 employing 1,500 people. An expansion that would, without doubt, have been made up from the importation of the poor from the new workhouses that were springing up around the country, it being the policy in the early days of the mills to select large numbers of pauper children for this work. Arkwright's own mill had, in a 46 year period, more than doubled in size from 300 employees to 727 by 1816 (Mathias 1989) and is indeed recorded as one of those using poor from the villages of Derbyshire (Rose 1989).

The hand weaving industry, of which Mathias suggests there were 250,000 using hand looms, only had a further nine years before it too underwent similar changes. But, as it went, so too went the family traditions of solidarity. And, as Thompson points out, by 1750 the Manchester weavers already had well established trade societies and, according to Hobsbawm, it is possibly here
in Manchester, that we can see the foundation of the Industrial revolution.

Owing to the fact that the new industry had its roots firmly in this type of trade system, the societies within it tried to maintain the rule that only the children or relatives of the adult spinners could be trained in the skill, thus seeking to maintain, as Mathias suggests, recruitment, discipline and earnings, and particularly status largely within a family grouping. Although Thompson implies that, in fact, the workers were reluctant to send their own children into the mill, preferring instead to have pauper children employed in their place. One reason for this could have been to avoid their own having to suffer the appalling conditions. Mathias goes on to suggest, however, that this kinship system broke up with the advancement of technology, indicating that the automatic mules of 1824 increased demand for workers, requiring at least one adult and nine children compared to the two adults that had been used with the old equipment.

It is from such beginnings of the the fifteenth and sixteenth century when trade began to prosper that we can see the emergence of a system of industrialised capitalism that, although requiring a much greater workforce, would ultimately result in a further reason for the decline of the craft apprenticeships for all but a few specialised trades.
The end of a compulsory apprenticeship system

By the eighteenth century the apprenticeship system was, in fact, well into decline. For where, in the periods following the fifteenth century, capitalisation could move into industry, it did. Such changes in the industrial base of the nation also brought with it a considerable and growing dislike from the new industrialists of the restrictive legislation, typical of which was the statute of Artificers, which, as indicated earlier, made it illegal to engage in any craft or manual occupation without having served an apprenticeship, but which, because of the objections was never enforced to its fullest extent, more often than not being broken than kept (Dean 1965).

A big Gloucester master manufacturer asserted in 1803 that out of 158 weavers employed by him only twenty-one had served a regular apprenticeship, whilst not one of his cloth workers had been apprenticed..........

...... In Yorkshire only about one in twenty of the men had been regularly apprenticed.

(Hammond 1979, pg.135)

Even the judiciary did not uphold the act, particularly after the troubles caused by the political activities of the apprentices in London. They based their objections on the grounds that it could not apply to trades that were not in existence at the time of its enactment. This strategy caused;

many absurd anomalies and inconsistencies e.g. that a coach maker could not make his own wheels but must buy them from a wheel-wright; while the latter might make both wheels and coaches because coachmaking was not a trade when in England the Act of Elizabeth was passed.

(Encyclopaedia Britannica 1890 vol.ii, pp212-214)
The economist Adam Smith, when writing his book *The Wealth of Nations* in 1776, also joined the debate, calling for the breaking down of the exclusive privileges of corporations and the repeal of the statute, both of which he considered as encroachments on natural liberty.

Even set against considerable objections on the part of the guilds and a national petition of 60,000 names requiring a strengthening of apprenticeship regulations, in 1814 the statutes repeal took place and considerable changes followed, allowing the individual to practice in any craft without the need to have followed an apprenticeship.

Thus, in effect, in one action, it brought to an end a compulsory system. There was considerable reaction to this move from the guilds and one might have expected this kind of response in trying to protect the apprenticeship system. The importance placed upon it is evident when one considers the actual views of a typical craftsman, George Sturt, when he published a semi-autobiographical account in 1923 of the family wheelwrights' shop at Farnham Hampshire, in which he indicates that, at least within his shop, an apprentice:

> after a year or two, might be equal to making and painting a wheelbarrow. But it was a painful process with them learning the whole trade. Seven years was thought not too long.  
*(Sturt 1923, pg. 19)*
The County Records of West Sussex show that this length of apprenticeship was not inconsiderable, as Luke Hewett of Stoughton West Sussex was apprenticed as a wheelwright to Thomas Outon of West Dean (West Sussex) for eight years.

The view of George Stuart however, was one that was in direct contradiction with the philosophy put forward by Dr Adam Smith and his contemporaries who disapproved of apprenticeships and considered;

> Long apprenticeship are altogether unnecessary. The arts, which are much superior to common trades, such as those of making clocks and watches, contain no mystery as to require a long course of instruction. ....... to explain to any young man, in the completest manner, how to apply the instruments and how to construct the machines, cannot well require more than a few lessons of a few weeks: perhaps those of a few days might be sufficient. In the common mechanic trades, those of a few days might certainly be sufficient.

(Adam Smith vol.i, p137. 6th.ed. 1961)

Such views and actions when combined with the mechanisation of the industries, resulted in the gradual loss of craft guild control and power over the apprenticeship (Dunlop, 1912), which as a result became marginalised as-much as they were confined to trades and professions that contained a high skill element requiring essential training and practice. While in the industrialised setting, apprenticeships were denigrated to a form in which many industries and trades obtained a very simple supply of cheap labour in large quantities by the mass employment of young individuals into a factory system where instruction was given in specific task skills which, being confined to an individual industrial setting, were of no value outside it. This
decline of the guilds in the face of the new capitalist industrialisation thus ensured that the apprenticeship system would never again have the central position of national importance it once had.

The Parish apprentice and contracts of indenture

i  The Parish apprentice

The term "apprentice" as Dunlop (1912) indicates, is first mentioned in England in 1261 in the ordinances of the London Lorimers, (it also confirms that the term of indenture was for seven years). She goes on to show that later in 1300 there was an Act of the Common Council of the City of London which dealt with enrolment of apprentices.

In a number of cases it was the town that supported apprentices when the various guilds for obvious reasons did not, although the term "support", in many instances, is inappropriate. As these so-called apprentices tended to be children from the parish workhouse, this lead to the term "parish" or "pauper" apprentice.

These children were sold, "farmed out" or apprenticed, in some cases on a massive scale, to private employers as a means of disposing of them, and I use the term unreservedly. And it was not uncommon, as Land indicates when writing about the Bromsgrove Union Workhouse, for adverts to be placed in local
newspapers notifying the availability of the parish pauper children for apprenticeship when the children where old enough for full time work (Land 1990). This would appear to have been accepted as normal practice, for it is also confirmed by Rose (Rose 1989) who cites the Daily Advertiser as being used by the wardens of St.Clement Danes and the Wheelers Manchester Chronicle displaying advertisements relating to boys and girls between 9 - 13 years of age requiring places as servants and apprentices.

Such arrangements were seen as a means of releasing the burden placed upon the parish, as Longmate indicates when he quotes from a Poor Law official:

A parish apprentice is regarded as a defenceless child, deserted by its natural protector and whose legal Guardian, the parish, is only anxious to remove the burden of its maintenance, at the least possible cost.....

(Longmate ,29)

Longmate goes on to indicate that local rate payers were, in the eighteenth century, required to take on an apprentice from the parish for a period of one year. In return, they were paid ten pounds. Failure to comply with such a request met with a ten pound fine, a practice that was later outlawed by an Act of Parliament in 1834.

Many of these parish workhouses were themselves appalling places as shown up by an investigation carried out by Jonas Hanway in 1763 (Strange,1982) when he found that in one institution 82% of the children (64 out of 78), died. In another, this figure had increased to 89% (16 out of 18) and, in a further case, not one
child survived over a period of fourteen years. It appears that such places were not appropriate for children and they themselves may have welcomed being "apprenticed out" as a release from the deprivation.

In this respect, the Bromsgrove workhouse would appear to be more caring in that potential employers were interviewed by the Guardians and if deemed acceptable, the child was placed with the master for a trial period of one month, at the end of which all three parties; Guardians, Master and child, met to discuss the possibility of an apprenticeship, which in such cases were usually for a period of four to six years. Tables 1.1 and 1.2 provide an indication of the number and type of apprenticeships served by parish apprentices.

Within the Bromsgrove scheme a number of varying trades and professions were covered including; gun lock maker, engraver, fish hook maker, needle maker, bricklayer, stirrup iron maker and basket maker. Land goes on to recount that an Ann Warman aged twelve was apprenticed as a painter and glazier, while a Nicholas Tilt, in 1841, was apprenticed as a hairdresser – as he was;

\[
\text{a weakly boy and not fit for laborious occupation} \\
(\text{Land 1990, pg 61})
\]

Within other workhouses the children were not so fortunate, as a number of such children were sold off and apprenticed into the service of chimney sweeps to become "climbing boys". Girls, however, were not exempt from this profession, nor was age a
particular barrier. For as Strange indicates (Strange 1982) a climbing boy, Thomas Allen, is recorded as being articulated at 4.5 years. The apprenticing of pauper children was carried out on a very extensive scale, as Rose suggests (Rose 1989) in London alone some 2,794 children were dealt with in this way over an eleven year period from 1767 and that for the period 1802 to 1811, this figure had risen to 5,815, an average of 646 children a year compared to 254 previously.

In the first years of the cotton boom it was not uncommon for blocks of 50 or more children at a time to be apprenticed to one mill owner, the suggestion being that it was cheaper to house them, 100 at a time in one unit rather than to provide cottages for families.

Under the acts of 1597 and 1601, local justices of the parish were instructed to nominate up to four freemen who would have the responsibility for poor law administration, which included the apprenticing of orphans and the children of the poor to suitable masters. The guardians of all these workhouses tried to show that by apprenticing children in this way they were in fact benefiting not only the masters, but also the rate payers and the children themselves. Such masters were not always men as I have shown and as Strange indicates, when she describes the case of Anne Wilson, a master sweep whose apprentice of nine years of age died, as so many did, from suffocation whilst in a hot flue (Strange 1982). A number were also burnt to death and a great many boys suffered a very brutal form of cancer.
The nineteenth century, when such atrocities were taking place, was a period when the misuse of child labour was at its worst. At a time when the humanitarians were calling out for the abolition of slavery, the climbing children were themselves slaves, locked into an apprenticeship system that ensured they were bound to a master until their time had been served, when those that survived had little to offer on completion but the skill of climbing. In many such cases these children were initially sold for a few shillings to the master sweep by their parents without any form of contract having been established. A situation later overcome by the passing of the Chimney Sweep Act of 1834, which indicated that boys (or girls) must express themselves as willing to be apprenticed by appearing before a justice of the peace for approval of their indentures, such apprenticeship being signified by the wearing of a large and obligatory brass cap badge.

ii The contract of indenture

Emerging from the craft trades of the middle ages was an important feature, which, until recently, distinguished an apprentice from the unskilled worker; that of the written compact or indenture, a term that owes its antecedence to a form of contract consisting of two identical documents indented, cut, with a jagged edge along matching lines such that each partner could retain a copy which could be rejoined to prove authenticity at any later date. Initially a private arrangement between the master and the guardian of the apprentice, the administration was
later to be taken over by the town or parish, in-as-much as these
agreements were to be registered with them. In "The Rules for
The Conduct of Life" a small book issued to freemen by the
Goldsmiths of London "for the use of such freemen of London as
take apprentices" it is stated:

Masters should inroll their apprentices at the Chamberlain’s
Office within twelve months from the date of binding, as
otherwise the apprentice can after then - or at any time
during his time of service, sue out his indentures and be
absolutely discharged from his master. If the apprentice
should refuse to go to the Chamberlain’s Office to be
inrolled, the Chamberlain if applied to, will summon him to
appear before him; and if he does not appear upon such
summons, or if he should appear and not show sufficient cause
why he ought not to be enrolled, the Chamberlain will make
such an entry in the books of his office as will bar the
apprentice from discharging himself.

(pp 39-40)

The contract bound all parties to very specific fixed terms and
conditions and having their roots in the early religious role
adopted by the guilds they consequently also related to the moral
conduct and behaviour of the individual, a feature that was
further confirmed in 1802 with the passing of the act on the
Health and Morals of Apprentices and continually confirmed in the
indentures of that period as indicated by the following example;

.... he shall not commit fornication nor contract matrimony
within the said Term shall not play at Cards or Dice Tables
or any other unlawful Games whereby his said Master may have
any loss ........ He shall not haunt Taverns or Playhouses

(The Indenture of William Margetson of Norfolk 1858)

Even in the 1960s, a clause on an indenture contained a
statement to the effect, that no apprentice should be on the
street after the hours of darkness.
The apprentice was also bound to work for a fixed period of time, usually as indicated above seven years or longer. A period which in 1340 was an established rule in London and one that gradually became law by the mid-sixteenth century (Leeson 1979). It was also expected that over this period the apprentice would work for very low remuneration which in modern times was usually based upon a portion of the skilled working rate which increased during the period of training, with the employer agreeing to provide instruction and occupational practice leading to the acquisition of a recognised qualification as a skilled craftsman (OECD 1979). Although, in a number of cases throughout history such provisional requirements placed upon the employer tended to be neglected. The greater number of employers, especially those in the industrial sector neither wanted to, nor tried to, undertake the training.

It was a factor which gradually led to the academic and training element being undertaken in technical institutions. The Factories Act of 1802 and later 1833 which tried to enforce factory owners to provide schooling and limit hours were an instrumental influence in this respect, also in the process braking down the prevailing kinship system.

In general however, the employee was exploited as cheap labour, Mathias (1989) suggesting that by 1820 there were 110,000 operatives working in the spinning mills. Thompson (1991) provides an indication of a Manchester cotton spinner in 1818 earning in 1818 £2 3s 4d per week, but he qualifies this by
indicating that over half the payment could be lost by various outpayments including the wages of up to three child workers, who were employed directly by the spinner.

In contrast he shows that by 1825, a "superior journeyman" in Staffordshire could be earning £3.00 per week (Thompson 1991). This can be compared with apprenticeship documents held in the West Sussex Records Office (WSRO), which indicate a William Margetson being apprenticed as a Collar and Harness maker in 1858 for a period of seven years being paid two shillings per week for the first year and increasing by one shilling each year until the seventh, when he was paid eight (appendix 1.4).

This same practice was still in operation seventeen years later when in 1875 James Knight was accepted as an indentured apprentice, provided he followed a triplex scheme of crafts; plumbing, painting and glazing. During his apprenticeship he was paid one shilling per week in the first year, two shillings and sixpence in the second, five shillings per week for the third year and eight shillings for the fourth and fifth year. And this for a ten hour day throughout the whole term, with deductions made for absence through sickness. It may appear to have been a long working week for such little remuneration but in 1899 Frederick Margetson, William's brother, worked a fifty six and a half hour week, during the three year term of his indenture (appendicies 1.5 and 1.6).
Contained in the same records is a letter from James Knight's master making a formal offer of employment at the end of his term:

firstly as a skilled plumber, but generally as a three branch hand (plumber, painter and glazier) and I am agreeable and hereby promise to pay sixpence halfpenny for all hours worked subject to the rules of the shop...

This offer was made in 1886 and assuming James Knight still worked a ten hour day then he would have gained £1 7s 1d (£1.29). This was well below that of the 'superior journeyman' of Staffordshire and the cotton workers of Manchester. Yet it was some sixty years further on.

The state, as Hall and Miller indicate, has always recognised and accepted the apprenticeship indenture as a binding agreement (Hall and Miller 1975). So much so that in 1710 Queen Anne imposed a stamp duty upon indentures. A rate which amounted to:

six Pence for every twenty shillings, for every sum of fifty pounds or under, and the Duty Rate or Sum of one Shilling, of every twenty Shillings of all and every sum and sums amounting to more than fifty pounds

(Rice 1924, vol.xxviii)

And all indentures;

which shall, within or during the said Term of five Years, be entered into, executed or signed in any part of Great Britain..

(Rice 1924, vol.xxviii)

after this date, were sent to London. Regional centres acted as collecting points where the document was recorded, together with the fees paid, before forwarding within specific time limits.
after signing, a time limit that was, however, flexible in taking account of the apprenticeships geographic location. Within West Sussex, Chichester and Lewis were two such collecting regions, as confirmed by the addition in the apprenticeship record book of the initials d.p.c. for Chichester and d.p.l. for Lewis.

Much later a report produced by the Minister of Labour in 1925-26 confirmed that the relationship embedded in the apprenticeship system was formed on a contractual basis. And as Liepmann suggested (1960,14), this contract did not just exist between two parties. She implies that as the trainee would eventually gain entry into a skilled occupation, an extra party, the trade unions, were involved, although they would not necessarily be signatories to it. Such a view is also supported by Haxby, who continues by suggesting that the trade unions:

try to define and defend levels of skill, and act in partnership with Joint Apprenticeship Boards, which recommend the content and length of training,

(Haxby 1989 pg. 167)

Liepmann does go on, however, to show that as a result of the need for apprenticeships to be registered, the compact was in fact a quadripartite deed (Liepmann 1960) involving a representative of the Local Joint Apprenticeship committee as well as the master, apprentice and guardian, as indicated in appendix 1.8.

Within the United Kingdom, however, there never has been, any mandatory framework established for apprenticeships. Neither has
there been any legislation which made it obligatory for an employer to provide any form of systematic training or associated vocational education (Parkes 1979) a fact that appears to contradict the basic principals of the training bond established between trainer and trainee, and founded in the indenture.

In this instance however Parkes is placing the emphasis upon the lack of a national legal framework endorsed by the state together with the lack of any single administrative body that would have responsibility for it, a fact supported by Haxby (1989,167).

This is evident by the lack of any government body to collect or even hold statistical information on apprentices until the establishment of the Industrial Training Boards under the 1964 Act. Up until that time, it was government policy that the responsibility for industrial training rested solely with employers.

While technically, both Parkes and Haxby are correct, what they fail to mention is that a very well established training system, as I indicate later, was, in fact, in place and insisted upon, at least within the construction industry. In addition The Education Act of 1944 also stimulated the provision of further education for apprentices, the post-war years having seen an increase in the technical colleges providing day-release courses to trainees in employment.
In spite of this, the academic literature tends to suggest that the 'validity' of the apprenticeship system in the U.K. has always been based upon the completion of the 'specified term' of the contract and not on the instruction given. On the other hand, the documents of the industry lead bodies, (within the construction industry it is the National Joint Council for the Building Industry (NJCBI)), provide a very different impression and suggest, without any doubt, both training and time serving were very much linked, as I indicate later.

In certain industries for example the electrical contracting industry, this time serving was being replaced by a staged system of apprenticeship which had recognised standards.

I would, however, agree with both Parkes and Haxby that this country did not have, (although in my opinion, it should have had), an organised system of vocational education that also embraced industry and commerce and that should have been bound within a legal framework encompassing both education and training.

Thus at this stage, it is possible to establish that an apprentice was one bound to a master, by contract of indenture for a specified period and for a specified return - to learn the mystery of the trade. But this was to change.
### Table 1.1
Details of Bound Parish Apprentices

<table>
<thead>
<tr>
<th>Details</th>
<th>male</th>
<th>female</th>
<th>Total</th>
<th>Aged below 8</th>
<th>Aged between 8 and 11</th>
<th>Aged between 11 and 12</th>
<th>Aged between 12 and 14</th>
<th>Aged between 14 and 18</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of apprentices from 1802 - 1811</td>
<td>3446</td>
<td>2369</td>
<td>5815</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3749</td>
</tr>
<tr>
<td>Of the above bound to Trades, Watemen</td>
<td></td>
<td></td>
<td></td>
<td>2428</td>
<td>1361</td>
<td>3789</td>
<td>15</td>
<td>493</td>
<td>483</td>
</tr>
<tr>
<td>the sea service and to households</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of this group, bound to the sea service,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watermen, Lightermen and Fishermen</td>
<td></td>
<td></td>
<td></td>
<td>484</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household employment</td>
<td></td>
<td></td>
<td></td>
<td>528</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Various trades and professions</td>
<td></td>
<td></td>
<td></td>
<td>2772</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Those remaining</td>
<td>1018</td>
<td>1008</td>
<td>2026</td>
<td>58</td>
<td>1008</td>
<td>316</td>
<td>435</td>
<td>207</td>
<td>2024</td>
</tr>
<tr>
<td>bound to persons in the country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>note: 2 children not accounted for</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abstracted from the report of:
The Committee on Parish Apprentices 19th May 1815

Totals: 73 1501 799 2091 1309 missing 42

Note: The survey was conducted amongst 50 parishes made up from:
17 without the walls of London
10 within the City and Liberty of Westminster
and 23 in Middlesex and Surrey
Table 1.2

General classification of bound parish apprentices
By specific Trade

<table>
<thead>
<tr>
<th>Trade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now serving indentures</td>
<td>644</td>
</tr>
<tr>
<td>Served their time now in same employ</td>
<td>108</td>
</tr>
<tr>
<td>served and settled elsewhere</td>
<td>99</td>
</tr>
<tr>
<td>Dead</td>
<td>80</td>
</tr>
<tr>
<td>Enlisted in the Army or Navy</td>
<td>86</td>
</tr>
<tr>
<td>Quitted service (mainly ran away)</td>
<td>166</td>
</tr>
<tr>
<td>Not bound to person mentioned in</td>
<td></td>
</tr>
<tr>
<td>the Return kept by the company of</td>
<td></td>
</tr>
<tr>
<td>Parish Clerks</td>
<td>58</td>
</tr>
<tr>
<td>Sent back to their friends</td>
<td>57</td>
</tr>
<tr>
<td>Transferred to tradesmen in</td>
<td></td>
</tr>
<tr>
<td>different parts of the Kingdom</td>
<td>246</td>
</tr>
<tr>
<td>Incapable of service</td>
<td>18</td>
</tr>
<tr>
<td>Not accounted for or mentioned</td>
<td>5</td>
</tr>
<tr>
<td>In Parish workhouse</td>
<td>26</td>
</tr>
<tr>
<td>Not satisfactorily or intelligibly</td>
<td></td>
</tr>
<tr>
<td>accounted for by the person to whom</td>
<td></td>
</tr>
<tr>
<td>the were bound, or by the Overseers</td>
<td></td>
</tr>
<tr>
<td>where the masters have become</td>
<td></td>
</tr>
<tr>
<td>bankrupts</td>
<td>433</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>2026</strong></td>
</tr>
</tbody>
</table>

Note: The above spans a ten year period between 1802 and 1811 for those parish apprentices bound to a particular trade

Abstracted from; The Committee on Parish Apprentices 19th May 1815
Chapter Two

Establishing an identity for the term apprentice within a modern context

A hierarchical apprenticeship system

The apprenticeship system was initially one form of long-term, specific job related skills training that held an élite position in the 'labour aristocracy' (Watson 1987) as it was a means by which the working class could gain an education. And until the Factories Acts brought in the requirement of providing education for factory workers, it was, on a national scale at least, the only means of securing an education for this group. It was an important system non-the-less that also had the effect of setting them aside from their contemporaries. Thompson, quoting Mayhew, indicates that they, the artisans;

.... are sufficiently educated and thoughtful to have a sense of importance in the state....... The unskilled labourers are a different class of people.

(Thompson 1991, pg266)

In describing the labourers in this way, Mayhew is indicating very clearly that even within that group making up the lower social stratum, the plebeian, there existed the distinction of a working class structure that had its own very well defined boundaries. And it is true, there have always been divisions within every aspect of society, the eighteenth and nineteenth centuries were no exception. Indeed, the working class itself was very much a divided society.
Such divisions being clearly visible in the apprentice system where there prevailed a similarly distinct social status order, a feature that continued until recently. For embedded within this structure there existed a hidden culture which determined the worth of the apprentice in two ways. First, by the specific occupational type of apprenticeship, which in the construction industry places painters at the lower end of this hierarchical stratification structure, while carpenters and joiners are positioned closer to the top, (even within the wood trades there is a rank order of joiner, carpenter, cabinet maker). Secondly and possibly more importantly, within the same apprenticeship group a further, to some extent more élitist structure existed in which the emphasis was placed upon where this time serving had been undertaken. For example, within the north of England, engineering apprentices having served their time with what was then BSA (British Small Arms) were ranked higher in the engineering world than their counterparts, as were those without doubt from the workshops of the esteemed Rolls Royce, which held its own élitist position. An engineering apprenticeship with Rolls Royce, for which there was a high academic entry requirement, was held as the national pinnacle of this apprenticeship order, and, within the garage system, in which I worked as a young man, I observed that a time served Rolls Royce apprentice was always paid the highest and would expect to have exclusivity over high grade work.
The introduction of an Industrial Training Act

The apprenticeship system of the 1960s and on through the 1970s aimed at providing a highly developed craft skills training, but once again it was only for a select minority of the workforce, the majority of whom were trained, as it transpired, in industries which declined rapidly from 1973 onwards. By 1979 it was clear that within the manufacturing and industrial sector in general, this decline was to be a permanent factor (Haxby, 1989) as exemplified by the continued recession a decade later. When it became clear that the voluntary efforts of employers were not meeting the needs in terms of reducing the national skills shortages that prevailed in the early 60’s, the government intervened in a positive way by introducing the Industrial Training Act. An Act responsible for the setting up of 26 Training Boards to effectively re-structure, co-ordinate and in general look after the training needs of specific industry sectors; in short to do what industry had failed to do and has always failed to do, at least at a national level. Even in 1983 Ian Strath the assistant education officer for Sheffield, writing in the Coombe Lodge report on engineering training, stated;

the success of the scheme depends upon maintaining the periods of time spent within college. The time spent in employers’ premises allows development of skills and gives practical experience, but employers show a marked reluctance to be involved in the training and teaching process.

(Strath 1983, pg 268)
It was still an industry, non-the-less, that persisted in a blind belief in radical reforms and demands for a skilled workforce without ever saying what it actually wanted, or just as importantly, how it could be achieved. One might question, however, whether the burden of responsibility for establishing a national framework of training should be left to an industrial sector that has, since the Industrial Revolution, indicated its lack of interest and inability in the main to deal with training. The complexity of such a task would perhaps be better served and organised through government or its agents, who would be able to cross the complex and restrictive boundaries that exist between respective parties.

The Industrial Training Boards (ITBs)

It would appear that the instigation of the ITBs was just such a radical solution for vocational training and the apprenticeship system, as the greatest rise in this area took place in the period between the mid 1960s and 1970s.

The Industrial Training Act of 1964 thus enabled the establishment of Industrial Training Boards thereby reflecting (albeit late) the need for statutory intervention in the area of vocational training, (Brendan Evans 1992). It was also instrumental in providing an administrative framework for training, and unusually for this country, an element of
compulsion upon firms to provide training (Tipton 1983). Two years later the first Schools Industry Liaison Officer was appointed. An employee of the LEA, he acted as an advisor/facilitator between both the schools and the schools/industry organisation.

By 1969 there were some 27 statutory training boards in operation. And in 1973 the Education (Work Experience) Act opened the way to work experience for school pupils. There was by now a definite move towards an industry led curriculum initially established between the schools and industry. It would appear however, that such developments were not sufficient for the government, (Jamieson 1985).

It was obvious that within the country there was a rising interest in vocational training and steps were underway to improve the workforce of the nation. But there was at the same time the problem of raising youth unemployment, although as Horne points out this was not a new situation, it being referred to as the 'second slump', (Horne 1983). Also the 'new' schemes brought about to ameliorate conditions were not new, as indicated by the Juvenile Instruction Centres of the 1930s.

An important feature of the Act enabled the publishing of detailed training recommendations together with the standards to be reached, and vocational courses to be followed (Haxby 168). These were recommendations and no more; they were not a legal obligation. Such schemes were developed to meet the changing
industrial base of the nation and the demands of the industrialists, who still complained about lengthy training periods (by now reduced to 3-4 years), which, in their eyes, led to a shortage of an adequately skilled workforce. Thus indicating industry’s continued dislike of the basic structure of an apprenticeship system, which still did not supply, in the industry’s view, the answer they needed to solve skill shortage problems. Although a number of large organisations which could afford the necessary investment provided well structured apprenticeships (Haxby 1989), the majority could not, and if they did exist they tended to be of a transient nature, disappearing when economic circumstances were not favourable; training being the first to suffer during periods of economic decline. Many organisations did not believe in the training philosophy, looking instead to others to provide a trained workforce. In many instances, a common policy of poaching was adopted, as I observed myself, at a County level whilst undergoing my own training.

In some respects the ITBs had been established as a government response to industry’s fear of poaching (Twining 1989). It is a fear, which is current today, especially when labour shortages make skilled workers a rare commodity, means that many small company’s do not and will not become involved with training. Thus at the outset contributing to a fragmented system.

Under an apprenticeship system, such practices would be an infringement on the laws of contract and would have been rare. In
general industry was keen for a radical review of the training system, and it was about to happen, but not as a direct result of their endeavours.

For although there had been a significant increase in the number of individuals taking up apprenticeships, there was still a much higher percentage of school leavers not undergoing skills training. It was indicative of an educational system that provided the off-the-job element for the apprenticeship system, to be locked into this vocational structure and to be unable to offer an alternative strategy. There were obvious and valid reasons for this situation. It was also a government problem for not having established a framework of vocational education that enabled the system to deal with this event. In an attempt to try and address the growing problem of youth unemployment during this period and in going some way to meet the demands placed upon it by industry, the government established, under the 1970 Industrial Training Act, the Manpower Services Commission, resulting in a system that became known as the 'new vocationalism' and it could be said that in this respect the U.K. underwent a training revolution. It was a system that combined a much shorter training period, with a large element of deskilling amongst both staff and students and heralded a distinct move away from an apprenticeship system, to a point where apprenticeship contracts and the associated training methods tended to be rare. The term apprentice came to have a very transitory meaning, as it did towards the end of the eighteenth century.
By the early 1980s the revival had lost its momentum and most of the training boards had been replaced or had gone.

A further Industrial Training Act of 1981 aimed to reduce the degree of government intervention by the replacement of 16 of the original 26 Training Boards with non-statutory Voluntary Training Organisations. Haxby (1989,167) indicates that amongst those remaining, the Construction, Engineering and Road Transport Training Boards between them sponsored two-thirds of the modern form of apprenticeship training in the U.K.

The Construction Industries Training Board (CITB), by the end of the 1980s, had been responsible for some 723,000 trainees, of which just over 37 per cent in terms of being indentured were apprenticed trained. Table 2.1 indicates the CITB student intake into FE for the period 1989 to 1992. It is obvious that a decline occurs with each first year cohort and if we track the 1989/90 students across each year there is a loss of 42% by year two, followed by a 45% loss in the final year. Following the second year students from 1989/90, the loss by their third year is 48%. And the first year students of 1990/91 present a loss of 42% by the second year (1991/92). This is a trend amongst craft students we will meet again in more detail in Chapter five.

The importance in the use of the term modern apprentice cannot be overlooked, for even in an industry that had strived to maintain the indentured apprentice a change was taking place. The CITB,
the last bastion for the apprentice within the construction industry, reached an agreement with the MSC in 1983 to train 21,470 trainees under what had been established by the MSC as the Youth Training Scheme (Haxby 1989), a number much larger than it had previously dealt with but where it proved very successful in the way in which it achieved its goals, the importance being that these young people were trainees, not apprentices. There was of course, the requirement for them to be registered, but not for them to become indentured. It was only a suggestion rather than a condition that employers might adopt this approach after the first year. From the records few appear to have followed the recommendation.

To some extent, in reinforcing this trend away from the apprenticeship system there was a move to re-align the structure of the CITB training system along those of the developing National Vocational Qualification structure. For in 1989, together with the Further Education Unit and five selected colleges, the CITB collaborated on a pilot scheme looking into the possibility of implementing this validating system. A shift which has been accompanied by an increasing emphasis on competence based testing of specific skills and activities and a move towards shorter training periods, resulting in the introduction of a modular training approach.

Because of the continued dominance of the CITB the vast bulk of new entrant construction craft training was, in the late 1980s and early 1990s, undertaken through the auspices of the CITB YTS
national Managing Agency to a national pattern of training laid down by the CITB, with a subsidy of funding from them raised by a levy on the industry.

Very few employers would have been outside this system and selected students would follow an approved course of study, which meant those recognised by the CITB. Or at a centre run by CITB at a company training centre approved by the National Joint Council for the Building Industry (NJCBI) (Stewart 1990).

A large element of the classroom based training was still carried out through colleges of Further Education founded on centrally negotiated terms (Cormican 1990), although, the CITB also undertook a large element of training itself through its own skills training centres located around the country. The colleges through their construction departments, however, had no effective control in this negotiation process and operated essentially through a directive procedure, although this fact, while upheld by lecturing staff, would be denied by CITB.

There was to be, however, a planned shift of emphasis from this central position to a more regionally based system, with the inception of the Training and Enterprise Councils (TECs), established to take over after the demise of the MSC. The new roles adopted under the Further Education Act, which came into force in mid 1992, led progressively towards a local system where the regional TECs were responsible for their own training
budgets. The envisaged aim of this being to negotiate and establish contracts with training and educational organisations at a local level. This approach reflected a much greater emphasis towards a trainee system rather than apprenticeships becoming the established method of gaining a 'skilled workforce'.

The CITB may have adopted the trainee approach but originally, in an attempt to protect its own industry through the traditional pattern of apprenticeship skills training, the Engineering Industries Training Board had no such arrangement with the MSC. Recruitment under this scheme was 25,240 in 1975. Unfortunately on reflection, it appears to have been a futile attempt by a training body that seemed to be out of touch with changes occurring not only at a national level but also within its own industry.

Such moves were reflected in the drastic decline that transpired over the following nine years leading to a recruitment in 1984 of 6,040. It was a devastating blow, for as Haxby, in his detailed account of the effect YTS had on the ITBs indicates, from a consistent figure of 10,000 those reaching craftsman status by completing two training modules in this branch, fell to only 2 individuals. It is my contention that the CITB although trying to modify and adapt its training approach will follow a similar route.
A number of colleges in 1992 were withdrawing from the partnership they had developed with CITB and were attempting, in some cases successfully, to establish their own local training schemes within the NVQ structure to meet local needs. The hidden agenda for this action was, however, a case of self survival amongst the colleges in a climate of economic depression within an industry (construction) that was itself in deep recession. These trends indicated very clearly that the apprenticeship system was losing its validity as a means of gaining an occupational skill, primarily because there was no coherent system to administer it. The previously established method of becoming a crafts-person was being successively eroded.

**Achieving the level of crafts-person**

Most countries which continue to have a strong apprenticeship philosophy, specify the method of instruction the apprentice should undertake and in Europe, unlike the United Kingdom, this tends to be a compulsory element of the training period. Within the U.K., according to Parkes (FEU 1979), there is no national mandatory instruction method, the emphasis being on mandatory. Neither has there ever been a final examination, test or certificate of competence, except when a trainee has joined a professional body that has its own examination structure for various grades of membership. I have shown, however, that there gradually evolved within the terms of indentures a requirement for the individual to undergo formalised training. And later,
when vocational training had become established in educational institutions, written into the indentures was the requirement that the apprentice would follow a recognised scheme of training appropriate for the craft at the local technical institute.

According to the literature, apprentices having served their time under such a system were technically accepted as a crafts-person by the employer and, as Liepmann would agree, by the trade union. They were then entitled to regard themselves as a trades person merely by the fact of having served that period; time served apprentice. Although it is difficult to say in every case what would happen to the apprentice who failed the craft examination, it would appear from terms of the apprenticeship (appendix 1.4 clause 10) that the Local Joint Apprenticeship Committee could cancel the Deed for persistent non-performance. So one could assume that, from at least 1944, the completion of an apprenticeship was conditional, not only upon time serving but also on the passing of an approved training scheme for which a craft examination would be held.

Voluntary vocational education schemes, usually operated within a technical institute and related to craft apprenticeship which, until the middle of 1993, led to a final examination. Although, according to Parkes, the result of such examinations have no effect on the final elevation of the apprentice to the level of crafts-person (Parkes 1979). Parkes however considers that schemes of attendance at a college would be atypical. The
evidence, however, as I have shown indicates the contrary. Considering clause 6 in the apprenticeship document provided in appendix 1.4, it would appear that there was in fact a requirement to attend specified courses of technical and general education at a technical college or similar institution and that this should continue until the end of the school year in which the apprenticed reached the age of eighteen. Such conditions still applied to apprenticeship documents in 1963.

Even the form of attendance was specified; two half days or one whole day each week of term and any evening classes reasonably required by the college provided that they related to studies in the craft. In addition, the apprentice should study for the craft examination in the craft or to sit for any other examination approved by the National Joint Apprenticeship Board. Within the U.K. the vocational FE training element, which, in general, was strongly founded on a tradition of paid day release was, at a craft level, increasingly replaced by a block release system. Even in 1979 the National Joint Council for the Building Industry (NJCBI) Working Rule Agreement (appendix 2.1) indicated that any individual being trained for a skilled building occupation should be given by the employer, appropriate off-the-job training, and or further education together with appropriate work experience. This was reaffirmed and expanded in the 1988 NJCBI Agreement (appendix 2.2) which goes on to stipulate that this training should enable the individual to take 'job knowledge' tests normally by the end of the first year of training and that practical skills tests should be undertaken not earlier than nine
months before the end of the period of training. Thus further providing evidence that a very well established system was in place to provide training and testing at both an institutional and national level for both apprentices and trainees, but without the benefit of a legal framework that made apprenticeships a compulsory form of vocational training.

In Germany, as with other European countries, again with the exception of the U.K., the Government has a more pro-active and positive role, the requirement for the apprentice being to follow a compulsory and more structured form of instruction, bound within a legal framework which spans the whole of the apprenticeship period. At the end of the traditional 'time served' period the apprentices are required to sit an examination and it is only when these examinations have been successfully completed that the trainees are considered as being qualified or allowed to call themselves craftsmen. It would appear that the U.K. was very close to having a similar system.

The New apprentice in a changing social context

Marsden and Ryan (1990) would have us consider that it is the labour market structures of a nation which, in fact, pre-determine the vocational training structure and hence the apprenticeship system and, that such a system operates within an occupational market rather than an internal one, which itself
relies on informal yet task specific 'upgrade training' undertaken at the workplace, resulting in shorter training periods. This is very similar to the concept behind the NCVQ system.

They go on to suggest that there no longer exists a clear boundary between apprenticeship and other forms of training. I would tend to agree that the distinction is being eroded, a view formulated as a result of observing the developments of the vocational training philosophy of the Manpower Services Commission.

Within the U.K., the vocational changes that have taken place lead common usage to suggest, as Marsden and Ryan indicate, that the term "apprenticeship" has been taken to denote any system of vocational training which: (i) relies primarily on employer provision and on-the-job training and (ii) involves training in a range of occupational skills and knowledge over an extended period of time and I would add, in a number of cases without any form of contractual agreement.

There is also another position that has to be taken into account, that of the trainee, a term which, like that of the apprentice, has also undergone a change. According to Kate Liepmann it was a term originally reserved for novices in the non-manual occupations but it was also linked to craftsmen who were undergoing retraining. Initially, the next stage below that of an
apprentice was reserved for the "learner". Having completed the training period there was a requirement for the apprentice to undergo a further period of training at which stage they were termed an improver. It was not until they had completed this final stage that an apprentice qualified for the full journeymans rate.

These are now outmoded forms of nomenclature, although, with regard to vocational education, we are still left with the terms "apprentice" and "trainee", the latter being synonymous in modern times with the philosophy inherited from the disbanded MSC. The term "improver" is still in existence but no longer has the same connotation, like "apprentice" and "trainee" it has taken on a more liberal meaning, "learner" obviously being reserved for the educational sector.

It is also necessary to consider that the inherent lack of interest in the long term value of vocational education, resulting in the gradual decline of the apprenticeship system and the rise of the new vocationalism, is closely linked both in a social and educational context to changes that have taken place since the first World War. Coming as they did from an educational system of the late nineteenth century that was differentiated by an entrenched social class structure that had a vested interest in maintaining a classical form of education, which had a limiting effect on the educational progress of the working class, failing as it eventually did to meet the demands of the very same industrialists who supported the classical
Élite. A feature which to a considerable extent in a modern setting has declined.

Nor is it possible to overlook the problems resulting from the demographic turn-down of the late 80's, which resulted in fewer young people from social class 3-5, those traditionally forming the craft apprentice, being available. In addition, with the changes that have occurred within society, individual aspirations are causing the modern generation to move out of such class defined work positions, towards a technology based occupational role which presents for them a more acceptable social position.

Conclusion to chapter two

From the historical viewpoint it is possible to distinguish five main phases in the apprenticeship system:

i  Guild apprenticeships, from 12th century to 1563

ii Statutory apprenticeships set up by the Statute of Articifers in 1563 - 1814

iii Voluntary apprenticeships since 1814, which if the first World War is taken into account had itself three phases:

a) 1814 - 1914
b) 1914 - 1918 war years apprenticeships disrupted
c) 1918 - 1928 interrupted apprenticeship scheme
The apprentice / trainee, which evolved out of the new vocationalism of the early seventies and led to the final demise of the apprentice.

The revival of the apprentice in the early 1990s

In trying to establish the position and an identity for the term apprentice in a modern context it has been necessary to identify three training methodologies which in turn distinguish three distinct apprenticeship models.

These methodologies are:

i  a form of skills learning that consists of both on and off-the-job work related training which is undertaken for a fixed period usually three years and underpinned by some form of contractual arrangement which is registered through local apprenticeship boards, a system having historical roots but which is in rapid decline. The indentured apprentice.

ii  a similar system of occupational training with an element of associated classroom based technology and related academic instruction; for example maths, science and communication. A system covering a shorter period of time, (currently about two years) and without any form of contractual agreement, although, if undertaken through the CITB there would be a requirement for employers to register the individual if they continued for the second year. The non-indentured apprentice.
iii modular based short term training schemes that are totally vocationally skills based in content with very limited, if any, technical provision and again with no form of contract or even registration. Coming as a direct result from the development of the MSC structure with the Youth Training Schemes and Employment Training programmes. The trainee. Because this system is based on the modular approach the trainee could cover a range of modules that would enable them to move from a semi-skilled position to skilled and in a social context at least may have the term apprentice placed upon them.

So, from this, how would I define an apprenticeship in its modern setting?

The majority of modern day vocational training falls into category ii and thus an apprenticeship in these terms would, in my opinion, consist of a period of very specific competency based vocational skills training, that may have a modular structure and which may to a greater degree be undertaken and validated at the workplace, with individuals being required to reach level 2 or 3 of the NVQ validating system. There would be no fixed term of training but it may, on current trends be considered to last from one to two years depending on the skill level required by the employer. There would be no written form of contract other than that covered by the current industrial employment legislation.
Such a system still fits in with the initial definition of a craft apprentice but not with that of an indentured apprentice. From this it is possible to make three observations; first, that the apprenticeship system appears to be moving away from the very broad based system that was implied in the definitions relating to indentured apprentices provided at the start of this chapter to a very narrow and selective set of training programmes that build together as and when required to meet the demands of an ever changing industrial base facing decline, not only within itself but amongst those it is trying to train. Secondly, that within this vocational structure, there has evolved three very distinct training methods that require proportionally decreasing levels of skill acquisition, and, finally, it would appear the apprenticeship system in its traditional sense of an indentured process is in rapid decline. I will consider this aspect later.

For the moment, it is the second point I would like to consider in the next chapter. What form of training evolved to deal with craft apprentices, and to what extent has there been an element of deskilling.
Table 2.1

CITB student intake into Further Education Colleges

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Source: CITB New Entrant Report 1993
Chapter Three

Education and Training - the early history, 11th to 19th century

Introduction - From conquest to grammar schools

Prior to 1066 a considerable element of monastic education had been available in this country, through the teaching of the Benedictine monks. And by 1160 Oxford University had finally and firmly, been re-established by Henry II, recalling the scholars from their European sanctuaries, where they had sought refuge after purges at the University.

Such developments however, could not be seen as a move towards a system of education for anyone other than the privileged. It was not an educational institution for the nation as a whole, nor was it the foundation of such. It would be more true to say that the origin and development of the modern vocational education system began with the various forms of craft training, undertaken during the middle ages. And in the larger castles, it would not have been uncommon to find 'schools' for training in the art of combat, from which the knights, esquires and men of arms would have been drawn. Individuals who found themselves in the baronial halls and courts of such knights and nobles, would have been instructed in the day to day activities of their respective household departments. Certain large households might also have had a priest, to provide instruction in reading, writing and
grammar. Although, without doubt, the actual level of academic education available to, or received by any individual, would have been commensurate with his or her particular position in service. Such positions being dependent upon their social standing.

Whatever this social standing, one aspect of society that touched each individual and was fundamental to the foundation of education for the population was the religion available to that eclectic population, outside monastic teaching. In this respect William the Conqueror took a significant lead when he set about the reformation of the English church.

The fact that the church developed such a strong leaning towards educational improvements is not surprising, when we see such eminent scholars as Lanfranc and Anselm being appointed to important positions within it. Both in succession took on the mitre as archbishop of Canterbury. Lanfranc, an Italian and former teacher in the school he had established in the Normandy abbey of Bec, had come over with William at the time of the conquest as his advisor. Later, in 1070, as archbishop, he set about the rebuilding of the cathedral. And Anselm, who came from a wealthy background, was, after some time as a travelling student, drawn to Bec to study under Lanfranc. While in England he was to succeed as archbishop, four years after his tutors death in 1089 (Poole 1987).
Anselm was selected for the position, one assumes, because of his association with Lanfranc and his reputation for having turned the abbey of Bec, of which he was the abbot, into a European centre of scholarship. In addition Anselm held an important place in the development of Scholasticism, of which he was a champion of realism, a philosophy that led to the term schoolmen being used for its followers. Having previously devoted more than thirty years of his life to learning and contemplation, he was very reluctant to take up the post, which was eventually forcibly placed upon him by William II in 1093 (Poole 1987).

It is well established that all members of the clergy were educated men and as almost every village throughout the land had a church or chantry there was at least one person with a classical education able to pass an element of this knowledge on. The early developments of formal "education" on anything like a national scale, was therefore, by way of religious instruction. A fact confirmed by the actions of King Edward, who in the tenth century required children to be instructed in elements of Christianity. The responsibility for such a task fell primarily upon these parish priests who also had the task of establishing schools to accommodate young boys, (Aldrich 1982). London it is thought, had three such church schools dating from the twelfth century. We are to see much later, at the time of the charity schools, that the priests outside London gradually lost this ideal and felt such tasks were no longer their role.
Later, in 1281, a constitution prescribed a basic summary of the beliefs and teachings of the church, which it was directed all should learn. It was envisaged that this instruction might be undertaken from the pulpit, but it was also considered other means, such as schools, could be used. In addition there was a requirement for song schools to be established to train boys for choristers (Aldrich 1982).

Without doubt the nobility valued and understood the importance of education. Even in the early fourteenth century they made use of boarding schools. For example, the priory of Benedictine nuns at Amesbury in Wiltshire, boarded the children of noble birth. And Aldrich suggests several children of Isabel, daughter of Henry, Earl of Lancaster, and Eleanor, the daughter of Edward I, were amongst those nobles to be found there, (Aldrich 1982).

Thrupp (1948) suggests, that in trying to emulate the gentry and with apparent aspirations to join, the wealthy merchant class held a similar view towards education to that of the more cultivated of the nobility;

An alderman who died in 1312 had wished his sons to stay at school until they could compose reasonably good verse; this might mean staying until they were twenty, (Thrupp 1984 pg.160)

It was considered important by these merchant families that their offspring should gain this form of education for more than academic or religious reasons. Although there were strong convictions that it was important to have an understanding of the scriptures, the more overriding reason, and one not to be
overlooked, was that an educated member of the merchant class would have been better placed to move into the ranks of the nobility or gain a commercial advantage, should the opportunity arise.

For those from the lower orders, who were in service and lesser trade guilds at this time, however, the actual classroom was in most cases the individuals place of work; as Dunlop indicates when she considers the training undertaken by the apprentices in the fifteenth century (Dunlop 1912). In this respect, she is relating specifically to the technical training undertaken within the many workshop and not of the scholastic type, as in general the evidence would indicate that little, if any, form of education was available for anyone other than those high born or of wealthy parentage. In such cases use would have been made of the growing number of universities and monastic institutions. Aldrich suggests (1982 pg.126) there existed five major branches of medieval higher education:

   i  cathedral schools
   ii  the order of friars
   iii the monastic order
   iv  the university
   v  the Inns of Court

Those church schools that had been established during this period stressed, along with grammar, the teaching of moral righteousness, an element considered by certain members of the merchant class to be very important;
for it inferred not only to the moral values but also training in all those social attitudes that were by convention suited to their role in the community. The child had to learn that the world was organised through authority. The child's state of subordination, involving liability to corporal punishment was prolonged throughout apprenticeship, the masters part in the matter being set out in the indentures as though chastisement of his charge was a duty rather than a right.

(Thrupp 1948 pg.164)

Although for the majority, education was limited, in many instances the apprenticeship was viewed as the best, if not the only method of obtaining some element of education. It becomes apparent when reviewing the literature that even as early as the fifteenth century it is possible to establish that there were two discrete forms of apprentice in terms of their academic standing; those that were required to be reasonably literate before being admitted to a particular craft thus indicating access to education and a wealthy background, and those from the lower trades where particular levels of literacy were not as important or even required.

It did in fact become a requirement of some guilds, that the applicant be educated to a reasonable standard before being considered as an apprentice. The Goldsmiths' had a rule in force in 1478, again reaffirmed in the 1490s, actually forbidding any member from taking on an apprentice who could not read or write, (Thrupp 1948). In other cases further basic schooling in English, and occasionally Latin if required would be incorporated into the apprenticeship agreement.
Aldrich indicates that a number of guilds maintained schools, mainly for the children of the masters, he implies however, that apprentices may also have been provided with an academic education in this way. It is a view well documented by many authors, such as Lipson (1929), who suggests a number of free grammar schools were established by the guilds in the middle ages, and goes on to provide an example with the Drapers of Shrewsbury, who maintained just such a school in 1492.

Monasteries would also have been used in a similar way for the children of the wealthy merchants. For the lowly apprentice however, such provision would have been rare at this time. Even so, it is accepted that a limited form of instruction may have been available at the Parish level where chanteries had been established and the priest may have provided the tuition; in a number of cases, free. Later the requirement for an apprentice to be provided with some form of academic tuition became a condition written into many indentures. And in the twentieth century the type of education to be received, as indicated in chapter one, became more specific.

In certain areas the value of running schools to meet the requirements of trade, had not been overlooked. A number of schools amongst those private schools that existed, had been established by guildsmen, usually scriveners, to meet the needs of the clerical trades and were, according to Thrupp, developing high-pressure methods of education. She indicates that in 1415 a member of the scriveners, William Kyngesmill was running a school
in commercial French and taught not only reading and writing but also accounting. The pupils of such schools must have qualified at an early age for she indicates that by the age of twelve, having completed a course at the Kyngesmill school one pupil was ready to take up an apprenticeship in London. Thrupp goes on to suggest that writing schools, most likely run by scriveners, were being established in the 1490’s and that goldsmiths apprentices were amongst the student body. By the seventeenth century a number of such schools had been well established in London, (Thrupp 1948).

In her work on the Merchant class of medieval London, Thrupp also provides an indication of the level of literacy in the 15th century as it affected this coterie, when she shows, that of the 116 males who gave evidence at a particular court between 1467 and 1476, 40 per cent were recorded by the clerk as literate, in terms of being able to read and understand Latin, (it was a requirement at that time to record such facts), (Thrupp 1948).

From these records it was assumed therefore, that if such a number could read Latin, then at least, some 50 per cent of the London male merchant class should be able to read English. Thrupp goes on to provide a table showing the occupational groupings of the witnesses, and indicates 45 occupations ranging from baker to whitetawyer, amongst whom 48 were considered literate and 68 illiterate.
The significance of this being that the list was considered to be fairly representative of the artisans in the city at the time, although, it did not contain those thought to be from the professional classes. Thrupp also indicated that a change appeared to be taking place in the common language used in certain documents of the period, and cites the case of the Brewers guild, which in 1422, changed from keeping its records in Latin, as this could no longer be read, to English, which a few members could not only read but also write.

The major setback in educational provision, as seen by the poorer classes in the fifteenth century, and confirmed vividly by Mayhew in his interviews amongst them even as late as 1850, was that families required their children to work. The attitude towards education therefore, was one of requiring a utilitarian rather than a religious base, where parents demanded that their children be instructed within the schools in those skills necessary to follow a trade. It was still to be some time, however, before such a vocational system would be accessible to all at a national level.

Education for the freeman - Grammar schools

I indicated in Chapter one that Chichester was an important trading City in the fifteenth century and being one of 23 medieval dioceses, it could therefore provide a local yet typical indication of educational provision for that period. Ballard
indicated in his History of Chichester (1898), that until the end of the fifteenth century, there appears to have been a distinct lack of educational provision for the children of the locality. It is thought the local friars provided tuition for a small number of privileged children, and that perhaps private schooling, or tuition, would have accommodated a few more children of the nobility or wealthy merchants and artisans. The first actual school to be established in Chichester, was founded by Bishop Storey in 1497 and was to be;

a Free Grammar School for the education of the sons of freemen.

(Ballard 1898, pg.52)

The school was originally attached to the Prebend of Highleigh and its headmaster appointed by the Dean and Chapter of Chichester Cathedral, a common practice for schools attached in this way.

During the Tudor and Stuart period in England, almost anyone could become a teacher provided they had a licence from the church, a requirement that applied to both grammar schools and petty schools alike, (Cressy 1987). In the case of the grammar school, however, the normal qualification was also a university degree. For most other forms of institution there was no such requirement. It was not until the 1980s was there a requirement for a teacher to have both a degree and licence to teach.
In time the school at Chichester became known as the Prebendal school, a name it holds to this day. And with the main function of grammar schools at this time to teach Latin, religious instruction and music, the Prebendal was no exception. The tradition of religious and musical instruction continues today with the provision of the choir for the Cathedral. It has now however, broken with the historical tradition of being all male by becoming co-educational.

The Prebendal typified the type of grammar school attached to churches throughout the country. Large numbers (many of which had some provision for free schooling) were endowed schools that had been attached to chanteries, which were later to be dissolved in the reformation to come. In this respect the sixteenth and seventeenth centuries could be looked upon as the period of the grammar school.

After he broke with the Catholic church in 1532, Henry VIII proclaimed himself head of the church and set about dissolving the monasteries and chanteries. In all, by 1536, 376 religious houses had been dissolved by royal decree, and in 1540 an Act was passed which reconstituted the monastic cathedrals and prescribed in detail the form of new King's schools, as at Canterbury, Ely, Rochester and Worcester (Aldrich 1982).

The dissolution of the monasteries and chanteries continued after Henry's death during the reign of his nine year old son king Edward VI, who came to the throne in 1547. It was in fact the
Duke of Somerset, a staunch Protestant, who, having been given the instructions by the young king's father, actually pursued them with some vigour. The removal of the chanteries on such a scale was an important issue, for with their demise the local parish also lost the priest and the elementary education he had provided.

It appears, however, that there never was any intention under the reformation to reduce the provision of education, but then neither was there any intention to expand it. The only new schools came with the new cathedrals and although some of the grammar schools established under Edward VI were new, many in fact were refoundations. In some respects we should be grateful for the actions of Henry VIII. For although much of the land past into private hands a number of chantry foundations were saved by the trustees. For where these trustees ensured that the chantry had some form of educational role, they were in the main, declared exempt and remained intact to become essentially endowed grammar schools (Briggs 1991).

The dissolution was not necessarily just to reform the church (in some respects, its aim was to enable Henry to obtain a divorce) but also, to gain its wealth in the form of land for the crown. Land which was later to pass into the hands of the gentry for service to the monarchy. Asa Briggs indicates an instance where one Gloucester clothier turned a priory into a factory and in another case at Robertsbridge in Sussex, a furnace and forge were established (Briggs 1991).
Such revisions within the church by the monarchy were also accompanied by reforms to both the bible and prayer book. And as Youings indicates, when the rebellions against the new English Prayer Book took place in Devon and Cornwall, the objection was not only on the grounds of religion but also on those of education, as;

"children would never learn the words unless they had been to school."

(Youings 1991, pg 192)

she suggests that due to the reformation, attending school was a remote possibility. The fact that in 1543 a statute had been passed, restricting the reading and knowledge of the bible to noblemen and gentlewomen only, and then in private, may have led to the suggestion that perhaps the lower orders did not require the use of letters. And as Asa Briggs shows, education was expensive at this time, even for those that could afford it. The Inns of Court he suggests, became more exclusive than the universities, indicating an almost absolute class divide in the early seventeenth century, nine out of ten students coming from the aristocracy and the gentry (Briggs 1991).

Aldrich suggest by 1547, opinions had changed and chantry priests were required by royal command to exercise themselves in teaching youths to read and write. He goes on to say;

"This may be seen not merely as a consequence of the Reformation, but also as a logical extension of the developing facilities for elementary schooling of the previous one hundred and fifty years."

(Aldrich 1982 pg 65)
In the reign of Queen Elizabeth the church took on a new position of power, equal to that of the monarchy, and after 1559 it became compulsory to attend church, non-attendance could lead to a fine or imprisonment, (Briggs 1991).

The period of the reformation was a time when we also see a change in the religious role of certain guilds, towards a more structured educational one. For with the removal of the established church under Edward VI, came the disillusionment of the fraternities and religious guilds. Those guilds that had them, lost the priest school teachers although, some of the income gained by the crown from this action was used to re-establish grammar schools, the guild schools.

The guilds also had a direct and major link in two of the three great grammar schools founded in London in the sixteenth century. The first of these was St.Paul’s, whose first high master William Lilly took office in 1510 with, according to Aldrich, a stipend of £35, an usher and a student body of 150 boys. Invariably, the students at grammar schools were boys.

John Colet, the Dean of St. Paul’s during this period, entrusted the government of the school to the Mercer’s company of London, his aim in this action being,

> to encourage the diversion of lay provision for the church and its clergy into schools for the laity.

(Younings 1991, pg183)
There had been considerable criticism both in the role of the clergy as educators and in the philosophy of the curriculum, and Colet saw his action as a move away from the traditional role adopted by the church school system. As it developed, St. Paul’s became a prototype in the field of humanistic learning and gained a considerable reputation, attracting the support of the humanist and Dutch scholar Erasmus, whose first visit to England took place in 1499, when he became professor of Divinity and Greek at Cambridge.

Although Youings indicates that St. Paul’s was the only grammar school in London to offer free education to all, she suggests that even then, no child was admitted who could not already read and write.

Some fifty years later, the next great grammar school to be established was Westminster, originally intended for 120 boys in the charge of two masters. In fact refounded in 1560 by Queen Elizabeth, it was itself to gain a very good reputation, which it maintains to this day. The third grammar school was again, like St. Paul’s, a guild school, the Merchant Taylor’s School, established the year after the foundation of Westminster. It followed closely upon the statutes of St. Paul’s, and provided for 250 pupils, of whom 100 would have been admitted without charge.

School in the seventeenth and eighteenth century, for those children that attended (and in London at least there was no
shortage) began at the age of six or seven and, as Earle suggests, it was not untypical for pupils to remain at a grammar school until they were between fourteen and sixteen. In some cases they continued to receive a free secondary education before going on to an apprenticeship or university (Earle 1989).

Between 1749 and 1797 two major grammar schools from the north of England emerged, Hull and Manchester. Both developed a considerable academic reputation and were renowned for sending boys to the universities, including Cambridge. The majority of the local day boys, however, as Aldrich suggests, would have left between the ages of twelve and fourteen to enter either a commercial academy, or to take up an apprenticeship.

Another school directly associated with the training of apprentices, and one that pre-dates both Hull and Manchester by some eighty years was the Royal Mathematical School. Established at Christ’s Hospital in the 1670s, it was intended to prepare some forty boys for apprenticeship at sea, (Aldrich 1982). The curriculum here would have, without doubt, included mathematics, geometry and navigation.

Returns for the period 1836 - 1860, from the 1861 General Register and Record Office of Merchant Seamen (table 3.1), indicated that some 88,323 boys under sixteen had been apprenticed to the merchant services and 88,942 between sixteen and eighteen were similarly apprenticed. The records also
indicate that the minimum term of apprenticeship for a boy under seventeen during the period 1836 to 1849 was four years. It is also interesting to note that there was a considerable upsurge in the numbers of young merchant seamen during 1845 to 1849, which may have been a result of the corn laws or the increased migration to America.

St. Paul's, however, played a considerable part in the development of the grammar schools system as it existed in London, for, as Thrupp indicates, it was not possible to establish a grammar school in the City without the prior approval of both the bishop of London, and the chancellor of St. Paul's. The object, she suggests, was to maintain the high standard of education attained in the existing church schools, of which three existed until the middle of the fifteenth century, when the number was increased to six (Thrupp 1948). But as we have seen, Colet moved away from this pedagogic philosophy. And Thrupp goes on to suggest, that perhaps it was not so much to maintain standards that such approval was necessary, but the fact that the church wished to avail themselves of the endowments (which in some cases were very large) that came with a number of the schools, and also to maintain a monopoly on the fees obtained from education. For as Earle suggests, considerable sums could be accrued from fees paid to the top schools, such as Westminster;

the Newcome family made a fortune out of Hackney Academy, which was the most fashionable of London's eighteenth-century schools.

(Earle 1991 pg.68)
16th and 17th century literacy

It has been estimated (Aldrich 1982) that in the years 1558 - 1685, at least 358 new grammar schools were founded; 136 in the reign of Elizabeth, 83 in the time of James I, 59 under Charles I, and 80 under Charles II. But as Asa Briggs indicates, these grammar schools;

on the whole exaggerated rather than reduced inequalities.
(Briggs 1991, pg.129)

thus indicating that such a system was still the prerogative of the ruling classes. Youings does suggest however, that under the reformation there was a marginal increase in secondary education;

Children 'meet for learning' were slightly better provided for in 1560 than in 1530, but the general literacy rate had not been anyone's concern and had probably not improved.
(Youings 1991, pg. 194)

In this context Youings was referring to the nation as a whole. Briggs, however, implies that the literacy level of the metropolis was high, suggesting that there appeared to be an increase during the 1560s and 1570s. He goes on to make an interesting point about literacy amongst the lower social order, implying that evidence exists to indicate that by the beginning of the seventeenth century 47% of the criminal class of London could read. How this level of academic attainment had been achieved amongst this group is not clear, but a contributory factor to this improvement in literacy may have been the fact that during the Elizabethan period the English language was
becoming more standardised. And, as Briggs indicates, the publication of books and broadsheets increased considerably in 1600, suggesting there was at least a demand from a growing literate population.

To some extent Campbell provides a level of understanding of literacy amongst the important Yeomen class in the early seventeenth century when she indicates that signatures on leases, wills and similar documents, suggested somewhere between 60 - 70% of this group were able to write their name (Campbell 1945). She implies, however, that it was no disgrace in the eyes of one's peers not to be able to read or write. But as time progressed, money and accounting became more important in what was an agrarian economy and there is evidence to suggest that a growing interest and need for some basic education was emerging, if not for themselves, then at least for their children, who could then undertake the bookwork for them. Campbell continues by showing that, in the late 16th and early 17th century, a number of Yeomen were educated enough, not only to read but also to maintain records and she suggests it was not uncommon for them to be called upon to assist their neighbours. The Yeoman, it must be remembered, was the first level of freemen in the ranking of the social order. Education, therefore, occupied an élite position in the institution of this order.

Dealing with the literacy of individuals in the 1640's Cressy (1980) indicates that some 70% of the population in the regions
of England, would, when signing a document, leave a mark, while the records for the London parishes indicated a much higher standard of literacy, as the proportion of those leaving only a mark ranged from 33% to as low as 9%. This would tend to confirm that outside London the greater part of the population were not of a privileged class and did not readily have access to any available form of education. A number of eminent historians, however, doubt that the method of recording signatures on documents is a reliable indicator of literacy levels for particular periods in history.

In either case, perhaps the difference shown up in the London documents is not so surprising, when one considers that London had a very good reputation for its schools at this time; the quality of education available was yet another magnet drawing people into the metropolis ... and the high level of literacy in the capital in all classes and both sexes suggests that elementary education was widely available and reasonable competent.

(Earle 1991, pg.65)

There was some growth in vocational education during the period 1660 to 1730, Christ’s Hospital, for example, was one of the largest schools in London with a population of some 1000 pupils and one that had established its own writing school. Considerable expansion was also taking place in the number of boarding places being offered at grammar schools in and around London. Again St.Paul’s and Westminster were amongst the most famous, attracting boarders from all parts of the country. And encircling the city there were a number of lesser boarding
schools mainly for the children of the middle classes.

At the same time arguments were put forward by certain protagonists that far too many grammar schools existed and that these were in truth the root cause of the civil war. It was an argument that Christopher Wade and the like were, in 1678, trying to refute on the grounds that 'a youth brought up at school will be taken apprentice with less money than one illiterate.' And if one reads the work of Manning (1991), the argument against the grammar schools is a weak one, for although there was dissent amongst the middling classes it was not laid at the door of the grammar schools.

Education for the poorman - Charity schools

1 - Foundation for growth

Throughout the sixteenth and seventeenth centuries there was a steady growth in the independent "school" sector. Such classes as were offered, may have taken place in the front parlour of the housewife, the dame (the dame school), the craftsman or in some cases a scholar (usually the writing school). Each of them were prepared to offer instruction in reading and writing to a small number of those with a thirst for learning. We have an account given by William Lovett, who indicated that such schools were still in existence in the nineteenth century;

Like most children, when very young, my love of play was far greater than that of learning, for I was sent to all the dame-schools of the town before I could master the alphabet ...
I was then sent to a boy's school to learn 'to write and cypher,' thought at that time to be all the education required for poor people.

(Loe 1876 (1967) pg.1)

Although more modest schools were founded in a number of market towns throughout the country, many of the teaching staff within them had links with their counterparts on the continent and although, in most cases, laymen, were considered well read. Earle indicates that, in addition to teaching, many tutors, in what were termed the 'petty' or 'English schools', were again made up of tailors, shopkeepers and clerks, as well as curates and housewives, (Earle 1991).

Peter Earle suggests that the expansion of the 'petty' school system was aided by the formation of the 'Charity School movement' in 1699. He makes the point however, that this was founded mainly by the middle classes so as to provide;

a dutiful and subordinate working class, with just enough education to turn the children of the poor from pagan savages into obedient and Christian apprentices or servants.

(Earle 1991, pg.65)

He goes on to indicate that in London it was a considerable success, with 54 new schools being founded within the City and Westminster in the first five years. If one considers that at this time London, in its built up form, had not yet reached as far as Hyde Park to the west, or Stepney to the east and was only just forming along the banks of the Thames at Westminster, it is not hard to see that London was a thriving centre of education.
Prior to this expansion, however, Francis Bacon was warning James I, in 1611, that the state was over-supplied with scholars, for whom there was no suitable employment, but short of husbendmen and trade apprentices, (Aldrich 1982).

Towards the end of the seventeenth century there tended to be a questioning of the values of a classical educational curriculum from amongst the middle classes, for as Holmes describes, there was a;

*rise in parent demand for 'modern' syllabuses at the secondary stage of schooling*

(Holmes 1982 pg.47)

He goes on to highlight this questioning when he aptly quotes Francis Brokesby writing in 1701;

*Many things in learning the grammar are imposed that are toilsome and needless, several things that may be useful are not taught in the due season;... further, that the learning which is acquired at grammar schools is of little or no use to such as are set to ordinary trades, and consequently that time might have been better spent in attaining some useful knowledge, may much more profitably in learning to write a good hand, arithmetic, and other things of this nature.*

(Holmes 1982, pg.47)

A picture thus emerges from the seventeenth century that suggests education for the lower order was spasmodic outside London and the major cities; London being the focal point for natural development. There was, however, a growing demand for the right to an education amongst a lower social group whose economic situation, according to Holmes, had undergone a sophisticated change. This is not to say education did not exist, although in
some instances it was freely available, it was not readily available to a certain class. And the standard of teaching within the rest of the country was also something to be questioned.

Perhaps a contributory factor to the lack of expansion and development in education was the poor communication and transportation between the major towns. Cole shows us that even towards the end of the eighteenth century Robert Owen took three days and two nights of continual travel to reach Glasgow from Manchester.

In some regions where communication with the capital was more reasonable and the attitude was more in line with the philosophy developed there, it was also reasonable to expect an improved educational standard. Elsewhere there are reports of poor standards in what was being taught as well as in the competence of the teachers themselves, many of whom had no formal qualifications. The payment of such staff often reflected this;

Mathew Elward, who taught grammar at St Dunstan's-in-the-West in London, protested in 1661 that he had 'lost his whole estate and his posterity, ruined without recovery' in the service of the late King. Now as a city schoolmaster in charge of a general school, he could not even afford a licence, 'his incomes at the most could exceed not five shillings weekly'.

(Cressy 1987, pg.144)

This obviously works out at £13 a year and as Cressy indicates later, the average salary for a teacher in the West Midlands in the 1640s was £17 2s. He provides a number of examples that
similarly reflect the problem of low pay and provides evidence indicating that certain governors actually encouraged the masters of their schools to charge an entrance and annual fee that, the traffic would bear, to supplement their stipend (Cressy 1987). He does however also indicate that not all schools paid such poor salaries, reflecting the importance placed on these institutions and the staff within them.

ii - The emergence of the S.P.C.K.

Some seventy years after Francis Bacon had made his statement to James I, the problem of unemployment amongst scholars still existed, for as Earle indicates, in London the problem was aggravated by the fact that there were also, too many priests without work and desperate to find any form of placement. This problem was reflected in the parish of St.Martins in the Fields, where in 1684, some thirty to forty young men were in just this position. Perhaps it was these conditions that accounted for the considerable upsurge that was to come in school foundations, brought about by the Charity Schools movement.

With such a ready and willing band of ecclesiastical scholars waiting for a position to promote Christian knowledge, and with religious institutions, during the period of the late seventeenth century, advocating that charity was a Christian duty, the time was right, at the start of the eighteenth century, for the formation of a movement such as The Society for Promoting
Christian Knowledge (S.P.C.K.), an organisation founded in 1698 by four laymen and one preacher, (Jones 1938).

Barnard suggests that where a curriculum was in place, it was, in addition to religious instruction, focused upon the vocational skills of spinning, sewing, knitting, gardening and even ploughing; a system adopted later, as I indicate, by the 'industrial schools'. The emphasis was on a vocational theme, because it was generally expected that the children would be taking up positions within domestic service, or the labouring fields (Barnard 1961).

The applications for the teaching posts in the schools promoted by the S.P.C.K. were so many, that the society actually had to dissuade those outside London from applying. There does, however, appear to be some contradiction in this matter, for Cressy would have us believe, from the historical accounts, that the teaching profession, while rewarding in some respects, was, in others, a thankless task, that received little recognition or financial gain, with little if any security or professional status (Priest 1987). The same could have been said of engineers and architects during the same period. In the grammar schools the teaching staff were graduates and paid reasonably well in comparison.

Walter Gale, a failed fabric designer, hop-farmer and sign painter, was according to Porter, appointed as head teacher of the village school by Mayfield Parish in Sussex, for the sum of £12 a year (Porter 1990). Prest indicates that prior the
seventeenth century the academic qualifications of the teaching profession were very high, while towards the end of the century, at the time of the charity school movement they became less common. Even later in the eighteenth century little store was set by the acquisition of paper qualifications. Hence the conditions found in the endowed schools, where as suggested by Cressy, there was a rapid turnover of staff, (Cressy 1987).

It would appear that the middle classes were so taken with the idea of resolving their sins by providing charity, that parishes vied with each other for the privilege of establishing charity schools. These were set up across the London parishes of Southwark, Holborn, Poplar, Whitechapel, St.Martins in the Fields, Cripplegate and Shoreditch. Just a few amongst many other parishes. By 1704, thirty two of them had established charity schools; in total there were 54 schools with over 2,000 children. In the next twenty five years this had risen to 132 schools with 5225 pupils of both sexes. Barnard suggests, that by 1760, although standards had declined towards the end of the century, such schools were catering for some 30,000 pupils. In no uncertain terms this zeal in school foundation can be attributed to the work of the S.P.C.K. in promoting the idea and encouraging subscribers.

It is unfortunate however, that the enthusiasm to establish these schools in London was not so forthcoming in the regions. After the success in London the S.P.C.K sent letters to clergy around
the country, with little response. There were, as Jones suggests, a number of reasons for this. The outlying clergy, felt that such a society was contrary to both civil and ecclesiastical law, and were unable to take on additional duties when the parishes were so far apart and, in the main, poor. In addition it was considered that the children of these parishes and towns could not be spared from work to attend such schools, should they be set up. England was still an agrarian society and depended upon all the labour it could muster to bring in the crops.

A number of clergy also saw the idea as a direct infringement upon their personal parochial independence. We appear to have come a long way since the time when it was seen as the duty of the priest to provide both a school and instruction for the local children.

While in the beginning this was the view of most of the parishes, towns and counties, Bristol and Surrey being an example, it was not the reaction of them all. Jones indicates that the Bishop of Salisbury was active in setting up a number of such schools and in Lincoln by 1714, two hundred schools had been established. In areas where it was not possible for children to attend school on a regular basis, arrangements were made for them to receive instruction as and when possible. The teacher in such situations was then paid by results, on a sliding scale, (Jones 1938). Barnard informs us that by the end of the century the charity school movement was being criticised as 'mechanical, and 'perfunctory'.

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In 1715, with the establishment of the Little Tower Street Academy, we see a specific development taking place in the teaching of vocational skills to the lower orders, as Earle indicates when he quotes Vincent;

The proper age for education here is from about 13 or 14 upwards; and the young gentlemen are not only such as are immediately designed for trades, merchandise, the sea, clerkship in offices and to attorneys, or any other employment in business at home or abroad, but those in general who are not designed for the Universities.

(Earle 1991, pg.67)

We later see in 1754, a further development in the promotion of a vocational awareness with the founding of The Society for the Encouragement of Arts Manufacture and Commerce, later gaining royal assent to become a Royal Society.

Nor can we ignore, the role Sunday schools played in the education of the masses, which by 1797, were, according to Porter, providing religious education for some 69,000 pupils in 1,086 schools across the country. The charity school movement having lost its impetus was no longer as popular.

The Sunday school movement had started at Gloucester in 1780 by Raikes and Stock (Adamson 1930) but it was mainly organised through the Sunday School Union founded in 1785 by Robert Raikes with the support of John Wesley. The teachers of these schools, who were not usually academics, were, in a number of cases, paid one shilling for a twelve hour day. Porter also suggests that a number of the pupils attending these schools were adults wishing
to learn to read. In many Sunday schools it was the only option; writing not being taught. He goes on to suggest that one way a number of individuals picked up reading skills was from the number of folklore books being published at the time (Porter 1990).

It is well documented that in the late 1780's, a Mrs Trimmer, mother of ten, was so taken with the physical and moral state of children in the factories, she started her own Sunday school. Later she obtained a spinning wheel and embarked upon the vocational side by providing a day 'spinning school' during the week. Armytage suggests that later, other schools were started in knitting and winding cotton, and at least one school was started for boys, (Armytage 1970). Most education in the eighteenth century revolved around learning to earn a living. Adamson suggests that in a twenty five year period 20,000 children, mainly from the families of miners, had been taught in the Mendip schools, (Adamson 1930).

The Factory Schools and the development of educational legislation

As far back as 1697 Industrial schools had been proposed by the English philosopher John Lock. His Essay concerning Human Understanding in 1690, maintained that experience was the only source of empiricism, and three years later he published Some Thoughts concerning Education. It took however, an industrial revolution and the rise of a factory based system to provide the
impetus for change, which came about slowly and was not necessarily in the direction one would have expected it to have gone.

i. - Schools of industry

'Working' or 'industrial schools', were established during the latter part of the eighteenth century. And in 1833 the parliamentarian, John Roebuck proposed a system of four school types, one for infants, schools of industry, evening schools and finally teacher training schools. He also suggested that the country be divided up into districts, and the whole system to come under the control of a cabinet minister. Roebuck envisaged that the schools of industry would not only teach;

the three 'R's' but also art, music, hygiene, natural history, civics, and training in some trade,

(Barnard 1961 pg.69)

Unfortunately this scheme never came into effect in the form proposed but it did cause considerable debate in parliament.

Industrial schools were free schools mainly for pauper children who were, according to Barnard, taught to spin, wind, knit, plait straw, sew, cobble shoes and gardening, thus following the vocational tradition established by the charity schools. And an inquiry into the apprenticing of parish apprentices between 1814 and 1815 found that almost three quarters of those in the survey were bound to masters connected with the cotton industry (table 3.2). The survey was carried out on parish apprentices and
workhouses who were, in the main, sent to the industrial schools. In 1796 William Pitt the younger, the prime minister of the day, suggested that parents receiving poor relief should be compelled to send their children to schools of industry (Barnard 1961). Barnard goes on to suggest that this form of action depressed the status of this type of school and that they were also handicapped by competition with child labour in factories.

England underwent an industrial revolution that resulted in an established factory system which Germany lacked, and although, like Germany, industrial schools were established, they faced competition with the British factory system in its need for child labour. England had for many years based its economy upon this system, and now parents were facing the problem of sending their children to school and suffering the resultant loss of earnings. For many it was a situation which could not be tolerated.

In trying to overcome this problem the Society for Bettering the Conditions and Increasing the Comfort of the Poor, founded in 1796, tried overcome this by attempting to foster schools of industry, but to little avail. For a survey carried out in 1783 and published in 1809 for the society, indicated that of the 188,794 children aged five to fourteen in receipt of parish relief, only 20,336 (10.7%) were in schools of industry and receiving education. A figure that appears to bear comparison with the 30,000 in the Charity schools just 40 years previously (Barnard 1961).
ii. - The first Factories Act

In 1802 the government of the day took the first step in establishing some form of educational provision for the masses of the working class. It was not an education act that paved the way, but industrial legislation, the Health and Morals of Apprentices Bill, brought about by the joint effort of the first Sir Robert Peel and Robert Owen (Checkland 1964). The Bill was presented to Parliament by Peel on the 6th April 1802, which was somewhat ironic, for Peel was himself at the time employing more than 1,500 workers. And at his mill at Bury few of the 136 employees were, according to Mathias, adult males (Mathias 1989).

This Act was important in that it was the first Factories Act and as such the forerunner of state regulation in industry. Placing as it did a requirement upon employers to provide, in addition to a suit of clothing once a year, adequate instruction in reading, writing and arithmetic during at least the first four years of the seven year apprenticeship.

The requirement was for the provision of some basic education to take place for one hour on Sundays; making the point that religious instruction was obligatory. The suggestion was that this educational provision might take place during the day, but the children were so tired that it became fruitless; as Robert Owen was to discover later. The Bill also specified separate sleeping accommodation for boys and girls, and stipulated that
not more than two apprentices were to share a bed. It however, made no provision for a system of inspection and where infringements took place the penalties were so marginal as to have no effect.

Although somewhat limited, in that it applied only to those cotton mills employing twenty or more individuals and workhouse apprentices, and not to those 'free apprentices' sent by their parents to work in the mills, it none the less restricted the working day for pauper apprentices to twelve hours: night work having been banned (Barnard 1961). It was a working day that could not start before 6.00 a.m. nor end later than 9.00 p.m. (Morrish 1970). This Act can thus be viewed as the first to take constructive steps towards a system educational legislation that culminated in the Education Act of 1870.

Robert Owen however was annoyed at the changes that had been made to the Act of 1802 and sought the assistance of the second Sir Robert Peel. As a result in 1815 a select committee was appointed to investigate the 'State of the Children employed in the manufactories of the United Kingdom'. Two further investigations were undertaken before, again in a much revised form, it became the Factories Act of 1819 (Barnard 1961, Checkland 1964). But again it only applied to cotton mills and did not allow for the provision of education. And all reference to inspection had been removed (Checkland 1964); a system which was not to be established until the Factory Act of 1833 provided the power of entry (Armytage 1970, Checkland 1964).
It was the failure of these first Acts to have any effective power which caused Robert Owen to abandon his ideas of reform through legislation and the governing classes.

The new Act of 1819 also stated that children below the age of nine were not to be employed in mills or factories, and that children under thirteen were not to work for more than eight hours a day. Those workers who were aged between thirteen and eighteen were not to work for more than twelve hours in any day nor more than sixty-nine in one week, (Adamson 1930). The problem was in determining the ages of the children. This was rectified by the passing of an Act in 1837 making the registration of births compulsory (Checkland 1964).

iii. - Robert Owen and the New Lanark Mills

The literature would agree that Owen, while having high ideals, was imprecise in his philosophies of thought. He was also to some extent elitist, if not messianistic (Williams 1985). And it was his isolation from reality and this imprecision that enabled his theories to be adapted by his followers in the late 1820s, the Owenites, to fit different working groups (Thompson 1980). Checkland suggests that dealing with the passive recruits at the New Lanark Mills lead Owen to establish a different yet flawed view of society and himself (Checkland 1964).
The belief that an individual's environment determined behaviour led Owen to believe education was the means by which change and social reform could be brought about. It was this philosophy of educational development that the Owenite co-operative communities advocated. Harrison suggests that such institutions were less significant than the 'sustained propaganda of his idea's.

The idea of establishing co-operative movements was not new. Lanark had a 'Victualling and Baking Society as far back as 1800'. Long before Owen was to found a new philosophy in social reform at the mills that bore the counties name. Checkland suggests that nineteen similar co-operatives, founded prior to 1937, were still in operation in England and Scotland in 1898 (Checkland 1964).

The Owenite co-operative communities were a failure and Checkland feels that Owen must bear the responsibility for this as he had not considered the fact that those entering the communities, would be the unregenerate creatures of the system he condemned (Checkland 1964 pg. 409). The skill and knowledge used to develop New Lanark was lacking in the co-operative communities. He also failed in his endeavours at New Harmony in Indiana during his period in America between 1824 to 1829.

It was a principal, however, that had to come to terms with trade unionism. Owen had returned from America in 1829 at a time when the Spinners were just becoming organised; to be followed a year
later by the Potters. But the first National Union was the Operatives Builders Union founded in 1832. It was a federated alliance of all the building trades, organised into seven trade sections. Within three years its membership had expanded to about 40,000 (Kingsford 1973).

Owen at this time was central to the ideal of reform and change; co-operation and unionism. He was communicating directly to the workers, having been ostracised by the governing classes, in some respects for his views on birth control (Cole 1924, Checkland 1964). Because his theories and teachings had reached the leaders of the working class, Owen was asked in 1833 to address the delegates of the Operatives Builders Union at Manchester, during the height of their conflict with the masters, and called for the formation of the Grand National Guild of Builders (Rule 1991). The builders had hoped to overcome capitalism by a system of co-operative production and self-employment (Cole 1924, Kingsford 1973). It was from Manchester that Owen was called to London to head the Grand National Consolidated Trade Union (GNCTU), which by November had gathered a membership of some 800,000 (Checkland 1964). The Builders Union, when called upon to join, however, elected not to, instead it operated in parallel.

Cole suggests;

Socialism was conceived as an immediate thing, to be achieved by one great revolutionary effort. With the Grand National and the other great Unions perished these hopes. The trade Unionism was reduced to impotence.

(Cole 1924 pg.5)
The euphoric rise of the trade unions between 1832 and 1834 was brought to a head when, in 1834, after a period of industrial unrest (the Sacred Month), a group of Dorchester Labourers from Tolpuddle were sentenced to transportation (Woodward 1988) as a result of forming a trade union:

Owen's judgement of the behaviour of the employers was as unrealistic as was his view of the workers. (Checkland 1964 pg 348)

It was a turbulent time, for in 1831 at Petworth in Sussex, twenty six men were among many across the country under sentence of death for machine breaking and rioting; in total, nation-wide, nine were hanged, 400 imprisoned and 457 transported (Thompson 1980). In 1836 the Tolpuddle men were pardoned and brought home.

At the demise of the GNCTU Owen was sixty-three.

It was the later period of Owenism, which extended beyond his basic teachings, that became a period of new ideals, providing as it did a forum for social reform. Socialist halls and Halls of Science were established, mainly in the north of England. And 'district' or 'station' lecturers organised meetings often in a series of two to six (Harrison 110).

The development of educational theory had been developed by the discussions of the eighteenth century and by the experiments of Owen at New Lanark and of a few other factory masters. (Checkland 1964 pg.257)

One of the most important factory schools stemming from the Act of 1802 and one that was to have a considerable influence on
basic educational philosophy was that at the New Lanark Mills. A school, first established by the owner David Dale, who had himself served an apprenticeship as a weaver, before becoming a clerk to a silk mercer. Eventually in partnership with the renowned Richard Arkwright, the mill was purchased in 1783 and began operations in 1784.

New Lanark originally consisted of 'a primitive manufacturing Scotch village and four mills for spinning cotton' (Cole 1965, pg 83). And Owen first saw it on a chance visit to Glasgow. Later, in 1798-9, in partnership with others, he took control, and in his capacity as resident manager in 1800 he was at last able to put into practice his thoughts on social reform.

His socialistic behaviour modification theory was approached from the humanistic standpoint, considering the whole individual as well as his surroundings; much in the way echoed, many years later, by Carl Rogers. Owen was a believer in the philosophy that character was formed in the individual during the early years of childhood and that this was determined by social environment (Harrison 1961). In this respect his first requirement was for a good pre-school system for the very young. For in addition to the adults working at the mill, there were some four to five hundred parish apprentices between the ages of five to ten (officially the workhouses had the children recorded as being between seven to twelve).
These apprentices were treated no differently to the adult hands and worked a thirteen hour day. Their schooling took place at the end of this long shift, and Owen soon found that this was of little value, even though at the mill, the system established by Dale was far better than that received by other parish apprentices, and was something not available to children of the village.

D.H. Cole suggests that Owen could not accept the conditions placed upon the pauper apprentices and soon stopped employing them, releasing the remainder as their apprenticeships of seven, eight and nine years ran out (Cole 1965). He then set about improving the factory and rebuilding the workers' houses, and in 1809 prepared to erect new buildings to serve as schools for the children of his workers. In the January of 1816, the educational system that Owen had proposed, was finally in place, and aptly named the 'New Institution'.

Owen had a strong belief that his schools should include dance, music, singing and marching, an approach that, according to Woodward, did not go down well, not only with his Quaker partners, but also other bodies who were involved in educational work. In spite of such feelings, the 'New Institution', Cole suggests, became an educational showplace.

It is unfortunate, that even after twenty eight years at New Lanark, very little was to come from Owen's' philosophy of
education, or from the movement that bore his name;

Despite frequent tribute to the value of education and emphasis on the need for training socialist lecturers, no solid core of adult (or any other kind of) educational work emerged from the Owenite organisation ... Owen's enlightened views on education were more clearly thought out in their application to infants than to adults.

(Harrison 1961, pg118)

iv. Moves towards State schooling

Although Owen took a stand against the employment of apprentices, and tried to improve the education of the lower orders, albeit on a limited scale, very little else was done in the rest of the country. Henry Brougham, however, (founder of the Society for the Diffusion of Useful Knowledge) instigated a parliamentary committee of investigation in 1816 which was to "inquire into the Education of the Lower Orders". The committee reported on the great lack of educational facilities, and the very poor and irregular attendance of the children (Armytage 1970).

Further consistent action on the part of Brougham was constructive in presenting the Parish Schools Bill of 1820, "for the better Education of the Poor in England and Wales". Once again the parents were expected to pay for education, through school fees of 2d to 4d per week. But such fees were only to be paid by those parents who were able to afford them. The Bill also enabled the Parish church council to appoint the school masters,
who were themselves required to be members of the church of England. The clergy were also placed in a position where they could veto appointments and had the authority to dismiss masters. Such power was also combined with the right of entry, which enabled them to determine the curriculum of the school (Barnard 1961, Adamson 1930).

With such power over rate-aided education, it is not surprising, that after considerable objections, the Bill was eventually withdrawn (Woodward 1988, Morrish 1970). Undeterred, Brougham, in 1825, produced a pamphlet entitled "Practical observations on the Education of the People". And the year prior to this he was also involved in the formation of an important institution which is dealt with later.

Some thirty years after the first Factories Act the government at last provided a grant of £20,000 for the construction and provision of schools, which was the first time such provision had been made and was a tentative start towards a system of State schooling. And in 1839, by Royal Prerogative, a central administrative authority was established for national education this time with a grant of £30,000 (Dent 1963).

A further inquiry in the 1840s, into the conditions of children working in the mining and factory industries, resulted in the proposal of the Factory Bill of 1843 being sponsored by the then Home Secretary Sir James Graham. Barnard indicates that children
between the ages of eight and thirteen were to be provided with a staggering three hours instruction a day, minimum, and were not to work for more than six and a half hours. It was a Bill that offered far reaching proposals and one that had very strong opposition, as a result it never made the statute book. (Barnard 1961, Woodward 1988).

Almost forty years after William Pitt had suggested that parents should be made to send their children to industrial schools, there were again calls within parliament to make it compulsory for children to attend school. Morrish states that;

Such schools were to be confined to the education of the poor, and were to be classified as (a) infants’ schools; (b) schools of industry for children between the ages of seven and fourteen; and (c) normal schools for the training of teachers.

(Morrish 1970, pg. 42)

The nineteenth century

Introduction

In 1815 the most common method of education in Great Britain, and many other European countries, was one advocated by both Bell and Lancaster. Dr. Andrew Bell, an Anglican chaplain, while in India, put into practice a monitory system of education when he appointed a young boy to take on the task of teaching fellow pupils. Bell was so impressed by the achievements he published 'An Experiment in Education' in 1797. And although little came of the work he had carried out in this area, the system was adopted
at St.Botolph's Charity School at Aldgate the following year and at the Kendal industrial schools in 1799, (Armytage 1970). Dr. Bell later became head of the National Society, an organisation which promoted the education of poor children in the principles of the Established Church.

It was not until Joseph Lancaster, the founder of the British and Foreign Schools Society, adopted the system that it received much public attention. The difference here was that Lancaster also believed it was important to teach monitors the basic principles of instruction. And in 1805 he began to board monitors he had taken on as "apprentices". By 1808 Lancaster had engaged 24 in this way and within three years the number had risen to 50, (Armatage 1970).

Each of the systems advocates claimed to be its originator, even though it was a method that had been documented in France some time prior to its becoming popular in England (Woodward 1988). In either case, being a very cheap method of teaching, it was one generally accepted within the factory system, and in the school system where, until 1846, little had been done to compensate for the shortage of teachers.

Born in 1771, at the dawn of the Industrial Revolution, Robert Owen, like many others, had been brought up in the Lancaster and Bell system of education. And at the age of seven was himself a monitor in his local village school, at the instigation of Mr. Thickness, the headmaster. Working in this way, Owen was able to
pay for his tuition, (education was not yet free) and later to help Joseph Lancaster in his educational campaigns.

The headmaster's aspirations towards educational attainment were limited to basic reading, writing and a knowledge of the four rules of arithmetic. Within a village school this might at the time have been very satisfactory, but not for the young Owen, who was resigned to acquire a great deal of his knowledge from books. And being an avid reader, by the age of about nine, at which age he left school, he was reading books suited to those at least ten years his senior. Three years later, on reaching the age of twelve, Owen was taken on as an apprentice in the millinery trade. Like so many young apprentices he had only the rudiments of an education. Michael Faraday was another example of an apprentice of this period who had only a sparse education.

Originally, in October 1805, he was apprenticed as a bookbinder to a Mr. Rieban who had three apprentices at this time; a fact which provides some indication to the growth in literacy. During his apprenticeship Faraday had access to the books in Rieban's library, and it appears that it was the Encyclopaedia Britannica which fired his interest in science.

His reading was centred upon electricity and in particular the papers of John Tatum, a leading member of the London Philosophical Society, which provided many of the lectures to which Faraday went. Faraday was very much aware of his own shortcomings and enlisting, over the next seven years, the aid...
of a private tutor, Edward Maygarth, he received instruction in grammar, spelling, and elocution. Drawing lessons were also obtained in a similar way from a tutor. But it was while attending a lecture that Faraday meet Humphrey Davy, who was later to take him on as his secretary, and enable him to change direction. It was after Davy had injured his eye that Faraday, before completing his bookbinding apprenticeship, began work as the laboratory assistant. It was a change he had long sought and one that was to alter his career, (Lewis 1990).

In 1835 a series of resolutions were moved in the House of Lords regarding the lack of provision of elementary education. Lord Brougham suggested that the country was inadequately provided with schools, and that the attendance was poor. Instead of being 1 in 9 of the population between the ages seven and thirteen it was only 1 in 11 over the country as a whole. In the capital it was a little more than 1 in 15, and in the more densely populated regions it was only 1 in 18 or 19, (table 3.3). Suggesting that in these areas only half the children were at school (Adamson 1930).

In 1844 The London Ragged School Union was formed for the poor, and although children had to leave at ten to go to work, no industrial training was provided. Where it was provided was in those industrial schools established for children considered to be potential criminals, and in the reformatory schools for convicted children, (Adamson 1930).
Prior to 1850 a number of schools dealing with the vocational element of education had sprung up and were developing quickly. In the north of England, the Manchester Church Education Society opened schools where in addition to teaching modern languages, book keeping together with accounts were also on the curriculum. It is important to note that the locality of the school also had a bearing upon the curriculum. Urban schools, for example, had a different one from that of the rural schools, where husbandry, land surveying and measurement might be taught.

In 1856 the Education Department superseded the Privy Council's Committee for Education and two years later the Newcastle commission was established under the chairmanship of the fifth Duke of Newcastle, Henry Pelham. Although the report estimated that almost 1 in 8 of the population was attending school (in 1816 it was around 1 in 14 and at the beginning of the century it was 1 in 21) it was critical of the poor standards of attendance and in particular the age at which children left school to take up employment. The commission also considered military and naval education and while the Regimental and Arsenal school for apprentices at Woolwich were thought efficient, the naval schools were not. Dockyard schools had been established at Portsmouth, Chatham, Devenport and four other locations to improve the education of the apprentices, (table 3.4). Entrance to which was through entrance exams conducted by the Civil Service. But although such establishments were considered to have some value there were still shortcomings (Adamson 1930).
The scope of the inquiry was also extended to consider the problem of pauper children, criminals and vagrants. It was also felt by the commissioners, that little consideration was given to the younger children or those who left early and too much was made of those brighter and more able students. It was estimated that of those children attending school only 29 per cent were over ten years old and only 19 per cent over eleven (Barnard 1961).

Even though the commission considered that the system of grant aiding schools (inaugurated in 1833) had not fully achieved its aims, it did not advocate its withdrawal and, in addition, Barnard suggests there was no intention to abolish school fees or to introduce compulsory attendance. The local grant, however, was to be administered by county or borough boards, but these would not have:

power in the management of the schools, nor were they to concern themselves with the religious teaching given there.

(Barnard 1961 pg.111)

The commission did require however, a more ‘regular attendance, sounder teaching, and a wider curriculum for older pupils’, (Barnard 1961 pg.110). Although a valuable report it was considered it did little for what was gradually emerging as the secondary education sector, for it also introduced the system of ‘payment by results’ through the examination of the pupils by Her Majesty’s inspector; a system that was to set back elementary education for many years.

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The public school sector was covered by Lord Clarendon and his group in 1861 but on this occasion the commission was mainly concerned with the administrative side of the schools.

The Newcastle and Clarendon commissions on elementary and secondary education were followed in 1864 by the Schools Inquiry (Taunton) Commission. Established to investigate the education provided in schools not included in either of the previous inquiries. It was a massive work, consisting of some twenty one volumes, providing considerable evidence relating to mid-nineteenth century schooling, including a full account of the conditions found in the 942 schools surveyed.

The report identified, three categories of school; endowed, proprietary and private.

And although the endowed schools included more than 700 grammar schools and over 2000 others, which gave elementary instruction, the commission found that in a hundred towns with 5,000 or more inhabitants there were no such schools. And even though there were so many endowed schools, the commissioners considered that they failed to meet the academic requirements of both the artisans and middle classes. It is significant therefore that neither the Clarendon or the Taunton commissions recommended any change in the 'class' basis of English secondary education. The Taunton commission recommending as it did a system that to some extent reflected the social order of the country.
Of the three schools envisaged in the report, (with leaving ages of fourteen, sixteen and eighteen to nineteen), the lower school it was suggested, should be for the sons of the tenant farmer and smaller tradesmen. Barnard considers however, that what was required were more schools as those investigated by the Clarendon commission, (Barnard 1962). It would be useful at this point to include a quote from the Taunton commission used by Aldrich:

We cannot but consider, that it is a matter of national interest, that boys of real ability, in whatever rank of life they may be found, should receive every aid and encouragement that can rightly be given to enable them to rise to a position suitable to their talents.

(Aldrich 1982 pg.107)

The Taunton report was far reaching and showed the great need for a secondary education system and;

recommended nothing less than a national system of secondary education.

(Aldrich 1982 pg.107)

Lord Stanley, the Foreign Secretary at the time, at the request of the commission also sent out a questionnaire to all H.M. Ministers on the European continent requesting information on the system of both public and technical education systems adopted within each country. The massive five-hundred page report was eventually issued to Parliament in 1868.

While the Taunton commission was gathering its information, the MP Bernard Samuelson undertook a similar European quest and reported back one year prior to the commissions publication. Although, on this occasion Samuelson paid particular attention to
primary education, as it was felt that both secondary and technical education were founded upon this base. He did consider, however, that the development of a sound technical education was marred by the lack competent science teachers.

Lord Montagu, the Vice-President of the Council on Education, raised very important questions on the subject and circulated a questionnaire among the Chambers of Commerce of the country, which related specifically to the effect a lack of technical education was having on industry, and requested their views on the requirements needed to bring about change. The responses reflected an obvious lack of understanding of the problem, but most did agree that without a sound educational base, technical education would be of little value.

The late 1830's play a significant part in the development of the education of both the working and pauper classes with regard to industry and apprenticeships and in this context I would like to dwell on two areas to illustrate the point. The first of these is the education of workhouse pauper children and the reaction that took place as events progressed. The second deals with particular developments that took place in the area of technical education - the growth of the Mechanics Institutes, and the Great Exhibition of 1851.
In chapter one I attributed some importance to the workhouses that had sprung up across the country during the nineteenth century to cope with the expanding growth of the poor, and their role in providing pauper apprentices. One of the conditions placed upon the Union, in 1834, and one that was directly related to these apprentices was the duty to provide some form of educational structure for the inmates.

"Three months' education in a well-conducted workhouse", boasted one Assistant Commissioner in 1836, "was worth to the children almost as many years attending village schools". (Longmate pg.167)

The education, received by the parish apprentice emerging from the workhouse (if any was provided at all) would have been very limited. For where there was a school system, the method of instruction tended to follow the monitorial Lancaster and Bell system. Although generally undertaken by older inmates of the institution, in one case it is recorded that a thirteen year old girl, the daughter of the warden, was in charge of the school. And in another, Land indicates that the first teacher of the Bromsgrove Workhouse school, was a sixteen years old Miss Owen, appointed in 1839, on a stipend of £10 p.a. (Land 1990).

In a great many of these institutions, the instructors themselves were only just literate, many recorded, like the young female school mistress from the Southampton workhouse, as only being able to read the simplest of text, and in others not being able
to read at all. In at least two cases a lunatic had charge of
the school, although in one instance this was not discovered
until later, after the murder of a pupil. Many workhouse schools,
were abysmal. And reports throughout a long period continued to
indicate a total lack of educational ability amongst many pauper
children. In one case where a workhouse school was inspected, it
is recorded that the teacher was reading to the class from a book
held upside down and again in another it was the pupils that held
their books this way. Numerous cases record pupils being taught
to recite particular sections of text without understanding its
context or indeed, being able to actually read the words they
were speaking.

When the Bromsgrove workhouse classroom was inspected in July
of 1848 by a Mr. Bowyer, 'Inspector of Union Schools', Land
suggests that his report was barely satisfactory:

I have inspected the school and find the children as well
instructed in scripture as usual. In reading, writing and
arithmetic, however, many of them are not so forward as
usual, which is accounted for by the fact of their being
either more recently admitted or naturally dull.

(Land 1990 pg.54)

Longmate also suggests that generally classroom conditions were
not conducive to learning. In some instances not even a basic
slate to write on was available. Other common features of the
workhouse school that went undetected for many years, were those
of corporal punishment, cruelty and rape, on a horrific scale. A
general order passed in 1847 did, however, attempt to regulate
this facet of the workhouse school. But the numbers at certain
workhouses were staggering and go some way to suggest why such a
great deal went by unnoticed. The Tooting Infant Pauper Asylum,
for example, housed some 1400 children between the ages of two
and fifteen (Chesney 1970).

a) - Kay - Shuttleworth and pauper education

One cannot mention workhouse schools without reference to Dr.
James Kay-Shuttleworth who, having been appointed an assistant
Poor Law Commissioner in 1835, produced a highly influential
report on the apprenticing of pauper children. He also encouraged
the recruitment of young parish school teachers from Scotland,
where education, it was reputed, was far in advance of that in
England. He was in particular, very impressed with David Stow's
school in Glasgow.

It could be said of Shuttleworth that he laid the foundations of
the English elementary education system and could be considered
as one of the most important figures in English educational
history. According to Barnard;

To him education meant an inculcation of habits, a training
of skills, and a development of intelligence; the school was
to be a centre of social life and culture.

[Barnard 1961 pg.111]

He, like Owen had long regarded education as the key to reform,
and was convinced, through his work with the poor, that the
education of this group 'was a national responsibility', (Barnard
1961 pg.99). In 1839 Dr. Kay (later to be Sir Kay-Shuttleworth)
was elected as secretary of the new Committee of Council for Education, a position he held until 1849 when he retired.

b) - Farm schools and rough workshops

To overcome the problems that had been found in many of the workhouse schools, the inmates were placed at schools outside. And after the Poor Law Board had given permission for union funds to be used to pay the fees incurred, usually twopence to ninepence per week (Longmate), the use of outside schools increased rapidly. Such schools were known generally as 'farm schools'. One, Aubins of Norwood, became a national showpiece.

Dr Kay-Shuttleworth having secured a grant of £500 in 1838, used it at Norwood to pay for the teachers brought in from Stow's institution. The money was also used to construct practical workshops, (known as rough workshops), which provided training in those skills required for work, both of a practical and domestic nature. Another well known farm school was Drouet's at Tooting, although, in 1848, 180 of the 1,400 children were killed by a cholera epidemic that broke out at the institution, (Longmate).

These schools were operated for profit, and in time, the Guardians of the workhouse decided that the interests of the inmates would be better served by attending the district school.
The first district school serving London, Anerley, opened in North Surrey in 1850, and faced considerable problems relating to property damage resulting from the actions of the workhouse pupils during the first few years (Longmate). Although such problems subsided in time, Longmate does go on to suggest that there was a considerable distrust amongst the Boards of the workhouses against the District schools. This is supported by the Newcastle commission, which found that of the 44,608 pauper children only about 7,100 were educated by this method, while the remainder were taught in the workhouse schools.

Of the three systems on offer, the workhouse school, farm school and district school, the last was without doubt the better option. But again the commission found that these schools only drew in some 6 per cent. of the children from the neighbouring parish, (Adamson 1930).

With the blatant dishonesty and cruelty that prevailed in the majority of the workhouses it can only be assumed that monetary gain and secrecy were the main reasons for not opting to use the district schools. For in the main, the workhouses were closed institutions, inmates rarely being allowed out. When one considers that the warden at Tooting was paid four shillings and sixpence (22.5p,) a week for each one of his 1400 charges (£315), and also received payment for some of them as outworkers, it is not hard to understand that this could be a very lucrative business for some, if an element of control over the inmates could be maintained.
c) - The first Education Act and pauper children

Woodward, amongst others, suggests that England's education was lagging far behind that of many of its European counterparts and in fact it was the wars of 1860-70 in America and mainly in Europe which showed up the imbalance in literacy between the English and other troops.

Even though church schools had tried to tackle the mounting problem of illiteracy, the help they provided was insignificant in terms of a literate nation. The education of the population became an urgent problem. So it was on the 9th August 1870 under the guidance of W.E.Forster, the first Education Bill was passed. It was to be the true beginning of state education for those children between the ages of five and twelve. Even though the government raised taxes and rates to fund the new state system, it was not a free system. Only those parents who could not afford the fees were exempt and in this respect many poor families may have approached the Guardians of the 'board schools' for help.

In June 1873 the Bromsgrove Guardians;

"resolved to petition the House of Commons against the Elementary Education Act of 1870 which proposes to compel the Guardians to provide out of the Poor Rate for the education of all outdoor pauper children and also proposed that the school fees of the children of non-paupers who may satisfy the Guardians of their inability or otherwise to comply with the compulsory bye laws of a school Board, shall be paid by the Guardians out of the Rates."

(Land 1990 pg.55)
In their letter to other Guardians across the country they also stated:

"that the results of that legislation [the 1870 Act] so far as it operates in requiring children to remain at school after the age of 12 years, prejudicially affect the industrial classes of the country, and is proving a source of serious inconvenience and loss to all connected with either agriculture or mercantile pursuits"

(Land1990, pg 55)

The letter went on to complain about the worker and his family being deprived of the income that would have been gained from the child and the fact that withdrawing labour between the ages of 12 and 14 was:

"prejudicial to the manufactures and agriculturalists in as much as their places must be filled by older persons at an advanced rate of wages...."

(Land1990, pg 56)

By 1881 the Guardians had decided to send the workhouse children to the Board schools and eventually closed the workhouse school.

The 1870 Act was later reinforced by Sanderson's Act of 1876 which attempted to strengthen attendance by providing for the establishment of school attendance committees in areas where school boards had not been set up. The onus under this Act was placed upon the parents to ensure that their children received an effective basic education in the three rules. There were also new conditions which prohibited the employment of children under ten. And the Act also specified that children between the ages ten and fourteen had to reach specific educational standards before being
employed, (Morrish 1970).

This leads me on to the second area, which is more specifically concerned with the development of a system of technical education.

ii - A 19th century technical education

The first seventy years of the nineteenth century saw a great many reforms in education, although, there was a considerable upswell against such reform as confirmed by Woodward;

Self-made and successful men, quick to see the possibilities of a new machine or the importance of a good water supply for their towns, did not show the same alertness of mind in considering the economic advantages of an educated working class. From their point of view an educated working class meant an increase in labour troubles.

(Woodward 1988, pg.474)

Woodward goes on to suggest that such views were not unfounded, for it was considered that the existing schools and Universities did not provide very good results and did little to improve the standard of technical efficiency. It was left to the artisans and engineers of this period to gain the knowledge of their trades mainly through apprenticeships. But, such apprenticeships were not always in the profession later taken up by the individual.

Two examples of this can be provided by the education and training of Thomas Telford the renowned road and canal builder and Isambard Kingdom Brunel, engineer.
Telford was born in a shepherd's croft in Glendinning in 1757, and attended the small parish school at Westerkirk. On leaving school with just a basic education, he was initially apprenticed to a stone mason, but because of ill treatment, Thomas was removed and apprenticed to Andrew Thomas, a master mason at Langholm. On becoming a journeyman he continued his work in Langholm for one shilling and six pence per day (7.5p), building bridges, paved trackways and numerous buildings. Having gained his trade as a mason Telford was not one to remain in the same place long, and it was later, while in Edinburgh that he came into contact with professors Playfair, Stewart, Gregory and Robinson. Frequent meetings which obviously stimulated his thirst for knowledge, for later, writing from Portsmouth in 1786 to his friend Andrew Little in Langholm, he indicates that he was 'now very deep in Chemistry'. It was Telford's aim to train himself to become an architect and from Portsmouth he later went on to Shrewsbury to supervise the renovation of the castle and later to undertake a great deal of work in the town (Rolt 1969). He later went on to become an established canal, road and bridge builder, both in this country and abroad.

The lengthy and complex training that Isambard Kingdom Brunel underwent before he became an accomplished engineer is very well illustrated in Adrian Vaughan's biography (Vaughan 1991). Initially educated in his early years by his father, who had provided instruction in mathematics and geometry, Brunel later, in 1814, went to a school in Chelsea run by a Reverend Butler.
Here he continued with maths and geometry as well as both Greek and Latin, but was only at the school for a short period before moving on to a boarding school run by a Dr. Morell.

At the age of twelve Isombard was sent to a relative in France, where he was introduced to Euclidean geometry and gained a passion for Latin. Brunel paid a short visit to Hove in Sussex to continue his studies, but very soon after, in 1820, he returned once again to France, this time to Caen college. For it was considered this was the only place to obtain an advanced level of mathematics. It was also from Caen, after a period of preparation at the École Polytechnique, that he went on to attempt the entrance exam for the world's only university of science and engineering, Lycée Henri IV in Paris, which he failed, although this was no disgrace.

It was after this that his father arranged for him to undertake tuition in the workshop of the chronologist Louis Breguet. Brunel returned to England as 'Élève de Breguet' (a student of Breguet) an honour he held dear. And while working on small projects for his father he continued his training in the workshops of Henry Maudslay, a machine tool craftsman. One could say that Brunel did not come into his own until he was made Resident Engineer on the Thames Tunnel project his father had undertaken, although, the position was not officially recognised until nine months later in January 1827, when his father was too ill to return (Vaughan 1991).
From such illustrations we again see, that to gain experience and any form of suitable education, the potential artisan was left to his or her own resources. And such examples are not untypical of many a skilled craftsman or engineer of the period;

for many years the backwardness of English technical instruction was due to the number and efficiency of the workshops and factories where a man was taught his business in a practical way.

(Woodward 1988, pg.475)

It is a statement emphasised by Braudel when he suggests that the great number of factories and the need to employ a vast labour force, with the prospect of mass unemployment, were significant factors that delayed progress. The number of factories to be found in England were a direct result of the Industrial revolution, which had not occurred in Europe. The consequence of this was that Germany and her partners had far fewer factories and technical education was therefore resigned to advance within a school system that had to cater for the vocational requirements of its limited industry, which it did, and at a faster rate than in England.

Braudel indicates (Braudel 1985 pg 431), that two important schools opened in France, the École des Ponts et Chaussées, founded in Paris in 1743, (the school of Bridges and Highways), and in 1783, some sixty eight years before its counterpart in London was established, the École des Mines was founded. This school had been modelled on the Bergakademie of Freiberg, Germany, set up in 1765.
The resultant lack of a good educational base in England also meant a lack of trained, specialised teachers, resulting in long delays before technical education on a reasonable scale could be at all widespread. Owing to such factors, British industry lost considerable ground in relation to Germany between 1870 and 1900, a situation which to this day has still not been rectified in terms of apprenticeship or vocational training. It is a system of training that has, apart from a few isolated cases, remained very poor, having been left with the legacy of industry led training.

a) - To be an engineer.

It is important to note that in the 1780's engineering was hardly recognised as a profession even though there were men we would today recognise as engineers. Fernand Braudel suggested, as do many others, that the 'profession of engineer emerged only slowly', and initially, in the fifteenth and sixteenth century the term engineer had military connotations. It would have been normal at this time for an individual with such skills to 'hire out his services as architect, hydraulics expert, sculptor or painter'.

The great canal builder James Brindley hardly thought of himself as an engineer, although by training he was a mill-wright, as was William Nash, the father of John Nash the builder. It was an occupation considered as the aristocrat of the craft trades
(Kingsford 1973), requiring a high degree of skill and technical knowledge. The first person to actually call himself an engineer was John Smeaton, canal builder and son of an attorney, who adopted what was in fact the French mode and called himself a civil engineer. He later went on to found the Society of Civil Engineers in 1771, although in this instance the society was more of a social organisation, rather than one for imparting knowledge in the field of engineering as it does today.

Braudel also makes an interesting point about the progress of technology when he recounts, that although Newcomen’s steam machine was invented in 1711 it took a further thirty years before the first one was working in Britain. During the next thirty years, sixty had been built to lift water in the mines of Cornwall. In France however, only five were in operation. Almost one hundred years later, writing in the 1880s, Charles Twite stated;

Thirty years ago Technical Education was scarcely heard of in England, and yet we prided ourselves upon holding the foremost position in the world, in everything relating to manufactures and commerce.

(Twite 1882, pg.204)

Thereby indicating that although this country had a very sound and well respected manufacturing base it had been established with a total disregard to the development of a sound technical education. Although, there were signs of an effort to rectify this situation. Braudel goes on to indicate that in 1826, a catalogue produced by the London firm of Pigot listed 826 different craft activities in the capitol. Schools providing a
sound technical education for English engineers or technical craftsmen however, did not exist and it would appear that this was the main thrust of Twite’s argument.

The main work of any vocational nature at this time was being undertaken within the universities in the areas of the sciences and chemistry. There were very valid economic and industrial reasons for this practice, but they were ones that did not consider the provision, or need, for a system of training for the artisans.

It was while in a lecturing post, and having equipment made for his classes at Glasgow University, that George Birkbeck was able to observe the highly skilled work carried on by the artisans. He was considerably impressed by both their skills and acquired knowledge, and also surprised at their thirst to gain even a greater understanding of their subject. It was with these factors in mind that Birkbeck started a series of lectures for them, out of which eventually grew the Mechanics’ Institute although he was not responsible for the first one in Glasgow, which was started after he left.

The growth of the Institute was a major development that was to be influential in helping to establish a foundation for the start of a vocational system of education for the working class. And this leads me on to two major events that were occurring at about the same time as those in the Bromsgrove and other workhouses were taking place.
b) — The growth of Mechanics' Institutes

In 1823 the Liverpool Mechanics' Institute, prompted by what had been seen in the example set by the Apprenticeship Library of New York, founded in 1820, established their own Mechanics and Apprentices' Library and Reading-Room. A similar library was also established at Sheffield in the same year, and like Liverpool, it too had a long and successful history.

Chichester, was also significant, for not only did it have a Mechanics' Institute in the 1830's but it was also the first to establish a travelling library in the form of books housed in wooden boxes that were distributed around the locality at regular intervals. Steer provides evidence which indicates that the foundation of the Mechanics' Institute at Chichester occurred in April 1825, (Steer 1952). And he suggests that around the late 1830's it merged with the Chichester Literacy and Philosophical Society, which itself had been established in the City in 1794. The method of travelling libraries was later to be adopted by a number of other Mechanics' Institutes, particularly in the north of England, (Kelly 1957). The Chichester branch did boasted a library of some 250 volumes. By 1858 the Ewart Act made it possible to have free libraries and local museums maintained through the the rates.

One of the first recorded references to the Chichester Mechanics' Institute relates to a lecture given by Henry Watson, the then

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secretary to the Institute, on the 29th of November 1837 on the subject of South Australia. By 1850 both institutes moved into new and prestigious premises within the City.

The lecture topics were varied and in 1837 covered;

Life and organisations, architecture, geology, acoustics, electricity, galvanism, magnetism and electro magnetism;

and all this for a fee of £50! What normal, lowly artisan could afford this? One might ask. With members such as the Bishop of Chichester and the Duke of Richmond and Gordon, the answer might be, few. Such forms of membership became a problem for many institutes across the country. Detracting as it did from their original objectives.

Thomas Kelly indicates, by 1851, Chichester had a membership between 200 and 499. The institution certainly flourished for it did not lose its identity until 1923 when it became the Regnum Club, which still functions today in the same building.

Kelly provides a very comprehensive list (although, he considers it as only provisional) of Mechanics Institutes throughout each county of England, Scotland and Wales, Two for the Channel Islands and one for the Isle of Man are recorded as being in operation up to 1851.
Once the Mechanics Institute had been founded in London by George Birkbeck, Brougham and Francis Place in 1824, the philosophy was rapidly adopted across the country and Kelly suggests that by 1826 over 100 institutes were in existence. Kelly indicates that by 1851 there were 698 Mechanics' and similar institutions which would have had, with a best estimate, some 183,700 members. Kelly goes on to suggest that the institutes embodied three basic elements;

the element of technical education by means of lectures and classes; there was the library element, intended initially to subserve the purpose of technical instruction but soon breaking away and achieving a vigorous life of its own; and there was the social club element, which forced its way in rather against the wishes of many of the founding fathers ...

(Kelly pg.271 1957)

The Institute, in certain cases also provided day-schools for the education of the members children, a provision that was also made available to other local children. In the second half of the nineteenth century the provision of education, libraries and day-schools was taken over by the local authorities (Kelly 1957). A contributory factor, apart from the growing social rather than academic use, that led to the decline of the institutions.

c) - The Great Exhibition - a watershed in technical education

Possibly the major turning point in technical education came with the Great Exhibition of 1851. An event planned by the Royal Society of Arts, the exhibition recorded the technical progress
and scientific discovery of the age and was housed within the giant glasshouse constructed for the purpose in Hyde Park. It was an innovation supported by Prince Albert, who was prescient in recognising the results of not adopting technological change and industrial training. He was an advocate of both causes and warned of the consequences of neglecting them. This avid support and understanding obviously stemmed from his Germanic background.

The structure for the exhibition was designed by Joseph Paxton who had originally been apprenticed to the gardener at Woodhall Park for four years. He later became the foreman at the Horticultural Society gardens adjoining Chiswick House, at 18 shillings per week, moving on later to become head gardener at Chatsworth House where he received £70 per year and a cottage.

It is thought Paxton only had an elementary education consisting of reading and writing at the village school at Milton Bryan near Woburn, which had been built by the local squire. Any deficit in his education was rectified, like so many others, while apprenticed. For his work on the Crystal Palace Paxton was knighted by the Queen (Kingsford 1971).

At this exhibition it was possible to witness the progress made by other countries, and it was soon evident that they were beginning to outpace England in all areas of technical and scientific advancement, an advancement that was due in no small part to the technical institutions that were in existence on the continent. To this end in 1853 Professor Lyon Playfair published
a pamphlet, 'Industrial Education on the Continent', in which he pointed out the superiority of the technical instruction in Germany, (Woodward 1988). A condition highlighted by professor Checkland when he states;

Damaging comparisons between the theoretical grasp of French and German workmen with those of England were made after the Paris Universal Exhibition of 1855.

(Checkland 1964 pg.91)

He also goes on to indicate that in a lecture given before the Prince Consort in 1855, Faraday suggested that;

the training of the mind by the older classical education still left men wholly incapable of understanding simple questions in chemistry or mechanics, and may indeed have impaired their powers.

(Checkland 1964 pg.91)

Checkland does continue however, by saying that;

The traditional landed interest saw no great need to nurture a new set of institutions that would further hasten their own eclipse.

(Checkland 1964 pg.91)

As a result of the debates that ensued, however, as Twite informs us;

it was generally received that provision should be made for the better technical education of the nation.

(Twite 1882, pg204)

At the time of the Great Exhibition there had been only thirty-eight science classes catering for some 1,300 pupils across the whole country. Within ten years this had risen to seventy classes with over 2,500 pupils. And a census undertaken in 1851 by Miss Erickson, indicated that most of the middle class were literate. But an inquiry into social origins in 1865, however, indicated
that only 10 per cent of the leading steel manufacturers had been to public school, by 1965 this had risen to one in three of the top managers,(Deane 1965).

Twite goes on to indicate that the first industry to be provided with technical educational resources was mining. Although some attention had been given to this area in 1837 the first real and positive step came in 1851 with the establishment of the London School of Mines, of which Lyon Playfair was a professor,(Twaite 1882). Checkland suggests a date of 1845 for the foundations of the School of Mines which was established at the same time as the Royal College of Chemistry, however, both Barnard and Armytage indicate that in the November following the Great Exhibition of 1851 an institution called The Government School of Mines and Science applied to the practical Art was established (Checkland 1964, Barnard 1961, Armytage 1970). This was followed in 1852 by a Department of Practical Art and a year later a science division was added. It at this point became the Science and Art Department of the Board of Trade, to be transferred in 1856 to the newly formed Education Department. There does, however, appear to be some confusion in this area between Armytage and Barnard.

Soon after the formation of the London School, there was a demand for a local school of mines to be established in Cornwall and with the help of the Royal Institution of Truro the Truro school of Mines was established.
Shortly after this, and this time with the aid of the Miners Association of Cornwall and Devon, the concept of classes in every town was put into practice and travelling lecturers appointed. Twite indicates that this practice was successful for twenty years, although two great difficulties had to be faced:

the imperfect elementary education of many who were desirous to learn, and the apathetic indifferences on the part of many to whom the young miner is accustomed to look for encouragement, or otherwise, in their acceptance of any scheme, the full importance of which he is unable to at once realise.

(Twite 1882, pg 205)

The 'apathetic indifferences' is a factor we come across again in Bristol, and is one which may be seen as a significant contributory factor in the demise of the apprenticeship system. He does go on however, to indicate that the role played by the Board School in raising the general education was improving year by year and that;

the feeling of indifference has in very many cases either died out, or has been changed into one of approval, and hearty support.

(Twite 1882, pg.205)

Twite goes on to give a detailed account of what in his mind constitutes a technical education for miners and provides a syllabus prepared by one Mr. Henderson, on which a technical examination on mine surveying was to be based. As one would expect, great emphasis was placed, on mathematics, surveying, mapping, machine construction, the use of air, water and steam as motive powers.
The important aspect of this early form of technical education was that examinations were set. Twite goes on to indicate that there was an Elementary stage, an Advanced stage, and an Honours stage. For a full Technological Certificate the candidate would have been required to have passed at least the elementary stage in one of the following three subjects:

- Practical, Plane, and solid Geometry
- Pure mathematics
- Principles of mining

But as Woodward suggests, educational reform was expensive and initially it was not seen to bring any economic returns, dealing in values, which could not be measured in terms of commercial gain (Woodward 1988, pg.474). It was a view that was to alter later, as today we would consider education an important factor in terms of having a long term economic value;

Self-made and successful men, quick to see the possibilities of a new machine or the importance of a good water supply for their towns, did not show the same alertness of mind in considering the economic advantages of an educated working class. From their point of view an educated working class meant an increase in labour troubles.

(Woodward 1988 pg.474)

As a result of the debate following the great exhibition, Woodward suggests that the newly formed education department asked for information about the needs of technical instruction, and the effects upon British trade of the competition of countries where this instruction was already given. It was pointed out by the Nottingham manufacturers that their greatest rival in the hosiery trade was Chemnitz. Nottingham had only one
technical school where the fees, in contrast to Chemnitz, were so excessive that they excluded the poorer classes. And unlike Chemnitz, the classes at Nottingham were in the arts, while their rival was able to offer excellent technical instruction at low cost.

The Paris Exhibition of 1867 had already shown the manufacturers of Leeds that their continental competitors were able to produce work far in advance of English goods. Again like Nottingham, the provision of technical education within the city was totally inadequate. The population of Leeds at this time was in the order of 250,000; and because of the very nature of its industries there was a considerable reliance upon applied science. The only technical instruction given in the city however, was in a cellar where one teacher held a class in chemistry. Such facts were enough in 1872, to produce a royal commission of inquiry into the teaching of science.

I close this part on education with a quotation from Benjamin Kidd writing in 1894, which, at the close of nineteenth century, sums up the situation of the past nine hundred years - the privilege of wealth;

A large proportion of the population in the prevailing state of society take part in the rivalry of life only under conditions which absolutely preclude them, whatever their natural merit or ability, from any real chance therein.... For under the great body of rights which wealth has inherited from feudalism, we to all intents and purposes allow the wealthy classes to retain the control of these positions for generation after generation, to the permanent exclusion of the rest of the people. Even from that large and growing
class of positions for which high acquirements or superior education is the only qualification, and which we consequently (with strange inaccuracy), speak as if they were open to all comers, it may be perceived that the larger proportion of the people are excluded - almost as rigorously and as absolutely as in any past condition of society - by simple fact that the ability to acquire such education or qualification is at present the exclusive privilege of wealth.

(Benjamin Kidd 1898 pg.234)
Table 3.1
Return of Number of Apprentices
Registered in the Merchant Services

<p>| Apprentices bound as marines in the Merchant Services |
|------------------|------------------|------------------|------------------|------------------|</p>
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<th>Year</th>
<th>under 16</th>
<th>16 - 18</th>
<th>18 +</th>
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<tr>
<td>1859</td>
<td>2044</td>
<td>2971</td>
<td>158</td>
<td>5015</td>
<td>3785</td>
<td>1988</td>
</tr>
<tr>
<td>1860</td>
<td>2572</td>
<td>2877</td>
<td>167</td>
<td>5449</td>
<td>3789</td>
<td>1827</td>
</tr>
<tr>
<td>Totals</td>
<td>88323</td>
<td>88942</td>
<td>1255</td>
<td>177265</td>
<td>113653</td>
<td>66458</td>
</tr>
</tbody>
</table>

* During this period the Act required that boys should be under 17 on being apprenticed and bound for a minimum term of four years.

Table 3.2
Parish Apprentices
Bound to different trades and employment

<table>
<thead>
<tr>
<th>Trade</th>
<th>Number</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silk Throwsters</td>
<td>118</td>
<td>144</td>
</tr>
<tr>
<td>Silk Manufacturers</td>
<td>26</td>
<td>175</td>
</tr>
<tr>
<td>Flax Dressers</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Flax Spinners</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Flax manufacturers</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Sail cloth manufacturers</td>
<td>8</td>
<td>174</td>
</tr>
<tr>
<td>Woolen manufacturers</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Worsted Spinners</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Worsted manufacturers</td>
<td>146</td>
<td></td>
</tr>
<tr>
<td>Carpet weavers</td>
<td>2</td>
<td>174</td>
</tr>
<tr>
<td>Frame-work Knitters</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Earthenware manufacturers</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cotton Spinners</td>
<td>353</td>
<td></td>
</tr>
<tr>
<td>Cotton Weavers</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Cotton manufacturers</td>
<td>771</td>
<td></td>
</tr>
<tr>
<td>Cotton Twist manufacturers</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Calico Weavers</td>
<td>196</td>
<td></td>
</tr>
<tr>
<td>Fustian manufacturers</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Cotton Candlewick manufacturers</td>
<td>24</td>
<td>1491</td>
</tr>
<tr>
<td>Manufacturers (supposed to be cotton)</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

Note: The above spans a ten year period between 1802 and 1811 for those parish apprentices bound to a particular trade.

Abstracted from: The Committee on Parish Apprentices 19th May 1815
Table 3.3

Estimated school attendance

<table>
<thead>
<tr>
<th>Period</th>
<th>Ratio</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800</td>
<td>1 in 21</td>
<td>4.7</td>
</tr>
<tr>
<td>1816</td>
<td>1 in 14</td>
<td>7</td>
</tr>
<tr>
<td>1835 recommended</td>
<td>1 in 9</td>
<td>11</td>
</tr>
<tr>
<td>actual</td>
<td>1 in 11</td>
<td>9</td>
</tr>
<tr>
<td>London</td>
<td>1 in 15</td>
<td>6.6</td>
</tr>
<tr>
<td>populated regions</td>
<td>1 in 18</td>
<td>5.55</td>
</tr>
<tr>
<td>1856</td>
<td>1 in 8</td>
<td>12</td>
</tr>
</tbody>
</table>

Sources various

Table 3.4

Dockyard schools and apprenticeship attendance 1844

<table>
<thead>
<tr>
<th>Dockyard</th>
<th>No. attending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woolwich</td>
<td>94</td>
</tr>
<tr>
<td>Sheerness</td>
<td>110</td>
</tr>
<tr>
<td>Chatham</td>
<td>136</td>
</tr>
<tr>
<td>Portsmouth</td>
<td>219</td>
</tr>
<tr>
<td>Devenport</td>
<td>232</td>
</tr>
<tr>
<td>Pembroke</td>
<td>76</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>867</strong></td>
</tr>
</tbody>
</table>

Note: No. of apprentices attending each school during the year ending 31.12.1844

Abstracted from: Parliamentary Papers 1801 - 1900
Chapter Four
Technical and Vocational Education from 1900-1993

Introduction
Towards the latter end of the 19th century a flurry of report writing was taking place on the subject of education. And a number of schools were established offering comprehensive curricula which included the subjects of construction, mechanics and engineering drawing. Amongst these reports was one produced by the Royal Commission on Technical Instruction. Reporting during 1882-4, the year after it had been set up, it indicated an obvious need for a more marked distinction between elementary and secondary education. As a result there was a strengthening of the position of higher grade schools (the more advanced elementary and higher central schools).

Later, in 1888, the Cross commission in its Report of the Royal Commission on the Elementary Education Acts, was divided as to the value and function of these higher grade schools. It is no surprise therefore, to find that the Bryce Report of 1895 found a great deal of confusion amongst the variety of higher schools. The best of which provided an education for at least two years after what was then the seventh standard (when an individual would have left school at 15).

The Report did, however, identify three main types of higher schools which eventually resulted in the tripartite structure of grammar, high and secondary schools in 1944, but more importantly
It recommends the establishment of the office of Minister of Education with control over a central education body, thereby merging the existing Education Department, the Science and Arts Department and the Charity Commission.

The 1902 Education Act

Aldrich suggests that by the start of the twentieth century, schooling rather than domestic education or apprenticeships, had become the norm (Aldrich 1982). Thus, I would suggest, providing a stimulus to the decline of the apprenticeship system. The view of Aldrich is one that gains support from the Education Act of 1902, which eventually gave some reality to elements of the recommendations of the Bryce Commissioners by removing school boards and school managers, and establishing local education authorities (LEAs).

Although the Act provided some LEAs with the power to assist in the provision of education for those who had completed elementary education (then called higher education), it did little to further technical education for them. Only in Scotland, with the passing of an Act in 1908, was it made a statutory obligation to provide for evening classes in industrial crafts (Peters 1967).

In 1909, however, a report under the chairmanship of Acland, did look into the Act passed in Scotland to consider if it might also be applied to England and Wales. It indicated that 170,000 individuals between the ages of 12 and 14 left school and did not
attend any form of day classes, and that some 1,480,000 from a population of 2,000,000 between the ages of 14 and 17 (74%), received no continued education. The report also confirmed that apprenticeships were in decline and that there was a large group of both boys and girls who were neither apprentices or learners. The report therefore recommended the establishment of day continuation classes, which came into effect after the Education Act of 1918 (Ford 1969).

In the end, England and Wales were not to be faced with a statutory obligation, as it applied to Scotland, until the 1st April 1945, when the 1944 Education Act came into effect and it became a duty to secure the provision of education at all its stages, adequate to the entire needs of the community (Peters 1969, pgl). At the same time it finally established the position of Minister of Education. A new post and one that was to be directly responsible for the implementation of educational policy.

ii A vocational division

Morrish indicates that in 1903 and 1904 regulations emanating from the Board of Education made provision for day instruction for suitably qualified students who might profit from more advanced education (Morrish 1970, pg98). He suggests that these students were being prepared specifically for work in industry and commerce.
Following on from these regulations, two documents emerged in 1904 that had a distinct bearing upon vocational education. The first of these was the **Elementary Code of 1904**, which claimed the purpose of public elementary education was, both at an intellectual and practical level, to help prepare young individuals for working life. While the **Regulations for Secondary Schools of 1904** sought to establish a division between secondary schools and technical institutes where instruction and training was provided for both adults and young people who had already been through the general education system (Morrish 1970).

The technical school was thus being viewed as a distinct form of educational institution serving the specific needs of a particular sector of the population. Armytage indicates that 111 technical colleges held day technical classes by 1912, for elementary-school pupils, as a direct result of the 1905 regulations emanating from the Board of Education (Armytage 1970). It was because of their diverse nature that, between 1912-13, the Board of Education eventually recognised some as junior technical schools.

**Junior technical schools**

Indications from historical accounts suggest that this type of school had been under consideration and slowly evolving for a number of years. Their roots stemming from the trade schools of the late nineteenth century. Sir W.H. Hadow suggested that a
number of full-time Day Trade Schools had been established primarily to prepare boys for apprenticeships in the London area for furniture and cabinet-making (Hadow 1926). The first of these was at the Shoreditch Technical Institution in 1901, which operated a three year course.

Generally these schools were designed to take on boys who were near the end of their elementary education, for a period of one, two or three years, and provide them with a wide but sound education and specialised training that would equip them to enter a workshop or factory at about 16, with the prospect of rising to foreman or manager. In some cases, Barnard suggests, pupils were entered for the examinations of the Royal Society of Arts, or similar (Barnard 1961).

1 Early trends

In 1913 the Board of Education issued Regulations for a new category of school which were to be known as Junior Technical Schools. By the time the first World War broke out 37 such schools were in existence. And in 1926, the Hadow Report on The Education of the Adolescent stated that;

these schools are definitely intended to prepare pupils either for artisan or other industrial occupations or for domestic employment.

(Hadow 1926, pg.33)
Courses were to extend over a 36 week year and were not to be less than two, nor more than three years in duration. The report indicates that between 1922 - 23, 12,133 pupils between the ages of 11 to 16 attended Junior Technical Schools (table 4.1). By 1923 - 24 a considerable increase in the intake of such schools can be observed (table 4.2).

It is suggested that employers were attracted to these new institutes by the vary nature of the vocational philosophy offered, which in most instances was determined by local requirements. In particular the employers welcomed the idea that there was potential in the supply of high quality apprentices, as it was usual for the students to prepare for specific trades. Barnard indicates;

> some junior technical schools, especially in London, were more definitely 'trade schools' and provided a more narrowly vocational training.

(Barnard 1961, pg.271)

He goes on to state that although this vocational structure was predominant, at the same time all types of junior technical schools provided a strong backing of general education (Barnard 1961). The schools often contained two or three different departments, and a certain proportion of the staff in each junior technical school were required to have had industrial or workshop experience.
The Hadow Report of 1926 suggested junior technical school at that time fell into two categories:

1. those which dealt in particular with "craftsmanship", and which in London were known as "trade schools". Providing a substitute for up to two years of an apprenticeship, and supplying extensive training in individual crafts.

2. those which were linked specifically to engineering and provided an understanding of the principles of machinery. Skill being taught up to a certain level with full training being provided at the place of employment. The curriculum included mathematics, science and engineering drawing.

Outside London the Report suggests that most of these schools conformed to the second type, which, according to local circumstances comprised building, engineering and occasionally shipbuilding. It was assumed that once an individual entered a Junior Technical School their future occupational career had been selected and therefore, the remainder of their education should be directed towards this goal.

The Gradual Growth of the JTS

The Report, The Education of the Adolescent, attempted to define the origin, aim and province of the junior technical school. And in 1928 the President of the Board of Education, Lord Eustace Percy produced a report which indicated that about 80-90 per cent
of those undertaking further education in industry or commerce attended evening classes (Morrish 1970). He argued that it was of great importance to develop both full and part-time day courses for such students.

By 1929 there were some 108 officially recognised junior technical schools with a student population in the region of 18000. Mowat suggests that between 1920 and 1931 the number of schools rose from 84 to 177 (Mowat 1984).

The following year (1930), the Board of Education published its report The Junior Technical School, where it was stated the growth of such schools was steady although not considerable. I would suggest that compared to the elementary sector this might be so, but a 41 per cent growth in this type of school was, by itself, significant. The Report did, however, highlight the real, and what I would consider major problem. There had been no planning of these schools, and in 1933 the board issued a circular (1444), which stressed the need for co-operation between authorities when planning provision.

Trade schools were included amongst technical schools which by 1937 in England and Wales had reached 220, and had a population of 29,431 (table 4.3). Contrast this with the provision of 'secondary' and 'elementary' schools recognised by the Board of Education in the same year (table 4.3). For the 12 to 17 year age group there were, when combined, some 1,597,362 pupils, or 45.9% of the estimated population for this age range. The figure for
the Junior Technical schools for this range is not so promising. But if we compare the 13 to 17 age range, the ratio improves (table 4.4). A more detailed analysis of vocational schools is provided by table 4.5, where an indication of the destination trends post 14 between 1925 - 36/7 is given. If a comparison is made of the 1937 Junior Technical Schools figures for the 12 - 16 year olds, with those of 1922 - 3 (25,324 and 10,781) (table 4.6 and 4.7), the growth of 134.8% over a fourteen year period proves to be significant. These results would indicate that the JTS was becoming well established and meeting a growing demand. The apprentice was gaining a sound education relating to their vocation.

In 1937 the Board of Education produced pamphlet 113, which outlined the basic curriculum for Junior Technical schools. This had been based on a full inspection of eighty-two Junior Technical schools which included fifty-five preparing individuals for the construction industry, twenty one Junior Commercial Schools, three provincial Trade Schools and three Junior Housewifery Schools. It was this report that made up the Educational Pamphlet 111, A Review of Junior Technical Schools in England.

I consider it relevant to outline those aspects of the curriculum as they affected the Junior Technical Schools for the Constructive Trades, and have therefore dealt with the topic at some length in appendix 4.1.
By 1938 Spens had classified 4 types of Junior Technical school (see also table 4.5);

1. Those preparing boys for specific industries without restriction; engineering, construction, chemical or mining industries, the mercantile marine or fishing industries.

2. Preparation of boys and girls (note the inclusion of girls in this area) for more specific occupations; furniture and cabinet-making, tailoring, printing, silversmithing, musical instrument making, needlework trades, hairdressing etc. A higher proportion of time (50% or more) is spent on practical work. These were the Trade Schools.

3. Those preparing girls for domestic management. They devoted a considerable proportion of the time to domestic crafts and were known as Junior Housewifery Schools.

4. Those preparing both boys and girls for commercial work; book-keepers, typists, clerks, telephonists etc. These were known as the Junior Commercial Schools

He also indicated that some 85 per cent of these schools were contained within Technical Schools, and that only about 16% of them had more than 200 pupils and 54% fewer than 100. Spens does confirm, however, that since 1925 the total number of students had doubled. He also thought the staff in these schools were very well qualified, about 55% holding degrees and the remainder with equivalent professional qualifications (Spens 1938).
The Report of 1938 also removed the term junior, and urged for the establishment of a new type of higher technical school and recommended that a number of existing technical schools should be converted to this form of technical high school, recruit their pupils at 11+, by means of a general selective examination, and provide a five year course up to 16 together with a new school leaving certificate.

The Norwood Report of 1943 largely supported the ideas of Spens and suggested a tripartite structure of secondary grammar, secondary technical and secondary modern. The 1944 Education Act confirmed the tripartite system set out in the Norwood Report. And in 1947 the school leaving age was raised to 15.

Apprenticeship education would now have to be developed through an alternative approach.

Continuative Education

It is well established that Evening education classes had been available in various forms for the past hundred years or more. As indicated by the Code of regulations, published in May 1893 by the Committee of Privy Council on Education, for Evening Continuation Schools founded on a part time basis, (Hadow 1926).

This form of education enabled those whose learning opportunities had been restricted, to gain an elementary education. And in
1907 the Board of Education recommended that a system should be introduced in which each student would follow a course composed of several allied subjects, including English. Evening institute classes, as they were known after 1926, were often held in the buildings of a day school or other educational institution, (Barnard 1961). In addition a number of colleges for further education were specially built and equipped to undertake this work. The foundation for a new system of apprenticeship training.

Harrison indicates that in 1937-8, Yorkshires 15 LEAs made provision for about 70,000 students over eighteen in evening institutes, technical institutes and art schools. Many, he suggests, were working in their spare time towards professional and commercial qualifications (Harrison 1961).

i Day continuation schools:

Armytage suggests the threshold to employment in 1909 was being raised so rapidly that,

more sophisticated firms, especially those concerned with the electrical and chemical industries, had started schools where boy entrants could continue their education.

(Armytage 1970 pg.212)

These were day, as apposed to evening, continuation schools. And in the same year, because of their popularity amongst the industrialists, a recommendation went out to the LEAs to make
similar provision for the young employed until they reached seventeen.

Although many were closed during the 1914 war, a committee was appointed in 1916 under the direction of H. Lewis to consider the question of juvenile employment when the conflict was over. Immediately after the first World War there was no significant unemployment. And A. J. P. Taylor suggests that the unskilled actually benefited, as a narrowing of the gap between the wages of skilled and unskilled was taking place. He goes on to indicate that by the summer of 1919 four out of five service men had been discharged and nearly all were absorbed into industry (Taylor 1988).

Amongst the findings of the Lewis committee was a recommendation that continuation classes for children lasting not less than eight hours a week should be established for those between the ages of 14 to 18. It was a basic concept supported by the Fisher Act of 1918, Fisher then being the President of the Board of Education. He stated that young individuals not undergoing full time instruction;

should be freed from work for the equivalent of three half days a week during forty weeks. Two half days at school and one half day holiday. When the Act was passed in 1918 provision was for those between fourteen and sixteen to attend day continuation school for 320 hours per week.

(Morrish 1970, pg.156)
But economic restrictions of the period, following the first World War (Taylor 1988), forced all but one LEA to close their continuation schools. The lone authority was Rugby which maintained a compulsory day system for pupils up to the age of 16 until 1966.

By 1921, the Education Act of that year made it the duty of the LEA either separately, or in co-operation with the LEA for Higher Education to establish and maintain a sufficient supply of Continuation Schools. The Haddow report understood this to imply day continuation Schools for young persons between the ages of 14 and 18. And viewed them as intended part-time Schools for those young individuals already in employment (Hadow 1926). As the Act of 1921 stated such schools were not to be in operation between 7 in the evening and 8 in the morning.

Peters indicates that under both the Education Acts of 1918 and 1921, local authorities had the specific duty to set up continuation schools for those who were required to attend and at the same time the power to direct them to attend. He continues:

young people could be compelled to put in at least 280 hours per year, their employers having to release them for the purpose. The duty placed on the authorities was to provide, not for all young people who might demand it, but only those who had been obliged to demand it. Thus the duty became operative only if the power was used.

(Peters 1967, pg.179)
It follows, therefore, if the local authority did not make it obligatory for young people to attend a day continuation school, then such schools need not be established by the authority!

Peters confirms that, obviously, few authorities used the power granted to them. And where it was used, inconsistencies prevailed. Young people and their employers were also faced with anomalies in the operation of the compulsion, particularly if near authority boundaries. In addition he indicates the schools were unpopular with employers as there tended to be a scarcity of the appropriate type of teacher, and limitations on the number of adequate buildings (Peters 1967). Even though there was the availability to impose compulsory attendance upon unemployed youths under eighteen,

in 1938 only about one fifth of the leavers from elementary schools continued to receive any kind of formal education, and of these most attended evenings only.

(Peters 1967, pg.180)

It is a statement not borne out by the figures provided in tables 4.3 and 4.4, which indicate a high proportion of this group went on to some form of further education.

ii County Colleges

The concept of the County College on the other hand met with a welcome response as it developed. Having suffered the ravages of the Industrial Revolution life in the rural community underwent
considerable changes again, this time after the first World War. And one county, Cambridgeshire offered a response to this problem by the establishment of a system of village schools. These schools owe their foundation to the foresight of Henry Morris, the County Education officer. Barnard indicates the first of these "village colleges" (Armytage suggests there was provision for eleven) was opened at Sawston in 1928. Between 1930 and 1939 three further colleges were opened. Their concept had a considerable influence on the proposed revival of the continuation schools, planned to be set up after the second World War (Armytage 1970). It was a proposal which, unfortunately, never came about.

The Butler Education Act of 1944 re-affirmed the duty placed upon every local education authority to establish and maintain County Colleges. Which were intended to provide facilities for young people from the age of fifteen to eighteen. Day release for apprentices was agreed upon when it was thought that a compulsory requirement was going to be placed on employers by the Act. In the event such provision never became a statutory obligation. Alexander indicates this proposal in fact gained support from the employers, who maintained the day release provision on a voluntary basis (Alexander 1964).
Sir William Alexander does, however, sum up the situation when he states;

It is perhaps fair to admit frankly that the development of education for industry and commerce in England and Wales has lagged substantially behind the developments in other forms of education.

(Alexander 1964, pg.65)

Writing in 1947, Barnard implied the county colleges were still in operation and in certain cases students were actually bused in from the outlying regions. The colleges were well endowed with workshops, laboratories, lecture rooms and halls. They were, from all accounts, well equipped establishments that fully met the needs of the community and the education of the individual (Barnard 1947).

Any nation faced with combating a major conflict also has to deal with developing technological change brought about in resolving that conflict. The period between 1928 and 1935 saw just such technological re-adjustments taking place in the United kingdom. One result was the establishment of Regional Councils for further education. Their main function was the preparation of young potential employees for dealing with technological change. Armytage suggests that the nation also had to consider the other side of the problem of acquiring technical skill, that of youth unemployment (Armytage 1970).

So prophylactic measures to prevent them from denigrating had to be devised by the Ministry of Labour. 'Leisure' of an enforced and demoralising kind was the overriding problem in the interwar years.

(Armytage 1970, pg.214)
Government Training Schemes

i A system of four training schemes

In terms of a Government response to the vocational training of adults it is possible to distinguish three periods during the interwar years:

1. a post 1918 resettlement period,
2. a period of unemployment extending from the middle 1920s to the early 1930s,
3. a period of industrial recovery until the late 1930s.

In the May of 1919 the Government obtained the authority to operate vocational training schemes, thus enabling a large population of ex-servicemen prepare for civilian occupations. Initially a temporary measure, it was restricted to the disabled servicemen, and was established within special hospitals. And between the period 1919 to 1924 88,800 men received training. Of these, only some 6,000 were not considered disabled. It was also during 1924 that the Instructional Factories (as they were called) were reduced from 58 to 13 and the other training centres under the Ministry of Labour were cut from 254 to 43 (Sheldrake and Vickerstaff 1987).

But owing to growing unemployment in 1925, following a brief period of prosperity, the Ministry of Labour, through its newly formed Training Department (fig4.1), established training course
in purpose built training centres, and introduced four training schemes;

1. an industrial training scheme,
2. an interrupted Apprenticeship scheme,
3. a Professional Business Training scheme,
4. a Resettlement scheme.

Of these the first was considered the most important.

ii 1924 -1930

This was a period of depression in the industrial sector and within the supporting regions, particularly in the north. In other areas the extent of the problem was less severe.

During the years of heavy unemployment two types of centre, one providing vocational training and the other rehabilitation functioned side by side.

the operation of the scheme brought out the main points of difference between the normal methods of industry for training or absorbing juvenile recruits and the type of intensive course by which adults could be fitted for industrial employment in a comparatively short time. To provide such courses, instructional factories were established, so far as possible along the lines of ordinary industrial undertakings, but with the emphasis transferred from production to teaching.

[ILO 1948 pg4]

This development indicates that for the first time a government was taking positive steps towards providing sound vocational
training for those beyond school age. But this should also be viewed in the light of being a palliative for unemployment and thus a possible misuse of training by government (to be repeated later in the 1970s with the MSC). There was some opposition from the trade unions to this system and in this respect a restriction was placed on the number of individuals admitted to training courses. The placement of trainees in employment also proved difficult. To the point where any notion of providing a high level of skills training was abandoned (Sheldrake and Vickerstaff 1987).

Non-specialised courses lasting six months were established during 1925 and 1926, for the young unemployed men (women undertook home training courses). By 1927 the unemployment situation particularly within the coal mining, cotton and iron and steel industries, was no longer seen as a temporary factory. In an attempt to alleviate the situation the unemployed from the regions were brought to the Midlands and South of England, where prospects were better. Initially the training centres were used as a temporary measure to absorb this influx. But as the placing of individuals improved the centres were more able to adapt to the local needs of industry.

Eligibility for vocational training was still confined to those men from the depressed regions, but the age limits that had existed in 1926 of 19 and 25, were relaxed in 1930 to 18 and 35.
The world financial crisis of 1930-1931 caused a serious slump in all industries and led to severe restrictions in vocational training. But as the demand for industrial manpower increased between 1937-1938, so courses at centres were altered to fit the new demand. In 1938 there were 16 training centres with provision for 8,739 trainees, 4,000 places being reserved for soldiers. During the year 18,750 men were admitted, and by December 6,366 were in training. During the same year 23,772 men were admitted to instructional centres.

a) Juvenile Instruction Centres

In 1918 five Juvenile Unemployment Centres, 'dole schools', were established, initially as a short term measure in an attempt to deal with the anticipated problems of a depressed economy after the first world war. Later, on the recommendation of the Board of Education, they took on a more permanent structure.

Although these centres had been designed for a period of six months, this was soon increased to one year and in fact they extended well into the late 1930s. There was a gradual growth in these centres, which became known as Juvenile Instruction Centres in 1929, particularly after the general strike and coal stoppages of 1926 and a National Advisory Council for juvenile unemployment had been established. And although at the start of this project the funding was met in full by the Board of Education, over time the general funding for this development became spasmodic,
varying from region to region. And as Pope suggests, in some regions the authorities were reluctant to provide any form of funding, even though they came under the sponsorship of the Ministry of Labour (Pope 1978).

It is generally agreed these Centres were seen as a form of substitute to work, there primary function being to keep the young unemployed between the ages of fourteen to eighteen occupied. Pope suggests that even the Treasury, the Board of Education as well as the Ministry of Labour (albeit to a lesser extent), saw them in this light, even until the late 1930s (Pope 1978).

Mills indicates, in Portsmouth, in an attempt to deal with the young unemployed, and to establish a centre, disused wooden huts were collected together and erected on an open site (Mills 1983). Even though in most cases boys and girls were housed in separate accommodation, the idea that little thought was given to the actual need of these unemployed individuals is supported by the fact that most Centres were housed in disused schools or run down commercial buildings in the neglected parts of towns. Both Pope and Mills provide illustrations of the clients of these centres having to confront social dereliction and the activities associated with prostitution on a daily basis.

Pope suggest that staffing at such centres was also a general problem, due mainly to the lack of job security and the fact that such posts did not count towards superannuation. Although
conditions at these centres left a great deal to be desired, Mills indicates at Portsmouth, in 1936, the post of Superintendent became vacant and applications from teachers were invited, thirty responded. The post holder here had to deal with a floating population of a hundred or so youngsters, although, he did have two assistance and was able to call upon part time staff.

a.i The problem of attendance

Another problem faced by these centres was that of attendance, which was not on an enforced regular basis until the 1936 Act placed an obligation on all unemployed young people to attend. Even then, Pope indicates that absenteeism was around 10 per cent. Compared to apprentices in Bristol as I indicate later, this was I would consider a reasonable and acceptable level. Generally in the 1930s, a young person would stay at a Centre for about three months although, depending upon circumstances, this could reduce to a few weeks. Mills suggests that at Portsmouth the boys attended continuously over a period of six months, but he also agrees with Pope that in a number of cases it was normally a matter of weeks (Mills 1983)

a.ii Curriculum issues

This obviously meant the curriculum and any educational opportunity at the Centres was very limited. Pope indicates that rudimentary arithmetic and English were included, but for boys
the emphasis tended to be on handicrafts while for girls it was
domestic subjects. He goes on to suggest that training in these
areas was rather basic. At Portsmouth the whole ethos was based
upon informality, with rules being established by the group as a
collective. Clients were free to select any subject loosely
categorised as educational, there being no structured curriculum
or timetabled periods.

Although clients at the centres across the country were
encouraged to develop and extend skills already possessed, Pope
suggests, generally, this was limited. Some did, however, develop
skills in areas they were unaware of and as a result were, in
certain instances, able to pursue further training. It is
apparent at a national level, however, no direct attempts were
made to match skills to specific jobs.

The practical aims of running the centres were
essentially negative ones of keeping them [clients] out
of trouble and, as far as possible, checking any
deterioration in morale or employability.
(Pope 1978, pg.16)

The major emphasis at the Portsmouth Centre was upon personal and
social skills development (Mills 1983). Thus endowing them with
personnel attributes that enabled them to approach prospective
employment without the stigma of being unemployed and the feeling
of being unemployable (sixty years on, this stigma is still a
problem amongst the current unemployed). In a number of cases
those with a reasonable educational background were able to leave
the centres and move on to higher technical courses (Pope 1978).

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While over a period of time some centres gained a good reputation, the majority were on the whole condemned by those that used them, as not fulfilling the needs of the individual. Again a comment heard with the emergence and operation of a modern response to unemployment - MSC, YTS etc.

The outbreak of the second World War closed many of these units down, Portsmouth was no exception closing as it did in 1939.

b) Government Training Centres.

The managers of these centres had considerable authority and could call upon the assistance of the Training Department who regularly inspected and supervised the activities (figures 4.2 and 4.3). As far as possible instruction was provided in conditions as similar to those of industry as possible and included demonstration, individual explanation and lectures, together with practical work (appendix 4.2) graduated according to the degree of proficiency reached. The theoretical instruction was by means of two lectures, every week each lasting one hour, and daily fifteen-minute "shop talks". Delivered by instructors who were practical men not drawn from educational institutions. Class numbers varied between eight and sixteen depending upon the level of supervision required and discipline was strict men could be dismissed for poor time-keeping or conduct. Trainees were required to clock in and out as they worked a 44 hour week. And were taken on under either a "block" or "staggered" entry system.
Where a "staggered entry" system was adopted, lectures were omitted, being replaced by hand-outs containing relevant material related to the work to be carried out during the week.

c) Instructional Centres.

The prime function here was one of rehabilitation, which consisted mainly of outdoor activities such as road building, excavation and forestry work, usually for government departments. Some instruction was also provided in what was termed "rough" carpentry, boot and shoe repair, and elementary metal work. Again the hours were 44 a week and strict discipline and time-keeping were maintained. Sheldrake and Vickerstaff indicated that by 1933 some 30,000 men had passed through what had been likened to three months at an open prison (1987).

iii 1939 - 1945

After the outbreak of war, all training not directly related to the war effort was discontinued and vocational training used only to fill vacancies in essential work. Men over military age and those rejected from service on military grounds became eligible for training. Over 420,000 individuals were trained during this period. In 1939 there were 16 Government Training Centres and by August 1940, a target had been set for 40. By January 1941 39 centres were in operation and almost 75,000 individuals had undergone training. But during 1942 -1944,
however, due to the direct transfer of available individuals to essential industries, many centres were closed down, and although some new ones had opened, by the end of hostilities only 17 were in operation. During the whole period of the conflict, however, 286,000 individuals completed training.

Since training had been directed towards the war effort and not to the development of qualified craftsmen, courses were shortened and simplified. Training in each trade was reduced to the essential elements required to perform a limited range of operations or even one particular operation efficiently. In addition the period of training was converted from a pre-war period of six months to between two and five months. Trainees who undertook short courses were often placed with employers who continued the training in the work-place. It was only those individuals displaying exceptional aptitude who were allowed to move on to higher grade training.

Technical colleges were also used in emergency schemes of training for semi-skilled employment. The courses took eight weeks to complete and consisted of between 40 to 48 hours of instruction. By the end of 1940 about 150 technical colleges were participating in the scheme. The educational authorities retained full responsibility, but the Ministry of Labour paid a standard rate per trainee per hour, drew up the syllabus and standard tests or arranged standard courses, and supplied an instructional manual based on the Ministries experience of training.
a) Upgrading.

Individuals with some prior experience were provided with short courses in both the Government centres and technical colleges. This was usually in the same area but to a greater skill level. Thereby enabling the individual to upgrade their skill requirements to meet industries needs. The employer either kept them on during training or the Ministry paid a basic wage. In this way nearly 17,000 individuals gained upgrade training, (ILO 1948).

In addition the Government encouraged firms to train workers above their own requirements by making a grant in respect of each such worker trained. Response was low as only about 300 firms took part during the period of the war.

iv Post-War Training

It was initially estimated that labour requirements for industry after the war would be 6 million, although, this figure had to be considerably increased. It was also established that because of the rebuilding of the nations infrastructure and economic base there would be no over-all surplus of manpower;

Reinforcement of the building trades was regarded as the largest and most urgent problem. (ILO 1948, pg22)

In addition to those that entered the construction industry through the normal route of apprenticeship, some 200,000 additional skilled workers were required.
This factor combined with the possible requirements of other industries, as and when they revived, was that provision should be made for training an estimated 55,000 skilled individuals each year. To this effect the Government announced in April 1944 a scheme of vocational training. Under this scheme training was restricted to those occupations where a high degree of skill was required, and where the period of training would exceed three months. These restrictions were, however, modified in the case of certain industries, particularly in the area of civil engineering and canteen work.

The scheme was constantly monitored with regard to local needs and the numbers to be trained within a particular occupations adjusted when necessary. In 1947, 35,836 individuals went through what was an accelerated skills training scheme for the construction industry, but by 1948 this had reduced to 3,732 (fig 4.8).

The year 1944 was also significant in the introduction of the Education Act which officially brought into effect the expression further education. It was an area where a significant change in the provision of education and training for the apprentice was to take place. The concept of further education having been firmly established by the White Paper of 1943,(Peters 1969 ). The White Papers also established the broad areas of vocational and non-vocational full-time and part-time education.
Further Education

i Introduction

Any power used during the immediate post-war period by the tripartite partnership of central and local government and the professionals as a direct result of the 1944 Education Act was, it is generally agreed, used sparingly, (Dale 1989). Current legislation, however, both in the school and FE sector has now radically altered this position of power. And in the case of FE has removed it from local authority control and placed it within individual colleges.

Like the Acts of 1918 and 1921, the 1944 Act attempted the imposition of a compulsory system of part-time education in county colleges for all young people up to eighteen. But again a clause within the legislation stipulated that this would take place on a date to be specified. That date was never set and further education has, with the exception of modern employment regulations, remained voluntary.

ii Economic trends

The gradual social changes, particularly in economic conditions and among the working class population, had several effects on education. This nascent wealth meant education became more affordable for the individual. And with increased affluence there
was at first less economic compulsion for the young to leave education. But as conditions improved an emerging problem was the loss of wage differentials in the work place between adults and juveniles. The weekly earnings of adult men in 1958 had risen to 372 per cent of those in 1938, while the wages of boys and girls had risen 429 and 469 per cent respectively (Crowther 1959 pg.46). Thus while the economic compulsion to leave school had diminished, the economic attraction of doing so had increased. Presenting a further and important influencing factor in the decline in the apprenticeship system. Crowther gained evidence to show that an individual who remained in education did not catch up in earning capacity with his peer, who left at 15, until the early twenties and even later. It was evident, however, that the individual who remained in education did eventually catch up, but more importantly, exceed his peers.

Not only have there been plenty of jobs for the qualified, there has been a steadily growing list of desirable callings that cannot be entered without qualification.

(Crowther, 1959, pg.47)

As far as employment is concerned, during the 1980s and early 1990s such conditions dramatically changed. And within the construction industry, even well qualified professionals are finding it difficult to retain their existing posts.

Qualifications as a prerequisite of belonging to a profession is a 19-20cent concept, but is one that since the second world war has spread across a much wider range of employment. And within the last five years the form of these qualifications has also
for the young to leave education. But as conditions improved an emerging problem was the loss of wage differentials in the workplace between adults and juveniles. The weekly earnings of adult men in 1958 had risen to 372 per cent of those in 1938, while the wages of boys and girls had risen 429 and 469 per cent respectively (Crowther 1959 pg.46). Thus while the economic compulsion to leave school had diminished, the economic attraction of doing so had increased. Presenting a further and important influencing factor in the decline in the apprenticeship system. Crowther gained evidence to show that an individual who remained in education did not catch up in earning capacity with his peer, who left at 15, until the early twenties and even later. It was evident, however, that the individual who remained in education did eventually catch up, but more importantly, exceed his peers.

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Qualifications as a prerequisite of belonging to a profession is a 19-20cent concept, but is one that since the second world war has spread across a much wider range of employment. And within the last five years the form of these qualifications has also
undergone considerable change, and at such a pace that employers are only just coming to terms with one system when another takes its place (many continue to refer to ONC and HNC when BTEC, which replaced them, is itself being replaced by GNVQ).

Crowther stated that in 1959 there had been a rapid rise in the number of jobs that could not be performed without some special knowledge or experience. Most of these were in the manufacturing industries and were as a direct consequence of the expansion in modern technology. Arising from such developments he also foresaw, (in direct contrast to the views put forward in the Carr Report of 1958), the development of a modularised system of vocationalism, where the old broader categories of trade were to be divided into more individualised areas requiring specialisation and qualification. A situation it is assumed in the 1990s will be provided for by means of the National system of Vocational Qualifications (NVQ/SVQ/GNVQ).

In 1958 there was also a further trend within a number of occupations for a recorded standard of general education among the work-force, even where specific expertise was not a requirement. In the present day of certification for all, this has been met by the instigation of the GCSE. It is then left to the employer to establish the relevant merits of a D, E or F grade as a measure of competence. In this respect there is considerable confusion among many employers who have little if any knowledge of the new vocational system. The findings of a survey carried out jointly by the Institute of Management and Manpower PLC
indicated that although 80 per cent of senior managers surveyed were aware of S/NVQ, only 40 per cent were familiar with the specific details. Only 15 per cent knew what the National Training Targets were, while only 46 per cent had actually heard of them.

The reason why the average worker in the 1950s required increased education was, according to Crowther, the result of two separate trends:

1. those more able individuals, who were denied educational opportunities in their youth, were now entering higher education and were, therefore, able to enter the professions.

2. the post-war period saw an increase in the number of skilled and professional jobs, which in turn drew into the higher positions many whose abilities would never in the past have permitted this.

So, the nation was faced with a shift both in social but more effectively in monitory power amongst its working population and a growing ability amongst this class to gain the educational standards demanded by both the professions and an industry that was continually developing its technological base. It was the interactions of varied social forces and the fact that the middle classes came to see the importance of a technical vocational education in terms of career structure, which were to establish trends that shaped the vocational education of the future (Shilling, 1989).
iii The growth of FE and its student numbers

Cotgrove emphasises that the period between 1880 and 1905:

was one of rapid growth in further technical education. By contrast the next forty years saw only a slow evolution of a system already established during the formative years. There was little growth in evening classes enrolments before 1939.

(Cotgrove, 1958, pg. 68)

In general, of those receiving technical instruction, 80% did so by means of evening class, while 2.3% attended full-time during the day (Cotgrove, 1958). It is suggested that even though the number of day students in the inter-war years remained very small, enrolments did increase more rapidly than those for the evening classes. This was particularly so after 1947, as indicated by table 4.9 and its associated graph. Most of this post-war day expansion was due to part-time day students released from employment.

There was a slight increase in the proportion of specifically vocational studies before 1937, but this was not maintained after 1947. Thus, most of the expansion in post-war evening classes was in non-vocational classes;

The Balfour Committee (1927) paid particular attention to technical education as a factor in industrial efficiency, and concluded that industry as a whole was apathetic towards the technical education of its recruits.

(Cotgrove, 1958, pg.77)
A similar conclusion was drawn by the Malcome committee in 1928. And enrolments, it has been suggested, would possibly have improved had industries demand for both scientific and technical qualifications' been greater. In a reply to a survey question put to industry by the Emmett committee in 1927, there was prodigious support from industry as a whole, both for the desirability and absolute necessity of a technical education (Cotgrove, 1958). But a major consideration that must be taken into account was the fact that apprenticeship was cheap, the apprentice earning a low wage throughout the apprenticeship conversely his value to the employer increased over the same period as skills were acquired. More points out that this factor alone might explain why employers were reluctant to pay for the training of an apprentice who might leave at the end of their term (More 1980).

iv A move towards an Industrial Training Council

Yet, Cotgrove suggests, in spite of the form of endorsement gained from the survey, other evidence pointed to the fact that practical support was not similarly forthcoming. The Balfour committee suggested that the lack of co-operation between industry and education was mainly on the part of industry. More implies that the problem of this lack of support for technical education from employers existed well up to the late 19 century but for a number of reasons; the main one being simple conservatism, another was the fear of the dissemination of knowledge. The support, when it did come was for technical
education rather than theoretical knowledge, for possibly this very reason. It was though that this element would best be provided for at the workplace. It has generally been agreed by many individuals and organisations, that employers bore the major responsibility for training, albeit on a voluntary basis (a view constantly echoed through the years). But Carr had found that many firms had not made a contribution to the training of apprentices as I indicate below. He further suggested that there were some doubt that the building industry in particular was in fact training enough apprentices. It was felt this was a similar problem in a number of industries;

there is no indication that there are too many apprentices in any occupation, the inference is that in some occupations there must be too few ... in the last year or two the number of apprenticeships on offer has actually declined.
(Carr, 1958, pg.11)

The Report went so far as to recommend that even where the number of apprentices in an organisation was small it was essential;

that one person in the firm should be responsible for the general organisation and oversight of their training.
(Carr, 1958, pp.21-22)

The Carr Committee also recommended the formation of a National Council for apprenticeships, to gather and provide information on training. In July 1958 through the initiative of the Employers Federation an Industrial Training Council was formed that undertook this role. From its inception the Council understood that training was the responsibility of the employer.
Industries' general lack of support in training is a situation which has remained to this day, as there is a general tendency for industry to be short-sighted in the matter of training, thinking only in terms of its own individual needs and not those of the industry as a whole. Until industry established a structured approach and made known its educational requirements, little progress could be made. The problem of the 1950s lay in the lack of the necessary machinery required for communication between the relevant bodies (Cotgrove 1958). In this respect little has changed, although it must be stated that changes in attitude did occur in the early part of the 1960s and 1970s as I indicate in chapter five.

There were a small number of full-time apprentice training schools towards the end of the 1950s (Croft 1960). But these were restricted to large industrial organisations or the nationalised industries of the period such as the National Coal Board and Electricity boards. The armed services continue to operate these schools today. As Croft indicated in 1960;

> there is the view commonly held by employers and trade unionists alike, that our traditional method of 'training on the job' contributes something that a budding craftsman will not get in a sheltered training school,

(Croft, 1960, pg.8)

With regard to trade unions, Liepmann considers that attitudes towards apprenticeship training differed according to the grade of worker, and across a great part of industry it never featured as an issue. It is a view supported by More, who suggests that
the general approach towards technical education was neutral, (More 1980), although he cites work published after Liepmann which indicates that the trades unions attitude may not have been as negative as Liepmann suggests. Many would agree, however, that the general practice of the unions towards apprenticeships was restrictive rather than pro-active. Liepmann goes on to indicate that craft unions had little concern for craft training, although they supported the extension of day release for young workers who were not apprenticed.

For whatever ultimate reasons craft unions may have at one time been interested in apprentice training, they have long since accepted the progressive deskillling of the crafts as an inevitable implication of technical progress, much as they may deplore the disintegration of craftsmanship and its accompaniment, the influx into their trades of unapprenticed workers.

(Liepmann 1960, pg.155)

v. Group apprenticeship schemes

In 1953 a system was established where a number of industries operated what were group apprenticeship schemes, where firms paid a levy for each apprentice selected by a central apprentice supervisor, whose role it was to arrange assessments and selection, and develop specific training programmes (Croft 1960, ITC 1962). Croft advocated that during the training period the apprentice should spend one day and two evenings at a local technical college. It must be emphasised that this was a relatively limited scheme and only accounted for little more than 1,500 apprentices. The apathy towards apprenticeships is
highlighted by Croft when she cites one case where, over a two year period, one particular scheme was only able to recruit some 20 firms and these firms were unable to raise one apprentice between them.

The Industrial Training Council (ITC) report of 1962 confirmed that many of these joint schemes had been unsuccessful. It suggested that what was missing from the apprenticeship system was a planned and systematic approach to training (ITC 1962 pg.8), and that industry should provide a detailed syllabus of apprenticeship training. It also upheld the recommendations put forward by Carr regarding each organisation having an individual responsible for the supervision and co-ordination of apprenticeship training. The report went on to indicate that there should be an induction period followed by periods of practical training and further education backed up by systematic assessment throughout the training period.

Singer and Macdonald imply that even in many major organisations the training methods were little short of deplorable (1970, pg.17). They further indicate that;

during the whole period of apprenticeship there is an almost total absence of the application of modern learning practice.  
(Singer and Macdonald, 1970, pg.17)
A decline in apprenticeship numbers

By 1946-7 there were 167,000 employed students provided with various forms of release. And in 1961 almost 494,000 individuals had been undertaking part-time courses of FE as a result of release from their employers (Dent, 1963).

Considering table 4.10 and discounting those attending University, for the period 1957-8, out of a population of 3,439,000 individuals between the ages of 15 and 20, a total of 1,450,000 (42.16%) were in further education. Of these, 882,000 (60.82% of the FE population and 38.73% of the age group) between the ages of 15 and 18 (the norm for apprentices), were undertaking full-time, part-time day or evening education. Of the total age group 1,960,000 (56.99%) were not in any form of education. If we consider the age group 15 to 17, 44,780 individuals were in full time education (2.62%); 234,000 (13.8%) in part-time day education and 395,400 (23.2%), participating in evening education. Providing a total of 675,080 (39.6%) in further education. Over the same period, table 4.11 indicates there were 530,100 boys and 497,800 girls between the ages of 15 - 17 in employment, a total of 1,027,900. Of these, 188,400 boys and 34,300 girls (a total of 222,700 individuals), were apprenticed, only 21.66% of the 15 to 17 employed population, and it can be assumed that under the general requirements of apprenticeship these were undertaking further education.
Over the same period (1957-8) the number of construction apprentices for England and Wales amounted to 15,692 (table 4.12), which accounted for 7% of those apprenticed but only 1.52% of the 15 to 17 working population.

So, although the numbers of both boys and girls employed over this period increased, the general trend was for apprenticeships to decline. There was a low pre-war birth rate which would account for the drop in employment rates and apprenticeships during the mid-fifties. And a trade recession between 1958-9 which followed a credit squeeze may have deterred some firms from taking on apprentices. But in many instances it was just a general reluctance to become involved with an apprenticeship structure.

Many industries in 1958 indicated that due to technical developments the number of apprentices taken on would increase, and the Carr Report cited some of the industries where it considered this expansion would take place; the Coal Industry; the Electrical Supply Industry; the Iron and Steel Industry; the Shipbuilding and Ship-repairing Industry; the Radio Servicing Industry; the Railway Industry; the Civil Air Transport Industry; and the Catering Industry. It is ironic that the Carr Report predicted expansion in all those industries, apart from one, that were in fact to decline.
When the period 1958 to 1968 is viewed as a whole there is a gradual increase in the percentage of boys taking up apprenticeships, while amongst the girls the trend is not so stable. Overall, there was a growth in the percentage of employed individuals who were apprenticed over the decade. There was also a gradual increase in the number of construction apprenticeships until 1968 when the trend is reversed. Apprenticeship numbers were only to exceed the 1968 figures on a further three occasions.

The educational pattern for the 16 - 18 year olds between 1976 and 1989, is provided by table 4.13, which indicates a stable growth in full-time education across the period, with a levelling out in the FE sector at the end of the 80s. While there was a growth in the numbers of individuals participating in FE over this period, within the construction industry, apart from a respite in 1979 and 1980, there was a continued decline in the number of apprentices.

vii Rationalisation and Crowther

Over the period 1957-62 a rationalisation of technical education was carried out, and extensive building programmes were undertaken. By the late 1950s and early 1960s £75 million had been spent (Dent, 1963). And in 1956 the Ministry published circular 305 (The Organisation of Technical Colleges) which delineated a four tier structure of colleges (fig 4.4).
Colleges of Advanced Technology (CATs) headed this structure and were to provide a broad range and substantial volume of exclusively advanced work, including post-graduate studies. Regional Colleges were those which had a substantial amount of full time and sandwich courses involving advanced work. And Area Colleges provided in addition to these courses, varying amounts of advanced work, mainly of a part time nature above ONC and Diploma. While Local Colleges provided on the vocational side, courses which were mainly part time up to the level of ONC or its equivalent.

Part Six of the Crowther Report of 1958 remarked on the need to produce far more technologists, technicians and craftsmen. And among a number of recommendations was the desirability for a greater degree of integration between schools and further education and the need to transform what was then a varied collection of plans for vocational training, into a coherent national system of practical education. Whereas only about 12.5% of sixteen to eighteen year olds were in full time education, it was suggested that 50% at least should be the aim. It was argued that there should be an expanded provision for 'college based' sandwich courses for young people aged sixteen to eighteen, provided satisfactory arrangements could be made for training in industry.
In his report Crowther provided a list of what were officially designated further education establishments:

Colleges of advanced technology CATs 10
Regional colleges 22
Area colleges 160
Local colleges 300
Colleges of commerce 23
Colleges schools and dept. of art 177
National colleges 8
Miscellaneous 57 in total
  incl National Sea Training schools 12
    Works schools 10
    Nursery training schools 24

Dent implies that although many colleges of Further Education were still referred to as Technical Colleges, there were, in 1961, 765 FE establishments (Dent, 1961). During the same period LEAs were maintaining provision in;

735 major establishments
7478 evening institutes
29 residential colleges or centres of adult education

In 1961 there were also 15 Government Training Centres providing training under industrial workshop conditions, the instruction being provided by trainers having extensive industrial experience.
By 1978/9 the picture had changed. While the Universities and Polytechnics remained the same in number, 35 and 29 respectively, over the same period (1978/9 to 1987/8) the number of other further education establishments decreased.

It was not uncommon for the great bulk of vocational education to be provided by local educational authorities through colleges of Further Education, Art Colleges, and Technical Colleges. This was until the first of April 1993, when, under the 1988 Education Reform Act, colleges became 'higher education corporations' and were funding through the PCFC (Maclure 1989 pg.83). As a result, those that qualified under the legislation for corporate status opted out of local authority control, and student numbers, particularly full time, became an important issue in the funding process of these independent establishments. As a result of the Further Education Funding Council (FEFC, see fig 4.5) regulations regarding expansion, colleges have been required to achieve a 24 per cent growth in full time numbers by 1995/96, in order to receive full funding (the FEFC currently funds education and training in over 450 colleges). This will obviously result in the decline of part time students. At the time of writing (1993/4) part time students are avidly encouraged to study for 15 hours per week and thus become classified as full time.
Writing in 1958 Cotgrove confirms that the,

characteristic feature of further technical education in Britain is its predominantly part-time nature - mostly in the evenings.

(Cotgrove, 1958, pg.68)

According to Armytage the introduction of the National Certificate in 1921 with the first certificate in Mechanical Engineering and Chemistry enabled the professional bodies to utilise technical colleges for their various qualifications. The building scheme started in 1929/30 and Civil Engineering along with Textiles in 1943. The technical college were thus beginning to develop specialities in response to local needs.

Peters advocates that the traditional form of part-time day release, grew up between the wars. This was in a country where it was considered the vocational education between the wars had been degraded and was completely inadequate by international standards (Peters 1967, Evans 1992). After the second World War (as I have shown), there was a gradual increase in the number of apprentices and looser forms of learnerships, resulting in an increase in the number of individuals released for education. Participation in the conflicts had dramatically changed the governments perspective of technical education and revealed the nations shortfalls. BACIE applied pressure upon R A Butler
(Minister of Education 1941-45), to expand technical education, and between 1943-44 the allocation of funds was increased by a factor of fourteen, thus reflecting the governments concern in the neglect that had existed (Evans 1992).

The growth that did occur between the wars led to new forms of release. And intending technicians obtained, where it was provided, the same kind of release as craft apprentices, one day per week. Indeed many technicians were recruited from promising craftsmen; technician apprentices, however, were not always clearly distinguishable at first. But they needed, it was agreed, more scientific knowledge than craftsmen; and some employers provided more than one day a week. More commonly there evolved alternating periods of training at work and full time college. Thus in addition to day release, various other forms of scheme emerged. One thing is certain with regards to apprenticeship training in the late 1950s, the five year apprenticeship that was current then was coming under some criticism, and it was agreed that in many cases this length of time was unnecessary and in a number of professions could be reduced (Carr 1958).

This part time day release developed through a voluntary tripartite partnership between employers, apprentices and the state where the economic interest of all coincided (Crowther 1959). And Peters agrees with Crowther when he suggests that training for industry evolved mainly through the apprenticeship system (Peters 1969). Conversely, Liepmann considers it grew up
as a desire for general further education and not out of vocational need. I think, however, it is generally accepted that there was a very distinct demand from industry for vocational provision which was met, initially, through a comparatively stable apprenticeship provision, after the second World War. Perry would argue, however, that there was in fact little impetus from industry to alter traditional training practice (Perry 1976). I think it is also true to say that although industry did offer its support it was more in the form of paper support rather than proactive leadership.

Peters goes on to illustrate that in 1946/7 there were 167,000 employed students getting various forms of release; but by 1964/5 there were over 624,000. Nearly half of those getting day release in 1964/5 were under eighteen. He indicates that this represented 31% of employed boys and 7% girls. Employee release figures for the period 1971 to 78 are provided in table 4.14.

The Henniker-Heaton Report, published in June 1964, specifically related to the subject of day release for young individuals below 18. It recommended that at least an additional 250,000 young people should be offered release from employment to undertake further education by the year 1969/70 (table 4.15).

Although the current educational structure for industry was founded after the first world war, it was primarily both the engineering and construction industries which led the way in day release provision. But Crowther had ideas to extend the facility
to other sectors by increasing the arrangement. He still considered that the curriculum would remain vocationally oriented but be more varied "developing the whole man" (Crowther 1959 pg.181). In this respect he is agreeing in principle with the view put forward in the Carr Report that an apprenticeship has always been regarded as providing education for life as well as training for a vocation. And Carr envisaged that the county colleges would include all young workers aged between 16 and 17. It was felt in the report that there was no sudden division between skilled and unskilled but a gradual shading of skill and ability throughout the whole range of employment (Crowther 1959 pg.182). Peters (1969), however, suggests that a post war trend was the extension of apprenticeship into higher levels of training, with the consequential evolution of new forms of educational provision.

ix Training for apprentices

As I have indicated by means of the indentures earlier, a condition of apprenticeship, sanctioned by a national tripartite agreement between the government in the form of the Ministry of Labour, the trade unions and employers representatives, was that regular and systematic part-time education and training should be undertaken by the apprentice when and where necessary at a technical institute. This inclusion, primarily developed during a period of decline in the number of individuals taking up skilled occupations after the first World War, due to the low birth rate
and later as a result of the raising of the school leaving age in 1942, was aimed at inducing young people to undertake apprenticeships.

The National Joint Council for the Building Industry (NJC) National Working Rules of 1979 indicated that every individual being trained for a skilled occupation in the industry should enter a training agreement and that under this agreement the employer would be responsible throughout the whole period to see that the "apprentice/trainee" was provided with "off-the-job training, and/or further education, and appropriate work experience.". The point was made that it was the responsibility of the individual to make every effort to gain knowledge and skills in the particular occupation (NJC, 1979, pg.105). The actual roots of this provision stemmed from the Interrupted Apprenticeship System of the late 1920s, and indicates that the apprenticeship system was clearly seen as the main process of gaining a vocational training. But the governments role towards a training methodology which was based on a system of voluntarism was seen (by itself) purely in terms of acting in an advisory capacity.

The period of training within the construction industry in 1979 was normally three years and those under 19 were required to serve an additional six months probationary period. Most apprenticeships commenced from the sixteenth birthday of the individual and as most left school and entered employment at the
age of 15 or just over at that time; this usually counted as the probationary period. Attendance at an approved further educational college for those under 19 was for not less than two half days or one whole day each week (or its equivalent on block release) and evening classes as required by the college. The condition was that the individual should study for the craft certificate or other approved qualification in the relevant skill. If the individual was over 19 then training was by mutual agreement between them and the employer. It was also agreed that where both the apprentice and employer agreed it would be beneficial to both, then further training at post-craft level would be undertaken.

Liepmann amongst others suggested that the main weaknesses of the arrangements that made vocational education an integral part of apprenticeship lay in the fact that the successful completion of a technical education by means of an examination has never been a prerequisite for completing the apprenticeship; and in the conditions which caused apprentices to attend courses which were too difficult; and also, in the opinion of many, at a level higher than required for their future work (Liepmann, 1960).

Technical colleges were meant to admit any and all apprentices, the selection of whom and the course upon which they attended being at the discretion of the employer, not the college. Carr suggested in 1958 that the systematic selection of apprentices based on their ability to absorb a certain amount of theoretical instruction was of considerable importance. It was also
emphasised that most apprenticeship agreements provided for a period of probation when errors in selection could be rectified. The problem was that the courses were governed by a syllabus laid down by an external body for an individual usually of higher ability. This problem stems from the fact that before the second World War the individual who participated in further education was of more than average ability and hence courses were adjusted accordingly.

The broadening acceptance of all apprentices into FE obviously resulted in wider variations in ability. Accordingly Carr recommended that an apprentice should not be entered upon a course that was more advanced than his or her ability. But standards required by the more able should not be reduced. Although questions were mainly produced by qualified craftsmen, usually now teaching, examinations for such courses were established by external bodies. Such qualifications for craft apprenticeships usually stemmed from the examinations of the City and Guilds of London Institute.

Writing in 1958 Beverstock considered that at the end of the three year period the craft apprentice should have gained a City and Guilds of London Certificate, more able craftsmen should then be allowed to transfer to National Certificate Courses (Beverstock, 1958). The structure of the City and Guilds courses followed the pattern outlined in figure 4.6.
Liepmann found in her report of 1960, however, that technical education for apprentices had not been a success. A number of small studies were undertaken on college records, although it was a limited representation it made it possible to appreciate the scale of the wastage in apprentices' technical education. The study indicated high failure rate in the various examinations, high drop-out rates and frequent re-sits of one or more years of a course (Liepmann 1960). In his Report of 1958 Carr had in fact indicated that the quality of apprenticeship training was inadequate.

This problem of failure rates was again outlined by L. Bill in 1982 when he refers to his involvement in the re-design of the City and Guilds craft Certificate in 1975, due to the low pass rate at basic craft (Bill 1982).

In terms of recent developments the National Council for Vocational Qualification issued a letter on the 9th of November 1993 in which it raised concerns about the number of Intermediate GNVQ student who did not complete all of the units necessary for an award, and of the low previous achievements of many of those individuals entered for the award.

Carr was, however, opposed to any form of compulsory testing being made part of a condition for completing an apprenticeship. In addition the report suggested that in terms of content, training for apprentices needed to have a considerable degree of
flexibility. An apprentice should not be skilled in one narrowly defined occupation. They required a broad skills base rather than a restrictive narrow specialisation. He indicated that he would like to see a return to a situation where;

the status of the man who has served an apprenticeship is that of a skilled worker, able to turn his hand to a fair range of operations rather than that of a worker whose skill is narrowly specialised.

(Carr, 1958, pg.20)

He went on to say;

Such a widening of the range of training given will not be possible or appropriate in all occupations. But we feel strongly that, in considering the scope of their present apprenticeship training, industries should regard this as of fundamental importance.

(Carr, 1958, pg.20)

The modern system of GNVQ, although it would be strongly denied, has in practice moved towards a narrowing of the skills base of the individual (chapter 5). When a system becomes modularised this must in most circumstances be the case. Only those modules appropriate to the individual, or more importantly the employer, would be taken up. More importantly still it is possibly the concept of a modularised training system which led to a renewed attack on the apprenticeship training methodology. The distinction between apprenticeship and industrial training was lessening.

The White Paper of 1956, Technical Education, identified three grades of workers - technologists, technicians, craftsmen. And suggested the main route to the highest technologist qualification would be via sandwich courses lasting four to five
years. It was envisaged that the scheme would attract pupils leaving school at eighteen mainly from colleges of advanced technology (CATs) (Morrish, 1970, pg105).

Thus in the early 1950s it was possible to broadly distinguish seven types of apprenticeship training:

- university or under-graduate student-technologist.
- technical-college student technologist.
- student technician
- craft
- trade

On the other hand, apprenticeships were not required by the unskilled; but as mentioned, there has been the growing tendency for loose forms of learnership to evolve for semiskilled operatives. This was especially so with the advent of the Manpower Services Commission (MSC) schemes. Since its decline, however, this provision has dramatically dropped off in the FE sector.

The late 1960s to 70s saw an increase in the number of apprentices, but it was a pattern that was to reverse. Cantor and Roberts (1972) intimate that the decline in the number of apprenticeships during recent years are as a direct result of the industrial recession. They indicate that in the the 1960s 40 per cent of sixteen-year-old boys were leaving education for apprenticeships, but by the 1980s this proportion had reduced to 20 per cent. The number of apprenticeships in manufacturing
declined from a peak of 236,000 in 1968 to under 150,000 in 1980.

At the same time as this decline was taking place, the standards of apprenticeship programmes were under attack. A New Training Initiative: Agenda for Action declared it was essential to modernise apprenticeship training by replacing time serving by standards of training and ensuring that all those who reached the new standard were recognised and accepted as competent. This led to a period of new vocationalism.
Fig 4.1
Central Administration relating to the organisation of Vocational Training
under the Government Training Scheme 1919 - 1945

Ministry of Labour and National Service

Training Department (three sections)

Administration
- Consultation with industry
- Schemes for occupations
- Recruitment, placement and control of numbers

Administration
- Administration of centre and trainees

Executive Branch
- Procedures to be adopted in vocational training
- Technical advice on vocational training
- Monitoring of all centers
Fig 4.2
Regional Administration relating to the organisation of Vocational Training

1 - Regional Offices

2
3

4
Ministry of Labour
5
6
7
8
9
10
11

Regional controller for technical advice
Regional technical officer

Co-ordination and control of Gov. Training Centres
Acceptance or rejection of applicants
Inspection of establishments

Recruitment and placement in employment
Control of training - establishment of new courses

This is the structure as it applies to each of the eleven Regional Offices

There were eleven Regional Offices reporting direct to the Ministry of Labour
Fig 4.3
Local Administration relating to the operation of Vocational training

1 - 11 Regional Offices

Local Office

Local administration
Recruitment, placement
Allowance payment - travel, welfare etc.

Training Centre

Training
Payment of allowances
Trainee welfare etc.
Vocational Education Structure as at 1961-62

- **District Colleges**: 350
  - Courses for technicians and craftsmen mainly part-time ONC and City and Guilds
- **Area Colleges**: 170
  - Courses for technicians and craftsmen, mainly part-time HNC and City and Guilds
- **Regional Colleges**: 21
  - Advanced studies; degree Dip Tech; HNC
- **C.A.T.s**: 10
  - Devoted entirely to advanced study, graduate and post-graduate study

Fig 4.4
Grants from the Polytechnic & college Funding Council for some higher education work

Fees income from students & employees consultancy & other services

Amount of funding from government will depend on success of courses attracting students

The English Funding Council
12-15 national members

Appointed by the Secretary of State for Education & Science through consultation with the Employment Secretary

Regional Committees

Composition Similar to main Council:-
Local training & enterprise councils to be represented and to retain their existing direct control of part of college funding

Responsibilities:--
- Allocation of resources
- Account for spending
- Ensure quality of education & training
- Financial health of the colleges
- Ensure that suitable full-time courses are available for all who want them
- Advise Secretary of State on:
  1. Closing colleges
  2. Building new ones
  3. Merging them where they think fit
- Empowered to take action in cases of financial mismanagement by colleges

1986 training credits £800 - £2000
for all 16-17 yrs olds for NQV II

Free hand to:
- Employ own staff
- Enter into contracts on their own behalf
- Manage their own assets
- Attract externally funded contracts
- Establish lectures pay rates

Grants under work - related PE programme

Training credits will meet cost of part-time courses in areas where FE is open to such schemes

PE Colleges

All post 16 provision

Sixth form Colleges

Fig 4.5
### 1958 structure

<table>
<thead>
<tr>
<th>Course</th>
<th>Duration</th>
<th>After Baverstock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craft course</td>
<td>1 to 2 yrs depending on secondary school attendance</td>
<td>1 yr Awarded to craftsmen over the age of 21 who had gained the advanced craft and had appropriate experience</td>
</tr>
<tr>
<td>Craft certificate</td>
<td>2 yrs</td>
<td>Advanced craft certificate</td>
</tr>
<tr>
<td>Advanced craft cert.</td>
<td>2 yrs</td>
<td>FTC extension course</td>
</tr>
<tr>
<td>Full Technological Certificate</td>
<td></td>
<td>FTC extension bridge year</td>
</tr>
</tbody>
</table>

### 1966-7 structure

<table>
<thead>
<tr>
<th>Course</th>
<th>Duration</th>
<th>After Peters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craft cert. course</td>
<td>3 yrs Average apprenticeship</td>
<td></td>
</tr>
<tr>
<td>Advanced craft cert.</td>
<td>2 yrs More able apprentice</td>
<td></td>
</tr>
<tr>
<td>Full Technological Certificate</td>
<td></td>
<td>2 yr Higher National Certificate</td>
</tr>
<tr>
<td>FTC extension course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2yr gen. foremanship course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In 1959 courses were classified into 11 occupational areas

In 1964 there were 113 craft courses and 110 technician courses
In 1963-64 405,000 students were following courses
Over 75% were in part-time day courses, only 3% were in full-time or sandwich courses
Table 4.1

Pupil numbers for type of school 1922-3

<table>
<thead>
<tr>
<th>Age</th>
<th>Elementary</th>
<th>% of total</th>
<th>% of pop.</th>
<th>Grant-aided</th>
<th>% of total</th>
<th>% of pop.</th>
<th>Junior</th>
<th>% of total</th>
<th>% of pop.</th>
<th>Total</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-12</td>
<td>640668</td>
<td>95.94</td>
<td>87.87</td>
<td>27028</td>
<td>4.05</td>
<td>3.71</td>
<td>94</td>
<td>0.01</td>
<td>0.01</td>
<td>667810</td>
<td>729133</td>
</tr>
<tr>
<td>12-13</td>
<td>616871</td>
<td>92.10</td>
<td>83.13</td>
<td>51687</td>
<td>7.72</td>
<td>6.97</td>
<td>1258</td>
<td>0.19</td>
<td>0.17</td>
<td>669816</td>
<td>742026</td>
</tr>
<tr>
<td>13-14</td>
<td>587950</td>
<td>89.35</td>
<td>78.94</td>
<td>66014</td>
<td>10.03</td>
<td>8.66</td>
<td>4034</td>
<td>0.61</td>
<td>0.54</td>
<td>657998</td>
<td>744768</td>
</tr>
<tr>
<td>14-15</td>
<td>155362</td>
<td>68.75</td>
<td>21.34</td>
<td>66108</td>
<td>29.25</td>
<td>9.08</td>
<td>4511</td>
<td>2.00</td>
<td>0.62</td>
<td>225981</td>
<td>727595</td>
</tr>
<tr>
<td>15-16</td>
<td>13737</td>
<td>19.60</td>
<td>1.91</td>
<td>54101</td>
<td>77.21</td>
<td>7.53</td>
<td>2236</td>
<td>3.19</td>
<td>0.31</td>
<td>70074</td>
<td>718798</td>
</tr>
</tbody>
</table>

Total  | 2014608    | 87.91      | 55.00     | 264938      | 11.56      | 7.23      | 12133  | 0.53       | 0.33      | 2291679 | 3662620              

Abstracted from Table 1 app.III pg.281 Hadow Report 1926
Table 4.2

Destination of Elementary School leavers 1923-24

<table>
<thead>
<tr>
<th>No. leaving Elementary school</th>
<th>No. going onto Secondary school</th>
<th>Junior Technical</th>
<th>Other HE</th>
<th>Total No. to Full time education</th>
<th>Full time employment</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>total</td>
<td>668749</td>
<td>55541</td>
<td>7244</td>
<td>19267</td>
<td>82052</td>
<td>497894</td>
</tr>
<tr>
<td>percent</td>
<td>8.31</td>
<td>1.08</td>
<td>2.88</td>
<td>12.27</td>
<td>74.45</td>
<td>13.28</td>
</tr>
</tbody>
</table>

Abstracted from Table II app.III pg.282 Hadow Report 1926

Note: As the regulations up to 1925 stated that the minimum admission age to Junior Technical School was 13+, and that of the Secondary system ranged between 12 and 17 it has to be assumed that this is the age of the leavers in this survey.

We can thus see an increase in the numbers entering the JTS.
Table 4.3

Pupil numbers for type of school 1937

<table>
<thead>
<tr>
<th>School type</th>
<th>Age</th>
<th>Elementary</th>
<th>% of total</th>
<th>% of pop.</th>
<th>Grant-aided Secondary</th>
<th>% of total</th>
<th>% of pop.</th>
<th>Junior Technical</th>
<th>% of total</th>
<th>% of pop.</th>
<th>Total pupils</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12-13</td>
<td>522304</td>
<td>86.53</td>
<td>81.48</td>
<td>80154</td>
<td>13.28</td>
<td>12.50</td>
<td>1135</td>
<td>0.19</td>
<td>0.18</td>
<td>603593</td>
<td>641000</td>
</tr>
<tr>
<td></td>
<td>13-14</td>
<td>530122</td>
<td>85.65</td>
<td>80.57</td>
<td>83902</td>
<td>13.56</td>
<td>12.75</td>
<td>4886</td>
<td>0.79</td>
<td>0.74</td>
<td>618910</td>
<td>658000</td>
</tr>
<tr>
<td></td>
<td>14-15</td>
<td>158303</td>
<td>63.55</td>
<td>23.25</td>
<td>79390</td>
<td>31.87</td>
<td>11.66</td>
<td>11401</td>
<td>4.58</td>
<td>1.67</td>
<td>249094</td>
<td>681000</td>
</tr>
<tr>
<td></td>
<td>15-16</td>
<td>19743</td>
<td>19.33</td>
<td>2.71</td>
<td>73333</td>
<td>71.82</td>
<td>10.07</td>
<td>9037</td>
<td>8.85</td>
<td>1.24</td>
<td>102113</td>
<td>728000</td>
</tr>
<tr>
<td></td>
<td>16-17</td>
<td>2393</td>
<td>4.51</td>
<td>0.31</td>
<td>47718</td>
<td>89.89</td>
<td>6.20</td>
<td>2972</td>
<td>5.60</td>
<td>0.39</td>
<td>53083</td>
<td>770000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1232865</td>
<td>75.78</td>
<td>35.45</td>
<td>364497</td>
<td>22.41</td>
<td>10.48</td>
<td>29431</td>
<td>1.81</td>
<td>0.85</td>
<td>1626793</td>
<td>3478000</td>
</tr>
</tbody>
</table>

Abstracted from Table 1 pg.88 Spens Report 1938
Table 4.4

Pupil numbers for type of school 1937 13 to 17 age range

<table>
<thead>
<tr>
<th>Age</th>
<th>Elementary</th>
<th>% of population</th>
<th>Grant-aided Secondary</th>
<th>% of population</th>
<th>Junior Technical</th>
<th>% of population</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-14</td>
<td>530122</td>
<td>80.57</td>
<td>83902</td>
<td>12.75</td>
<td>4886</td>
<td>0.74</td>
<td>658000</td>
</tr>
<tr>
<td>14-15</td>
<td>158303</td>
<td>23.25</td>
<td>79390</td>
<td>11.66</td>
<td>11401</td>
<td>1.67</td>
<td>681000</td>
</tr>
<tr>
<td>15-16</td>
<td>19743</td>
<td>2.71</td>
<td>73333</td>
<td>10.07</td>
<td>9037</td>
<td>1.24</td>
<td>728000</td>
</tr>
<tr>
<td>16-17</td>
<td>2393</td>
<td>0.31</td>
<td>47718</td>
<td>6.20</td>
<td>2972</td>
<td>0.39</td>
<td>770000</td>
</tr>
<tr>
<td>Total</td>
<td>710561</td>
<td>25.05</td>
<td>284343</td>
<td>10.02</td>
<td>28286</td>
<td>1.00</td>
<td>2837000</td>
</tr>
</tbody>
</table>

Abstracted from Table 1 pg.88 Spens Report 1938

Note: This table indicates that the JTS has gained in terms of percentage of the population compared to the Elementary and Secondary sector where the percentage in relation to the population has decreased

Table 4.5

Vocational Schools 1937

<table>
<thead>
<tr>
<th>Type</th>
<th>No. of schools</th>
<th>Pupils Boys</th>
<th>Girls</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Technical School</td>
<td>220</td>
<td>19285</td>
<td>7228</td>
<td>26513</td>
</tr>
<tr>
<td>Junior Art Departments</td>
<td>41</td>
<td>1344</td>
<td>1022</td>
<td>2366</td>
</tr>
<tr>
<td>Nautical Schools</td>
<td>6</td>
<td>882</td>
<td>0</td>
<td>882</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>267</strong></td>
<td><strong>21511</strong></td>
<td><strong>8250</strong></td>
<td><strong>29761</strong></td>
</tr>
</tbody>
</table>

Source Table 16 pg.105  Spens Report 1938
Table 4.6
Destinations post 14 1925 - 1936/7

<table>
<thead>
<tr>
<th>Destination</th>
<th>1925-26</th>
<th>1932-3</th>
<th>1934-5</th>
<th>1935-6</th>
<th>1936-7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>total</td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>totals</td>
<td>38184</td>
<td>32026</td>
<td>70210</td>
<td>40620</td>
<td>35057</td>
</tr>
<tr>
<td>Entered professional commercial or clerical occupation</td>
<td>47.5</td>
<td>30.2</td>
<td>39.5</td>
<td>43.1</td>
<td>36.6</td>
</tr>
<tr>
<td>Entered Industrial or manual occupation</td>
<td>16.3</td>
<td>2.8</td>
<td>9.9</td>
<td>17.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Entered an Agricultural or rural occupation</td>
<td>4.3</td>
<td>0.6</td>
<td>2.6</td>
<td>3.6</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Note: results indicated as percentages

Abstracted from Table 13, pg.102, Spens Report 1938
Table 4.7 A comparison between school attendance 1923 and 1937

i Pupil numbers for type of school 1922-3 13 to 16 age range

<table>
<thead>
<tr>
<th>School type</th>
<th>Age</th>
<th>% of pop.</th>
<th>Grant-aided</th>
<th>% of pop.</th>
<th>Junior</th>
<th>% of pop.</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>13-14</td>
<td>587950</td>
<td>78.94</td>
<td>66014</td>
<td>8.86</td>
<td>4034</td>
<td>744768</td>
</tr>
<tr>
<td></td>
<td>14-15</td>
<td>155362</td>
<td>21.34</td>
<td>66108</td>
<td>9.08</td>
<td>4511</td>
<td>727895</td>
</tr>
<tr>
<td></td>
<td>15-16</td>
<td>13737</td>
<td>1.91</td>
<td>54101</td>
<td>7.53</td>
<td>2236</td>
<td>718799</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>757049</td>
<td>34.55</td>
<td>186223</td>
<td>8.50</td>
<td>10781</td>
<td>2191461</td>
</tr>
</tbody>
</table>

Abstracted from Table 1 app.III pg.281 Hadow Report 1926

ii Pupil numbers for type of school 1937 13 to 16 age range

<table>
<thead>
<tr>
<th>School type</th>
<th>Age</th>
<th>% of pop.</th>
<th>Grant-aided</th>
<th>% of pop.</th>
<th>Junior</th>
<th>% of population</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>13-14</td>
<td>530122</td>
<td>80.57</td>
<td>83902</td>
<td>12.75</td>
<td>4886</td>
<td>658000</td>
</tr>
<tr>
<td></td>
<td>14-15</td>
<td>168303</td>
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<td>11.66</td>
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<td>681000</td>
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<td>236625</td>
<td>11.45</td>
<td>25324</td>
<td>2067000</td>
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</table>

Abstracted from Table 1 pg.88 Spens Report 1938
### Table 4.8
Approved courses in the construction trades and no. trained 1945-1948

<table>
<thead>
<tr>
<th>Construction Trade</th>
<th>Eligibility</th>
<th>Training type</th>
<th>Length of training</th>
<th>Nos. trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bricklaying</td>
<td>M, DX</td>
<td>G+E</td>
<td>26</td>
<td>20529</td>
</tr>
<tr>
<td>Carpentry</td>
<td>M, DX</td>
<td>R or G+E</td>
<td>26</td>
<td>14072</td>
</tr>
<tr>
<td>Painting &amp; decorating</td>
<td>M, DX</td>
<td>G+E</td>
<td>26</td>
<td>6020</td>
</tr>
<tr>
<td>Plastering</td>
<td>M, DX</td>
<td>G+E</td>
<td>26</td>
<td>5042</td>
</tr>
<tr>
<td>Plumbing</td>
<td>M, DX</td>
<td>G+E</td>
<td>26</td>
<td>4068</td>
</tr>
<tr>
<td>Slating &amp; tiling</td>
<td>M, DX</td>
<td>G+E</td>
<td>26</td>
<td>823</td>
</tr>
<tr>
<td>Stonemasons</td>
<td>M</td>
<td>G+E</td>
<td>26</td>
<td>86</td>
</tr>
<tr>
<td>Wood machining</td>
<td>M</td>
<td>G+E</td>
<td>26</td>
<td>875</td>
</tr>
<tr>
<td>Terrazzo: layers</td>
<td>M</td>
<td>G+E</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>Terrazzo: polishers</td>
<td>M</td>
<td>G+E</td>
<td>13</td>
<td>-</td>
</tr>
<tr>
<td>Brickmaking &amp; tile manufacturing</td>
<td>M</td>
<td>E</td>
<td>13 to 26</td>
<td>82</td>
</tr>
<tr>
<td>Glazing</td>
<td>M</td>
<td>G+E</td>
<td>13</td>
<td>93</td>
</tr>
<tr>
<td>Heating &amp; ventilating</td>
<td>M</td>
<td>G+E</td>
<td>26</td>
<td>50</td>
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<td>Mastic asphalt</td>
<td>M</td>
<td>G+E</td>
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<td>218</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blacksmiths</td>
<td>M</td>
<td>G</td>
<td>26</td>
<td>78</td>
</tr>
<tr>
<td>Construction</td>
<td>M</td>
<td>G</td>
<td>16</td>
<td>41</td>
</tr>
<tr>
<td>Plant maintenance</td>
<td>M</td>
<td>G</td>
<td>26</td>
<td>234</td>
</tr>
<tr>
<td>Pavers</td>
<td>M</td>
<td>G</td>
<td>26</td>
<td>140</td>
</tr>
<tr>
<td>Pipe jointers</td>
<td>M</td>
<td>G</td>
<td>8</td>
<td>173</td>
</tr>
<tr>
<td>Timbermen</td>
<td>M</td>
<td>G</td>
<td>13</td>
<td>48</td>
</tr>
</tbody>
</table>

Total over 3yrs: 52684
Average per year: 17561.33

Notes: M = men only
DX = restricted to disabled persons during last quarter of 1947
G = Government training centre
E = Employers establishment
R = Residential (disabled) centre

None of the above trainees attended a technical college or similar

Abstracted from appendix 1  Vocational Training of Adults in the United Kingdom
International Labour Office Geneva 1948
Table 4.9
Enrolments in day and evening classes 1921 - 1955

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population No. 15-24yr</th>
<th>Attendance</th>
<th>Day %</th>
<th>Evening %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Day No.</td>
<td></td>
<td>Evening No.</td>
</tr>
<tr>
<td>1921</td>
<td>6654</td>
<td>22</td>
<td>0.331</td>
<td>867</td>
</tr>
<tr>
<td>1931</td>
<td>6929</td>
<td>35.8</td>
<td>0.517</td>
<td>906</td>
</tr>
<tr>
<td>1937</td>
<td>6640</td>
<td>40.1</td>
<td>0.604</td>
<td>1049</td>
</tr>
<tr>
<td>1947</td>
<td>6036</td>
<td>209.5</td>
<td>3.471</td>
<td>1377</td>
</tr>
<tr>
<td>1951</td>
<td>5612</td>
<td>318.5</td>
<td>5.675</td>
<td>1901</td>
</tr>
<tr>
<td>1955</td>
<td></td>
<td>422.8</td>
<td></td>
<td>1805</td>
</tr>
</tbody>
</table>

Abstracted from Table 1 Cotgrove (1958 pg.69)

Note: all Nos. in thousands

Day and Evening enrolments
1921 1955
Table 4.10
Proportions of 15-18 yr olds in different kinds of education 1957-58

<table>
<thead>
<tr>
<th>Education</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
<th>15 to 18</th>
<th>Boys %</th>
<th>girls %</th>
<th>at %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>No in age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 PT at school</td>
<td>116</td>
<td>54.4</td>
<td>30.7</td>
<td>13</td>
<td>2.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 PT in FE</td>
<td>7.42</td>
<td>5.71</td>
<td>5.26</td>
<td>5.49</td>
<td>4.78</td>
<td>4.07</td>
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</tr>
<tr>
<td>3 PT day</td>
<td>80.9</td>
<td>66.6</td>
<td>68.9</td>
<td>51.4</td>
<td>38.9</td>
<td>28.5</td>
<td></td>
</tr>
<tr>
<td>4 Evening</td>
<td>75.7</td>
<td>68.3</td>
<td>68.3</td>
<td>61.4</td>
<td>38.9</td>
<td>28.5</td>
<td></td>
</tr>
<tr>
<td>5 None</td>
<td>80.3</td>
<td>76.4</td>
<td>107</td>
<td>163</td>
<td>213</td>
<td>231</td>
<td></td>
</tr>
<tr>
<td>Total 234</td>
<td>133</td>
<td>141</td>
<td>139</td>
<td>109</td>
<td>84.3</td>
<td>58.9</td>
<td></td>
</tr>
<tr>
<td>Total in Ed</td>
<td>248</td>
<td>196</td>
<td>170</td>
<td>122</td>
<td>96.4</td>
<td>58.9</td>
<td></td>
</tr>
<tr>
<td>Total boys</td>
<td>201</td>
<td>139</td>
<td>99.8</td>
<td>58</td>
<td>39</td>
<td>39.6</td>
<td></td>
</tr>
<tr>
<td>Total girls</td>
<td>883</td>
<td>567</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>All values in thous</td>
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</tr>
</tbody>
</table>

source: table 1 and 2 Ministry of Education (Crowther) Report 15 to 18 1959
Note: Does not include those attending university

Part-time and evening education
Boys and Girls 1959

[Graph showing trends in education participation by age and gender]
Table 4.11
Apprenticeships and Employment 1950 - 1968

<table>
<thead>
<tr>
<th>Year</th>
<th>Boys: age at entry to employment</th>
<th>total</th>
<th>total boys apprenticed</th>
<th>%</th>
<th>Girls: age at entry to employment</th>
<th>total</th>
<th>total girls apprenticed</th>
<th>%</th>
<th>total boys/girls employed</th>
<th>total boys/girls apprenticed</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>225.2</td>
<td>37.0</td>
<td>11.0</td>
<td></td>
<td>273.2</td>
<td>92.3</td>
<td>33.8</td>
<td>214.2</td>
<td>35.8</td>
<td>13.5</td>
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<tr>
<td>51</td>
<td>229.7</td>
<td>37.7</td>
<td>9.9</td>
<td></td>
<td>277.3</td>
<td>94.5</td>
<td>34.1</td>
<td>215.9</td>
<td>36.0</td>
<td>13.3</td>
<td></td>
</tr>
<tr>
<td>52</td>
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<td>8.6</td>
<td></td>
<td>286.9</td>
<td>93.0</td>
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<td>211.3</td>
<td>32.7</td>
<td>12.1</td>
<td></td>
</tr>
<tr>
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<td>9.2</td>
<td></td>
<td>280.5</td>
<td>94.4</td>
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<td>224.1</td>
<td>33.9</td>
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<tr>
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<td>9.5</td>
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<tr>
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<td>214.1</td>
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<td>9.1</td>
<td></td>
<td>256.6</td>
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<td>202.6</td>
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<td>12.1</td>
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<td></td>
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<td>192.8</td>
<td>31.2</td>
<td>11.4</td>
<td></td>
</tr>
<tr>
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<td>9.4</td>
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<td>10.9</td>
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<tr>
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<td>39.2</td>
<td>10.0</td>
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<td>268.8</td>
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<td>36.0</td>
<td>204.1</td>
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<td>199.2</td>
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<td>114.5</td>
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<td>207.2</td>
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<td></td>
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<td>67</td>
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<td>19.3</td>
<td></td>
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<td>107.7</td>
<td>42.6</td>
<td>159.1</td>
<td>53.9</td>
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</table>

Abstracted from the British labour Statistics 1866-1968

All values in thousands
Table 4.13
Full time Education trends of 16 - 18 yr olds as a percentage of population age

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<tbody>
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<td>boys</td>
<td>girls</td>
<td>total</td>
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</tr>
<tr>
<td></td>
<td>1231</td>
<td>1178</td>
<td>2409</td>
<td>1405</td>
<td>1343</td>
</tr>
<tr>
<td>% in full time education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>school</td>
<td>28</td>
<td>28</td>
<td>28</td>
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<tr>
<td>HE</td>
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<td>3</td>
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<td>3</td>
</tr>
<tr>
<td>FE</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>YTS</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
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<tr>
<td>other</td>
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<td>73</td>
<td>74</td>
<td>68</td>
<td>64</td>
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</table>

Abstracted from table 21 Education Statistics for the United Kingdom

Table 4.11a
Totals for table 4.11

<table>
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</tr>
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<tbody>
<tr>
<td></td>
<td>2409</td>
<td>2748</td>
<td>2633</td>
<td>2547</td>
<td>2480</td>
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<tr>
<td>% in full time education as no.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>school</td>
<td>27</td>
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<td>816.2</td>
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<td>943.2</td>
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<td>16</td>
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<td>17</td>
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<td>4397.7</td>
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<td>2473</td>
<td>2896</td>
<td>3065</td>
<td>2976</td>
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<tr>
<td>YTS</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>73</td>
<td>68</td>
<td>58</td>
<td>52</td>
<td>50</td>
</tr>
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</table>

Table 4.11b
Participation of 16-18 in part time FE as a percentage of population age group

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<tr>
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<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>28.7</td>
<td>21.3</td>
<td>21.8</td>
<td>22.2</td>
</tr>
<tr>
<td>female</td>
<td>17</td>
<td>18.6</td>
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</tr>
<tr>
<td>total</td>
<td>21.85</td>
<td>19.98</td>
<td>20.4</td>
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</tr>
</tbody>
</table>

Educational trends
16 - 18 yr olds
Table 4.14
Students released for part-time day courses 1971-78

<table>
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<tr>
<th>year</th>
<th>male</th>
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<td>101</td>
<td>661</td>
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<tr>
<td>1972</td>
<td>533</td>
<td>102</td>
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<tr>
<td>1973</td>
<td>512</td>
<td>100</td>
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<tr>
<td>1974</td>
<td>513</td>
<td>111</td>
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<tr>
<td>1975</td>
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<td>111</td>
<td>605</td>
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<tr>
<td>1978</td>
<td>517</td>
<td>125</td>
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Source table 4.2 Education Training and Employment ISM No.4 1984
Table 4.15
FE and part-time day attendance details

Part-time FE attendance

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<td>951</td>
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FE attendance 1987

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<th>Total</th>
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<td>153</td>
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<td>199</td>
<td>182</td>
<td>136</td>
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<td></td>
</tr>
<tr>
<td>Day</td>
<td>128</td>
<td>125</td>
<td>74</td>
<td>327</td>
<td>131</td>
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<td>80</td>
<td>339</td>
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FE attendance 1988/89

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<th>16-18</th>
<th>Total</th>
<th>16</th>
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<td>FE</td>
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<td>182</td>
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Abstacted from tables 22 and 25 Annual Abstract of Statistics 1990 and table 5.6 Education Statistics 1990
Chapter Five

The New Vocationalism and the demise of the apprentice

Introduction

Towards the start of the seventies there was some debate on the actual ability of both further and secondary education to provide the necessary vocational education and training required by industry. It was becoming obvious that those in power were not impressed with the vocational education of the workforce. Nor were they encouraged by the attitude of the teaching profession towards vocational change (Dale 1985).

Thus between 1971-72 the conservative government under Edward Heath made a U-turn and moved towards interventionism (Evans 1992). The government ended the grant/levy practices of the ITBs after pressure from industry and sought instead to establish an organisation with a national responsibility for both employment and training. The 1971 report "People and Jobs" advocated a new tripartite structure of management, trainers and trade unions to operate within a Council of Manpower Services. And the White Paper of 1972 "Training for the Future" enabled the establishment of the Training Opportunities Scheme (TOPS). While it also held conflicting views regarding the ITB, its main remit was the need to develop training programmes for those areas not covered by the ITBs.
In the November of 1972 the Council of Manpower Services actually came into being as the Manpower Services Commission, and was established through the Department of Employment as a quasi-autonomous-non-government-organisation, QUANGO, to rationalise and centralise industrial training. It was officially brought into operation by the Employment and Training Act of 1973, and assumed formal responsibility in January 1974.

The Development and organisation of the Manpower Services Commission

The DES is powerless ... the cabinet, impatient to get things done, has used one weapon to hand, the centrally funded Manpower Services Commission. In consequence the MSC has invaded or taken over very large areas of education and training. It is not accountable to local authorities or even educational ministers, and is resented by them.

(Shirley Williams, The Times 25.3.86)

There are many in further education who assumed, with very good reason, that with the inception of the MSC there was a hidden agenda on the part of the government to take over a major stake of non-advanced further education and thus gain control of both the curriculum and possibly the education of one important sector of the population. Much in the same way as the bourgeoisie of the 19th century wanted to retain control over the education of the working classes, and in the way that the Sunday schools were used to 'discipline' the child labour force in the factories (Foster, undated).
Such a development could also have been viewed as an attempt to bring about changes in productivity in an area that was considered yet a further drain on the economy. It also acted as a very effective process for removing a considerable level of control from the trade unions. Although initially, the TUC still had considerable influence and was able in 1972 to put forward its own ideas regarding the organisation of national training policies. It did not, however, achieve all of its aims regarding the organisations independence from government (Evans 1992).

Although a great deal has taken place in the last decade the seeds of this development were being planted over three decades ago, if in fact they were not first cast down at the start of this century (Horne 1983).

It was to be the lower achievers on which the Manpower Services Commission was to found its student base. Many of the people who would take advantage of the initial work preparation courses were to include those described as 'educationally or socially disadvantaged' (Hembrook et al 1982). In fact those student who were to form the third group in Gleeson tripartite structure the 'tertiary modern intake' (Gleeson 1985). ILEA, prior to 1973 had identified a series of differing groups requiring further education, and in 1973 a policy initiative was taken to expand provision for less able and less advanced students (Hollyhock 1982).
Initially the MSG co-ordinated its responsibilities for employment and training services through two sections:

Employment Service Divisions
Training Services Divisions (TSD)

The MSG, through the TSD, based their further education provision on the established industrial training programme, but ignored the traditional and useful links lecturers had formed with local industry in order to update their own knowledge base and to obtain clients for the course. Where the MSG differed from previous industrial training was in the type, structure and content of the courses, which, under the MSC, were never negotiated at a local level. They were largely organised and determined centrally. Neither was there any responsibility to the local education authority. Thus in one action all initiative and control was removed from the traditional educational organisation. The MSC lay down the precise framework and structure of each course on offer under the programme and verified the contents of each syllabus. In addition they were also involved with all proposed changes (Moos 1983). The purpose of the MSC was, therefore, to introduce a centralised curriculum, defining very rigidly what was desired as an end product. They retained total control over what was taught and how it was taught. Two very important factors that affected the very foundation of the FE system.

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A number of schemes and programmes were established through the structure of the MSC, many outside the scope of this work. The more important developments which did, to some extent have an impact upon apprenticeships, follow.

i  UVP

The Unified Vocational Preparation programme (UVP) first appeared when the Labour Government in conjunction with the MSC, published a statement entitled, Unified Vocational Preparation: a pilot approach (1976). It was primarily a limited experimental scheme of vocational preparation for the young employed not normally participating on any structured form of education or training.

Originally twenty schemes were planned for 1976-77 (Dale 1985). And for the first time the combined agencies of the Department for Education and Science (DES), through the LEAs; and the Department of Employment, through the Training Services Division of the MSC (which provided most of the funding) came together to establish the schemes. The emphasis of this project was to meet the individual needs of students, not the course, so programmes were organised by employers groups or colleges with this aim in mind. Lasting about 12 weeks they included vocational training, together with social and life skills, the latter forming a significant aspect of all the later MSC projects. Again, many employers were against such schemes on the basis of cost and relevance of training low-skilled employees (Cantor and Roberts 1986). As the majority of schemes were supported by the
distributive ITBs, there demise brought about when the Thatcher government withdrew its support, meant there remained little impetus for UVP. In addition the initiative was overwhelmed by rising youth unemployment. And although it never really advanced beyond the early pilot stage, it non the less forecast an expansion in the 'new vocationalism' by way of the Youth Opportunities Programme (YOP 1978), Technical and Vocational Initiative (TVEI 1983) and the Youth training Scheme (YTS 1989).

The Youth Opportunities Programme (YOP) was first proposed in the MSC report Young People at Work (May 1977, MSC) as a response to the increase in youth unemployment. The objective of YOP was to increase the competitive edge of young people and to get them into a job as quickly as possible. It was argued that as long as the programme was constrained by this objective its quality would necessarily be limited. Many of the jobs available to young people at this time required little or no skills training.

YOP caught the attention relatively quickly. Training for the unemployed is a more emotionally charged issue than training for the employed or those about to be employed. And operating under the Special Programmes Division of the MSC, it offered a range of opportunities which fell into two main categories; work experience and work preparation (Hembrook et al 1982).
Within the work experience category four different opportunities were offered;

- Work Experience on Employers Premises (WEEP)
- Community Services (CS)
- Project Based Work Experience (PBWE)
- and Training Workshops (TW)

All these schemes offered young people the chance to engage in 'real work'. But it was acknowledged that a significant number of young people entering this program would require a period of preparation and assessment before entering work experience. This lead to the establishment of Work Introduction Courses (WIC).

The Youth Opportunities Programme introduced in 1978, following the recommendations of the Holland Report, had the greatest impact in terms of student numbers and changing demands upon FE (Farmer 1982). The number and variety of new programmes established under the MSC caused many problems, it was not only that the programs had to be developed and expanded as required but that they had to be approved by a local MSC agent who in many cases was not a qualified teacher but a bureaucrat.

Alfred Fulcher, the head of building and specialist building sector at the Construction Industry Training Board in 1982, indicated that many colleges at the start of 1980 were developing schemes under YOP. The problem he suggested was the variation that existed in content and length of course, which could have had a number of negative repercussions on the industry. He indicated;
Thousands of partially trained young people approaching the age of 17 would be competing for the following year's jobs with 16 yr. old school leavers. With an apprentice wage structure which varies according to the age of entry this could put the YOP trainee at a disadvantage. With such a wide range of courses being developed it was difficult to see how they would fit into the next stage of their training programme. Centres were submitting their courses for reductions in the standard scheme and the length of apprenticeship. The schemes were beginning to develop to the point where they could have affected recruitment into normal apprenticeships with employers preferring YOP to commitment for three years. Those young people on YOP scheme who were not placed in industry could form the nucleus of the best scheme we have ever had for training future 'cowboys' in the industry.

Fulcher 1982, pp 37-38

A number of pilot schemes were developed across the country to deal with between 750 and 1000 individuals on a 52 week course (fig 5.1).

Fulcher went on to emphasises a very important point when dealing with achievement testing for the four main crafts, namely:

Industry has never defined the levels it requires and if the tests are to have any credibility with industry and the craftsmen they employ, they must test the skills actually used and not those which committees think they should.

Fulcher 1982, pp. 37-3

The 1988 NJCBI working rule agreement made it very clear that apprentices/trainees within the construction industry should be able to undertake a 'job knowledge' test by at least the end of the first year of training, and a 'practical skills' test not earlier than nine months before the end of training (see appendix 5.1).
YOP was replaced by YTS in September 1983, a much longer programme than the six month YOP scheme. Approximately £375 million had been invested in the YOP system, but this more than doubled to £775 million for YTS.

The expansion of the provision for many young people who would not, under normal circumstances, have been involved with formal further education tended to polarise the 'education versus training' issue. The educational response to employment uncertainty and rapid technological change was to argue the need for personal development and further education related to adult life in general as well as the particular demands of the world of work.

In May 1981 the MSC, then under the chairmanship of Sir Richard O'Brian, published A New training Initiative: a consultative document. Which with the Government White Paper, A New training Initiative: An Agenda for Action, published in December the same year, became the fundamental philosophy for all future MSC training policy at a time when unemployment had reached around 3.25 million (Hough 1987).
The initial consultative document put forward three major objectives, summarised as;

1. the development of skill training an apprenticeships to enable young individuals of different ages and ability to acquire agreed standards of skills for work and further education.

2. to afford the under 18’s the opportunity to either continue in full time education or enter planned work-experience with work related training and education

3. to enable employed or unemployed adults to increase or update their skills and knowledge throughout their working lives

There was a general agreement that apprenticeships training was not keeping pace with industrial developments. It was considered a system too rigid in structure and often too narrow. A concept agreed upon by the unions who recognised apprenticeships needed updating. In this respect the first objective was an attempt to reflect the need for change.

In the same way, it was acknowledged Britain was behind other countries when it came to the vocational attainment of its workforce. A target date of 1991 had been set when the MSC wanted to see 90% of the young work force with recognised qualifications. This formed the basis of object two. Objective three recognised the need to make a similar provision for the adult population. These were very ambitious targets.

With the advent of NVQ the foundation learning targets had been revised to 80% of young people to reach NVQ2 by 1997 and 50% to attain level 3 by the year 2000. The 90% target for 1991 had been
revised to 51%, with a progression from then on of 5% per year (appendix 5.2).

The consultative document went on to emphasise that the job market was changing, and that low skilled positions would rapidly disappear. At this time, as Hough indicates, somewhere between 50% of school leavers were unable to find employment (Hough 1987). There was also an indication that blue collar workers would give way to increased white collar opportunities.

Farley suggests there was wide spread agreement about the commissions analysis of the training problem, (Farley 1985), and Roy Jackson confirmed that the TUC was in favour of the NTI in terms of;

training for young people, modernising apprenticeships and providing improved schemes of adult training

(Jackson Coombe Lodge Report vol.15 no. 6 pg.204 1982)

He went on to state that the training system of this country had;

fallen down because a significant number of employers have failed their responsibilities

(Jackson Coombe Lodge Report vol.15 no. 6 pg.204 1982)

The TUC regarded the MSC's 'Agenda for Action' as a compromise, but accepted that in order to achieve a tripartite approach towards both education and training they had to accept this fact. They wanted a system that would contain modules common to all young individuals, which were specific to an occupation and that would confirm skill status (Jackson 1982).
The government's response White Paper (Agenda for Action), supported the views expressed in the MSC report, and outlined the proposals for implementation. Some of the proposals confirmed the establishment of a Youth Training Scheme to replace YOP and UVP, and an 'Open Tech' programme for technical training. There was, however, a most significant change: the replacement of apprenticeships by 1995. Apprenticeships had peaked at 236,000 in 1968 but by the 1980s had fallen to well below 90,000 (Hough 1987).

The TUC, although committed to the modernisation of the apprenticeship system, considered the document contained 'elements' totally unacceptable to the trade unions. They particularly objected to the limited scope of YTS and indicated that the government had not helped training by running down 16 ITB's. By 1994 only 2 statutory training boards remained; CITB (Construction) and ECTIB (Engineering Construction). ECTIB's term of office expires in July 1994 and is currently under review, while in 1993 the Government somewhat reluctantly reprieved the CITB for a further five years.

Gleeson felt that NTI had:

administered the last rites to the traditional apprenticeship system, replacing it with an enterprise model of training based on entrepreneurial rather than industrial values

(Gleeson Paradox 1989 pg. 11)
He went on to say;

time served training had been replaced by serving time as
government schemes with little indication that the skills
learned have any direct bearing on future employment
opportunities or the market itself

(Gleeson Paradox 1989 pg. 11)

Indeed, Gleeson echoes the thoughts of Hough, who suggested,
since 1981 and the NTI;

national policy has been aiming at universal youth training
based on the twin justification of economic performance and
individual opportunity

(Hough 1987 pg. 110)

Hough points out that it was increasingly obvious those emerging
from the YOP scheme were finding it difficult to obtain
employment. The problem is that while there would be no argument
against having a well trained young work force, there may be no
jobs for many of them.

At the time of NTI there was a distinct dualism within education.
Those within the secondary sector experienced a structure based
upon the acquisition of knowledge and power, whilst those in
training relied heavily on practical, relevant and vocational
skills (Gleeson 1989).

YTS was not to come into operation until 1983. In the meantime
the secondary sector, and education in general were to have
revealed what must have been one of the most closely guarded
secrets since the war.
Technical Vocational Education Initiative (TVEI)

TVEI was first announced to an unsuspecting academic and industrial world through parliament on the 12th November 1982. The secrecy which surrounded the concept and introduction is still astounding to this day. Neither the DES, LEA association, teaching organisations nor the MSC had been involved in any form of consultation prior to the announcement (Dale 1989). It was obvious that Margaret Thatcher wanted this programme launched without prior knowledge, thus minimising any objections. Originally known as the New Technical and Vocational Initiative, it was to be established through 14 pilot projects by September 1983, to provide a new form of technical and vocational education for 14 to 18 year olds in the last two years of secondary education, and in the first instance for 10,000 pupils (Ainley 1990).

The scheme consisted of a tripartite consortia of schools, industry and colleges, but initially there was considerable opposition as it was considered to be too narrow and divisive. Gleeson suggests that TVEI forced young people to select too early and felt that specialisation narrowed the options open to them. He considered a broader based, more general education would have enabled the individual to adapt to new forms of training later on (Gleeson 1990).
One area spotlighted by Blackman was the use of TVEI courses to accommodate pupils who were no longer interested in school. Dale suggests those turned off by school tend to benefit from undertaking relevant vocationally oriented work and participating in work experience (Dale 1985). Blackman, however, views this not only as a means of actually withdrawing the working class pupil from access to education but also a process which denies the individual a range of options within the occupational structure (Blackman 1987). The trade unions were also in opposition to this form of vocationalism within schools, on the grounds that it would disadvantage working class children (Watts 1983), but one suspects it was more for the interests of its working members. Watts however, points to evidence from the United States of America which indicates that such courses are invariably limited to low attaining students and lower-level occupations (Watts 1983)

David Young (Lord Young), who, as chairman of the MSC;

conceived TVEI as a means of fostering Britain's enterprise economy, by motivating the vast majority students who were not progressing to higher education, (Finegold and Soskice 1990 pg 32)

together with Norman Tebbit, the Employment Secretary, and Sir Keith Joseph, left no doubt in the mind of the education sector that if the LEA did not support TVEI, then schools (Young schools) would be established and organised through the Department of Employment by the MSC.
Lord Young indicated that the National Steering Groups, set up to oversee TVEI, were in fact to reflect the important role the education sector would play in the pilot study. It was this, combined with the financial benefits to be gained by the LEA in setting up the projects, that outweighed the fears that existed, (Ainley 1990). A number of Labour held LEAs, however, still objected and refused to submit bids.

Young had written to all the authorities in England and Wales outlining that the general objective of TVEI was to prepare young people (it is strange, but they were never tagged as 'Young people') for the 'world-of-work'. There had been a growing argument since Jim Callaghan's Ruskin speech of 1977, that the education system had failed to meet the requirements of industry. Over this period little had been achieved and there had been a dramatic increase in unemployment. The problem was that the education sector was unable to counter this argument or offer any alternative solution (Brown and Ashton 1987).

TVEI was thus viewed as a means of ameliorating the problem of unemployed working class school leavers. But as Brown suggests (Brown 1987), any attempt to restructure the education system just to meet the needs of industry must be treated with scepticism. For when it comes to specifying precisely what these so called 'needs' are, or how they may be met, industry is very uncertain in its response.
He goes on to argue that if this country is to meet the social and economic demands placed upon it, it is not more vocational education that is required, but a more general one.

Blackman suggests that TVEI was in fact seen as an attempt to re-establish some of the principles put forward in the Newsom Report of 1963, which was to increase the vocational education of pupils of average or less than average ability within the secondary sector (Blackman 1987). But then why not? For as Smithers indicates (Smithers 1991) the education system of this country has traditionally been focused towards the academically able. Very little structure was available for those of average, or below average ability.

As a result of Tebbit’s threat and the financial inducement, sixty-six LEAs made an application to run pilot TVEI schemes in 1983. In the first phase fourteen were selected and these authorities signed contracts with the MSC to deliver the projects, which were through a consortium of schools and colleges. Local steering groups, made up of representatives from industry, education and voluntary organisations were responsible for each local project.

A great deal of the initial funding went direct to the schools, thus enabling teachers to obtain resources that directly benefited the pupils (Ainley 1990). The schools, however, had to demonstrate that such resources were being used as indicated in
the contracts. In a number of cases, however, the schools administration was not used to such funding and the bureaucracy associated with it, so failed to use the funding to its full advantage. There was also the fear that the government, through the MSC, would attempt to take over the school sector, as it was perceived to have done with FE (Dale 1983).

In 1984, 48 further projects were launched throughout England, Scotland and Wales. And by September 1985, 73 of the 116 LEAs in these regions were involved with the scheme (Cantor and Roberts 1986). The full scheme started in 1986 with the publication of Working Together: Education and Training. And by 1987 almost all LEAs, with the exception of ILEA, were involved. There were 103 projects throughout England, Scotland and Wales by the end of 1988, covering approximately 650 schools and involving over 80,000 pupils (Gleeson 1989).

There were, however, substantial variations of the scheme from one authority to another, each of which were verified by a local steering group and monitored by members of the TVEI unit advisory team. But the main emphasis was placed upon developing, enterprise, motivation, initiative, problem-solving and personal skills. Aimed at enabling the 14 to 18 year old to develop skills and qualifications that would be of value in the workplace, the curriculum was more vocationally orientated, and as such was innovative in the field of secondary education. Gloria Hitchcock provides a very detailed illustration of a proposed curriculum for the 14-16 year group for 1987-88, (Hitchcock 1988), and for a
more detailed analysis and evaluation of TVEI and its impact on schools see Shilling (Shilling 1989).

Most schemes operated a core-plus-options structure, but Cantor and Roberts indicate that a number of authorities introduced a modular approach as an alternative. They suggest that this allowed the sampling of a range of subjects by means of short practical courses or a more detailed study in a limited number (Cantor and Roberts 1986). They also indicate that as a result of the TVEI programme subjects such as craft design and technology, information technology and business studies, expanded.

In addition, work experience was introduced through TVEI, now directly reproducing Marxist theories of work and social order within the schools. The school could no longer be seen as indirectly inculcating such a philosophy, as it was viewed to have been doing by the Marxist theorists back in the 1970s, (Blackman 1987).

TVEI also brought in a system of assessment in the form of records of achievement, which were met by a method known as profiling. A number of schools and LEAs complained about the undue bureaucracy involved with the MSC to no avail. TVEI was without doubt a political intervention. An attempt to update aspects of the secondary education curriculum with a view to restructuring the system towards the vocational rather than the academic. But as Ainley points out, the project failed in its
attempt to involve industry in funding technical training within 
schools (it failed again later with its attempt to introduce City 
Technical Colleges). The government had intended to pump-prime 
the project, with employers then expected to follow up the 
funding, which they never did (Ainley 1990). Industry just did 
not consider it as its responsibility to fund education, even if 
it was vocational. By 1987, just one year after its official 
launch, the governments support was waning and TVEI was coming to 
be seen in a supportive role to the National Curriculum. The 
funding for TVEI ends in 1996. And in 1994 many schemes had 
already been run down.

v The Youth Training Scheme

At the same time TVEI was impacting upon the secondary sector, 
and the MSC was producing its second NTI report Agenda for 
Action, the government produced its own White Paper containing 
many of the MSC’s recommendations. The White paper outlined the 
intention to establish, through the MSC, a new scheme to replace 
YOP. One that would guarantee a full years training for all 
unemployed 16 year old school leavers. This scheme was to become 
the Youth Training Scheme (YTS).

The Youth Training Scheme evolved at a time of decline, both in 
employment and manufacturing, and was introduced in 1983, 
initially, as a one year full-time scheme. Three years later it 
was extended to a full-time two year scheme for 16 year olds and
one year for 17 year olds. When YTS commenced, the Construction Industry Training Board (CITB) entered into an agreement with the MSC to become the Managing Agent for the construction industry and to operate on a national basis (Haxby 1989).

The White Paper Working Together - Education and Training (HMSO 1986), indicated that there would be 460,000 training places available for young leavers. The main implication of the paper was the need for all organisations to be Approved Training Organisations if they wished to provide training under YTS.

By the end of March 1989 there were 173 training Agents and 1208 training Managers involved in providing Employment Training.

Although, as I have indicated above, there has been a great deal of dissatisfaction with the educational system of this country, according to the November issue of the 'Times Educational Supplement' further education enrolments in England had risen 24% since 1984/5, from 1,606,000 to 1,986,000 (Times Ed. Supp. 30.11.90). This is in spite of the demographic turn-down.

When viewed in the wider context, however, the results for the 16 to 18 age group are poor. If we consider table 5.1 and graph 5.1, for the distribution of the 16 to 18 group in full time education, further education and YTS (now YT) and unemployment, a total of 1,231,000 individuals, and contrast that with the total 16 to 18 population of 2,481,000 (table 5.1 and graph 5.2), it soon becomes apparent that only 33.81% of that population
continued in full-time and further education in 1989 while 15.75% took up YTS (total in all forms of FE 49.6%). In 1957-8, 39.6% of the 15 to 17 age range were participating in further education; it had taken 21 years to achieve a 10% improvement on that 1958 figure.

Of the total group, the split between FE and YTS is fairly even with 15.5% in FE, and 15.8% going on to YTS, while 18.3% continue in full time education. For the 16yr olds the table (5.1) reflects a slight drop in YTS while for education there is a slight increase in the staying on rates. The greatest expansion in YTS is amongst the 17 year olds where between 1987 to 1989 there is a 112% increase, while in FE it is 8.4% and the growth in full-time is 6.4%. The ratio of construction apprentices to those employed within the industry (table 5.2) remained fairly constant throughout this period (1984-89). Which again confirms that the development of the MSC programmes did not appear to be to the detriment of the construction apprenticeship system.

Graphs 5.3 and 5.4 provide some idea of the type of destination taken by the 16 year old group. There is very little shift between FE and YTS but the stay-on rate in full time education has improved. When considering the gender movements there is a considerable move by males to remain in full-time education whereas females appear to have opted for YTS. This would tend to provide an indication amongst these groups as to the value placed upon YTS. There is also an indication that a greater proportion of females gain employment.
vi Adult Provision and the decline of the MSC

A number of other programmes were operated through the MSC which came under the heading Adult Training, brought about by major restructuring of its adult training provision in 1985. This training provision was in the form of two major programmes:

- the Job Training Programme (JTP)
- the Wider Opportunities Training Programme (WOTP).

These two programmes replaced the well-established Training Opportunities Scheme (TOPS), which had been in operation prior to the formation of the MSC. TOPS had been aimed at those individuals aged at least 19 and who had been out of education for more than two years. The programme offered a wide range of courses, including crafts such as bricklaying and carpentry and joinery which were taught mainly within government skills training centres (Dale 1985).

The occupational skill-training element of TOPS was replaced by the Job Training Scheme, which operated under the JTP (Thomson and Rosenberg 1987). But JTS was seen as being controversial, as the young 18 to 25 year olds, viewed as cheap labour by the unions, were in all effects considered to be working for their dole money.
Under the proposed government Employment Training (ET) policy of 1988 (White Paper—Training for Employment, Feb. 1988), the JTS programme was to be replaced along with a number of other adult schemes. All adult training programmes including YTS were to come into line with the new proposals to accommodate the 16 to 25 age range. Because of the way social security benefits and top up payments for the long term unemployed were manipulated under such schemes it was also viewed by many as a means of adjusting the number of registered unemployed.

These new schemes were to be administered by an organisation that was itself in the throws of metamorphism. In 1987 after the Conservatives had been elected to government for a third term, Norman Fowler, the Secretary of State for Employment wanted the work of the employment services sector of the MSC transferred back to the Department of Employment. The transfer took place in October 1987 and eight months later the Training Commission (TC) emerged under Roger Dawe the first Director General.

Initially, although there was some hostility, the TUC had supported ET because in essence it was geared towards training. The TUC Congress debate in September 1988, however, was essential for the new TC and ET, but Neil Kinnock’s speech left no doubts about ET’s failings and as a result the conference voted to phase out ET over a two year period.

As a direct reaction, Norman Fowler, the Secretary of State, abolished the TC and replaced it with the Training Agency (TA),
his reason, the lack of support from the TUC. Sir Geoffrey Holland, the Permanent Secretary of the Department of Employment at the time was then charged with establishing the Training Agency to take on board the delivery of training. The Training Agency itself was phased out two years later in 1990 (Evans 1992).

vii Loss of control and Drop in Skill - towards de-skilling

Lecturers, particularly those craft teachers involved in MSC programmes tended to lose the control they previously held over local negotiations and the operation and planning of courses. Also progressively losing more control over what and how they were taught, it could be argued that an element of de-skilling was taking place amongst the teachers wholly engaged on the MSC courses, in that they were no longer required to establish a broad base of education for the trainee.

In this respect the courses themselves were devalued, for the MSC established training centres for potential trainers to act as instructors and trainers on their courses (Hembrook et al 1982). We see similar trends developing with the facilitator and trainer structure under the NVQ system. It could therefore, be further argued, that lecturers teaching on MSC courses no longer required the skills they once possessed. A feature that has progressed to the NVQ system of delivery within the construction crafts. Much
in the same way as Bravermans concept of de-skilling relates to the loss of the right of the shop floor worker to design and plan the work (Braverman 1974). It was a processes dramatically accentuated by colleges increasing dependency on MSC funding.

The element of de-skilling was not confined to lecturers, there was a general devaluation of the skills process, much in the same way as it occurred with government training schemes during the inter-war years (Lee and Marsden et al 1990). And an analysis by the Centre for Research in Employment in Europe indicated in 1993 that the area of the single-skilled craftsman would undergo skill contraction and also be subjected to a significant level of de-skilling (Rojan 1993). It also showed that there would be an increase in demand in the multi-skilled craft area. In addition progress in technology has caused a shift from traditional craft skills towards assembly of products, in many cases the traditional boundaries between craft occupations has been removed (IPRA 1991). Many traditional skills were losing their value (Sheldrake and Vickerstaff 1987 pg.51). As Gleeson points out;

> it is recession and lack of investment, rather than technology alone, which account for de-skilling and unemployment.  

(Gleeson 1989 pg.11)

Thus it would appear the nature of de-skilling is market led.

Within the construction industry there has been a reduction in the demand for traditional craft and supervisory skills and an increase in the higher professional and management occupations (table 5.3). A view was held by the Institute of Manpower Studies
that the existing vocational training provision within the construction industry was limited and required reform. It recommended a more flexible system meeting the construction industries current and feature needs would be required (IMS 1992).

A study carried out by British Telecom suggests there is a decline in the basic skills of new recruits joining the industry. It indicated there were problems at all levels but the one causing most concern was the 16 to 19 technician group. The decline was in the standard of physics and maths and a deficiency in communication skills combined with a lack of maturity was evident at all levels. The report emphasised a need for better communication between the educational establishment and employers, but also criticised a curriculum that was "skewed away from basic skills and aptitudes" (TES 10.9.93). The report called for a greater emphasis to be placed on reading written and electronic text, problem-solving and teamwork, social and interpersonal skills, basic information technology and numeracy.

The intervention of the MSC into FE also had the effect of bringing about a new division of labour. As Merilyn Moos indicates, special departments were established in colleges throughout the country to run the courses and it became the general policy of FE establishments to make staff appointments on the basis of one year renewable contracts. A further feature that has carried over to this day was the fact that courses could also start at any any time within the academic year (Moos 1983). Thus
FE was operating under a demand led 'roll-on roll-off' trainee centred system, again reflected in the current NVQ system. They were also pressing for the extended academic year on the premise that this would 'fit in' with industry. Until this time FE had, in most cases operated on the traditional 36 week academic year, but this was rapidly changing towards a 48 week academic year (Moos 1983). It is obvious that the seeds of commercialism and the total reconstruction of vocational education were being sown at this time. It is my opinion that such developments were bringing down the standards of an educational system that had some respect and credibility if not in this country then abroad. It is ironic that we are now selling the vocational City and Guilds course, replaced by NVQs, to foreign educators.

viii Trainees, and a move away from apprenticeships

One of the particular problems with the MSC courses was that students were not always compelled to attend college. And as the students tended to be in the main low achievers, they were not always well motivated to attend. In addition, as these students lacked sponsorship from industry there was a greater tendency for them to be critical of the subject matter and modes of teaching. Also under the traditional part-time day or block release system, formal examinations were a major function of the curriculum. Initially this was not the case with the MSC courses.
The MSC had distinguished the young persons on its courses as 'trainees', and had no wish for them to be educated in the traditional broader sense but instead trained for a particular skill or job.

Under the system established since the inception of the MSC, time served and with it skills learning, has been reducing to meet the demands of shortages, when in fact employers require higher skills training not less. During 1985/86, while there were some 38,000 young people on engineering training schemes under YTS only 8,800 passed the City and Guilds Part 1 examination, as compared to 13,600 in 1982 - the year before YTS commenced (Hall 1990).

According to Hall, the UK has tended to suffer skill shortages every time the economy has expanded this century. Mainly due to the fact that during periods of recession, employers have the tendency to shed skilled workers, and both government and employers abandon any long term education and training plans, (Hall 1990).

Employers, in the main, stay unconvinced of their obligation to train beyond their immediate short term needs.
Sheldrake and Vickerstaff pg. 64 1987

Throughout most of the post-war period there was a mutual understanding between both the major political parties to leave vocational training to industry. Wiener suggests that the post-war Conservative government held itself rather aloof from
industry. With the leadership responding to the labour victory of 1945 by; **widening the distance between Conservatism and industrial capitalism**. The Conservatives were at this time stuck within an agrarian philosophy and the concept of the country gentleman (Wiener 1985 pg.110). While the labour movement considered technical education to be at odds with their comprehensive schooling philosophy and wanted to avoid confrontation with the trade unions and their control over training within industry (Hall 1986).

Neither during the periods of subsequent growth does industry invest in training, thus reflecting the short term thinking of many company’s who do not view training in the same way as long term investments. The majority of those individuals who left school in the 1960s engaged in occupations which offered no formal qualifications. Apprenticeships remained almost exclusively the method of obtaining a structured vocational education. There were, however, many barriers placed upon entry, in addition;

> The equation of apprenticeships with training also had the effect of stifling training for positions below skilled level and for older employees whose skills had become redundant or needed updating.
> (Finegold and Soskice 1990)

The problem is that with the rapid expansion in technology there has been a significant change in the need for a skilled workforce at all levels. In this respect there has been a significant shift within the vocational framework of FE, away from the once
traditional three year apprenticeship system, itself cut from seven, towards a much shorter two year training period. This was caused by the very nature of the 'new training system' and the establishment of the 'MSC', brought about by a government's attempt to rectify the problem of growing unemployment amongst the 16-19 age group. But it was not until the government established the MSC was an active policy towards the labour market formulated.

It is clear from the Coombe Lodge report, (Hall 1990), there should not have been this move away from the apprenticeship system, for in addition to the indication that the emphasis was to train 250,000 - 300,000 young people at the level below apprenticeship, traditional the starting point in further education, Peter Haxby, the Deputy Chief Executive of the MSC at the time stated;

We also have a commitment this year to support 35,000 apprenticeship places.

Coombe Lodge Report Vol.15,No.6 1982, pp196-197

He went on;

It is a dreadful comment on the depth of the recession that employers who had an impeccable record of protecting apprentices are now being forced to declare redundancies.

Coombe Lodge Report Vol.15,No.6 1982, pp196-197

He indicated that these redundancies were caused by companies becoming bankrupt rather than attitudes towards training. Such failures in 1990 amounted to 24,442 a 34.6% increase on 1989 and a figure that exceeds the high of 21,682 in 1984 (Times Jan. 2
Between the period 1991 - 2000 there is expected to be a negative shift of -1% in skilled construction trades. Between 1971 and 1991 craft skilled manual occupations saw an average fall in employment of 1.3% (LMST 94/95). Most trade journals consider this trend will continue.

For a six year period between 1973 and 1979 the MSC did introduce various forms of grant aid to support the apprenticeship system but it was the rigid and lengthy framework, that, combined with high cost, caused an average decline in apprenticeship numbers of 18% over the period (table 5.2).

Shilling indicates that although, in 1960, 40% of male school leavers at 16 or below took up apprenticeships, within the engineering and shipbuilding industries in the ten year period between 1964 and 1974 apprenticeships halved (Shilling 1989). The recession of the 70s and 80s also caused apprenticeship numbers to be cut by half, and training to fall from 7% in 1974 to 4% in 1984 (Hall 1990). A view reflected by Haxby writing in 1989 when he indicates that road transport apprentices fell from 11,000 in 1975 to 1,000 by 1986. He also showed that while the mid 1960s to 1970s saw the highest levels of apprenticeship recruitment there were only 110,000 out of a cohort of 750,000, and then most of these individuals were apprenticed in industries that were in decline from 1973 (Haxby 1989).
If we consider the figures for construction apprentices from 1973 to 1986 (table 5.2), there was a drop from 14,251 to 7,469 (47.5%). If, however, a longer term view is taken over the period 1973 (14,251) to 1991 (5,086) the loss increases to 64.3% (average 31.35%). Such factors combined to produce a large increase in youth unemployment over almost two decades.

The changes that subsequently took place as a result of economic trends, meant a re-evaluation of the way that FE met both the need of the employers in providing the skilled force they required quickly and the requirements of the MSC for an ad-hoc arrangement of temporary short courses. The main focus of the MSC was eventually The Youth Opportunities Programme (YOP) later to be replaced by The Youth Training Scheme (YTS) which initially was of one year duration, but later extended to two years. The numbers of trainees actually catered for by this system were limited, while the expenditure was staggering.

Writing in the 1990 December issue of 'Education Today' Tessa Blackstone suggests that the British education system had failed the 16-19 age group and become a national scandal (Blackstone 1990). Earlier in the August of the same year, Sir Claus Moser at his Presidential address to the British Association, called for a Royal Commission into education. Both the CBI and the TUC having severely criticised the system. In addition David Sainsbury in his TSB lecture of 1990 referred to it as a national disgrace.
It also became obvious that within this country too many people left education at 16. England appears to be the only major nation where the majority of individuals leave full-time education and training at 16. Whereas within Europe the tendency is to continue in further education until much later (table 5.4). Although the dates could lead to some dispute regarding comparisons, the table does provide an indication of the situation existing between countries of those students in the 16 to 18 age range who opt to remain in education.

West Germany is one of those European countries considered to have a vocational training system far in advance of the UK. Within Germany, Austria and Switzerland the majority of 16 years olds remained in full-time education or participated in highly structured three or four year apprenticeships (Finegold and Soskice 1990). Within the German system day release is compulsory for all people up to 18 and has been so since 1938. Thus a fixed tradition which is also bound by regulation and law, means that students are just not available for full-time work. Within this system at some point in the training the young people are productive usually at 20% to 30% of the full craft pay level (le Sage 1990).

A comparative analysis of French and British construction companies by Steedman in 1986 found French firms providing more extensive training which was less firm specific. What exaggerated the situation was the fact that fewer of these UK school leavers entered recognised training programmes. The very nature of our
labour market and the structure of the existing industrial and education system both contributed to this shortcoming. Many of the employers either consciously or unconsciously encouraged the trend away from full time education by paying relatively high wages. In addition most training schemes offered by such employers had restrictive barriers placed upon them in the form of age limitation, thus making it difficult for potentially older entrants to gain access. Although, there is now a gradual shift towards removing such barriers, particularly in the northern dockyards where mature apprenticeships are being introduced on a trial basis.

In addition, the acquisition of skills especially those broader-based ones and further educational qualifications, are not rewarded adequately enough to provide young people with a direct incentive to acquire them. Employers compete for well qualified 16 and 17 year old school leavers, turning them away from further study, unlike the systems of Europe, where there are few such incentives.

Many FE colleges were forced to fight for the funds that followed MSC students. When one considers the sums involved this becomes understandable;

£399,000,000 in 1982, £510,000,000 in 1983, and £648,000,000 in 1984, (Haxby 1982).
According to Peter Haxby, these vast sums were set aside for:

some form of structured training and education for 68 per cent of those who leave school and do not find a place in full time further or higher education.

Coombe Lodge Report Vol.15, No.6, pg196, 1982

It is interesting to note that he does not specify in which, if any year, this 68% would be achieved, in fact if one studies the figures it never was achieved. When abstracted, the figures from graph 5.2 indicate that only 15.75% of the total 16-18 population were on the YTS programme in 1989 and this appears to be the best year! It was a strict diversion from a traditional training system to meet political ends and massage unemployment statistics. And a scheme which operated at a time when apprenticeships saw their worst decline. But when one studies the figures, (table 5.2), the actual ratio of construction apprentices to those employed in the industry is reasonably constant between 0.7 and 0.8. In fact it was the industry itself which was in decline, which in turn lowered the apprenticeship numbers, but not the ratio.

During the five year period for which figures have been provided we find that on average 379,600 of the 16-18 yr age group were unemployed each year. If we look at table 5.5 and follow the progression of the 16 year olds from 1984 to 1986 until they reach 18 we find an almost doubling in unemployment amongst this group, thus indicating that a large number lost there jobs. The same applies to the 16 year olds of 1985 and is almost similar for the 1986 cohort, the trend not changing until 1989 when the
continued increase of unemployment amongst this group reduces to about 10%.

There were no figures for the 16 and 17 year olds in 1989 as there appears to have been a political agenda to remove the 16 and 17 year olds from the statistics. This was done in an attempt to force this group into vocational education and training by removing income support. It also enabled the government to indicate a reduction in the unemployment figures. From this table (5.5) it is possible to determine that in 1988 some 259,000 young people were unemployed. It may also be assumed that this figure was similar for 1989/90. Thus in 1989 we find that some 776,000 of the 16-18 age group were undertaking FE or skills training and approximately 260,000 were unemployed. When viewing the findings of the survey Skills Needs in Britain (IFF 1990), there is some disparity in this situation in that there appears to be some difficulty in matching skills needs with posts and finding enough adequately trained people.

**Youth unemployment and the loss of apprenticeships**

i  **Skills shortage**

In 1990 the survey "Skill Needs in Britain" was first carried out for the Department for Employment (by IFF Research) and 22% of the responding employers reported hard to fill vacancies. An important feature was that almost all employers were seeking
recruits with qualities over and above the qualification and experience levels stated as a requirement for the job. In 1992 the hard to fill vacancies fell dramatically to 5% but rose again slightly to 6% in 1993. Craft and the related occupations accounted for 20% in 1992 but only 16% in 1993 (ED 29/93). The 1992 Report indicated that 65% of companies had training programmes, but this was below the 1991 figure of 71% (LMQR August 1993) (see, Industrial Training Provision, later).

The 1990 Skills Survey found that 40% of employers required a high level of motivation and ambition in the applicants. About 33% were looking for fully experienced staff and about the same number sought employees who would get on with others. In addition the engineering employers were most concerned that their applicants had experience. Even at the low skills level employers still required certain general skills and this may partly explain the existence of relatively high levels of unemployment alongside high numbers of low skilled vacancies. Finegold suggests a number of studies indicated a positive correlation between skill levels and productivity. And Daly showed in 1984 a shift of 1% of the labour force from the unskilled to the skilled produced a rise in productivity of 2% (Daly 1984).
ii Ownership

It is my opinion that a sense of ownership is lacking in the UK training system. Within the Miester system of W. Germany the trainee sees the Miester as the organisation in which he/she has ownership and belongs, to which are attached very strong values (Dickinson and Erban 1985). This appears non-existent throughout the whole of the traditional UK training sector. It is my own belief that this factor generates an ever expanding cyclic event illustrated in fig 5.2.

Dickinson and Erban go on to confirm the lack of a 'tight knit' training system and feel that within the UK we could not support such a system by the very nature and development of our own industrial based society.

iii Drop in skills

If this is true and we are not able to establish strong values then the model illustrated above will continue to expand to the point where the original craft can no longer be identified and we break away into smaller sub-crafts like kitchen fitter, window fitter, service "engineer". Crafts will become modularised skill elements, with each crafts person only having knowledge of one specific module and no other. Thus training programmes would be reduced to a minimum, and based on a modular process. Such a development fits in well with a new FE system based on high
turn round cost effective processes. It also fits in well with the NCVQ method of awarding certification.

My research interviews with skilled craftsmen have, however, indicated a hidden agenda, in that the full skills and knowledge base, acquired over extensive years of experience, has been deliberately withheld from the new breed of un-apprenticed trainees. This obviously means that within a short period of time, only a select few will remain with the traditional skills once possessed by the time-served craftsmen. For example, within Sussex it would be rare to find an NVQ trainee being taught the skills of building in the traditional Sussex Flint, the demand for such skill is being met by the existing master craftsmen. And for furniture restoration, one could expect to pay several thousand pounds to attend a specialist college such as West Dean, Sussex, where a competence test, in the form of test piece would have to be completed to an acceptable standard prior to entry.

One flaw in using the apprenticeship system as indicated by Twining (Twining 1989), was the assumption that an individual having mastered a trade would remain in it for life. The fact that most individuals now need updating (now referred to as up-skilling) on a regular basis, and often make a career change more than once in their working lives, was not matched by the available vocational education and training. No account in this philosophy, however, appears to have been taken of the need for skilled craftsmen in all trades that will continue for a number of years to come.
The evidence of skill shortages both understates and oversimplifies the consequences Britain's ET failure has on its economic performance. Skill shortages reflect the unsatisfied demand from trained individuals, ... but they say nothing about the negative effect poor ET may have on how efficiently enterprises organise work or their ability to restructure.  

Finegold and Soskice pg. 21 1990

Those in power tend to take a very narrow view when it comes to education and training and only deal with the current problem, or the one just passing. Audrey McKeown (1985) emphasises this very point when she says:

there is a need to be involved with Strategic Planning with a 'Planning Horizon' from 5-7 years into the future.

JFHE vol.9 No.3, pg 85, Autumn 1985

The development of the Training and Enterprise Councils (TECs)

The development of the 82 or so TECs in England and Wales with a budget in 1994 of £2 billion signalled a shift of emphasis from the centre, to local markets. TECs hold their own budget for training and negotiate their own contracts. The nationally prescribed pattern of YTS no longer applied, and CITB's coverage of the industry lessened, after moves towards closure and consequential restructuring in the early 1990s (fig 5.3).
Where in the past the Association of County Councils together with the Association of Metropolitan Authorities, negotiated course fees, there now exists a complex negotiating structure which is established separately between the 82 TECs within the 10 regions of England and the 1 of Wales, together with the 2 regions of Scotland and the Highland and Islands, the 22 Local Enterprise Councils, all 250 colleges and the CITB.

In 1994 funding for colleges came through two major sources; the Further Education Funding Council (FEFC), which funds the technical educational element, and by either the Training and Enterprise Council (TEC) or jointly through the TEC and CITB, which provides the training element, (Harris 1994). And from August 1994 FTE (Full-Time Equivalent) funding within the college sector is to be abandoned and replaced by a three phase system;

- on entry will include payment for counselling and guidance
- on programme
- on exit results - not necessarily based examination results

The fact that there was no representative from the construction industry on the 15-strong FEFC council established doubts that the special needs of the construction industry would be considered.

Due to the complex financial requirements, many colleges, according to Harris, were avoiding expensive construction
courses (Harris 1994). The high cost of construction materials, much of which is non-reusable, and expensive workshop space, made a number of construction courses un-viable. In a number of instances departments were, and are continuing to be, re-structuring the provision that existed. Many experienced staff took early retirement and where replacements were made the trend was, and still is, towards cheaper trainers or instructors.

There remains a constant and increasing demand from Government for colleges to be more cost effective. In some colleges across the country these changes have meant the closure of a number of courses, and in certain areas, the craft sections within departments;

Most London colleges have closed machine woodworking because of the high costs and low staff to student ratios.
Harris pg.14 Chartered Builder Feb.1994

It will be very difficult to restart such sections at a later date as the skills base that operated them will have dissipated.

There was increasing pressure from government, with which the TUC agreed, for flexible, modular packages of training across traditional trade boundaries, based on core skills common to all. They were calling for a narrowing of the skill areas even though the likes of Leipman (1960), Ryrie and Weir (1978) indicated that this was a false concept, narrowness does not inculcate motivation and care for a craft, it leads, as has been found, to frustration and lack of job satisfaction. This trend represents
itself in the courses established under the MSC programme. The government was attempting to re-structure vocational education with the introduction of the MSC and later with a system of National Vocational Qualifications.

**National Vocational Qualifications (NVQs)**

The motivation for this new system owes much to the belief that countries such as West Germany have VET structures far in advance of Britain

Sheldrake and Vickerstaff 1987 pg. 60

In 1985 a review of vocational qualifications was undertaken throughout England and Wales under the chairmanship of H.G.De Ville. The report made a significant point regarding the low take up of vocational qualifications by referring to the Labour Force Survey of 1984, which established that more than 40% of the workforce across all levels had no recognised qualifications.

The group recommended in its final report that;

- vocational qualifications in England and Wales should be brought within a new national framework to be called the National Vocational Qualification (NVQ)

- a new National Council for Vocational Qualifications (NCVQ) should be set up to secure necessary changes, to develop the NVQ framework and to ensure standards of competence are set.

The review group went on to suggest that initially there should be four levels of attainment based on standards of achievement:
Level I  Occupational competence in performing a range of tasks under supervision

Level II  Occupational competence in performing a wider, more demanding range of tasks with limited supervision

Level III  Occupational competence required for satisfactory responsible performance in a defined occupation or range of jobs

Level IV  Competence to design and specify defined tasks, products and processes and to accept responsibility for the work of others

At that time the review body had not been able to consider a structure beyond level IV but was aware of the need in this area.

As a result of this review the 1986 White Paper Working Together - Education and Training (HMSO 1986 Cmnd. 9823) was instrumental in the creation of a new Framework of National Vocational Qualifications, which was to be developed and supervised by a new National Council for Vocational Qualification (NCVQ). This was established through the Department of Employment and many of the staff previously involved with the late MSC transferred to this new section, as was the case with its current director Dr. Gilbert Jessup.

The White Paper indicated that there were some 250 professional bodies and it was expected that these should extend their full co-operation and commitment to the new National Council. The government also envisaged the NCVQ and MSC working in close association together and with industry, to establish the new qualification through the industrial lead bodies which must
identify the competences both industry and commerce required. At the present time there are 186 Lead Bodies and Industrial Training Organisations who are responsible for producing NVQs for specific occupations at the various levels. The Government would like to reduce this number to 15.

The competences developed in this way would then remain the same, regardless of location. There was, however, to be a major change in organisational structure within MSC, for the White Paper went on to suggest that YTS should at some stage come within the NVQ framework. The MSC, one assumes to protect itself, established a YTS Certification Board following the interim report of the Review Group. Nevertheless, it was made very clear in the White Paper that the MSC would need to review the future of the Board as there was a strong case for it to be subsumed within the NCVQ.

The government recommended that the attainment levels I-IV should be in place by 1991, and indicated that existing award bodies would continue to issue their own qualifications.

The Business and Technology Education Council, City and Guilds of London Institute and the Royal Society of Arts have been forced to comply with the NCVQ philosophy. As they must now work as self-financing businesses depending on NCVQ approval of courses, it is difficult for these organisations to oppose NCVQ without putting their own survival at risk.

Smithers 1993 pg.18

Where these awards met the NVQ standard they would be endorsed by the council and assigned to the appropriate level.
In 1990, the Construction Industry Standing Conference (CISC), the industries second Lead Body, set about encouraging some 60 institutions and employers' organisations to establish level III-V NVQs in the technical, managerial and professional fields. This was to be achieved within two years. Four years later, they applied to the Department of Employment for an extension. The Government itself has recognised that a target of 1992 was too ambitious and now indicates that 90% of the framework for NVQ levels I-V should be in place by the end of 1995. I consider this target is again too optimistic as well, and the general consensus from the industry itself is that few professional level V NVQs will be ready by this date.

The British Plumbers Employers Council (BPEC) also accepted the timescale of implementation of plumbing NVQs into colleges was unrealistic. But in reality the delays of 1992 were due to problems within NCVQ. Once standards had been established BPEC developed a Training Specification that provided training establishments with the support that Professor Smithers stated was lacking (Brooks 1994). The education sector is facing similar problems with GNVQ, which is being rushed through to provide a start date in September 1994, when at the time of writing (April 1994) the Mandatory Modules have not yet been finished.

There is some debate as to the need for a GNVQ structure, when the five level structure of NVQ is already divided into; craft, which occupies I and II, while technician, supervisor and
management roles are covered by levels III, IV and V (figure 5.4).

It is a framework which allows skills to be built in as candidates progress on a designed career path. And the suggestion is that the skills and training thus gained could be transferred from occupation to occupation. No time limit or age restrictions have been placed on the completion of any unit, although within certain occupational areas under the current scheme, time limits have been set on the completion of occupational tasks. Within reason, the individual may also select the order in which elements or units should be undertaken. The theory is, that a candidate might pick any element or unit they feel applicable at the time to suit their individual needs. In practice the success of the system is in the hands of the employer. Will they support the candidate through to completion or will they be selective on the units required for the organisation and not the individual. At the present time no research has been undertaken in this particular area.

The problem is, as NVQ is unit based, what relevance will a potential employer place on individual units that only form part of an overall certificate. And as the assessment is work-based, how does this help the 3 million unemployed who would not be able to participate in this assessment. Within Chichester College, of the 20 C&J students participating in NVQ, 16 (80%) are currently unemployed. In this case the assessments are all College based.
And in 1994, the journal Chartered Builder (February 1994), indicated there was a current shortage of employers willing to take on trainees or even offer an appropriate form of practical experience.

BPEC is also concerned with the numbers of unemployed individuals inadequately trained - unemployed individuals are able to undertake an NVQ without a practical workplace. And BPEC considers employers are justified in being cautious about employing individuals who have obtained an NVQ in this way. There is also some concern that these individuals will not be formally recognised by the Industry (Brooks 1994), as is the case within the construction profession for GNVQ.

Some professional institutions within the construction industry are showing very little interest in the NVQ system (Building March 4th 1994). Only building and civil engineering are committed at the present time. The RIBA has been opposed to NVQ since their inception;

what the RIBA objects to most is government interference with its autonomy.

Building March 4th 1994

John Whitwell, the education director of the Institution of Civil Engineers takes a different view as he feels;

There is potential for NVQs to provide a very realistic and valuable mid-career CPD-type qualification.

Building March 4th 1994
There is a further problem, that of funding. As indicated earlier funding now mainly emanates from two main sources, the FEFC or TEC. Whereas in the past, a full City and Guild certificate was achieved within three years with an employer usually meeting the third years costs, professor Smithers confirms that the Training and Enterprise Councils will only fund two years of an NVQ. Will the employer, as in the past, sponsor a student into a third year?

i Skills testing, accreditation and assessment

The White Paper went on to emphasise the importance of skills testing as a means of assuring competence and indicated that in some sectors the opportunity for assessing this was weak. In going some way to illustrate this the 1989/90 annual report from the CITB indicated the number of trainees undergoing skills testing had increased by almost 20% to 6833, compared to 1988/89, and the pass rate was a healthy 81.6%. The programme, however, did not meet the requirements of NCVQ. It became necessary therefore, for the CITB to review and modify its skills testing programme (CITB 1989/90) and now it offers the industry a very valued skills testing service.

Members of the British Association of Construction Heads (BACH) indicated there was also some concern regarding the implication of CITB/NVQ units, as no consultation had taken place between CITB and BACH or the FE sector regarding delivery and
assessment. The report considered there was a general failure to recognise that more time, space and funds would be required in order to successfully deliver and assess craft NVQs. Using an example of level II Brickwork, it was illustrated that an individual student would have required 29,000 new bricks and 81 hours of assessment. After government intervention the process of communication was improved (BACH 1991). Resourcing assessment on the other hand, would appear to have increased rather than decreased. Just the additional stationary requirements of departments operating NVQs are in themselves staggering.

As indicated above NVQ is a competency based unit assessment scheme with the emphasis placed on work-place achievement, where the elements of the task are specified in terms of performance criteria, thus to achieve certification, candidates must complete various set tasks to an approved level of competence. Accreditation of qualifications based on these standards of competence are developed using functional analysis, (occupational, rather than Skinner's behaviourism), through which process the complex structure of work processes are broken down into elements of competence; those tasks an individual would be expected to be able to perform at the relevant NVQ level. These were then grouped into core and occupational units. Under the 'Blue Book' scheme for Level II Carpentry and Joinery, which started in 1991/92, there are five Core units, while within the Occupational units there are ten, of which four are Mandatory and six Additional, from which the individual selects three, (appendix 5.4).
The NVQ schemes are constantly being modified and each new scheme is given the name of the coloured manual in which it arrives. In 1993 a 'Green Book' scheme was introduced which merged all the the units of competences and completely updated the 'Blue Book' scheme, which had not been adopted nation-wide, it also set time standards for the competences. As the competences from the 'Blue Book' scheme were not transferable, craft sections within those colleges operating the scheme had no option but to operate both schemes in parallel. In November 1993 there was an indication of a new 'Green Book - Light Green' programme that was to come into operation in 1994. This development has been delayed until June 1995, but this scheme, when it arrives, will revert back to a structure of Core, Mandatory and Additional units (figure 5.5) it is also felt that it will not as prescriptive as the 'Dark Green Book'.

Under the NVQ system examinations are not mandatory;

Because the theoretical knowledge required to carry out the task is said to be 'embedded' in them, it is not independently tested. It is assumed if the candidate can show themselves capable of performing a task, the relevant knowledge must have been acquired.

Smithers

Alan Smithers highlights the fact that the old City and Guilds plumbers course for craft and advanced craft contained five written assessments which were each completed in four hours, two multi-choice examination papers and finally practical assessment on simulated or on-the-job sites. This was underpinned with a
wide range of necessary technical knowledge; physics, electronics, mathematics, technical drawing, heat, thermal movement and the principles of materials, magnetics and construction as well as the concepts of chemistry.

None of this, he goes on to inform us, is available in levels II or III of the NVQ. The NVQ structure is based upon "units", "elements", and "competencies". And within the plumbing NVQ, no unit, element or competence is devoted specifically to 'relevant scientific knowledge and understanding' (Smithers 1993, pg. 22).

The Centre for Education and Employment Research (CEER) at the University of Manchester asked Steve Stone from Brunel College Bristol to undertake a comparative study of the plumbing training within Germany, Holland and France. Stone was concerned in particular with the difference in mathematics training between these counties and the UK. He felt the UK was failing in not providing the basic principles. He also considered that within the German system the lecturers knew precisely what a student had to achieve, whereas within the NVQ system there is no indication of the level of understanding required (Plumbing Magazine Dec. Jan. 1993/94).

Thus, Smithers states;

whether a plumber can calculate the necessary slope for a drain of particular length is inferred from how he installs a drain, not from whether he can do the necessary calculations.  
(Smithers 1993, pg.17)
A similar problem is emerging within GNVQ where both science and mathematics are optional units, end tests, however, are a feature of this system. But one ludicrous outcome is that if a student selects, for example, level II mathematics as an optional topic, any level of award they may gain is not recorded as the award is not for individual units as it is with BTEC. Students will soon reject optional subjects if achievement is not documented. And universities will have problems in assessing an individual's mathematical ability. At the present time most will only accept an individual provided they also have 2 'A' levels with the GNVQ. Why bother with a GNVQ if the intention is to go on to university?

Where a centre wishes to assess NVQs, they will need to be accredited, as with the ATO status under YTS. It will be necessary for such centres to also provide:

- co-ordinators, to ensure standards and to act as a link with the awarding body.

- facilities and resources for all the units to be assessed;

- accredited assessors;

These assessors should:

- have been a craftsmen or supervisor within the appropriate craft area and worked within the construction industry for at least five years;
be qualified to at least craft level or hold a recognised assessment certificate within the relevant occupation;

be prepared to undergo training in the relevant assessment process.

Within the assessment system there is a four tier assessment verification structure;

- internal verifiers
- external verifiers
- principal verifiers
and - chief national verifiers

One major aspect of the NVQ system is that assessment is not confined to colleges of further education, it may take place either on-the-job, off-the-job or a combination of both. But where this is done the actual assessment centre must, as before, be approved by the awarding body. It has been found yet again, however, that many employers, while welcoming on site assessment, were not prepared to make the necessary commitment to ensure assessment could be undertaken. So once again industry was paying 'lip-service' to the ideal, but did not wish to be Financially committed. Under the scheme It is not necessary for employees of the organisation to be trained as assessors, as these could be brought in from outside. Employers had no objections to this (FEU 1992).
This lack of support is also confirmed by a report by the Institution of Electronics and Electrical Incorporated Engineers, which suggested, there might be problems in assessing NVQs in the workplace due to the difficulty of finding enough qualified assessors and the unwillingness of industry to fund such an assessment scheme, (National Vocational Qualifications: a review, IEEIE 1993).

A further new departure under NVQ is the acceptance that an individual may have spent some time within the industry, for which, accreditation of that prior knowledge and learning would be given. This is without doubt one of the better aspects of NVQ.

My enquiries, however, indicates that this process is not operating in a structured way. Very few mature candidates are able to provide physical evidence of achievement. In these circumstances they are allowed to attempt the assessments attached to modules, which is then backed up by practice work.

In addition, unlike the old apprenticeship system, there are no restrictions on access by age or training, although, there is now a trend within certain industries such as shipbuilding, to provide mature individuals with a retraining programme based on an apprenticeship system where their employed occupation is threatened.
Within the construction industry there is the suggestion that because NVQs are specifically related to workplace practice, rather than academic achievement, they will raise the standards of skills training and thus the standards of the craftsmen (Harris Chartered Builder Feb. 1994). But as I have indicated earlier, certain aspects of the skill knowledge is being withheld by the practitioner. It is my opinion therefore, that standards will not improve but decline and will become marginalised.

In response to the requirements of the National Vocational Qualifications developments, craft courses are moving away from classroom-based teaching to self-study and learning activities. The problem is those students who generally make up the craft students, do not have the skills necessary to follow this pedagogical change. And no position exists within the college NVQ structure to develop them. An HMI report of 1992 found that this approach was less successful with the first year students than with mature students. It also highlighted that;

the content of some of the general education aspects of NVQ craft course provision was weak in comparison with the practical provision.

HMI 1992

My fear here is that all this process does is equip the individual with the skills necessary to undertake complex information searches and develop planning strategies, and while it cannot be denied such skills are very useful and it would appear there has gradually been some success in this area, I am informed by craft teachers students are less able to solve
relevant practical problems, where once they could.

By March 1993, 135 colleges had opted for NVQ assessment accreditation. The Governments targets are 50% of the workforce aiming for NVQ by 1996. Although there were regional variations between the north of England and London, in 1992, 55% of young individuals gained NVQ level II qualifications. This was 3.7 percentage points above the 1991 figure. In the same year, approximately 33.5% qualified at NVQ level III, in this case the percentage point increase over the previous year was 3.5%. The national targets for level II by 1997 is 80% while 50% of young people should be qualified at level III (the equivalent of advanced craft CGLI) by the year 2,000 (LMQR August 1993).

As indicated in the previous chapter a number of employers are unaware of the role of the NVQ system or of its merits. Two thirds of employers as yet (1994) do not offer NVQs or SNVQs and more than 50% are still unaware of the eight National Foundation and Lifetime Education and Training Targets (ED 6/93) (see appendix 5.2). Which are monitored by the National Advisory Council for Education and Training Targets (NACETT - established in March 1993). This problem is not confined to industry. A great many universities at the present time do not recognise or in some cases are unaware of the General National Vocational Qualification (GNVQ), although it is estimated that about 70,000 students have taken up this form of qualification at colleges of further education (Times Higher 15.10.93).
Construction provision 1992

1 Construction employees and apprentices

The United Kingdom construction industry, which comprises both building and civil engineering, is the fourth largest in Europe. And in 1991 building accounted for about 80% of the industry’s construction activity, while civil engineering accounted for the rest.

Private firms were responsible for the bulk of this workload (about 90%). And this results in the industries main problem, the fragmented nature of its labour force. For in 1990 approximately 96% of construction companies employed fewer than 25 people and only 3% employed between 20 and 99 people. In addition, the self employed element accounted for approximately 40% of the labour force. Since 1971 the significant trend in the construction workforce has been downwards; the area of the self-employed has increased, but at the expense of direct employment (table 5.6). As a consequence few within the industry employee trainees (HMI Report 1992). This fragmentation of the industry would go some way to account for the low apprenticeship rate that has prevailed in the construction industry. This fact was highlighted earlier in table 5.2, which indicated the number of construction employees and apprentices in the industry between 1973-1991. The table clearly demonstrates that there never has been a significant ratio of apprentices to those employed, and that the
trend has been towards an almost continuous decline, apart from 1979 and 1980 when there was a sudden rise in the number of apprentices, this was at the time of the conservative election when Margret Thatcher became Prime Minister.

ii Industrial Training Provision

During the period 1993/94 the construction company Redland Tiles offered 50 bursaries for training apprentices in the craft of roofing. The manufacturer awarded the £2,000 bursaries to a number of roofing companies and after only two months only 25 apprentices remained on the scheme. Seven of the original companies lost their first apprentices and sought to find replacements, calling upon the CITB for assistance, neither these companies nor a further seven that wished take on apprentices were able to find any suitable candidates. The CITB admitted that it had found difficulties filling all its training places and that "barely 50% of all its roofing trainees complete their courses."

In a further instance, the managing director of a roofing fabrication company indicated in an article in Building Materials' 21 January 1994, that site skills had diminished. The article went on to state;

few joiners are time-served apprentices these days, partly because the industry is fighting shy of directly-employed craftsmen and partly because so little money is invested in training.

( Building Materials' 21 January 1994 pg 18)
The 1992 Skills Needs in Britain survey found that for small firms cost was a major factor against training, (LMQR 1993).

There were approximately 160 firms employing 600 or more people in 1979, but by 1989 the number had decreased by 28.75% to 114. By their very nature construction projects tend to be of limited duration, as a result, those working in the industry continually face new project locations, for the trainee this means there tends to be a lack of a common structure regarding site experience, a major factor for consideration.

With regard to the employers provision of training remission, David Cormican, an HMI staff inspector writing in 1990, indicated that the construction industry only allocated 5.8 days training per employee compared to health which provided 17.6 and educations 9.6. The percentage of construction employees trained (24%) also put the industry at the bottom of the league table, with health at the top (78%), education fourth (64%) and catering and local government in the middle (45%), (Cormican 1990).

The Skills Needs in Britain 1993 study (ED29/93), found that 80% of the 4,000 organisations surveyed had provided some form of training for the employees compared with 77% in 1992, so in this respect there appeared to be an improvement. Some 40% of this training was off-the-job, an increase on the 36% reported in 1992. In terms of numbers trained it estimated that 5.8 million employees received training compared to 5.6 million the previous year. Although this appears good, when equated to actual days it
was found on average in 1993, employees received 4.5 days off-the-job training compared to a much higher average of 7.8 days in 1991. It would appear from this that the construction provision was above average. In 1991 the estimated total number of days training amounted to 40 million, in 1993 this fell to 26 million, a 35% reduction. The evidence would suggest that training in general had a low priority.

Cormican indicates that the further education statistical returns showed a steady increase in the number of craft students between 1983 to 1988. Events confirmed by the HMI report of 1992 which suggested that between 1985 and 1990 there had been an increase in student numbers of over 50%. Enrolments to part-time courses, however, had fallen to about 30% during the period 1990-92 due mainly to the economic turn-down of the industry.

iii College provision

In a survey carried out in 1978 among Inner London building craft students (the major findings relating to plumbing), it was found that 65% of plumbing students were studying for the CGLI craft certificate while 29% were studying for the CGLI advanced certificate; 3% had no idea what they were studying for.

Of the plumbing students 64% were considered by their employers to be apprentices while 9% were considered trainees, 12% as craftsmen’s mates and 6% craftsmen.
The report also found that 42% of this trade group came from families where there were no construction trade connections, while 23% came from families where one or more members had connections with plumbing. The report found similar trends amongst the other trades.

Day release courses were attended by 55% of plumbing students compared with 34% of the total student population, while 15% attended evening classes compared with only 6% of the student population. The report indicated that 29% of the plumbing students considered that their qualifications were not recognised by their employers and that only 7% felt that they had improved career prospects as a result of the qualification. Of those continuing on advanced courses 17% considered it was as a result of the qualification. This obviously signifies very low esteem being attached to gaining formal qualifications which could prove a very significant factor in relation to a number of problems in the vocational sector.

Britains failure in the vocational sector both at home and in comparison with the systems of Europe, is directly related to the way this country views vocational training and "tradesmanship". An elitism has always existed that divides society. Not until there is parity of esteem and status between vocational and academic education will the barriers be removed.

An HMI report, produced by the Department for Education in 1992 relating to Construction in Further Education between 1989 and
1992, indicated that construction courses were offered in 270 of the 370 colleges of FE and that these colleges provided course for approximately 130,000 students of whom 30% were on technician courses and 60% were on craft courses, where students spent over half their time at college on practical skills training. Some 40 colleges had over 1,000 students studying construction and more than 50 colleges had between 500 and 1,000 students studying the subject. About 100 colleges had fewer than 100 construction students. Approximately 20% of the construction departments offered higher education courses (DofE 1992). David Cormican indicated, however, that many employers within the construction industry did not provide training and were it not for the provision of the Construction Industries Training Board and the national levy system training would grind to a halt (Cormican 1990).

The 1992 report showed that 90% of construction students were attending on a part-time basis, of these, approximately 75% were technician course students. Only 5% of craft courses were offered on a full-time basis. Examination success rates for students on craft courses was usually over 65% and for technicians it was over 90%. Thus reflecting the trend towards low pass rates for craft students as indicated in chapter 4. Few craft students, as expected, progressed to higher technician courses. It was also found that few students who complete the advanced craft proceeded to study for supervisory studies; these being the 600 series of the City and Guilds (HMI 1992). A comparison of examination
results for the period 1970/71 to 1981/82 is provided in table 5.7. These show consistently low pass numbers for the City and Guilds examination, the most significant development is in the introduction of TEC where a significant shift takes place in the number of students passing this new certificate. The same shift is seen with the Higher certificate.

The distribution of construction craft students by level of course and mode of study are given in graph 5.5 i-iv. These results fit very close to those of the ILEA study of 1978 (5.5 iv). It is suggested, from past HMI reports that examination passes at craft level were at about 75% and at advanced craft 60% but that wastage rates were high. Thus continuing to fit in with Liepmans findings.

A detailed analysis of the FE intake and wastage rates for the period 1989 to 1992 is provided in table 5.8. Considering the students for carpentry and joinery first, and following the new first year co-hort from 1989 to 1992, it will be found that after the first year the table indicates a 37.89% drop out rate. Between the second and third year this has increased to 40%. Overall there was a 62.87% loss amongst the C&J students who had commenced in 1989/90. Very similar figures are reflected for the second year students of 1989/90 and the new first year student intake of 90/91. The drop-out rate for both brickwork and painting and decorating is significantly worse; a total wastage respectively of 70% and 73%.
It must be acknowledged that some students within the third year may not have progressed directly from the previous two years. In this case the actual progression from the two year course may have been worse.

The first two years would represent the basic craft course and thus, for carpentry, brickwork and painting, 38%, 47% and 45% of students did not complete the course. Of those that did, 40%, 44% and 52% did not continue to the advanced craft. Writing in 1960, Kate Liepmann put forward a number of reasons for failure to attain certification. Had it not been for the intervention of the NVQ system, it may have proved an area worthy of further study.

The table also indicates the progressive intake decline in each trade and in each year. Such indicators are not encouraging for the future of the industry.

It is important at this point to isolate from the number of craft students, those who were registered as apprentices. For this reflects a totally different yet significant picture in the shift away from the apprenticeship system. The actual apprenticeships for the particular trades over the same period are given in table 5.9. Again this table indicates a very severe decline across the each trade from 1990 onwards. It shows without doubt the final demise of the construction apprenticeship system. When, however, a comparison of the apprentices against student intake in a particular trade over the same period is made (table 5.10), the
ratios of apprentice to construction student are reasonably stable but are consistent with the decline in FE intake. This tends to indicate that the industry is facing a major problem with regards to its future trained workforce.

While both Cormican and the Inspectors Report suggest an increase in student intake up to 1990, the attendance figures from 1989 onwards show without doubt a decline. The result of the economic recession meant that the number on part-time courses fell by about 30% during 1990 and 1992. But the construction apprenticeships system indicates a steady decline that dates from 1966 (table 4.12). This factor is very well illustrated for all the major craft areas in Table 5.11 over the period 1983 to 1992. For the first four years the figures are reasonably stable with only a minor increase in most trades in 1986 and again in 1990.

What is not obvious is that a radical change was taking place in the concept and methodology of craft apprenticeships, when only a small percentage were actually apprentices. If we consider table 5.12 the shift becomes apparent. The figures for the period 1984 to 1991 abstracted from the Department of Employment Training Statistics 1992 would indicate a steady growth in construction apprentices for the period, with 74,000 in 1991. This figure is very close to those produced by the HMIs report for construction craft students in 1992, but in this case the 78,000 was over a three period and ties up well with the 74,969 indicated for the
period in table 5.10. In fact if the figures from the DoE Training Statistics are compared with other sectors there is a significant rise (table 5.13).

The significance is in the terminology. They are not apprentices as recognised by means of registration with the National Joint Council for the Building Industry. They are trainees. And this marks a recognisable shift in vocational policy. As I have shown an apprenticeship has, by a legally binding agreement, a built in training requirement, usually to be undertaken at a further educational establishment. Trainees have no such right. In addition the results from table 5.10 would also signify that a large proportion of the trainees as indicated in table 5.13 did not participate in further education, but undertook training elsewhere.

Even if we argue the case of the decline in the construction industry the ratio of true apprentices to construction employees had fallen by 1991 (table 5.2), although it had shown improved ratios previously and at a time when over the period there was a decline in apprenticeships (table 5.11). The problem of the decline is even more pronounced if viewed on a regional basis.

For ease of presentation I have concentrated upon the three main trades of carpentry and joinery, brickwork and painting and decorating across the ten main regions covered by the statistical returns of the NJCBI, Table 5.14 (I have omitted those from Scotland). Figures for the skill area plumbing are not
held by the NJCBI, and have not been made available by BPEC. The graphs produced from the data for the trades over the six selected regions all indicate very similar trends. Which, apart from carpentry and joinery in the north in 1984, is downwards until 1986, at which point the individual trend for each trade, apart from the carpenters of South Wales, is reversed. When viewed regionally and by trade this way, there was an average increase of 10%. Even though employment in the construction industry had reached its lowest point in fourteen years (table 5.2). This, however, did not reflect the true national picture. In 1986 there was also a drop in the number of trainees (table 5.12) which amounted to 20%, compared to 1985. For the construction apprentices at this time the drop was 14%. The trend for apprentices then immediately continued down even though employment in the industry picked up.

There was no significant change to this general decline in apprenticeships until 1990 when all trades in all regions, except the painters and decorators again in South Wales, indicate an increase, although there was no significant shift in construction employment until 1991 when it reached an all-time low shedding almost 100,000. All the reports indicate that this decline will continue well into 1995.

In 1994, except where there might be the odd agreement, it could be said that the construction craft apprenticeship system was dead.
A New Apprenticeship system

On the 18th February 1994 the Employment Department issued a guide note on the proposed introduction of a modern apprenticeship system to come into operation in September 1995. Preparatory work on this proposal began after the Chancellors announcement in the budget statement in November 1993.

It was felt there was;

- a need for more people with practical technician, craft and supervisory skills. In helping to meet this need, Modern Apprenticeships is primarily an economic measurer to improve skill supply - an important distinction when looking at the aims of much other Government funded training.

(G.Willis DofE February 1994 par. 4)

At last, after the dissemination of the apprenticeship system, they have recognised the need to take a closer look at vocational training. And as a result we have come full circle from the reports issued after the Great Exhibition of 1851 in London and the 1867 Paris Exhibition regarding international competition, for the note indicated;

Studies on international competitiveness show that one of the main factors of success is a well trained work force.

(G.Willis DofE February 1994 par. 4)

Modern apprenticeships are planned at the moment for 14 industrial areas, for which the Government has set aside £1.25 billion over a three year period. These funds have been earmarked for both the new apprenticeships and Youth Credit training vouchers. And the aim is to have 150,000 individuals on the apprenticeship scheme at any one time with 40,000 being trained to A-level equivalent or higher.
We come back to the fact, however, that:

... training and apprenticeship represents a considerable on-cost to employers under present circumstances. Those who are prepared to train have to compete in the market place with others who have no intention of training. Customers generally seek the lowest price. They are not normally prepared to pay a premium by engaging the services of a firm which is committed to training and apprenticeship. In a deregulated free market the current cost of voluntary training is a deterrent to what is recognised as a national requirement.

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The main features of this Modern Apprenticeship will be:

1 an apprenticeship contract in the form of a pledge between the individual and employer which will detail the training offered, the prospect of a qualification, intended route to a job or job interview with the employer, and confirmation of commitment by both parties to a successful outcome

2 flexible qualifying period - two and a half to three years

3 apprenticeships will not be gender specific

4 opportunities in all sectors and occupations including large, small and medium companies.

The Government's view is that this contract will be in the form of a quadripartite compact where the employee, the trainee their parents and a representative of the local TEC would be signatories. The Government also feels it important for the individual to be in employment. It actually uses the term highly desirable, but does not see it, as I would have thought, essential. It considers this employment might be with a single employer, or a consortium backed by the TEC, or in fact it might be a transferable contract. In any case the trainee will always
need to know who his or her employer is. The legal status for this compact, however, has yet to be established. But this form of language does not instil much confidence in the proposal.

The Government intends to implement this new scheme for those up to eighteen through three interrelated processes; youth training credits, early careers advice for the 14 to 15 year olds, and a number of prototypes. But one would question the need for prototypes when apprenticeships have such a long history and the method of their operation is very well established.

One has to be careful in passing judgement upon a Government that takes action in the direction one wants, but this is a considerable 'U-turn' in a philosophy that strongly supported a modular based training system devoid of time constraints and one which condemned apprenticeships as an outmoded system. The question as to whether this is just a palliative measure, an impromptu response to the current situation or a serious attempt to replace the dwindling skills base of this country. Time will only tell, but from past experience this will be yet another short term measure. The fact that the Employment Minister has excluded the construction industry from its plans, when the CITB has requested funds to finance the 30,000 trainees industry needs each year over the next five years, does not lend much support to this new initiative. And that fact that no mention has been made of the well established framework that once existed, or that the
Government has avoided the issue of regulation leaves the strong impression that little thought has been given to this current project. My concern is, that like many of the previous initiatives, both good and bad, and the neglected old apprenticeship system, the new system will disappear.
Fig. 5.1  52 Week YOP construction course

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<th>6 weeks</th>
<th>8 weeks</th>
<th>20 weeks</th>
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<td>Life skills and introduction to at least 4 building crafts</td>
<td>Introduction to site work with a firm</td>
<td>Single trade selected from previous 24 weeks</td>
<td>On site experience with organisation</td>
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Abstracted from Fulcher 1982
Lack of ownership and belonging within craft/trade training

Lack of respect or esteem from outside profession

Lack of respect for the craft/trade from the trainee

Resultant lack of broad based skills and knowledge
Fig 5.3
The Growing Power of TECs
Level 1: Competence in routine work or the achievement of work competence. Most trainees bypass this level.

Level 2: Competence in a broader range of activities involving greater individual responsibility. This would be the old City and Guilds basic craft certificate level and equivalent to 4 GCSEs.

Level 3: Competence in skilled activities which are complex and non-routine that may include supervisory skills. This would be the old City and Guilds advanced craft certificate level and also equivalent to 2 GCEs at A-level.

Level 4: Increase in technical content and complexity of the task, and assumes responsibility for supervision and management. This would equate to Higher National level.

Level 5: Applies to senior people and professionals with wide-ranging responsibilities. This is to be equivalent to first degree.
Figure 5.5 NVQ 'Book' Scheme

'Blue Book' Scheme 91/92

Core Units
1
2
3
4
5

Occupational units
Mandatory
1
2
3
4

Additional
1
2
3
4
5
6

Unit competencies
Elements

'Green-Book' scheme 1992

Unit competencies
Elements
Evidence

All merged

Elements

'Green-Book 2' scheme 1995

Core Units
1
2
3
4
5

Occupational units
Mandatory
1
2
3
4

Additional
1
2
3
4
5
6

Note: the new scheme may not fit exactly that shown but will be close

See also appendix 5.4
Table 5.1

Education and unemployment details 16-18 age range 1984-89

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Abstracted from Employment Gazette Dec 1990 (Special report pp 664-647)
Table 5.2


<table>
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<tr>
<th>Year</th>
<th>Construction Employees</th>
<th>Construction Apprentices *</th>
<th>Apprentices as %</th>
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<td>13,093</td>
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<td>11,336</td>
<td>0.942</td>
</tr>
<tr>
<td>1977</td>
<td>1167</td>
<td>10,249</td>
<td>0.878</td>
</tr>
<tr>
<td>1978</td>
<td>1161</td>
<td>10,806</td>
<td>0.931</td>
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<td>14,035</td>
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<td>1985</td>
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<td>1988</td>
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<td>1991</td>
<td>956.6</td>
<td>5,086</td>
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</table>

* Note includes values for Scotland
All values in thousands

Source: Employment Gazette Feb. 1992
NJCBI April 93

---

**construction apprentices**

![Graph showing construction apprentices from 1973 to 1991](image-url)
### Table 5.3  Distribution within construction employment

<table>
<thead>
<tr>
<th>From a total construction employment population of 1,650,000</th>
<th>Const.</th>
<th>total of all occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers and Administration</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Professional</td>
<td>5</td>
<td>10.6</td>
</tr>
<tr>
<td>Ass. prof. &amp; tech</td>
<td>2</td>
<td>9.3</td>
</tr>
<tr>
<td>Craft &amp; skilled manual</td>
<td>56</td>
<td>14.1</td>
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</table>

*Source: Labour Market and Skills Trends 1994/95*

### Table 5.4  Educational Comparisons 1986

<table>
<thead>
<tr>
<th>Country</th>
<th>Min. leaving age</th>
<th>16 to 18 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PT</td>
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<tr>
<td>Germany</td>
<td>15</td>
<td>47</td>
</tr>
<tr>
<td>Belgium</td>
<td>14</td>
<td>77</td>
</tr>
<tr>
<td>Sweden</td>
<td>16</td>
<td>76</td>
</tr>
<tr>
<td>Denmark</td>
<td>16</td>
<td>70</td>
</tr>
<tr>
<td>France</td>
<td>16</td>
<td>66</td>
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<tr>
<td>Italy</td>
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<td>47</td>
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<tr>
<td>UK 1986</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>1989</td>
<td>16</td>
<td>37</td>
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</tbody>
</table>

*Notes:*
- Includes apprentices, YTS etc
- 1987 for Germany; 1985 for Sweden; 1982 for Italy
- Compulsory part-time for 16 and 17yr olds in Germany
- Estimates for part-time in Sweden

*Abstracted from Table BB Annual Abstracts of Statistics No. 126 1990*
Table 5.5 Unemployment details of the 16 - 18 age group

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<tr>
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<th></th>
<th></th>
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<tbody>
<tr>
<td>16</td>
<td>88</td>
<td>87</td>
<td>81</td>
<td>76</td>
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</tr>
<tr>
<td>17</td>
<td>168</td>
<td>158</td>
<td>151</td>
<td>120</td>
<td>82</td>
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</tr>
<tr>
<td>18</td>
<td>202</td>
<td>189</td>
<td>170</td>
<td>149</td>
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<td>Totals</td>
<td>458</td>
<td>434</td>
<td>402</td>
<td>345</td>
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</table>

Notes: All values in thousands
In September 1988 all 16-17 year olds became ineligible for income support and were thus removed from the unemployed category

Source: Employment Gazette December 1990

Unemployment Progression
amongst 16yr olds over 3 yrs
### Table 5.6

**Construction Self Employed**

<table>
<thead>
<tr>
<th>Year</th>
<th>No. Self Employed</th>
<th>No. Directly Employed</th>
<th>Self employed As % employed</th>
</tr>
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<tbody>
<tr>
<td>1971</td>
<td>342</td>
<td>1167</td>
<td>29.31</td>
</tr>
<tr>
<td>1973</td>
<td>439</td>
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<tr>
<td>1975</td>
<td>362</td>
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<tr>
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<td>343</td>
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<td>388</td>
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<td>1985</td>
<td>469</td>
<td>994</td>
<td>47.18</td>
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Source: Employment Gazette Feb 1992 and Table 9.1 UK Occupation and Employment Trends to 1990

### Table 5.6a

**Employment in Construction 1973-1991**

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<th>Year</th>
<th>No.</th>
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<tbody>
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<td>1974</td>
<td>1223</td>
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<td>1203</td>
</tr>
<tr>
<td>1977</td>
<td>1167</td>
</tr>
<tr>
<td>1978</td>
<td>1161</td>
</tr>
<tr>
<td>1979</td>
<td>1201</td>
</tr>
<tr>
<td>1980</td>
<td>1206</td>
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<td>994</td>
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<tr>
<td>1986</td>
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<td>1987</td>
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<td>1988</td>
<td>1021</td>
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<td>1989</td>
<td>1056</td>
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<tr>
<td>1990</td>
<td>1052</td>
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<td>1991</td>
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Source: Employment Gazette 92
### Table 5.7
Examination passes for Construction by board and level

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<th>71/72</th>
<th>72/73</th>
<th>73/74</th>
<th>74/75</th>
<th>75/76</th>
<th>76/77</th>
<th>77/78</th>
<th>78/79</th>
<th>79/80</th>
<th>80/81</th>
<th>81/82</th>
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All values in thousands

Abstracted from tables 4.3, 4.4, 4.5, 4.6, 4.7, 4.10, and 4.12
Education Training and Employment ISM No.4 1984
### Table 5.8

#### FE intake 1989/90 - 92

<table>
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<td>672</td>
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<td>%</td>
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<td>37.13</td>
<td>62.87</td>
<td>3138</td>
<td>52.67</td>
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</tbody>
</table>

| Bricklaying    | year 1  | 937     | 8076    | 6690    | 937     | 8076    |
|                | year 2  | 5295    | 5909    | 4270    | 5295    | 5909    |
|                | year 3  | 2960    | 2566    | 2960    | 3013    | 3013    |
|                | difference | 2605    | %       | difference | 2566    | difference | 2605 |
|                | year 1  | 4642    | 53.29   | 46.71   | 3806    | 52.67   |
|                | year 2  | 2936    | 55.90   | 44.1    | 2951    | 50.06   |
|                | year 3  | 6977    | 23.79   | 70.21   | 3806    | 52.67   |

| Painting       | year 1  | 5317    | 4684    | 4256    | 5317    | 4684    |
|                | year 2  | 2902    | 3028    | 2595    | 2902    | 3028    |
|                | year 3  | 1386    | 1402    | 1386    | 1819    | 1402    |
|                | difference | 1366    | %       | difference | 1402    | difference | 1366 |
|                | year 1  | 2415    | 54.58   | 45.42   | 2089    | 55.40   |
|                | year 2  | 1516    | 47.76   | 52.24   | 1626    | 48.30   |
|                | year 3  | 3931    | 26.07   | 73.93   | 2089    | 55.40   |

| Totals         | year 1  | 29150   | 24800   | 21215   | 74957   |
|                | year 2  | 18569   | 16836   | 14127   | 49532   |
|                | year 3  | 10696   | 9752    | 9507    | 29955   |

Abstracted from CITB New Entrant Training Report Feb 1993
<table>
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<td>19036</td>
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(1) Values do not include plumbers
All values calculated at December

Abstracted from NCB II 1983
Table 5.10
Comparison of apprentices to FE intake to craft trade 89-92

<table>
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<tr>
<th>Trade</th>
<th>session 1989/90</th>
<th>% of FE intake</th>
<th>session 1990/91</th>
<th>% of FE intake</th>
<th>session 1991/92</th>
<th>% of FE intake</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>13898</td>
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<td>11840</td>
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<td>10269</td>
</tr>
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<td>Brickwork</td>
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<td>1962</td>
<td>24.29</td>
<td>1006</td>
</tr>
<tr>
<td></td>
<td>FE intake</td>
<td>9937</td>
<td></td>
<td>8076</td>
<td></td>
<td>6690</td>
</tr>
<tr>
<td>P&amp;D</td>
<td>apprentices</td>
<td>791</td>
<td>14.88</td>
<td>839</td>
<td>17.91</td>
<td>393</td>
</tr>
<tr>
<td></td>
<td>FE intake</td>
<td>5317</td>
<td></td>
<td>4684</td>
<td></td>
<td>4256</td>
</tr>
<tr>
<td>Totals</td>
<td>apprentices</td>
<td>5403</td>
<td>18.53</td>
<td>6190</td>
<td>25.16</td>
<td>3413</td>
</tr>
<tr>
<td></td>
<td>FE intake</td>
<td>29132</td>
<td></td>
<td>24600</td>
<td></td>
<td>21215</td>
</tr>
</tbody>
</table>

Abstracted from tables 5.8 and 5.9
### Table 5.11

Apprenticeships by construction trade 1983 to 1992

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenters &amp; Joiners</td>
<td>9112</td>
<td>8678</td>
<td>8630</td>
<td>9123</td>
<td>3538</td>
<td>3503</td>
<td>3389</td>
<td>2014</td>
<td>1105</td>
</tr>
<tr>
<td>Bricklayers</td>
<td>4043</td>
<td>3634</td>
<td>3523</td>
<td>3894</td>
<td>1837</td>
<td>1559</td>
<td>1962</td>
<td>1006</td>
<td>470</td>
</tr>
<tr>
<td>Painters &amp; Decorators</td>
<td>3221</td>
<td>2678</td>
<td>2450</td>
<td>2486</td>
<td>1115</td>
<td>791</td>
<td>839</td>
<td>393</td>
<td>296</td>
</tr>
<tr>
<td>Plasterers</td>
<td>652</td>
<td>539</td>
<td>576</td>
<td>623</td>
<td>310</td>
<td>231</td>
<td>249</td>
<td>136</td>
<td>72</td>
</tr>
<tr>
<td>Masons</td>
<td>280</td>
<td>243</td>
<td>207</td>
<td>277</td>
<td>100</td>
<td>82</td>
<td>109</td>
<td>61</td>
<td>40</td>
</tr>
<tr>
<td>Slaters &amp; Tilers</td>
<td>241</td>
<td>242</td>
<td>234</td>
<td>231</td>
<td>51</td>
<td>68</td>
<td>70</td>
<td>28</td>
<td>19</td>
</tr>
<tr>
<td>Painters &amp; Decorators</td>
<td>394</td>
<td>357</td>
<td>348</td>
<td>323</td>
<td>158</td>
<td>157</td>
<td>140</td>
<td>77</td>
<td>30</td>
</tr>
<tr>
<td>Other trades</td>
<td>915</td>
<td>835</td>
<td>819</td>
<td>823</td>
<td>253</td>
<td>196</td>
<td>178</td>
<td>132</td>
<td>84</td>
</tr>
<tr>
<td>Total</td>
<td>18828</td>
<td>17206</td>
<td>16778</td>
<td>17789</td>
<td>7362</td>
<td>6137</td>
<td>6936</td>
<td>3847</td>
<td>2116</td>
</tr>
</tbody>
</table>

Notes: All values in units.

Apprenticeships by construction trade up to 1986 were recorded in a different way to table 5.2, the values indicate the number of current apprentices undergoing training regardless of the year they started. Hence the sudden drop after 1986.

Values for 1987 by construction trade were not available.

* includes new registrants and values for Scotland by trade.

~ only records new registrants and does not include values for Scotland.

Source: NJCBI April 1993
Table 5.12

Apprenticeships 1984-91 *

<table>
<thead>
<tr>
<th>Year</th>
<th>const. industr.</th>
<th>others</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>64</td>
<td>268</td>
<td>332</td>
</tr>
<tr>
<td>1985</td>
<td>68</td>
<td>289</td>
<td>357</td>
</tr>
<tr>
<td>1986</td>
<td>54</td>
<td>264</td>
<td>318</td>
</tr>
<tr>
<td>1987</td>
<td>64</td>
<td>250</td>
<td>314</td>
</tr>
<tr>
<td>1988</td>
<td>64</td>
<td>265</td>
<td>329</td>
</tr>
<tr>
<td>1989</td>
<td>81</td>
<td>286</td>
<td>367</td>
</tr>
<tr>
<td>1990</td>
<td>77</td>
<td>275</td>
<td>352</td>
</tr>
<tr>
<td>1991</td>
<td>74</td>
<td>256</td>
<td>330</td>
</tr>
<tr>
<td>totals</td>
<td>546</td>
<td>2153</td>
<td>2699</td>
</tr>
</tbody>
</table>

Cons. manpower (1) | Cons. manpower (2)
---|---
1010 | 1992
994 | 964
964 | 983
693 | 1021
692 | 1056
670 | 1052
608 | 956.6

all values in thousands

abstracted from table A1.17 Training Statistics 1992
(1) abstracted from Housing and Construction stats. 1991 pt2 no.45
and provides specific details of operatives over the period 88-91
(2)abstracted from table 1.2 Employment Gazette Feb. 1992

* Although these are classified as apprentices,
from other findings it would be better to call these - trainees

Trainees
1984 - 91

![Graph showing trainees from 1984 to 1991](image-url)
### Table 5.13

**Apprenticeships/Traineeships by industrial sector 1984-1991**

<table>
<thead>
<tr>
<th>Industrial sector</th>
<th>Year</th>
<th>84</th>
<th>85</th>
<th>86</th>
<th>87</th>
<th>88</th>
<th>89</th>
<th>90</th>
<th>91</th>
</tr>
</thead>
<tbody>
<tr>
<td>metal goods, engineering and vehicles ind.</td>
<td>a</td>
<td>74</td>
<td>72</td>
<td>64</td>
<td>57</td>
<td>47</td>
<td>55</td>
<td>74</td>
<td>55</td>
</tr>
<tr>
<td>other manufacturing ind.</td>
<td>b</td>
<td>29</td>
<td>27</td>
<td>30</td>
<td>24</td>
<td>29</td>
<td>35</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td>construction</td>
<td>c</td>
<td>64</td>
<td>68</td>
<td>54</td>
<td>64</td>
<td>64</td>
<td>81</td>
<td>77</td>
<td>74</td>
</tr>
<tr>
<td>distribution, hotels, and catering</td>
<td>d</td>
<td>40</td>
<td>50</td>
<td>44</td>
<td>47</td>
<td>60</td>
<td>57</td>
<td>52</td>
<td>49</td>
</tr>
<tr>
<td>banking etc.</td>
<td>e</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>15</td>
<td>14</td>
<td>19</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>transport and communication</td>
<td>f</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>*</td>
<td>12</td>
<td>*</td>
<td>*</td>
<td>11</td>
</tr>
<tr>
<td>energy and water supply</td>
<td>g</td>
<td>13</td>
<td>14</td>
<td>10</td>
<td>*</td>
<td>*</td>
<td>10</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>other</td>
<td>h</td>
<td>60</td>
<td>70</td>
<td>65</td>
<td>53</td>
<td>64</td>
<td>63</td>
<td>48</td>
<td>59</td>
</tr>
<tr>
<td>total for period as shown</td>
<td></td>
<td>307</td>
<td>324</td>
<td>287</td>
<td>270</td>
<td>290</td>
<td>320</td>
<td>300</td>
<td>296</td>
</tr>
<tr>
<td>total from gov.stats</td>
<td></td>
<td>332</td>
<td>357</td>
<td>318</td>
<td>314</td>
<td>329</td>
<td>367</td>
<td>352</td>
<td>330</td>
</tr>
</tbody>
</table>

**Source:** Table A1.17 Training Stats 92

**Note:** Estimates for less than 1000 not shown

---

**Apprenticeship / Traineeship**

**by Industrial sector 1984-91**

![Graph of Apprenticeship / Traineeship by Industrial sector 1984-91](image-url)
Table S.14
Construction apprenticeships by region 1983 to 1992

<table>
<thead>
<tr>
<th>Year</th>
<th>London</th>
<th>South</th>
<th>South Western</th>
<th>Eastern</th>
<th>Midland</th>
<th>South Wales</th>
<th>Yorkshire</th>
<th>North Western</th>
<th>Northern</th>
<th>Liverpool</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>843</td>
<td>309</td>
<td>152</td>
<td>120</td>
<td>162</td>
<td>178</td>
<td>178</td>
<td>181</td>
<td>217</td>
<td>203</td>
<td>203</td>
</tr>
<tr>
<td>1984</td>
<td>524</td>
<td>244</td>
<td>177</td>
<td>138</td>
<td>159</td>
<td>175</td>
<td>179</td>
<td>184</td>
<td>233</td>
<td>230</td>
<td>230</td>
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<tr>
<td>1985</td>
<td>113</td>
<td>286</td>
<td>182</td>
<td>141</td>
<td>169</td>
<td>193</td>
<td>197</td>
<td>201</td>
<td>213</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>1986</td>
<td>766</td>
<td>205</td>
<td>183</td>
<td>162</td>
<td>185</td>
<td>198</td>
<td>202</td>
<td>213</td>
<td>227</td>
<td>228</td>
<td>228</td>
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<tr>
<td>1987</td>
<td>345</td>
<td>125</td>
<td>141</td>
<td>143</td>
<td>165</td>
<td>185</td>
<td>189</td>
<td>194</td>
<td>210</td>
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<tr>
<td>1988</td>
<td>366</td>
<td>109</td>
<td>133</td>
<td>129</td>
<td>154</td>
<td>178</td>
<td>182</td>
<td>185</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>1989</td>
<td>251</td>
<td>69</td>
<td>110</td>
<td>119</td>
<td>147</td>
<td>168</td>
<td>175</td>
<td>179</td>
<td>195</td>
<td>195</td>
<td>195</td>
</tr>
<tr>
<td>1990</td>
<td>298</td>
<td>132</td>
<td>125</td>
<td>127</td>
<td>157</td>
<td>176</td>
<td>182</td>
<td>188</td>
<td>207</td>
<td>207</td>
<td>207</td>
</tr>
<tr>
<td>1991</td>
<td>183</td>
<td>112</td>
<td>117</td>
<td>122</td>
<td>151</td>
<td>170</td>
<td>177</td>
<td>180</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>

Note: C&J - Carpentry and Joinery
B&Z - Brickwork
P&D - Painting and Decorating

All values in units
Values for 1987 not available

Source NJCBI April 1993

Regional Apprenticeships

Regional Apprenticeships
5KW Trends 1983 - 1992

Regional Apprenticeships
Graph 5.1  Distribution of 16 - 18 yr olds in FTed/FE and YTS 1989

Source: Employment Gazette December 1990

Graph 5.2  Total Population by Age and FE/YTS take-up 1989

Source: Employment Gazette December 1990
Graph 5.3 Destination of 16yr olds 1988 and 1989

Note the values for the YTS of 1989 do not fit in with other records

Source: Employment Gazette December 1990

Graph 5.4 Male and Female Destinations period 88-89

Note: sample based on 64 LEA’s and represents 73.2% of total leaver population

Source: School Leavers Destinations Association of County Councils 1989
Appendix 1.1  The Chichester Guilds 1479 - 1698

Weavers' guild 1479
Tanners' and Cordwainers' guild 1504
Barbers' guild 1527
Whitawers' and Glovers' guild 1562
Woolen Drapers guild 1562
Cappers guild 1564
Joiners guild 1600
Barbers' Sugeons' and Glaziers guild 1608
Blacksmiths' and Cutlers' guild 1609
Clothworkers', Dyers', Weavers' and Fustian Weavers' guild 1616
Mercers' guild 1622
Sadlers' and Collarmakers' guild 1633
Blacksmiths', Cutlers' and Goldsmiths guild 1662
Merchant tailors' guild 1685
Barber Surgeons', Periwigmakers' and Glaziers' guild 1685
Sadlers', Ropemakers', Stationers' and Bookbinders' guild 1686
Goldsmiths', Cutlers' and Blacksmiths' guild 1686
White Tawers' guild and Glovers' guild 1687
Mercers' guild 1698

Abstracted from Sussex Record Society vol. xxviii 1924 pg.22
Appendix 1.2  Letter regarding an absconder 1827

Subject: The information and complaint of James Hale of the parish of Boshain in the county of Ayr, taken on his oath this 22d day of September 1827 before us two of his Majesty's Justices of the Peace for the said county.

Who declare that John Farquhar lately an Apprentice, legally bound by indenture to this Examinant, was in the service of his Apprenticeship guilty of divers misdemeanors towards him the said James Hale, and particularly that he the said John Farquhar did on the eleventh day of November 1825 run away from and desert the service of the said James Hale.

(Signed)

James Hale

(Jured before us)

P. Higgins

Richard Harris
Appendix 1.3i  Goldsmiths Indenture document for Walter Hosking 1921

To the witnesses be it known that Walter Hosking of 28 Burlington Street New York is a Citizen and Goldsmith of London, the son of Edward Thomas Hosking of that place 72 years of age, doth put himself apprentice to Harry London a Goldsmith to learn the Art of a Goldsmith and with the consent of said Master doth put himself apprentice to Harry London a Goldsmith to learn the Art of a Goldsmith and with the consent of said Master.

The Day of the Date hereof, until the full End and Term of the said Term, the said Apprentice shall be fully complete and ended. During which Term, the said Apprentice shall keep, in lawful commands everywhere gladly do. He shall do no Damage to his said Master or to any other persons or his said Master's property, nor shall he commit any unlawful Game or other unlawful Games, whereby his said Master may have any Loss. With his Goods, or otherwise, during the said Term, without licence of his said Master, he shall neither buy nor sell. He shall not hasten or play houses, nor absent himself from his said Master's Service Day or Night unlawfully; but in all things, as a faithful Apprentice, he shall behave himself towards his said Master, and all his, during the said Term. And the said Master, in consideration of the said Apprentice, his said Apprentice, in the same Art of a Goldsmith, during the said Term, paying unto his said Apprentice the following Wages, namely:— Six shillings per week for the first year, Twelve shillings per week for the second year, Twenty shillings per week for the third year, Twenty-five shillings per week for the fourth year, Thirty shillings per week for the fifth year, and Thirty-five shillings per week for the sixth year, and Twenty shillings per week for the seventh year. And the said Edward Thomas Hosking, in consideration of such payment to the said Apprentice shall and will find and provide for the said Apprentice during the said term, meat, drink, apparel, lodging, and all other necessaries, and shall and will keep the said Master indemnified from all claims and demands, costs and expenses, in respect thereof. And to the true Performance of all and every the said Covenants and Agreements, each of the said several Parties binds himself unto the other and others jointly and severally by these presents. In Witness whereof, the Parties above-named to these Indentures have put their Hands and Seals the Sixth day of April in the Year of the Reign of our Sovereign Lord George V of the United Kingdom of Great Britain and Ireland, and of all the British Dominions beyond the Seas, King, &c., and in the Year of our Lord, One Thousand Nine Hundred and Twenty-one.

Signed, sealed and delivered in the presence of

[Signatures]

Walter Hosking
Apprentice to sign here

Edward Thomas Hosking
Father or Guardian to sign here

Father of ( )

Signed, sealed, and delivered in the presence of

[Hand Stamp]
Appendix 1.311  
City of London Guildhall Freedom document for Walter Hosking 1927

Walter Hosking, son of Edward Thomas Hosking and late apprentice of Henry Havert Aymonds, citizen and goldsmith of London, was admitted into the Freedom aforesaid and made the Declaration required by Law in the Mayoralty of Sir George Roundel, Alderman, and Commoner of the City of London, Mayor and Sir Adrian Donald Wilde Pollock, Ald. Chamberlain and is entered in the book signed with the letter C.R. relating to the Purchasing of Freedoms and the Admissions of Freemen (to wit) the 5th day of April in the 11th Year of the reign of King George V and in the Year of our Lord 1927. It Witnesseth whereof the Seal of the Office of Chamberlain of the said City is hereunto annexed Dated in the Chamber of the Guildhall of the same City the day and Year aforesaid.

[Seal of the City of London]
Appendix 1.3iii Certificate and fee paid for Freedom of the Goldsmiths of London 1927

This is to Certify that

Walter Hoshing

of 28 Lombard Street in the County of London

the Son of Edward Thomas Hoshing

was this Sixth day of April One thousand nine hundred and Twenty seven admitted into the Freedom of the Mystery of Goldsmiths of the City of London by


Walter Hoshing

Clerk of the Worshipful Company of Goldsmiths.

No. 762

CHAMBERLAIN'S COURT,
GUILDHALL, E.C. 2.

Received from Mr. W. Hoshing the sum of TWO GUINEAS, being the Fee pay respect of his application for Admission to the Freedom of the City of London.

£2 : 2 : 0

Clerk of the Chamberlain's Court.
THIS IS TO CERTIFY

that

Anthony George Hosking

of 45, Whyke Lane, Chichester, Sussex - the Son

of Walter Hosking — was this sixteenth
day of May — One thousand nine hundred and fifty-six

admitted into the FREEDOM of the MYSTERY of

GOLDSMITHS of the City of LONDON by Patrimony.

Walter A. Prideaux
Clerk of the Worshipful Company of Goldsmiths

GOLDSMITHS HALL
LONDON. E.C.2
Appendix 1.3v

Abstract from Freemans handbook regarding Patrimony, Servitude and Redemption, and the fees and document required, 1926
THE FREEDOM OF THE CITY CAN BE OBTAINED

1st. By Patrimony; that is, being the son or daughter (unmarried or a widow) of a Freeman, and born after the admission of the father. If the father belonged to a City Company, the freedom of that Company must be first obtained.

2nd. By Servitude; that is, having faithfully served an apprenticeship to a Freeman, according to the custom of the City; and if the master was a member of one of the City Companies, the freedom in his Company must be first obtained.

3rd. By Redemption; that is,
   (c) Being on the Parliamentary Register for the City.

(b) Being a Ratepayer in the City, when application for admission has to be made to the Court of Common Council.

(c) Being a Freeman of a City Company, when application for admission has to be made to the Court of Aldermen.

(d) By application for admission to the Court of Common Council without any such qualification.

In every case personal application at the Chamberlain's Court, Guildhall, E.C., is essential.

Any person having taken up the Freedom of the City without a Company, subsequently joining one, must bring his copy of freedom and certificate of admission to the Company.
CAUTIONS RELATING TO TO THE Chamberlain's Office, TO BE RECORDED.

FEES

<table>
<thead>
<tr>
<th>Description</th>
<th>£</th>
<th>s</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>By Patrimony</td>
<td></td>
<td></td>
<td>2 2 0</td>
</tr>
<tr>
<td>Servitude</td>
<td></td>
<td></td>
<td>2 2 0</td>
</tr>
<tr>
<td>Redemption (a, b, or c)</td>
<td>2 2 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do. (d)</td>
<td>3 3 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Record</td>
<td>0 1 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DOCUMENTS REQUIRED.

A Certificate of Birth must be produced in all cases.

In cases of Presentation by a Company, the Certificate of Admission to such Company must be produced.

*BY PATRIMONY:—

The Father's Copy of Freedom and Applicant's Certificate of Birth.

†BY SERVITUDE:—

The Indenture signed by the Apprentice, the Testimony of the Master, (in the case of Non-Indenture) the Master's Copy of Freedom, and Applicant's Certificate of Birth.

BY REDEMPTION WITHOUT THE INTERVENTION OF A LIVERY COMPANY:—

Proposal Form (to be obtained on application) signed by two Freemen of known respectability, and Applicant's Certificate of Birth.

FREEMEN AND APPRENTICES.
Appendix 1.4  Apprenticeship document of William Margetson as a Harness Maker 1858

This Indenture Witnesseth That Ernest Friedrich Margetson

Doth put himself apprentice to Harvey Riches Junior Trading as Harness Maker, Exeter, to learn his Art and with him for the term of an Apprentice to serve from the first day of July, One thousand five hundred and forty-nine, to the full and entire Term of three Years from those next following to be fully complete and ended.

During the said Term he shall be under the charge of the Master and shall be instructed in the Art of Harness Making and in no wise shall he do any damage to any of the said Master's goods.

He shall not engage in any other Trade or Activity without the authority of the said Master. He shall not leave the said Master's service at any time without the prior consent of the said Master. He shall not be allowed to be employed by any other master without the consent of the Master.

The said Apprentice shall work twelve hours per day, six days per week, and shall be paid five shillings per week in the first year, six shillings per week in the second year, and seven shillings per week in the third year.

If he leaves the service of the said Master before the end of the said Term without the consent of the said Master, he shall be liable for any losses incurred.

And for the due performance of all and every the said Conditions and Agreements aforesaid the said Apprentice agrees to pay to the said Master the sum of ten shillings for each week of the said Term of three years.

Given under our hands for the said Apprentice, Ernest Margetson, to be held and kept in force to the full extent from the date of this Indenture.

Ernest Friedrich Margetson

Witnessed by N. R. Dunn, Alderman Margetson
Appendix 1.5

Triplex Apprenticeship agreement of James Knight 1875

An Agreement

Made and entered into
This fifth day of May one thousand eight hundred and seventy-five, between Daniel Richardson, Plumber
and Painter of Horsham, in the County of Sussex, of the one part, and James Knight of Queen Street in the same place, of the other part, as follows:

The said Daniel Richardson doth hereby agree

to employ and instruct, or cause to be instructed, James Thomas Knight, one of the above mentioned James Knight, in the art of Plumbing, Painting and Joining for the term of five years, from the date hereinafter in the fifth or last year of the same James Thomas Knight shall agree to be taught to the Plumbing branch of the above art and the said Daniel Richardson agrees to pay to said James Thomas Knight the sum of one shilling per week for the first year, two shillings and six pence per week for the second year, three shillings per week for the third year, four shillings per week for the fourth year, and the sum of six shillings per week for the fifth year; and it is agreed by the said Daniel Richardson shall work and serve in the time of Fours core and four days during the said time.

And the said James Thomas Knight, shall freely agree with the said Daniel Richardson, that he will hold

and agree to the terms of this agreement, perform all duties, and

continue or if he shall abscond himself from this work, he shall

exceed whatsoever be for that time, to himself, or as auction or Daniel shall be charged with payment

of his weekly wages, or he shall abscond himself (under the

conditions after stated) without the leave of the said Daniel

Richardson.

In witness whereof, the said parties have signed

this bond.

[Signatures]

Witness: Benjamin Blackmore

[Signature]

James Knight

[Signature]
and materials used, and to establish yourself in Chichester at your earliest convenience. I shall be glad to hear from you at your leisure.

I remain, Yours etc,

Fred de Vliek

P.S. One week's notice to be given by either party.

Mr. James Knight.
Appendix 1.7

Employment offer to James Knight as a three branch hand 1886

To Mr J. Knight,

I am willing to offer you constant employment firstly as a skilled plumber, but generally as a three branch hand (plumber, painter and glazier) and I am agreeable and hereby promise to pay ten shillings per week for all hours worked subject to the rules of the shop, a copy of which I enclose. You will be expected to carefully book all time worked.
Deed of Apprenticeship

between

C. Bryant & Son Ltd
(Name of Master)

and

Andrew George Snodin
(Name of Apprentice)

11th November 1944
(Date of Birth)

FORM No. 1
(For use when the “Representative” signs on behalf of the Local Joint Apprenticeship Committee)

Issued by
THE NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY
11, Weymouth Street, London, W.1
(1759)

THE NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY

This Deed of Apprenticeship made

the 19th day of February, 1945

between C. Bryant & Son Ltd

of Whitmore Road, Small Heath, Birmingham 10

(hereinafter called “the Master”) of the first part

By George Snodin

of 29, Aernleigh Road, Solihull

(hereinafter called “the Guardian”) of the second part

Andrew George Snodin

of 29, Aernleigh Road, Solihull

(hereinafter called “the Apprentice”) of the third part

and J.E. Jones of 165, Pershore Road, Edgbaston, Birmingham 5

of the offices of the Birmingham Area Joint Apprenticeship Committee
(hereinafter called “the Representative”) of the fourth part.

Whereas

(1) The Representative has been selected by the Local Joint Apprenticeship Committee for the

_____________Area of the ___________ Region

constituted by the National Joint Council for the Building Industry, to be a party to this Deed in accordance
with their Scheme of Apprenticeship dated the first day of November, 1945, and

(2) The Apprentice has attained the age of 16 years and is employed as _______ by the Master with a view
to becoming an apprentice in the Building Industry,

(3) The Master and the Representative are satisfied that the Apprentice is a suitable person to be taught
and instructed as an apprentice in the craft of _______ , and

(4) The Guardian and the Representative have enquired into the nature of the business conducted by the
Master and desire that the Apprentice should learn the craft of _______ in the service of the Master.
Now This Deed Witnesseth as follows:

1. The Apprentice of his own free will and with the consent of the Guardian hereby binds himself as Apprentice in the craft of a Building, Plant Site and the Master hereby accepts him as an Apprentice upon the conditions hereinafter appearing.

2. The Master hereby covenants with the Guardian and the Apprentice and also as a separate covenant with the Representative

(a) To accept the Apprentice as his Apprentice for the term of 3 years 10 days, to be commenced from the first day of July 1963, being the commencement of the said period and during the said term to the best of his knowledge and power to teach and instruct the Apprentice or cause him to be taught and instructed in the craft of Building, Plant Site and in all things incidental or relating thereto.

(b) To answer such enquiries as the Representative may from time to time make as to the training progress and conduct of the Apprentice.

(c) To allow the Apprentice until the end of the school year in which he shall attain the age of 18 years such leave of absence during normal working hours as will permit him to attend the course of technical and general education referred to in Clause 6 hereof, provided that the Master may in his absolute discretion in cases where the Apprentice has obtained a craft certificate and wishes to study for and appears to be capable of obtaining a higher qualification continue to allow him leave of absence during normal working hours to attend technical day classes for that purpose.

(d) To pay the proper fees payable in respect of the attendance of the Apprentice at both the technical day and evening classes as required by Clause 6 hereof.

(e) To pay the Apprentice every week during the term of apprenticeship (subject to the provisions of Clause 7 hereof) wages at the rate prescribed from time to time for apprentices in the district by the National Joint Council for the Building Industry for the normal working hours prescribed for workmen by the said Council and to observe the working conditions for apprentices as from time to time laid down by the said Council and if and when overtime is worked as hereinafter provided to pay the Apprentice at the overtime rates for apprentices in the district from time to time prescribed by the said Council.

(f) (i) Not to deduct any amount from or reduce the wages of the Apprentice on account of his attendance for such technical or general instruction as aforesaid or on account of any period or periods when the Master's works may be closed save that if the Apprentice should absent himself from his Master's service unlawfully or fail to attend the said course without proper and sufficient reason the Master may deduct from the Apprentice's wages the amount of wages otherwise payable for the time during which the Apprentice is absent therefrom.

(ii) Not to deduct any amount from or reduce the wages of the Apprentice on account of any days of holiday recognized under National Working Rule 4 of the National Joint Council for the Building Industry for the building industry in the locality.

(g) In the event of the Apprentice being at any time incapacitated from work by illness or accident certified by a doctor's certificate in respect of each week of absence from the Master's service, to pay the wages of the Apprentice during such incapacity, but not for a longer aggregate period in any one year than four weeks, and less any benefits due to him under the National Insurance Acts 1946 or any other Statutes in respect of such incapacity provided that if the Master is not satisfied with the terms of the doctor's certificate produced by the Apprentice, he may at his discretion and expense require the Apprentice to be examined by a doctor nominated by the Local Joint Apprenticeship Committee upon his (the Master's) application that body and if such doctor is not satisfied as to the incapacity and so certifies this clause shall be inoperative.

3. The Guardian hereby covenants with the Master and the Representative that he will during the term of the apprenticeship provide the Apprentice with such board clothing and lodging and all other necessaries as he may reasonably require.

4. The Guardian hereby covenants with the Master and the Representative that he will to the best of his ability and opportunities during the term of the said apprenticeship restrain the Apprentice from contact with any harmful influences outside the Apprentice's working hours.

5. The Apprentice and the Guardian as surety for the Apprentice hereby jointly and severally covenant with the Master and the Representative as follows:—

(a) That during the continuance of the apprenticeship the Apprentice will faithfully and honestly serve the Master as his Apprentice and be diligent to learn the craft aforesaid and will at all times willingly obey and perform the lawful and reasonable commands and requirements of the Master or of his authorized representatives and keep the secrets of his trade.

(b) That the Apprentice shall work in his Master's business during the normal working hours prescribed from time to time for the district for Building Trade workmen by the National Joint Council for the Building Industry and work such overtime as is provided for under the National Working Rules of the National Joint Council for the Building Industry.

(c) That the Apprentice shall not do or attempt to do any waste damage or injury to the property or goods of the Master or knowingly suffer the same to be done without acquainting him therewith provided always that the Master shall not hold the Apprentice liable for any such waste or damage or injury not done or committed wilfully or maliciously or as a result of a breach of the lawful rules and regulations of Master committed knowingly by the Apprentice.

(d) That the Apprentice shall not during the continuance of the apprenticeship engage in any other occupation or business whatsoever which might interfere with the successful carrying out of his apprenticeship.
(e) That the Apprentice shall not absent himself from the Master's service unlawfully but shall in all things conduct himself as an honest and faithful Apprentice should.

(f) That the Apprentice shall regularly and punctually attend and diligently follow the course of technical and general education referred to in Clause 6 hereof and upon the request of the Master or the Representative apply to the proper authority for and produce for their inspection such certificate of attendance, reports or results of examination as may be issued to him in respect of any of the courses of instruction above referred to.

(g) That the Apprentice shall at the proper time make application to the Ministry of Labour and National Service for deferment from military or other national service during the period of the apprenticeship and shall not by his act or default cause an interruption in the training provided for under this Deed.

6. The Master shall direct the Apprentice to attend and the Apprentice shall attend the undermentioned courses of technical and general education at such technical college or other institution as may be approved for the purpose of this Deed by or on behalf of the National Joint Apprenticeship Board, viz.—

(a) Until the end of the school year in which he attains the age of 18 years, the Apprentice shall attend technical day classes for two half-days or one whole day in each week or for an equivalent period in each school year in the case of continuous or similar courses of instruction and shall study for the craft certificate examination in his craft or other examination approved by or on behalf of the National Joint Apprenticeship Board.

(b) In addition to attendance at the technical day classes referred to above the Apprentice shall throughout the period of apprenticeship attend evening classes on such day or days in each week as may be reasonably required by the technical college or other institution providing the correlated course of studies in his craft.

Provided that the Joint Apprenticeship Committee shall have the full power—

(i) To relieve the Apprentice upon his application from his obligation to attend further technical evening classes after he has obtained the craft certificate where the principal of the technical college or other institution where he is enrolled recommends and the Joint Apprenticeship Committee is satisfied that he is unlikely to benefit from further attendance at such classes; and

(ii) To suspend at any time the obligation of the Apprentice to attend technical day and evening classes where the Principal of the technical college or other institution where he is enrolled advises and the Joint Apprenticeship Committee is satisfied that the Apprentice is unable to benefit from attendance at technical classes.

7. It is hereby expressly agreed and declared that if the Apprentice conducts himself in such a way that the proper training of himself or of other apprentices is thereby impeded the Master shall have power summarily to suspend the apprentice and shall forthwith report the suspension to the Joint Apprenticeship Committee.

8. If at any time or times hereafter during the term of the apprenticeship the Local Joint Apprenticeship Committee for the area of the Region or the Board of the said Local Joint Apprenticeship Committee shall be dissolved by the Master of the said region the said Local Joint Apprenticeship Committee or any successor or successors, party to this Deed, or liable hereunder in any way whatsoever.

9. In case of any dispute by any of the parties hereto to have this Deed cancelled for any cause whatsoever or in case of any dispute or difference between any of the parties in relation to or arising out of this Deed (except any dispute or difference in regard to the rates of wages payable to the Apprentice during the normal working hours or in regard to the rates of pay for additional hours worked as overtime, or in regard to such working conditions applicable to apprentices [other than conditions as to training and education] as may be prescribed by the National Joint Council or the conduct of any of them in the performance thereof or in relation to the apprenticeship hereby constituted such claim dispute or difference shall be referred to the Local Joint Apprenticeship Committee which shall have full power forthwith to cancel this Deed or to transfer the Apprentice to another Master for completion of his said apprenticeship or to take such other action as they think fit and proper and in the best interests of the Apprentice and all such decisions of the said Local Joint Apprenticeship Committee shall be final and binding on all the parties.

Provided that if any party shall be dissatisfied with the decision of the said Local Joint Apprenticeship Committee then and in that event any party may within 14 days by notice in writing to the Joint Secretary of the said Local Joint Apprenticeship Committee have the matter referred to the said Regional Joint Apprenticeship Committee which Committee shall have full power to review such decision and whose decision shall be final and binding upon the parties. Provided further that if any party to this Deed shall be dissatisfied with the decision of the said Regional Joint Apprenticeship Committee then and in that event any party may within 14 days by notice in writing to the Clerk to the Council have the matter referred to the Appeal Committee of the National Joint Council whose decision shall be final and binding upon all the parties. In arriving at their decision the Regional Joint Apprenticeship Committee and the Appeal Committee shall be guided primarily by what is in the best interests of the Apprentice.

10. In particular and without prejudice to the powers reserved in the preceding clause the Local Joint Apprenticeship Committee shall have full power to cancel this Deed or to transfer the Apprentice to another Master for completion of his said apprenticeship on such terms as they think fit in case they are satisfied that there has been a serious or persistent breach non-performance or non-observance by the Master the Guardian or the Apprentice of any of their respective covenants herein contained or in case the said Local Joint Apprenticeship Committee shall be of the opinion at any time during the first year from the date of these presents that the Apprentice is unsuitable for the craft of the said Apprentice and that it is wholly unsatisfactorily to complete his apprenticeship or that for any other reason whatsoever at any period of the apprenticeship it is for the benefit of the Apprentice that this Deed should be cancelled or that he should be transferred to another Master for the completion of his said apprenticeship.
IN WITNESS WHEREOF the Common Seal of the party of the first part has been affixed and the parties of the second, third and fourth parts have hereunto set their hands and seals the day and year first above written.

IN WITNESS WHEREOF the parties hereof have hereunto set their hands and seals the day and year first above written.

The Common Seal of

C. Bryant & Son, Limited,

was hereunto affixed in the presence of

[Signature]

Director

Secretary

Signed sealed and delivered by the above-named

in the presence of

[Signature]

(The Master)

Signed sealed and delivered by the above-named

in the presence of

[Signature]

(The Parent or Guardian)

Signed sealed and delivered by the above-named

in the presence of

[Signature]

(The Apprentice)

Signed sealed and delivered by the above-named

in the presence of

[Signature]

(The Representative)

Endorsement of Deed of Apprenticeship

a. We (i) the Master and (ii) the Representative hereby certify that this Deed of Apprenticeship terminated on the 14th November, 1965 has been faithfully complied with and is hereby endorsed in accordance with the provisions of Clause 2(k) thereof.

b. We further certify that during the period of apprenticeship the Apprentice has attained the following awards:

(i) 

(ii) 

(iii) 

(iv) 

(v) 

(vi) 

(vii) 

(viii) 

(ix) 

(x) 

Signed sealed and delivered by the above-named

in the presence of

[Signature]

Master

Signed sealed and delivered by the above-named

in the presence of

[Signature]

Representative.

145, Edgbaston Road, Edgbaston, Birmingham, 5.
This is to certify that

ANDREW GEORGE SNODIN

has completed an approved apprenticeship in the craft

of

MAINTENANCE FITTING

Issued under the authority of the

NATIONAL JOINT COUNCIL

for the

BUILDING INDUSTRY

by the

NATIONAL JOINT APPRENTICESHIP BOARD

Date 14.11.1965.

11, WEYMOUTH STREET, LONDON, W.1
6th December, 1965.

BY REGISTERED POST

A. G. Snodin, Esq.,
29, Ashleigh Road,
SOLIHULL,
Warwicks.

Dear Mr. Snodin,

I should like to congratulate you upon completing your apprenticeship with us in the trade of Maintenance Fitting, and enclose your apprenticeship indentures duly completed by the proper authorities. Would you kindly acknowledge receipt.

You have now qualified as a fully-fledged craftsman in an expanding industry that has great prospects. More and more importance is being placed, quite rightly, on the quality of the management in our industry and the best jobs will only go to those who are fully qualified. If it is your ambition to get further up the ladder of success, you must have further training.

If, therefore, you feel you have the ability to achieve higher qualifications and are in any doubt as to what is the next step, do not hesitate to seek an interview with our Personnel Manager, Mr. Vernon Summers, who can give you full and proper advice.

In any case, whatever you decide to do, may I take this opportunity of wishing you every success in the future.

Yours sincerely,

[Signature]

Encl.
Appendix 2.1

National Joint Council for the Building Industry
Working Rule Agreement 1979 (Nov. 1st)

Abstract from: National Joint Training Scheme for
Skilled Building Occupations pg.105

1. Training Service Agreement.

A person being trained for a skilled building occupation shall enter a "training service agreement" ...

Under the agreement it shall be the responsibility of the Employer to ensure that throughout the whole period covered by the agreement the apprentice/trainee is given off-the-job training, and/or further education, and appropriate work experience. It shall be the responsibility of the apprentice/trainee to apply himself to the acquisition of the knowledge and skills of the occupation in which he is being trained.

2. Wages and Working conditions ...

3. The Period of Training

"Approved courses" shall mean courses of further education and/or off-the-job training which are appropriate to the intended occupation of the apprentice/trainee which are recognised as such by the Construction Industry Training Board and approved by or on behalf of the Council.

3.1 Entrants under 19 years of Age

Training shall comprise practical training in employment supplemented by related further education at a technical college (see para. 5.1. below). Where practicable the entrant should in his first year be given initial training under the standard system of "off-the-job" training recognised by the Construction Industry Training Board and approved by the council, either at a technical college or a centre run for that purpose by the Construction Industry Training Board or at a company training centre.

3.1 Entrants Aged 19 or Over

Training shall comprise practical training in employment and, where the employer and trainee so agree, related further education at a technical college. Where practicable the entrant should in his first year be given initial training under the standard scheme basic "off-the-job" training recognised by the Construction Industry Training Board and approved by the Council either at a technical college or a centre run for that purpose by the Construction Industry Training Board or at a company training centre. Alternatively the initial basic "off-the-job" training may be given at a Government Training Centre.
4. Job Knowledge and Practical Skills Testing

4.1 All apprentices/trainees shall normally by the end of the first year of training be required to take the job knowledge test to standards set by the Construction Industry Training Board and the City and Guilds of London Institute and approved by the council. Trainees aged 19 years or over entering industry from a Government Skill-centre will be expected to have taken the job knowledge test before leaving the skill-centre.

4.2 All apprentices/trainees during the currency of the training service agreement will be required to take the practical skills test to standards determined by the Council. For those entering from a Government Skill-centre, at least six months' site experience will be required before the practical skills test can be taken. For all other apprentices/trainees the practical skills test will be taken no earlier than nine months before the end of the period of training.

4.3 Provision is made under the scheme for the practical skills test to be taken a second time if failed at the first attempt without direct expense falling upon the parties. If failed a second time, the third or any subsequent test will be taken at the expense of the trainee.

5. The Period of Training

5.1 All prospective apprentices/trainees shall serve a period of probation not exceeding six months' duration with their employers, during which a training service agreement shall be signed. The period of probation shall be included in the period of training.

5.2 The normal period of training shall be three years, but it shall be two and a half years for an apprentice/trainee under the Youth Training Scheme and recognised by the Council. The normal period shall be reduced to two years where the trainee has attended a Government Skill-centre.

6. Related Further Education

6.1 Entrants under 19 years of Age
During the period of training the apprentice/trainee shall attend such course or courses of further education as required by the council:

6.1.1 Where the apprentice/trainee has passed the job knowledge test there shall be entitlement for the apprentice/trainee to continue with off-the-job training subject to an appeal by the employer to the Local Joint Training Committee;

6.1.2 Where the apprentice/trainee has failed the job knowledge test the entitlement to off-the-job training shall cease subject to an appeal by the apprentice/trainee to the Local Joint Training Board.

6.2 Entrants Aged 19 or Over
For entrants over 19 years of age, including those who have completed a six-months' course at a Government Skill-centre, attendance at an approved course of further education shall be by mutual agreement between the employer and the apprentice/trainee.
4. The period of Training

4.1 Probationary Period

All prospective apprentices/trainees shall serve a period of probation not exceeding six months duration with their employers. The period of probation shall be included in the period of training.

4.2 Entrants under 19 years of Age

The normal period of training shall be three years.

4.3 Entrants Aged 19 or Over

1. The normal period of training shall be three years.
2. Attendance at Further Education courses shall be by agreement between the employer and the trainee.
3. The normal period shall be reduced to two years where the trainee has attended an approved off-the-job course in the first year, or a Government Training Centre.

5. Related Further Education

5.1 Entrants under 19 years of Age

Throughout the period of training the apprentice/trainee shall attend an approved course of further education for not less than two half-days or one whole day in each week, or for an equivalent period in case of block release or similar course of instruction, and evening classes on such day or days as may be reasonably be required by the technical college and shall study for the craft certificate in his craft or other approved qualification. Where the apprentice/trainee and the employer agree that the extended further education would be beneficial to both parties, opportunities shall be made available for post-craft certificate training, including attendance at college.

5.2 Entrants Aged 19 or Over

For entrants over 19 years of age, including those who have completed a six-month course at a Government Training Centre, attendance at an approved course of further education shall be by mutual agreement between the employer and the apprentice/trainee.
Appendix 4.1 The Curriculum for Junior Technical Schools

As indicated in Board of Education Pamphlet No. 113 HMSO 1937

The Board of Education based its report on a full inspection of eighty-two Junior Technical Schools, including fifty-five preparing for the constructive trades.

Junior Technical Schools Preparing for the Constructive Trades

Topic areas

i Mathematics
ii Science
iii Drawing
iv Workshop Practice
v Foreign Language

i Mathematics

The demand upon this topic for those entering the constructive trades of engineering and building were considered to be greater than in other schools.

Four to five hours per week were devoted to the subject. This excluded mechanics and certain amounts of geometrical instruction, which was undertaken in the appropriate class.

The syllabus included;

arithmetic
mensuration
use of logarithms
graphs
algebra up to and including quadratic equations
elementary geometry and trigonometry

and especially where a course extended over three years

an introduction to differential and integral calculus

Logarithms generally began around the age of 14. Trigonometry was sometimes started at the same time as it was needed for surveying later.
Because of the practical nature of the schools care was needed to make the topic applicable.

The teacher, whilst bearing in mind the general aspect, should devote himself in particular to providing a fund of mathematical knowledge and a power of mathematical technique adequate to deal with the quantitative basis and the logical development of the technical subjects such as engineering and building and of the scientific subjects such as physics, electricity and chemistry.

(Ed Pamph. 113, pg 9)

The greatest mathematical demands upon the constructive schools are:

1) A knowledge of ordinary arithmetic, especially mensuration.
2) An ability to handle formulae confidently, to be able to transform them, to substitute in them and to evaluate them.
3) An ability to handle logarithmic tables and tables of trigonometrical functions quickly and with understanding.
4) An ability to understand the use of equations and to solve simple quadratic equations.
5) A thorough understanding of graphical methods of presentation and the use of graphs to illustrate or to solve problems arising in science and technology.
6) A knowledge of the principle geometrical properties of rectilinear figures and the circle, and some acquaintance with the ellipse and parabola. The use of locus is of special importance.
7) A knowledge of simple solid geometry.
8) A knowledge of the elements of trigonometry as far as the solution of triangles.
9) An introduction to the ideas and the notion of the differential and integral calculus.

The above being based upon a three year course for a student starting at the age of 13 and leaving at 16.

It is also interesting to note the statement,

Decimalisation of British measures and conversions to and from metric measures should be practised throughout the course,

This at a time long before metrification.
## Science

The pamphlet indicated that it was common to divide the subject into the three main branches of, mechanics, physics and chemistry. And that where this was done then usually six hours per week would be allocated to them.

It was also considered that mechanics was the more important of the topics. And it was a subject that was to be taught throughout the course. Heat, light, sound, electricity and physical properties were other topics of importance.

The following was suggested as a guide for the syllabus:

<table>
<thead>
<tr>
<th>2 year course</th>
<th>Subject matter</th>
<th>Number of terms (at 2 hrs a week)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>Properties of matter</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Mechanics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Heat</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Electricity and magnetism</td>
<td>2</td>
</tr>
<tr>
<td>2nd year</td>
<td>Mechanics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Heat</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Light and sound</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Electricity</td>
<td>2</td>
</tr>
<tr>
<td>3 year course</td>
<td>1st year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Properties of matter</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Mechanics</td>
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</tr>
<tr>
<td></td>
<td>Heat</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Light and sound</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Electricity and magnetism</td>
<td>2</td>
</tr>
<tr>
<td>2nd year</td>
<td>Mechanics</td>
<td>2</td>
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<td></td>
<td>Heat</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Chemistry and biology</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Electricity</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Light</td>
<td>1</td>
</tr>
<tr>
<td>3rd year</td>
<td>Mechanics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Heat and heat engines</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Chemistry and biology</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Electricity</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Light and sound</td>
<td>1</td>
</tr>
</tbody>
</table>
The approximate proportion of time allocated to each science topic was given as:

<table>
<thead>
<tr>
<th>Topic</th>
<th>2 yr</th>
<th>3 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties of matter and mechanics</td>
<td>25 - 33</td>
<td>25 - 33</td>
</tr>
<tr>
<td>Heat</td>
<td>16</td>
<td>20 - 25</td>
</tr>
<tr>
<td>Electricity and magnetism</td>
<td>20</td>
<td>20 - 25</td>
</tr>
<tr>
<td>Chemistry</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Light and sound</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

The pamphlet indicated that at the time of its publication (1937) there were five Junior Technical Schools preparing individuals for the building trades and a much larger number preparing boys for the constructive trades. It indicated that in the building JT schools to scope of science did not differ to much from that in other JT schools.

iii Drawing

This was also considered an important subject, which was to occupy between 10 and 16 per cent of the total time. Usually four hours a week on the two year course and an average of three on the three year course. A considerable amount of the time was to be devoted to sketching, with the emphasis being placed on sketching to convey information from the site to the office.

It was indicated that whether the course was over two or three years the standard to be achieved should cover at least that required for the first year of a National Certificate course. And if the greater proportion of the boys went into the building trades then the drawing should reflect this.

iv Workshop Practice

The main areas covered in the pamphlet were,

- Metalwork
- Woodwork
- Foundry work

The aim of the topic metalwork was to provide the individual with a basic understanding of the principal engineering materials and processes. It also introduced working practices, working from drawings and working to time standards.
The time allocation for this topic was in the order of three hours per week in the first year rising to a maximum of six hours in the final year. It was suggested that results indicated that better results were obtained if the pupils spent one week in five rather than one or two half days in the workshop.

The topic woodwork had similar objectives, although it was stated that circumstances varied according to locality. And the time devoted to the subject also varied according to trades for which the individual school was preparing, although it was three hours a week in the first year. This may have been reduced in the final year. The work would have ranged from total devotion to pattern making depending upon the region to full scale, half scale or very small scale models. Wood turning was also considered an important part of the training.

As with metal work some time was to be devoted to the classroom for the associated technology.

Foundry work was also considered "vitally important" and it was considered at least an introduction to this "art" be available. That patterns made in the woodwork shops should be modelled in sand in proper moulding boxes. Where the school did not have a foundry then these models were to be sent to a local foundry, and visits undertaken. The castings would then be finished at the school. Some attempt, however, was to be made towards undertaking some casting.

Foreign Language

This subject was not usually taught in JT schools, however, those that included a three year course would have French or German on the curriculum and the time allocated varied from two to four hours a week throughout each year. In some cases it was taught outside normal school hours.

It had to be borne in mind that the introduction of this subject, while important, was not at the detriment of the practical subjects.

It was suggested that the study of a foreign language should be undertaken by those students whom had attained a satisfactory standard or who are likely to need it professionally. Where it was provided the recommendation was for four three-quarter hour periods a week, in each week of a three year course.
Appendix 4.2

Typical trades taught within Government Training centres

Building:
bricklaying, plastering, tiling, carpentry, house painting, gas and hot water fixing.

Furnishing:
cabinetmaking, upholstery, and French polishing.

Vehicle building:
coach building, coach trimming and coach painting.

Engineering:
machine operating, fitting and turning, instrument making, electrical welding, oxy-acetylene welding, panel beating, sheet metal work, metal spinning, metal polishing, and motor mechanics.

Miscellaneous:
wood machining, hairdressing, hotel waiting, glass tube welding and blowing for the illuminated signs industry.
Appendix 5.1

National Joint Council for the Building Industry
Working Rule Agreement 1988 (June 27th)
Abstract from Sec.4 pg.161

4. Job Knowledge and Practical Skills Testing

4.1 All apprentices/trainees shall normally by the end of the first year of training be required to take the job knowledge test to standards set by the Construction Industry Training Board and the City and Guilds of London Institute and approved by the council. Trainees aged 19 years or over entering industry from a Government Skill-centre will be expected to have taken the job knowledge test before leaving the skill-centre.

4.2 All apprentices/trainees during the currency of the training service agreement will be required to take the practical skills test to standards determined by the Council. For those entering from a Government Skill-centre, at least six months' site experience will be required before the practical skills test can be taken. For all other apprentices/trainees the practical skills test will be taken no earlier than nine months before the end of the period of training.

4.3 Provision is made under the scheme for the practical skills test to be taken a second time if failed at the first attempt without direct expense falling upon the parties. If failed a second time, the third or any subsequent test will be taken at the expense of the trainee.

5. The Period of Training

5.1 All prospective apprentices/trainees shall serve a period of probation not exceeding six months' duration with their employers, during which a training service agreement shall be signed. The period of probation shall be included in the period of training.

5.2 The normal period of training shall be three years, but it shall be two and a half years for an apprentice/trainee under the Youth Training Scheme and recognised by the Council. The normal period shall be reduced to two years where the trainee has attended a Government Skill-centre.

6. Related Further Education

6.1 Entrants under 19 years of Age
During the period of training the apprentice/trainee shall attend such course or courses of further education as required by the council:

6.1.1 where the apprentice/trainee has passed the job knowledge test there shall be entitlement for the apprentice/trainee to continue with off-the-job training subject to an appeal by the employer to the Local Joint Training Committee;

6.1.2 where the apprentice/trainee has failed the job knowledge test the entitlement to off-the-job training shall cease subject to an appeal by the apprentice/trainee to the Local Joint Training Board.

6.2 Entrants Aged 19 or Over
For entrants over 19 years of age, including those who have completed a six-months' course at a Government Skill-centre, attendance at an approved course of further education shall be by mutual agreement between the employer and the apprentice/trainee.
Appendix 5.2

National Education and training Targets

In March 1993 the responsibility for this area was passed over to the National Advisory Council for Education and Training Targets (NACETT)

<table>
<thead>
<tr>
<th>Foundation Learning Target 1</th>
<th>By 1997 80% of young individuals to reach NVQ level 2 or its equivalent (4 GCSEs grade A to C)</th>
<th>Foundation learning targets aim to improve the attainment of individuals both at school and at the start of working life.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Learning Target 2</td>
<td>Training and education to NVQ level 3 or its equivalent to be available to all young people who can benefit</td>
<td></td>
</tr>
<tr>
<td>Foundation Learning Target 3</td>
<td>By the year 2000 50% of young individuals to be qualified to NVQ level 3 or above</td>
<td></td>
</tr>
<tr>
<td>Foundation Learning Target 4</td>
<td>Education and training provision to develop self-reliance, flexibility and breadth</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lifetime Target 1</th>
<th>By 1996 all employees taking part in training or development activities as the norm</th>
<th>Lifetime targets establish the levels for enhancing investment in people, by employers and the individuals themselves.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifetime Target 2</td>
<td>By 1996 50% of the workforce should be aiming for NVQs or units towards them</td>
<td></td>
</tr>
<tr>
<td>Lifetime Target 3</td>
<td>By 2000 50% of the employed workforce qualified to at least NVQ 3 or equivalent</td>
<td></td>
</tr>
<tr>
<td>Lifetime Target 4</td>
<td>By 1996 50% of medium to large organisations should qualify as &quot;Investors in People&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Abstracted from LMOR August 1993
Appendix 5.3  Framework for a two year YTS

1. Inputs
   - Planned work experience and on-the-job training
   - Off-the-job training / education

2. Expressed in a training plan with competence objectives

3. Delivered through Training Processes
   - Induction
   - Assessment
   - Learning
   - Guidance
   - Review

4. To produce Outcomes
   - Competence in work or a range of occupational skills
   - Competence in a range of transferable core skills
   - Ability to transfer skills and knowledge
   - Personal effectiveness

5. Leading to Certification

From: A User's Guide to the Manpower Services Commission
Thomson And Arsenberg 1987 pg 121
Appendix 5.4
NVQ Blue Book scheme 1991

National Vocational Qualification

Carpentry & Joinery (Construction)
Level II

CORE UNITS

Construction Industry Activity Identification
Health and Safety in Site Operations
Communicating in Site Operations
Using Scaffolded Structures in Site Operation
Handling, Storing and Protecting Construction Materials

OCCUPATIONAL UNITS OF COMPETENCE

Mandatory Units
Fixing Joist Coverings
Fixing Frames and Linings to Openings
Fitting and Fixing Doors
Constructing Studwork Framing

Additional Units (Any three from the following six)
Encasing Services
Fixing Vertical and Horizontal Mouldings
Positioning and Fixing Units and Fitments
Positioning and Fixing Joists
Erecting and Fixing Trussed Rafters for Pitched Roofs
Fixing Verge and Eaves Finishings
References and Bibliography

Abbreviations

DLACC Descriptive List of the Archives of the City of Chichester
IMS Institute of Manpower Studies (Sussex University)
IPRA Innovation Policy Research Association
LMST Labour Market Skills Trends


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