

A study of the introduction of Industrial Studies into the City and  
Guilds construction craft courses, and of its relationship to the  
General Studies component.

Catherine Gibson

Submitted in partial fulfilment of the requirements of the CNA  
Degree of M.Phil.

Theses

A.B

Sponsoring Establishment: Garnett College.

July 1984.

#### ACKNOWLEDGEMENTS.

I wish to express my sincere thanks to my supervisor Monica MacDonald, and Ian McCallum (Garnett College) for their constant advice, support and encouragement during the planning, execution and writing of this thesis. The standards they set and the consideration they showed to me, at every stage, ensured that I gained the maximum enjoyment and benefit from the exercise.

I would like to acknowledge the help and interest of staff at the 10 London colleges where I carried out the research. The help of busy employers of building craft students in allowing me to interview them at considerable length, is also gratefully acknowledged.

I also wish to record my thanks to the Surrey County Education Authority for granting me one year's leave from my college, to enable me to carry out the field work for the study.

TABLE OF CONTENTS.

Abstract.

Statement of the problem

Chapter 1.	Historical background.	P. 1 - 34.
Chapter 2.	Review of the pertinent literature.	P. 35 - 46.
Chapter 3.	Design of the research programme.	P. 47 -59.
Chapter 4.	Statement of results.	P. 60.
	(See list of tables)	
Chapter 5.	Interpretation and discussion of results.	
	5a - 5g The teachers' view.	
	5a. City and Guilds aims as seen the two groups of teachers.	P. 61 - 71.
	5b. Concepts of Industrial Studies. The craft teachers' concepts.	P. 72 -76.
	Concepts of Industrial Studies. The general studies teachers' concepts.	P. 77 -80.
	5c. Concepts of General Studies. The general studies teachers' concepts.	P. 81 - 89.
	Concepts of General Studies. The craft teachers concepts.	P. 89 - 98.
	5d. The craft teachers.	P. 99 - 106.
	5e. The general studies teachers.	P. 107 - 111.
	5f. The link.	P. 112 - 122.
	5g. The courses - Industrial Studies. The courses - General Studies	P. 123 - 138. P. 139 - 151.
	5h. The employers' view.	P. 152 - 178.
Chapter 6.	Conclusions.	P. 179 - 188
Bibliography.		P. 189 - 194.
Appendices.		

## ABSTRACT.

A study of the introduction of Industrial Studies into the City and Guilds construction craft courses, and of its relationship to the General Studies component.

Catherine Gibson

The thesis examines the introduction of the Industrial Studies component into the City and Guilds construction craft certificate courses in 1973; and its relationship to the longer standing General Studies component.

The research included a programme of structured interviews conducted with teachers and administrators in a variety of college. It focusses on the development of City and Guilds policy and aims, particularly in relation to General and Industrial Studies and on the correspondence between teachers' perceptions and practical outcomes.

The backgrounds of craft and general studies teachers are considered with particular reference to their ability to adjust to new demands made on them and the possibility of co-operation between teachers with different backgrounds.

Further information is collated and interpreted regarding the presentation of Industrial and General Studies to the students. This includes consideration of content, teaching and assessment methods and of the implementation of the recommended link between them.

Research was conducted into the attitudes towards the City and Guilds courses, of 30 employers of students, particular attention being paid to their understanding and acceptance of the Industrial and General Studies components. A brief review of the relationship between the further education and training elements of the preparation of young people for work in the construction crafts, is included.

The findings from these investigations are considered in the light of the intentions of the CGLI's Joint Advisory Committee, as identified by published documents and by interviews carried out at CGLI. It is suggested that there has been a large measure of failure to fulfil these intentions.

Consideration is given to the method of dissemination of information on curriculum change and to the quality of support and guidance available in relation to such change.

Recommendations are made for the improvement of the process of dissemination and support of teachers, including specific recommendations intended to assist colleges towards a more effective implementation of the policies of CGLI in this field.

## STATEMENT OF THE PROBLEM.

In 1973, CGLI introduced a new component - Industrial Studies - into their construction craft certificate courses as part of a move towards a broadening of the further education element of the preparation of young people for work in the construction crafts.

The development was initiated in response to a recognition of the need for these workers to be more aware of the nature of their industry and to be more flexible in their approach to the work they do.

The existing syllabuses for the construction crafts were entirely trade based with the exception of the General Studies component which had been introduced into all City and Guilds courses in the early 1960s. It was considered that this component was not meeting the needs of the students or the industry because it was not sufficiently integrated into the whole course and it was being interpreted too widely by general studies teachers. Misgivings had been expressed for some time by employers and technical teachers about its value, and general studies teachers themselves felt that they were unduly isolated in their work and that the rest of the courses were being too narrowly conceived and taught.

It was decided therefore that the new component, which was to be the same for all the crafts, should aim to widen the students' knowledge and appreciation of the construction industry and act as a link between General Studies and the technical aspects of the course.

During the 1970s it appeared that the new component was not being fully accepted by those responsible for including it in the teaching. There was a lack of conviction in its implementation and in addition there was a measure of uncertainty about the intended relationship between General and Industrial Studies.

This weakness in the implementation of City and Guilds policy contrasted with the careful planning and high level of support associated with the introduction of Industrial Studies.

At the same time, the construction industry, through their representative bodies, was expressing dissatisfaction with the City and Guilds schemes for the construction crafts. The establishment during this period, of the Construction Industry Training Board had the effect of emphasizing a separation of the training and educational elements of the students' studies. Although the CGLI had attempted to draw up their schemes to reflect the joint decisions of teachers and employers, it was apparent that the resulting courses being taught in colleges were not acceptable to many employers.

This investigation attempts to establish the background to this situation and to ascertain the extent of the mismatch between the intentions of CGLI and the actual course provision in the colleges; and to identify possible causes and remedies.

The City and Guilds of London Institute.

The City and Guilds of London Institute for the Advancement of Technical Education was founded in 1878 by the five City Livery Companies and the Corporation of the City of London, in response to a call from the Prime Minister of the day, Mr. Gladstone, for the development of the country's (CGLI,1978,p.1) 'human resources...through education beyond the minimum of which the Schools Boards, Churches, and other voluntary philanthropic organizations were currently capable.' It was therefore agreed to form a body (p.2) 'specifically for the promotion of technical education throughout the country and at all levels of employment.'

The new Institute's Department of Technology 'concerned itself with the setting of standards of technical knowledge that would be relevant to industrial occupations ... and would provide apprentices and others with goals at which to aim.'(ibid.) They very soon took over the Royal Society of Arts' technical examinations, leaving them the responsibility for the commercial and clerical subjects.

When the State took up its responsibility for the provision of technical education by means of the 1890 Technical Education Act, the City and Guilds of London Institute retained its function of providing for society's need 'for individual attainment to be measured and given public recognition.'(Knutton,1978,p.1). The 1890 Act removed the Institute from immediate contact with government policy making in education. Since then its first consideration has been to 'match the provision of schemes to the changing needs of industry and to the resources of education and training establishments.'(Lang,1978,p.121). Its position is unofficial but it is recognised as the leading

examining body by all technical institutions in the country.

The Institute also plays a part as a forum for discussion of education matters, particularly in the field of vocational and technical education. It has issued a regular Broadsheet since the early 1960s to give reports of meetings and to put forward future proposals about their schemes. Special Broadsheets are issued from time to time to allow for fuller discussion of a topic. For example in 1978 a Centenary edition was issued to describe the history of the Institute 'in response to the wide interest expressed by technical college staff and students, industrial training officers and members of the public.'(CGLI, 1978 footnote.)

On occasions the Institute has contributed to the compilation of government documents. In 1962 the Ministry of Education published a report, 'General Studies in Technical Colleges', which advised that (p.2) 'equal importance if not equal time be given to the wider social purposes of further education', thus reiterating the recommendations of the Crowther Report (1959). The secretary of the committee which composed the 1962 report was the deputy director of CGLI. Through him the Institute exercised a strong influence on its tone and content. This report was to be the precursor of their own publication on the same subject, 'General Studies', issued in 1970.

General Studies as part of the CGLI courses.

The strongest influence that the Institute exerts is through what it does rather than what it says. General Studies was included as a component in some of their courses in 1959 after the publication of Circular 323 (MoE,1957). The purpose of this circular was to (p.1) 'stress the importance of introducing a liberal element into technical education and to set out a number of ways of doing so.' This need had already been emphasized in the White Paper on Technical Education



issued the previous year. (1956,para.8) 'Technical Education must not be too narrow or too confined to one skill or trade. Swift change is the characteristic of our age, so that a main purpose of technical education of the future must be to teach boys and girls to be adaptable.' The Crowther Report (1959) had recommended day release for all 15-18 year olds. This, with the widening of the range of students to be included in technical education, encouraged by the White Paper 'Better Opportunities in Technical Education' (1961), brought about a massive increase in numbers on day release courses, particularly as the post-war population 'bulge' contributed to the numbers of teenagers going through the education system at this time. The lack of provision for day release before this had meant, as the Institute's own book on 'General Studies' puts it,(p.3) 'Providers of technical education have, through limitations of time and resources, been necessarily concerned with short term effects and limited goals.'

Circular 323 refers to (p.1) 'the fairly general discussions and experimentation going on in technical colleges and elsewhere.' It goes on to express the hope that 'discussion and experiment will continue. Only so will students develop a broad outlook and a sense of spiritual and human values as well as technical accomplishment.' This is perhaps an example of the rather unrealistic hopes that have been expressed when General Studies is under discussion. However it is true that there was much experimentation and discussion going on about the teaching and content of 'Liberal Studies' as it was most commonly called at the time. It was constantly emphasized that it was not a subject but a means of encouraging students to think about their work and about their part in society. (Witness the many articles published in 'Liberal Education' during the 1960s and in 'The Vocational Aspect of Secondary and Higher Education' from 1953 through the 1960s.)

In 1958 when the Institute's mining schemes were being considered

for revision, the Institute's representative was acting as secretary for the Mining Advisory Committee. In tune with the new ideas for broadening technical education, he made a strong plea for the inclusion of some social aspects of the industry in the new courses. This was particularly appropriate in mining subjects because of the traditionally strong community spirit amongst miners. The committee agreed that there should be 25 hours allocated to these subjects per year. There was to be no examination but the colleges were to submit reports to the Institute at the end of the year. The intention was to build up a fund of ideas and materials for the teaching of this component.

In 1962 the Institute extended the inclusion of General Studies as a desirable element in all its courses. The emphasis, in Institute and other publications, has always been that General Studies should not be isolated from the rest of the course, and indeed that the technical teaching staff should be a part of the liberalizing movement. Circular 323 itself advocated five possible methods of broadening technical studies, only one of which was (p.2) a.) 'the inclusion of additional subjects.' The others were b.) 'broadening the treatment of technical and scientific subjects'; c.) 'increased use of the college library, of seminars, discussion groups, directed study periods and project assignments; and in general fostering a tutorial relationship between teaching staff and students on the lines of that used in universities; d.) 'the establishment of corporate life in the college and the development of extra-curricular activities; e) 'the establishment of contacts with institutions abroad.'

Following the inclusion of General Studies in all City and Guilds courses in 1962, it became a growth area. Many colleges appointed general studies lecturers, but it was not always clear what was being asked of them. A typical advertisement ran as follows :

'Applications are invited for Lecturer 1 in English and General Studies. There is no restriction on applicants as far as their discipline is concerned although qualified teachers are preferred. Industrial experience is an added recommendation.'

Many did not have an industrial background and were either unwilling to involve themselves in the industries with which their students were concerned or perhaps were unaware of the need to do so. Some were trained in sociology and brought a political bias into the teaching which was not always acceptable to the rest of the college. The teaching of General Studies became a profession in itself, with lecturers standing on their professional dignity, and an atmosphere of misunderstanding and even distrust sometimes arose. In these cases instead of General Studies being a means of supporting the liberalization of the whole teaching, as was intended, polarization occurred and extreme positions were taken up on both sides. In their book, 'Further Education or Training?' Gleeson and Mardel put forward the theory that (p.83/4)

'the unseemly injection of Liberal Studies into long established technical processes has not only heightened the problem of the concept of Liberal Studies within the technical curriculum, but has adversely affected both its development and practice within the sphere of F.E.'

On the other hand it is also true to say that some very interesting and valuable work was being done under the auspices of General Studies. Cedric Blackman, (Garnett College) an early editor of 'Liberal Education', the journal of the Association for Liberal Education, considers that it became a laboratory for the development of new areas of study such as environmental studies, media studies and health studies; and it played a valuable role in developing good student centred teaching methods.

In the late 1960s an Exploratory Committee for General Studies was set up by the Institute, consisting of representatives from the Department of Education and Science, the Association for Liberal

Education, the Association of Principals of Technical Institutions, Associations for the teaching of English and of Social Sciences, and other nominees including Garnett College.

In 1970 they produced the publication already mentioned, often referred to as the City and Guilds 'Green Book on General Studies.' It gives the historical and philosophical background to the introduction of General Studies into the courses; it offers advice on the organization of the teaching; and it takes a careful look at aims and methods. In its conclusion, a statement is made of CGLI's stand on General Studies. (p.28/9)

'General Studies raises fundamental educational issues that are not confined to technical colleges, nor even to our own time ... A student in a college of Further Education can expect the opportunity to develop his whole personality and intelligence as he acquires vocationally useful knowledge and skills ... a mature and balanced person enriches both society and his trade or profession ... and will have higher potential than one whose general education has been neglected ... no real conflict therefore exists between the claims of general and vocational education. The long term aims not only assist, but also go beyond the immediate and necessary purpose of aiding the national economy and of providing the student with the means of earning a living.'

'Liberal Education' described it as (Karol,1972/3,p.26) 'perhaps the most humane, thoughtful, and constructive statement ever made on the subject.' and in the Co<sup>m</sup>be Lodge Report of a Study Conference on General Studies (Flint,72/44,p.11) it is referred to as 'The most valuable contribution to the subject since Circular 323.'

After its publication, the Exploratory Committee was disbanded but it was reconvened as the General Studies Advisory Committee in 1975 when it was felt that there was a need to redefine the Institute's policy and practice on General Studies. General studies teachers were expressing the feeling that City and Guilds should give them more support in their efforts to explain and justify General Studies.

In 1970 it had been stated that college Principals were required to certify, at the time of entry to the examination, that a candidate

had satisfactorily participated in the General Studies programme. Candidates should not be entered if the General Studies requirement had not been fulfilled. Now the Institute's response to the teachers' appeal was to reiterate that unless this was done, the Institute could not withhold, at a later date, the award of its certificate in technical subjects. This effectively left the decision to support General Studies up to the colleges.

The General Studies Advisory Committee failed to agree on a final version of a report on the policy and practice of the Institute on General Studies and the Committee was disbanded in 1976. The Institute's Broadsheet for November of that year published a statement which reaffirmed their belief that General Studies should be an integral part of college courses, and identified the aims of General Studies as (p.2)

'to develop the student's ability to absorb, interpret and transmit information, whether in spoken, written or graphical form and to contribute to their general education and personal development as members of a technological society.' and goes on to recommend 'the development of courses in which the technical subjects, including a knowledge of the industry concerned - these subjects are the main interest of part time students and of their employers who grant them release - will be taught in such a way as to enable the treatment of all subjects of the course (including general studies) to be as fully integrated as possible. Any policy which tended to separate technical, general and personal development studies ... could be detrimental to part-time students and should be avoided as much as possible.'

Although the changing times do seem to have had their effect on the ability of the Institute to reconcile satisfactorily the needs of all parties, the Green Book has remained in print and is still being distributed. However in subtle ways it now seems out of date. Adrian Bristow has claimed in his book, 'Inside the Colleges of Further Education' (1976,p.115)

'The concept of General Studies was accepted for a while but in the event it proved somewhat unsatisfactory and there has been a marked shift in recent years. Instead of Liberal Studies being regarded

as a woolly liberal topping up element, it is being broken down into more clearly defined components such as industrial studies and communication. More important there is now an emphasis on achieving the desired effect by a 'liberal' approach informing both the curriculum and the way it is taught.' It was at this time that the Institute announced their intention of developing an examination scheme in Communication Skills, in order to help meet part of the General Studies provision in colleges.

Certainly many do feel now that the effect of making general education a separate component in the form of General Studies, has been to enable, or perhaps encourage, technical studies to be more narrow on the assumption that something was being done about the general education elsewhere. This effect has been compared to the related problem of English teaching. The Bullock Report, 'Language across across the curriculum'(1975) was intended to bring home to teachers the obvious fact that English cannot be confined to one lesson. Cantor and Roberts (1979, p.78) put the situation in which General Studies finds itself quite starkly,

'As a result of the emphasis given to Communication Studies by both TEC and BEC schemes, together with the taking up by some colleges of the CGLI certificate in Communication Skills, there is a growing concern among teachers of General Studies that, as presently conceived, the subject may disappear altogether from further education. Communication Studies are both easier to assess and also have a more easily demonstratable utility, and these are powerful attractions. However young people need both to be able to communicate effectively and also to develop the attributes of a liberal mind. Given the submission of suitable curricula by the colleges, and with support from TEC and BEC, these two objectives are by no means irreconcilable.' Perhaps CGLI should have been mentioned here too.

Gleeson and Mardel have another explanation for the changing fortunes of General Studies. (op cit p.84)

'Ostensibly, Liberal Studies entered the technical curriculum in response to the growing criticism levelled against a system of education characterised by over-specialization and the limited notions of training. It would seem to us however, that the criteria for its inclusion are inextricably linked with the long established aims of technical education. It is our contention therefore, that the criteria for the inclusion of Liberal Studies in the technical curriculum, far from representing a new direction in education, were ultimately very much a continuation of an

established tradition.' They go on to say, (p.85) 'The most salient point about the contribution of Liberal Studies concerns what should constitute its subject matter. Educationalists, college administrators and teachers have all failed to agree on the liberal studies brief.' They also reported the beliefs of some liberal studies teachers they had interviewed, (p.89) - 'that if the college administrators were to organize a more integrated approach to the subject, and to provide better accomodation and facilities, many of the initial problems of motivation might be overcome.'

There are therefore long standing problems associated with General Studies and it is left to the various agencies and to the teachers themselves to find remedies for them. There is no City and Guilds scheme in General Studies and so the statements issued by them from time to time differ in their emphasis according to the approach of the varying committees set up to consider General Studies. However there is a standard requirement about General Studies in every syllabus pamphlet. (CGLI, p.10/11)

Other Bodies which influence CGLI schemes.

The Association for Liberal Education has influenced the development of General Studies greatly over the years, through conferences, meetings and publications. It was founded in 1961 as a professional and academic association.

'We meant to have as members, not only practitioners of Liberal Studies but people from industry and universities and teachers of science and engineering.'... 'We were concerned with Liberal Education in its broad sense ... Foremost of all we believed that the individual student was what mattered.' (Duncan, 1982, p.7)

Such is the way one of the founder members of the Association describes its beginnings. Dr Alistair Duncan goes on to say,

'The ALE set out to influence those Councils, Boards and Committees which govern educational affairs and examinations, and had some success both by giving formal evidence and by informal meetings. The disadvantage of having hardly any leverage except moral persuasion was perpetual. The greatest triumph was probably the production of the City and Guilds pamphlet on General Studies ...written by a committee mainly consisting of ALE members in one guise or another.'

However, ultimately it must be acknowledged that the ALE is a group of individuals and no one opinion emerges from it on any one issue. Many present day members, including those in leading positions in the Association, are wary about the current ideas of 'integration' with the technical teaching. To them it means a loss of autonomy, an integrating out of the liberal element, rather than the spread of liberalism into the technical teaching. At the same time the growing importance of the MSC courses is providing a greater recognition of the need for education beyond the strictly vocational training which is traditional to technical colleges, and some ALE members are willing to grasp the opportunity for greater co-operation between general and technical teachers. Discussion with general studies teachers from some Midland colleges revealed that they considered very positive results are being achieved through collaboration between the two groups of teachers in this field.

In recent years a new group, the General Studies Workshop, (GSW) has been established as a ginger group, at a time when the ALE was in decline in the London area. Its founding followed an unsuccessful attempt to start a group of Socialist general studies teachers, but their character took on a new appearance when City and Guilds Communication Skills schemes were introduced at Tottenham College, in 1977. Since then the GSW has concentrated on opposing the teaching of these schemes, which they see as a danger to the concept of General Studies as they define it. As many of their members are also members of ALE, which had accepted these schemes as a body, there was a danger of a schism occurring over this issue. However, a compromise was reached at a Special General Meeting called in 1981. The resolution was put and gained a majority vote, that

'the ALE welcomed the stimulus to the curricular and method innovation resulting from the introduction of these schemes,



although concern has also been expressed at the position in some colleges where the scheme has been introduced without adequate consultation with general studies and communication studies staff or where the scheme has completely absorbed general and communication studies time.'

This resolution was printed in the CGLI Broadsheet for April, 1981, p.6).

Members of the GSW have more recently been instrumental in forming a General Studies Section of the National Association of Teachers in Further and Higher Education (NATFHE). This was in response to a feeling that the ALE was playing a national role as spokesman for general studies teachers but that there was not enough public debate about the decisions they were taking. The G.S. Section is also seen as a forum for discussion between ALE and GSW. It was associated with ALE in a Joint Working Party considering the idea of consortia for the validation of general studies at craft level. A report concerning this was produced in 1982, and adopted at the Annual General Meeting of the ALE in that year.

In so far as this document is a recommendation for, and gives advice regarding, the setting up of local consortia to provide support and stimulation for the teaching of General Studies at craft and operative level, it is valuable. However there is a danger that in the expression of its aims, teaching strategies and content guidelines, it could perpetuate divisions in the thinking between the technical and general studies teachers in Further Education. In principle it turns its back on the theory held by the vast majority of technical teachers and expounded by CGLI above, that general education is best accepted by these students when it is closely related to their current work situation and integrated into their main course. The content and teaching strategies suggested, interesting and stimulating as they are, seem more suited to full time students committed to a full General Studies programme, rather than to craft students for whom General

Studies is, at best, only an extension to their craft course, to which they are usually strongly committed.

In an unpublished paper written as a contribution to the ROSPA discussions in the early 1960s, Dr. Margary Reeves puts the case for allowing the work itself which is so important to a young person newly moved into it, to be the basis for personal development. She considers it particularly important for young people to be confident in the skills involved and to gain understanding of the context of the work they do. She sees helping young people to achieve that, as the proper continuation of their general education and as an aid to maturity. Any implication that education is something apart from work, she sees as unhelpful.

The Technical Teacher Training Colleges too, have a role, comparable to that of the Inspectorate, in keeping a check on what is happening in the Further Education field, mainly through participation on committees of bodies such as the CGLI. Also staff from these colleges are able to have an overview of the Further Education scene, through their function in observing teaching practice. They are concerned to preserve coherence in the educational structure of course provision.

These colleges also, along with the DES and the LEAs, provide short courses of in-service training in addition to full time professional training which is available to all who go into teaching. It is probable that it is mainly through effective teacher training that any real innovation in the curriculum can be brought about, as it is ultimately those who implement the changes who have the strongest influence on what changes occur. (See FEU 1980, p.139 'Day Release - A Desk Study.')

## Recent Developments in City and Guilds Courses.

Since 1973, after the setting up of the Technician Education Council for the purpose of co-ordinating the provision of education at technician level, the CGLI has concentrated on schemes at other levels. Indeed the Institute considers that craft schemes do not represent a level of education so much as a different type of provision, the craft function being different from the technician function. CGLI work on the assumption that there are levels within the craft function and have introduced a Licentiate for those who wish to rise to supervisory and consultative positions in the craft field. In a review of the Institute's work in the light of government's proposals for vocational education and training, (CGLI, Broadsheet, April 81,p.2), the Director General says, 'It is important to remind ourselves that craft work is not merely a combination of manipulative and cognitive skills; it also involves planning, decision making, teamwork and procedural skills. The skills of selection, review and control of operations distinguish a craftsman from an operator and the good craftsman from the bad. These qualities help to make good craftsmen such strong contenders for technician functions and a good source of supervisors and managers. The success of our Licentiate Scheme ... (is) eloquent testimony to this fact.'

Their Foundation courses for students who have expressed a general interest in an occupational area but who have not yet committed themselves to a specific job, have been taken up by young people in both secondary and further education. They have proved to be a useful guide to the more recently developed schemes for the unemployed. Another innovation, already mentioned, has been the introduction of Communication Skills schemes, levels 1 and 2.(772). It has proved very popular, especially with employers.

CGLI Schemes and the Training Element.

When the Industrial Training Boards were set up in response to the Industrial Training Act, 1964, a great many City and Guilds schemes were designed to complement their training requirements. The numbers taking City and Guilds examinations increased greatly, as indeed they had done since the 1944 Education Act.

With the establishment of the ITBs the distinction between education and training was officially made. The ITBs were now responsible for seeing that the employers within their scope provided good training in the appropriate skills. The Board's job was to co-ordinate and finance the training courses and facilities. The Local Education Authorities were still to provide the further education, and the CGLI was left with the difficult task of explaining the separation of the two activities and of insisting that their schemes could be legitimately funded through the educational institutions.

In the case of the construction craft schemes a policy statement was issued in 1972 explaining the principles behind the new courses and giving the background to the changes (CGLI, 1972). A clarifying statement followed a year later, restating some of the principles underlying the schemes.(CGLI, 1973). In particular it quoted the original statement,

'Practical activities are a particularly appropriate learning method. The emphasis should be on the educational function of such activities, which should be designed to illustrate craft principles...these practical activities will necessarily involve the acquisition of the basic skills, but the development by practice of these skills is regarded as a training activity.' This is followed by a further explanation. 'While the achievement of standards of excellence of performance to the level required by industry is not a course aim, instruction in correct techniques is an essential if the educational objectives listed with each syllabus are to be achieved.'

This statement also gives a reminder which is of particular interest to this study.

'The hope is expressed in the policy statement that General Studies staff, being an integral part of the course, will be included in the course planning stage with the technical staff. This joint planning is essential if the objectives of Industrial Studies, which draws its subject matter and time allocation from both General and Technical Studies, are to be achieved.'

The training element of the schemes, provided by the CITB, is written out in great detail and once training objectives have been agreed, CGLI attempt to integrate their further education courses with it. The 1972 statement from the CGLI refers to the CITB's proposed 'Plan of Training for Operative Skills', which was issued in 1969 but was not implemented. 'The intense discussions generated (by this document) has drawn attention to the special advantages of courses of integrated education and training'.(CGLI,1972.p.1) It is still being debated whether the best place for the training to be carried out is the college, where there are certain facilities available, or on site where there is the reality of the work situation. The CITB Standard Scheme of Training relied on the former of these in the first six months of an apprentice's course.

The Function of CGLI in relation to Curriculum Development.

In his address to the Association of Colleges for Further and Higher Education in 1978, the centenary year of the Institute, Mr. H. Knutton, the Director General of CGLI, predicted that the Institute had a future in (p.1) 'the provision of a national mechanism for co-ordinating curriculum development and assessment.' He went on to say, 'In a mixed economy there is a case for this being done by an independent body. CGLI is genuinely a public body accountable to the Privy Council, not, as is sometimes supposed, a small self-perpetuating

caucus. In all our activities the weight of public opinion and of the large number of professional bodies and industrial organizations we deal with, can and do influence our policy and decision making. Our financial independence enables us to be responsive to changing requirements and to preserve the balance between competing interests...'

The Institute makes it quite clear that it does not itself draw up the schemes. The Advisory Committee for Construction consists of representatives from industry, the teaching professions, local and national government and CGLI personnel. It meets annually. Revision of schemes takes place every five to seven years and minor changes take up to a year to become effective. Major changes, such as that introduced in the construction craft schemes in 1973, take up to seven years to complete, with working parties set up to work on the details.

It is then left to the colleges to teach the courses in their own way with City and Guilds assisting in an advisory capacity where necessary.

When referring (in a letter) to the policy statement put out about the new construction craft schemes (CGLI 1972) Mr. Bill, Head of Education and Training wrote,

'It is not really for examining bodies to make statements about teaching arrangements, and we try not to do so. However we thought we were under an obligation to make available to teachers, for their consideration, the advice we had received.'

The Institute feels that this arrangement allows the colleges to make the best use of their educational expertise and also of their knowledge of local conditions. However, since the new examining arrangements began, in 1975, whereby assignments are set by the Institute for completion during the examining year and practical work is also assessed during this year, there is a degree of guidance and monitoring carried out by the Institute's assessors. This is an area where their influence is greater than in the past. It should be noted

that the two components which are the special concern of this study, General and Industrial Studies, are not influenced in this way by the Institute. The arrangement for General Studies since 1970 has been that, at the time of entry for the certificate examinations, the college must certify that the student has satisfactorily completed the General Studies course. This tradition has been carried on with the Industrial Studies component but in this case there is a requirement that a satisfactory mark be given to the student for a college set assignment. The assignment must be available for a visiting assessor to see and can be called in for scrutiny, but in practice this is very rarely done.

#### Dissemination of Information by the CGLI.

Over the last decade the Institute has shown a greater tendency to give out information. This is perhaps in conformity with the current trend in society to inform and explain. It is also in response to a more frequently articulated request from teachers for guidance or at least for communication from the qualifying body. In a survey conducted by the Institute's research staff in 1981, replies from craft teachers indicated very clearly that most would like more guidance in the syllabus pamphlet on how to teach their courses.(CGLI,1982)

There has been a change too in the range of research work undertaken by the Institute. Until recently research was concerned with testing and measurement, but in 1977 a senior research officer was appointed to conduct a wide ranging series of investigative surveys which have made the work of the advisory committees and their working parties much more effective, as well as improving the whole process of communication between the colleges and the Institute. For instance a questionnaire was sent out to 80 colleges asking for their guidance on the revision of the machine woodworking scheme.(CGLI,1981) A summary

of the results of this survey was then used by the working party of the advisory committee when revising the scheme.

The new research method, which involves the teachers in course revision, is an important step towards obtaining the intelligent response from teachers which is essential to the proper working of the schemes. Again it is worth noting that the two components under consideration in this study were introduced prior to these changes. The fact that neither of them are strictly examinable is significant too, in view of the emphasis put by CGLI on its role as an examining body.

#### Background to the 1973 Construction Craft Schemes.

The new construction craft courses came into effect in colleges in 1973. They were the result of a thorough review of the aims and objectives of craft education and training by the Joint Advisory Committee (JAC) of the CGLI and the Regional Advisory Boards, and represent an attempt to update the education and training of construction craftsmen and women according to the latest developments in national educational policy, as well as attempting to adapt to changes in the construction industry. As has already been pointed out, CGLI has always had a policy of taking advice from representatives of both education and industry.

The Industrial Training Act of 1964 had set up the Central Training Council to advise the Minister of Labour on the exercise of his function under the Act. Between 1965 and 1966 the Council issued a series of memoranda. They were particularly concerned with the danger that, (MoL,1965,p.2) 'in recognising the division of responsibility for training and education which has always been accepted,' - that is that the provision of skills to meet the requirements of industry should be met by industry itself, while the education should be provided by the



education authorities - 'the Act may sharpen the distinction just at a time when the distinction was becoming less and less meaningful. We therefore think it important at this early stage ... to emphasize the point that, notwithstanding the formal division of responsibility ... further education and training are complementary aspects of a single process.'

Memorandum No.1 went on to assert that for a number of reasons, including the increasingly complex industrial environment, the rapid pace of technological change and the intense international competition, it is essential to have a highly trained and educated workforce.

(p.3) 'The Act provides that there should be educational members on all training boards and in this way associates the education service with the provision of training courses and the formulation of training recommendations. Similarly we hope that those responsible for drawing up syllabuses and examinations for education courses and making academic awards, will establish close contacts with the boards, and continue their work in close association with industry ... It will mainly be the responsibility of the boards to draw up job descriptions and requirements; it will therefore be for them to make this information freely available to those responsible for education syllabuses.'

Memorandum No.4 set out the main purposes of further education, and these were to become the basis for the JAC's discussions on the new craft courses. This Memorandum also considered ways in which technical education could be effectively integrated with systematic instruction in basic skills and with practical experience, and again emphasized very strongly the need to ensure close co-ordination of the efforts and plans of the Industry Training Boards and the education service.

It was with these memoranda in mind that the DES published their Administrative Memorandum 25/67 under which the examining bodies should

draw up advisory committees to prepare new or revised courses of further education where necessary.

The revision of the construction craft schemes had been under discussion since 1966. The National Joint Council for the Building Industry had commissioned the Building Research Station to make a comprehensive study of the work of building operatives in 1962, and their Report was published in 1966. Amongst other things it considered ways in which the training and qualifications of craftsmen affected their work, (Ministry of Technology, 1966,p.92) 'Given fact instead of conjecture and opinion, other expertise can be brought to bear and the way ahead is open for the industry to plan for the future.

All concerned have a common interest in ensuring that the labour force is so structured and trained as to achieve the twin goals of satisfying the industry's needs, and offering the prospect of a worthwhile career for its members.'

The results of this enquiry indicated that a revision of craft schemes was called for (p.90). 'Over the last 20 years there has been a considerable increase in the availability of technical education for apprentices. Nevertheless a substantial proportion fail to complete craft certificate courses. There may be many reasons for this: the content and relevance of courses, the manner of presentation, the attitudes of employers and the motivation and abilities of trainees. The matter is being currently examined.'

In 1969 four Joint Advisory Committees were set up in accordance with procedures set out in DES Advisory Memorandum 25/67. These committees represented the main sections concerned with construction: wood trades; trowel and roofing trades; mechanical services; painting and decorating. In their second report they accept the statement of the aims of further education set out by the Central Training Council Memorandums, No.4, but suggest, (CGLI,1970,para.2) 'it could be

expanded to give a greater emphasis to the more general educational aims and to the need to provide an educational grounding that will be appropriate to life and work in the 1990s and beyond.' In their third report, there is a general statement of the aims which had been accepted by all JACs as a basis for consideration of more specific objectives to be defined by the working parties. These are quoted here in full. Additions made to the Central Training Council's aims by the JACs are underlined.

To provide knowledge and appreciation of techniques necessary to enable the trainee to do his job with efficiency and understanding. To provide (instead of inculcate) a broad understanding of relevant science and technology, with background industrial studies - so that the trainee appreciates the problems of those working in associated occupations and the relationship of his own work to that of others in his industry; and is better equipped to adjust to changes in the nature of his own work, whether due to technological development, change of job, transfer to similar occupation in another industry or change in industrial conditions.

To prepare suitable trainees for more advanced study leading to more highly skilled work, was changed to - To provide opportunity for continued study beyond the minimum requirements so that suitable trainees may prepare themselves for advancement in the industry.

To widen the trainee's understanding of the society in which he lives and to develop him as a person - was changed to - To widen the trainee's understanding of the industry in which he works and the society in which he lives and to develop him as a person, so as to encourage the development of appropriate attitudes in industry and in society generally, of powers of thought, reasoning and communication, and of his appreciation of learning.

An additional aim was: to provide opportunity for the development

of purposeful leisure pursuits.

In the past schemes had been occupationally based but now the committee considered ways in which they could present a scheme which would achieve an awareness of the construction industry rather than a limited view of a single trade. At first discussion centred around the need for all trades to be taught general technology. This part of the course had been dropped in the 1962 schemes. The craft teachers were in favour of the re-introduction of this element because, on the whole, it was something they felt confident in doing. However, a paper was circulated to the committee members (CGLI, Paper 9,1969) which asked them to bear in mind the broader objectives of education. It recommended that (p.2)

'The course will include topics that are related to the trainee's job, to his place in industry and to his education requirements as an individual... Is there a case for outlining an element that is common to all building trade courses?'

It was felt that craftsmen in the construction industry have a particular need both to learn to work as a team and to acquire a wider appreciation of their role in relation to society, so that they are better able to relate to society's representatives when they come in contact with them, which they will surely do. They will have to deal with clients, building control officers, local authority planning departments and so on. The industrialists on the committee thought that demarcation disputes and lack of co-operation on site was due to tradesmen not understanding each others work. It was also considered that tradesmen whose work did not require them to be on site very much were hampered in their chances of advancement unless they were helped to acquire a wider understanding of the whole building process than that involved in the carrying out of their own trade. It appeared therefore that the study of general construction needed to be set in the context of a building team and also of its relationship to the

external world.

To help the members of the committee in their thinking about the educational needs of craftsmen in the construction industry, HMI Nield, a member of the committee, produced a paper (Nield, 1970) which looked ahead to the needs of the industry in 1990 and beyond. Permission has been obtained to quote extensively from this influential paper which formed a background to the committee's decisions.

Mr. Nield referred to a man's productivity over a working life as 'total productivity'. 'If capital is to be invested in organised training, it is essential that the return should continue over as long a period as possible.' In the past, he said, with labour plentiful, hire and fire was acceptable but that is no longer the case. We must not let the past dictate to the present, when there is a lack of skilled labour, and even those skills that are being passed on are obsolescent. While he accepted that a large section of the industry would continue to be concerned with the basically traditional type of building, he felt sure that the introduction of powered tools and plant, new materials and simplified building processes would progressively make quite different demands on the labour force. All this would lead to an orientation away from a 'craft' towards a 'task' approach. Even though industrialized building had had a set back, ultimately the practice will increase. In the future a man will need broader technical knowledge, a broader range of general skills and an attitude that accepts change and the need for change.

With regard to labour relations and job satisfaction, Mr. Nield suggested that employers were able to see the need for full consultation with employees, both at national level and on the job. An essential pre-requisite for this is that the workforce should be well informed in all matters relating to the building industry. They also need to be able to think clearly and constructively. When

working together on the 'tasks' in building, members of the gang will need to be co-operative and resourceful. Even those working on traditional building will need to have these qualities, if only to make them more flexible in a changing industry.

In considering how all this could be achieved, Mr. Nield says,

'The good teacher will educate in a liberal manner so that the value of these characteristics can be seen in a technical context; and a good instructor will not miss the opportunity to do the same thing where it is appropriate in the training.' However he felt that some general education would still be essential and that it 'will be wholly acceptable by the young worker if it is set in a context he sees as relevant to his own work and life.'

Mr. Nield did acknowledge that the ability to recognise what is relevant is affected by maturity. Some young persons are not able to appreciate the value of rational thought, except in a context which is relevant to their immediate work situation. The technical teachers with their wide experience and interest in helping young people to develop, see it as a natural part of their work. They can contribute much to developing social skills, co-operation and useful habits of thought. Mr. Nield considers that it is possible to change attitudes and included an appendix to his paper on this subject.

Mr. Nield points out that General Studies was specifically developed to help with this aspect of the student's education and quotes from the recently published City and Guilds Green book on General Studies (p.6) 'The aim of technical education, including General Studies, must be realistic and relate to the age and ability of the students'.

The college's existence as an institution does in itself further the aims of education by symbolizing the value of personal development and the maintenance of standards. He sees the influence of the college as being both tangible and intangible - a reference to the hidden curriculum.

'Even when the young apprentice expresses contempt ... and shows it in his behaviour, it is often only recognition of an influence he is trying to resist, and this is natural as he is at an age when non-conformity is an essential element for a period of his development. In later years he acknowledges the contribution the college made to his life.'

Mr. Nield suggests a pattern of general education which can be closely integrated with an education for skills and for a specific technology. He envisages three aspects of General Studies - industrial studies, social studies and personal studies. 'We can see the three aspects of General Studies as three mirrors, facing towards each other. If we shine some light on one, we may get some light from the other two'. It is worth quoting his description of Industrial Studies in full.

'Industrial Studies can well include the basic general technology which is needed to give an understanding of the relationship of a specific craft to the rest of the building process, and which is essential if a more flexible attitude is to be developed. This would also include a study of the construction industry, its relationship to industry in general and its effect on life. Studied in relation to a specific locality ... known to the student, it has immediate relevance. The tasks of development and redevelopment, the need for planning, the effect on property, on housing, and the economic and human problems that different types of firms have, can be studied in a simple way and contribute to total understanding.'

A description of social and personal studies is then given, showing the connections between them all, and Mr. Nield goes on to say,

'The most important point is to approach the teaching of skills and technology with the attitudes and general broadening aspects constantly in mind ... all the staff concerned with a particular course, including the general studies members, should operate as a team in planning, carrying out and evaluating the course. Such teamwork not only emphasizes the essential unity of the whole building process but helps to foster the all round personal development of the student. Some aspects of the General Studies may benefit from being studied in company with students from other courses. It is better that part of the pattern only is covered well, than that a too ambitious programme is attempted. The expanding of outlook in one context can produce in one individual an illumination of other contexts to a surprising extent.'

In considering the right time for further education, Mr. Nield says, 'General education is largely an assistance of maturation and should ideally be continuous ... there is much point in using the peak of a person's educational receptivity.'

In an appendix on 'Job satisfaction', Mr. Nield considers the responsibilities of management. They must not only consult but they must manage effectively.

'Action without protracted explanation or consultation has appeared attractive to management, as it calls for less mental effort and appears more effective in the short term ... but management and employees are seeing the need for a greater understanding of each other's point of view.'

While considering job satisfaction, Mr. Nield is also concerned at the movement into technician courses of young men of ability above the normal entrant who in the past have contributed so much to the quality of the work on the job and ultimately to the next generation of craft teachers. He feels that a better understanding of the satisfactions of craft work could contribute to a higher quality of entry.

Mr. Nield concludes his main paper, after saying that his proposals assume that some significant training is being undertaken alongside the further education, as follows,

'Should we not move to a situation where we have a range of subjects ...from special technology and general technology, through general building science to industrial, social and personal studies of which as much as half will be general in an educative sense, and the whole taught in an integrated course by a team of teachers in a building context. Can we afford not to invest in such further education, if we are aiming to achieve maximum total productivity from our manpower?'



With HMI Nield's authoritative paper as a background for discussion, members of the committee were able to settle on the broad objectives of a new component, Industrial Studies, to be linked to the existing General Studies component. As has already been described, there was dissatisfaction, especially from employers, with the way General Studies was being treated in colleges. Many thought it should be abolished altogether. The educationalists on the committee tended to see the problem as stemming from the looseness with which General Studies had been specified in the beginning. As far as the construction craft courses were concerned, there had been five pages of suggested approaches given in the syllabus pamphlets for the 1962 schemes; but at the same time it had been made clear that General Studies was a field in which (p.10) 'individual teachers will wish to exercise initiative.' There had been stories of some teachers exercising, perhaps, the wrong sort of initiative, and that along with other problems which have already been mentioned, was enough to give General Studies an unhappy reputation.

This background of misconceptions may have had its effect on the way Industrial Studies was conceived and also on the way the concept was conveyed to the teachers. It was still felt however, that it would not be suitable for it to be examined by CGLI because that could have meant tying it down to a rather rigid pattern. The intention was that individual colleges should be free to develop the subject in their own way and emphasis was placed on the desirability of making use of the local environment. Emphasis was also put on the importance of providing learning experiences for students which would involve them to the greatest possible extent. Industrial Studies was not meant to concern itself merely with the recall of factual subject matter. Colleges were to set Industrial Studies assignments themselves in order

to assess to what extent their students were achieving the objectives of the syllabus.

The overall aims of the course and the part to be played by Industrial and General Studies in achieving them, are written into the syllabus pamphlet, both in the general introduction and in the specific introductions to each craft course. Also a set of general objectives for Industrial Studies are included at the front of the detailed syllabus for each craft. These objectives are written in three parts - Part 1. The process of construction. Part 2. The construction team. Part 3. The construction industry in relation to the community. (See appendix C.) At the end of the detailed syllabuses there is a valuable description of the role of the teacher, where the teachers are described as (p.43) 'providers of a learning environment and managers of learning situations.' A separate paragraph entitled 'Industrial Studies' gives advice as to how this component should be treated in order to satisfy the intentions of its originators. It is suggested that much of the learning could be based on the study of a graded succession of building projects and again emphasises that attention should be given to principles and functions rather than to detailed treatment of specific examples.

A means of following this advice is demonstrated by a remarkable and far sighted 'Handbook for Teachers of Industrial Studies', published by Huddersfield Polytechnic in 1976. One of the editors was Eric Tuxworth, a member of the committee which devised the new construction craft schemes. The book is the result of two conferences held in Huddersfield in the 1975/76 session and it contains the ideas of a number of practising teachers. Explicit suggestions are made for the part to be played by general studies teachers.

In 1971 a general policy statement was submitted to the CGLI Committee for Technical Education and to the relevant Training Boards

for consideration and approval. The CGLI committee noted that (minutes of Committee for Technical Education, June, 1971) ) 'there was a change of approach from that adopted in the case of the Engineering Craft courses.' The syllabuses for these schemes had been made available to members of the committees for consideration as an example of one approach to the problem of co-ordination of industrial training and further education. There was a particular reason for this change of approach. The CITB had published their 'New Pattern of Training' in 1969 but financial considerations had caused them to withdraw it and it was not then implemented. So although the JACs had originally been set up to prepare courses to complement the pattern of industrial training recommended by the Boards, the committee noted that (op cit) 'the situation had developed over the past two years where off-the-job training was unlikely to be adopted to any substantial extent in the construction industry in the foreseeable future.' It was further noted therefore, that modifications were to be made to the reference to industrial training in order to make it clear that the schemes were not dependent on the existence of formal off-the-job training. They did however presume the existence of some on-the-job training and experience. The CITB did introduce their New Entrant Training Scheme in 1975 to complement the CGLI further education courses.

The Committee for Technical Education accepted the general principles underlying the paper but agreed that further opportunity for comment by members and representatives of educational associations should be given. It was requested therefore that the modified documents should be re-circulated to members of the committee with a request for submission of written comment.

As a preliminary introduction to the new schemes, CGLI produced a policy statement which was circulated very widely, in October 1972. It explained the setting up of the Joint Advisory Committees, and the

reasons for the changed policy in construction craft courses, including the social and industrial circumstances behind it. It went on to describe the aims of the new courses. These aims are those which were accepted by the JACs as already stated, although small but significant changes had been made during the course of discussions and these are worth noting.

The first aim now reads, 'to provide knowledge and appreciation of techniques and materials ... ' In the second aim a new clause has been added at the beginning - 'so that the trainee, i.) acquires an understanding of the fundamental principles of his own craft '. The third aim now reads, 'to provide opportunities for continued study in preparation for advancement in the industry.' In the fifth aim, the words 'to encourage the development of appropriate attitudes ... 'have become, 'to encourage the growth of mature attitudes ... '. Finally the last aim given in the earlier report - 'to provide opportunities for the development of purposeful leisure pursuits ' has been left out.

Each change appears to represent careful consideration of the exact use of language in expressing their ideas on the part of the committee members, as well as consideration of the exact aims they were hoping the course would achieve.

The policy statement went on to describe the course structure, content and organization, ending with the paragraph,

'In all cases it is desirable that the teachers who will be concerned with the various topics of the further education course, act as a team in its planning and programming. The aim should be to present the course as a unified whole, not as a series of disconnected subjects.'

In July 1973, a follow up statement was considered necessary (CGLI,1973) This re-stated some of the principles underlying the new courses in an attempt to clarify their relationship to the training element and to justify the distinction now being made between training and education. It was also thought necessary to reiterate the aims of

General Studies. This statement ends with another expression of the hope that General Studies staff will be included in the course planning. There can be no doubt about the policy makers' intended solution to the problems presented by General Studies. They were advocating much greater co-operation between all staff with the consequent mutual respect which this would generate.

These attempts to explain the new courses so thoroughly were an innovation. In the past it had been assumed that teachers would be aware of the need for changes and there had been less effort to communicate the reasons. Now however, a lot of work was put into communicating the aims of the new courses, as well as making recommendations to the teachers about how they might be achieved.

Staff development work was carried out under the auspices of the regional organizations. The Regional Advisory Councils for Further Education, whose main function is to advise on and co-ordinate further educational provision in their region, also organize short courses and conferences to encourage staff development. In this case, the RACs for Northern Counties, Yorkshire and Humberside, East Midlands and West Midlands all arranged meetings, sponsored in some cases by the DES. Two national conferences of three days each were held at Wolverhampton on the new courses. For one of these, Arnison of Tottenham College department of building, wrote a paper specifically on the Industrial and General Studies components, in which he made some strong points about the need for change. He insisted that teachers should not adopt entrenched attitudes. They needed to accept that the accurate translation of a new scheme into positive action at departmental level demands first class teaching expertise. He also emphasized that all teachers concerned with the course should be involved in all subjects of that course and be jointly responsible for the achievement of the course aims.

In 1975 Bolton College ran a week long conference at which working parties were given the task of producing a set of specific learning objectives to expand the Industrial Studies general objectives. (See appendix D.)

In 1975/6 Huddersfield Polytechnic ran a series of two 20 day conferences during which the 'Handbook of Suggestions for Teachers of Industrial Studies' Huddersfield Polytechnic, 1976) was compiled. As stated in the preface, 'After a series of one day conferences on the subject (Industrial Studies), it was decided to mount longer workshop type courses which would enable teachers collectively to engage in suitable development work in some depth. The courses, which included both general studies and technical teachers, were approved by the DES and financially supported by Local Education Authorities.' A number of teachers' organizations, such as the Plumbing Teachers Association, the Painting and Decorating Teachers Association and the Association for Liberal Education, also held conferences and meetings to help disseminate information about the new courses.

During a one-day conference at Huddersfield, in June 1975, which was attended by 50 general studies and technical teachers from 26 colleges in the North and East Midlands, an evaluation and review was made of the existing situation in the teaching of Industrial Studies. The main business of the conference was to disseminate the ideas behind the inclusion of the new component in the courses and to present evidence of how they had been implemented. This it was thought would encourage others to go away and implement their own ideas.

'Industrial Studies as a distinct component of the new curriculum has presented teachers both with challenge and with opportunities to bring a wider dimension to the education of the craftsmen of the future.' (Tuxworth, p.1)

The evaluation was added because the organizers, led by Eric Tuxworth, Principal Lecturer in construction education at Huddersfield

Polytechnic, felt the need to assess the effects of dissemination so far and to get indications of future needs.

'Innovation brings with it the responsibility to ensure that the new approach is doing what it was intended to do, and to seek continuous improvement through knowledge of the effects of the schemes in practice.'

The results of the survey, which were sent to those participating in the conference, to the Regional Advisory Councils and to the CGLI, suggested that the new component had been favourably received and accepted by most concerned and that the intended purposes were being fulfilled. However there were certain important limitations to this conclusion, two of which should be mentioned. One was that the answers showed that the teachers were not using the set of general objectives as intended. The teaching programmes were being divided into sections corresponding to the division of the general objectives on the syllabus, rather than being used as a guide to the topics which could form part of an integrated programme. More important than this point was the evidence that there was not the degree of co-operation in planning and carrying out the teaching between general and technical staff which is so strongly recommended in the syllabus pamphlet. Only 16/26(62%) of colleges concerned reported that the programme was being jointly planned by construction and general studies staff.

The survey also revealed that a minority of those attending felt that Industrial Studies should replace General Studies. The ideas behind this feeling were not investigated, but there might well be a connection with the previous point about a lack of co-operation between General and Industrial Studies teachers. The effect of this could be just that disconnection between subjects which it is the purpose of Industrial Studies to overcome. General Studies might then be seen by the technical teachers as a threat, or at least as a discordant or unsupportive element which it would seem best to do away with.

The present study was intended to clarify the position six years after this evaluation. It is not concerned with the same people or with the same part of the country. However it is, like the survey just described, concerned with a particular area of the country and so it is not a study from which national implications can readily be extrapolated.

It is important to make another distinction between the two surveys. It is known that staff development has been more persistent in the North and Midlands than in the South. Also, as Eric Tuxworth points out in his introductory remarks to the report of the 1976 Huddersfield survey, (p.2)

'The group of teachers attending the conference were, in the main, a self selected group; volunteers for attendance and in many cases with a known commitment to the teaching of the subject.' He goes on to say, '...in the Yorkshire and Humberside Region there has possibly been more development work done in Industrial Studies than elsewhere. This conference was the third one day meeting, following similar event in 1973 and 1974. It might therefore be claimed that the levels of interest, information and awareness of the subject are likely to be somewhat different in this region than where no development meetings have been held.'

The respondents in the present study are from colleges in and around London where less regional development has been undertaken; also they are teachers who are currently teaching Industrial Studies or General Studies to construction craft students, or have been in the last two years. This fact obviously implies some commitment to the teaching of the relevant component but possibly less than if they had attended a conference about them.



## Chapter 2. REVIEW OF THE PERTINENT LITERATURE.

### Liberalizing the Technical Curriculum.

There is little specific reference in the literature to the introduction of Industrial Studies into the construction craft schemes, or to the connection it might have with General Studies. However, the question of how to liberalize the technical curriculum has been a matter for discussion in the journals for over 25 years. The journal of the Association for Liberal Education, 'Liberal Education', has reflected the changing ideas on how it might be done. Articles with titles such as, 'Making a film', 'The Foundation of visual awareness', 'Active participation in music', were all published in the Summer 1965 issue. Many others published at this time report on, or suggest, experiments in liberalization through the involvement of students in cultural experiences of various kinds, as well as through other wide ranging activities and concerns.

In their review of the place given to General Studies by TEC and BEC, Cantor and Roberts (1979,p.78) describe its function thus:

'Traditionally it has been concerned with such issues as the environment, political awareness, ethical problems ... social issues ... and economic issues. It has involved a great deal of experiential education whereby students are encouraged to engage in discussion, to watch and make films, to solve problems, to conduct surveys, and so on.'

It is likely that the implementation of these ideas would have the effect of setting Liberal (or General) Studies apart from the rest of the students' technical studies; if not in opposition to them, at least as very different from them. This could have disadvantages, particularly in the reactions of technical staff, students, and employers. An article in the Spring 1970 issue of 'Liberal Education', describes the attempt by members of a Liberal Studies team (un-named) to deal with the widespread opinion in their college that

Liberal Studies was a waste of time. The authors comment, (p.10) 'Many students in Further Education think so, and they can find sympathizers in many a college staff room.' They then describe the traditional pattern of Liberal Studies, which up till then had been followed in their college, whereby day release students on a wide variety of courses were serviced for one hour a week in a class room with a Liberal Studies Lecturer who only saw them on that occasion. There were many complaints that this system was unsuccessful. As a radical change to this pattern, it was proposed that most day release students should have a whole day of Liberal Studies at six weekly intervals. A typical day's study might be entitled, 'Industrial Relations' and involve visiting speakers, films and discussions. When this plan was implemented it was generally agreed in the college that the new Liberal Studies was a great advance on what had been previously offered. However, a postscript reported that after the first term the whole project was abandoned because employers objected to physical activities, psychology and the arts forming part of the content of the courses. This story, which is not unusual, suggests that although by 1970 there was an obvious need for changes to be made in the provision of Liberal Studies, there was also resistance to attempts to improve things. The general studies teachers were thus caught between on the one hand a pattern of provision which was generally considered to be ineffective and on the other, innovations which were unacceptable to the employers, if not to the college. Such experiences would be likely to undermine the credibility of the whole concept of liberalization.

Trends towards integration of General Studies.

There were indications in the literature of the 1970s which suggest a more hopeful direction for what was now more generally called General Studies. At a study conference held on the organization of

General Studies at Coombe Lodge in 1972, Arnison, head of the Department of Building at Tottenham College, gave a paper in which he stressed that the advantages of having each department in a college responsible for its own General Studies, with staff appointed by that department, are only realized if General Studies is accepted as an integral and indispensable element of every course and not merely an additional subject. He went on to say, (p.20)

'The acceptance of the central position of General Studies in further education is in line with current trends in both craft and technician courses. The new City and Guilds building craft courses indicate a shift away from the traditional emphasis on manual skills training and a movement towards a more broadly based course including General Studies and the new subject of Industrial Studies. The compatibility between the aims of General Studies and the objectives of these new courses can be defined very clearly.'

In another paper given at the same conference, the principal of Lewes Technical College, (Hughes, p.31) reported that staff from the General Studies department

'attend meetings of boards of studies in all departments and can exercise a broad liberal influence over the curriculum. There is also some reverse flow from teachers in other disciplines helping with Liberal Studies ... Over the last eight years the college has changed out of recognition from a small narrow technical college of the old school to a broader, more comprehensive, more humane and more venturesome institution. The initiative has largely come from the staff of the General Studies department; this has in turn stimulated better and more imaginative teaching methods throughout the college.'

Such a statement may not be truly representative of the position of General Studies in the majority of colleges but it does suggest that the experience of General Studies had undergone some changes since the 1960s.

With the increased involvement of the Manpower Services Commission and its agencies in Further Education, there is another element apparent in articles being published in 'Liberal Education'. In the Autumn 1979 issue, an article, 'New Skills for F.E. teachers', Williams calls for a new dimension in management and in curriculum planning and organization, in order to meet the needs of the unemployed,

particularly those who are unmotivated, and who would never, in normal circumstances, have contact with the F.E. system at all. The skills to be developed are in relation to such activities as job finding and keeping, and liaising between student, employer and parents. This article is written by a general studies teacher who is no longer concerned with the problems of General Studies. No claims are made for the special skills of general studies teachers, although it may be deduced that it is their habit of concern for the whole person which has prompted their consideration of the new needs of the student. The fact that General Studies as such is not mentioned at all, may be an indication that it has achieved a more integrated and perhaps a more responsible position in the work of the college.

Further evidence of this trend is provided by an article in the Spring 1981 issue of the 'Journal of Further and Higher Education' (p.10). Branwood and Boffy, amongst other things, reject the assertion, expressed by Carroll in an article in the same journal for Spring, 1980 (p.27) 'that vocational and liberal education in F.E. are fundamentally antagonistic.' Such a belief would seem to take the problem of how to liberalize the technical curriculum back to a point reached in the 1960s, when distrust and lack of co-operation in the teaching was common. Branwood and Boffy do in fact call their article, 'Full Circle? The Future of General Studies in F.E.' In making his assertion and in his (p.10) 'implicit assumption of the superiority of the academic liberal educators over the vocational specialists', Carroll, 'ignores the progress that has been made in vocational teaching and in the attitude of vocational teachers, particularly those who have been professionally qualified.'

Branwood and Boffy go on to develop their ideas for the future of General Studies.(p.14)

'Our contention is that the way forward lies in the liberalization of vocational education, in the strengthening of general education and in developing a new approach to changing student needs ... by bringing together a team of teachers from different disciplines with a shared commitment to flexible innovation in content and method, a course could be offered containing a common core of, for example, literacy and numeracy ... We feel that if F.E. is to survive ... it must develop a curriculum which is genuinely vocational, which encompasses both technical and general components and which is also genuinely liberal.'

Watson (1980) also refers to the importance of co-operation in curriculum development and in the classroom. He emphasizes that the basic principle of General Studies is to be student centred and he considers that this is most effectively achieved through teacher co-operation.

The latest policy statement issued by the ALE, Commentary '80, was widely circulated and contributes a useful outline of the part General Studies can play in the preparation for the future of all students in Further and Higher Education. The CGLI considers that it provides an up-to-date complement to the Institute's own pamphlet, General Studies, published in 1970. (CGLI Broadsheet, April, 1981).

Debate on Training and Education.

Some issues relevant to the changing role of General Studies, and the introduction of Industrial Studies, have been raised as part of the wider debate about the relationship between training and education. From the results of an earlier examination of the attitudes of secondary modern school children to school and employment, Carter, (1963) suggests that the schools and the Youth Employment Service are in large measure failing to achieve their desired ends - partly perhaps because the ends were vague and the means not assessed. Ingram (1979) in a study of the benefits of curriculum integration, considers that the confining of education to a particular phase of life and

identifying it with specific institutionalized provision, has undesirable consequences, especially that of dissociating it from life.

A typical example of more recent publications from bodies concerned with this debate, is a booklet issued by the Association of Colleges of Further and Higher Education (ACFHE) in 1981, '16-19: Education and Training', in response to the rising concern about the lack of continuing education for young people beyond the statutory leaving age. It points out that (p.2)

'achieving the right balance between the parts - academic and vocational ... will be essential to the success of any programme and in achieving that balance the relation of the college to the industry and its training needs will be crucial.'

Two aspects considered inadequate in the existing system are identified. Firstly, insufficient people have been trained. Secondly, the training which does exist, because of its traditional emphasis, may itself be responsible for the imbalance in the availability of skills. The booklet goes on to say, (p.6)

'The major gap in the training provision ... is the failure to provide any substantial programme of personal development for the most vulnerable section of the youthful population.'

The Further Education Curriculum Review and Development Unit (FEU) has published several documents relevant to this theme. For example 'Curriculum Change', (1981) looks at the development of TEC programmes in colleges. In a seminal contribution to the field of pre-vocational preparation, 'A Basis for Choice', (FEU, 1979) emphasis is put on the need for a radical new approach.(p.59)

'Care should be taken that the traditional syllabus content of more established vocational courses does not dominate the curriculum of vocational studies (one element in the course being suggested) at the expense of an up to date and realistic analysis of demands being made on young people.'

ABC in Action (FEU,1981) reports on the piloting of A Basis for Choice and emphasises the need for staff support and team work. Leadership in learning, (FEU, 1981) describes how curriculum and staff

development occurred at meetings convened to discuss the progress of a new course.

In another publication from the FEU, the Project Report, 'Day Release, A Desk Study', (1980) the influence of the establishment of the ITBs, (and since the 1973 Industrial Training Act, the MSC ) on the development of the further education curriculum is explored. Like Mr. Arnison in the paper quoted above, the authors of the Desk Study describe, as part of this development, the phasing out of the City and Guilds craft practice schemes and their replacement by the more theoretical craft studies schemes, in order to provide a more generalized framework of knowledge relevant to training while leaving out any practical content which might be construed as training.

Staff Development.

Reference is made in the FEU's Desk Study to the difficulties which can be experienced in making curriculum changes. These difficulties have been considered in detail by Kaneti-Barry, (1974) in a study initiated by CGLI in an attempt to provide an independent survey of certain questions concerning City and Guilds policy changes in a well established course - the Engineering craft schemes. Kaneti-Barry reports that only 62.5% of craft teachers and 29% of general studies teachers were able to identify correctly the overall aim of the syllabus which they were teaching. She concludes, among other things, that this suggested teachers of (p.17)

'specific parts of the syllabus could not see the relevance of general aims to their particular subject thus failing to see one of the most important axioms of the syllabus, i.e. the totality of approach necessary to the attainment of the aims of the syllabus, that of enabling the students to cope with a variety of work situations future and present by providing general theoretical principles.'

She goes on to suggest that a more widespread induction on the syllabus could have alleviated difficulties in the teaching and led to

a better understanding of its aims.

The effects of the lack of staff involvement in curriculum innovation has also been considered by Llewellyn (1978), in an investigation of staff attitudes to the introduction of the City and Guilds new printing courses. His findings reflect those of Kaneti-Barry. By means of questionnaires he found that attitudes towards the new courses were significantly more favourable in three groups of teachers: those who had been teacher trained; those who had attended courses or seminars relevant to the new courses; and those who were involved in planning the implementation of the new courses in their own college.

The important element of staff development as a corollary of curriculum development has also been considered by Baum (1981). His study is concerned with the development of feedback mechanisms which will enable teachers in Higher Education to obtain information about various aspects of their teaching. His thesis is that the vital element in good curriculum development is the quality of the communication which takes place between teacher and students, particularly in relation to the aims and objectives of the course they are engaged on. He hypothesizes that such communication occurs best when the teacher is fully involved with the course he is teaching. Following a large scale survey of staff and students' perceptions of the teaching, Baum concluded that, (p.32)

'When some commitment to the course was evident on the part of the teacher, in that he had contributed to the design or planning of the course, mainly positive comments were forthcoming. When this was lacking and the teacher was either new or taught in a servicing capacity, dissatisfaction was much more evident, particularly focussing on the lack of student and staff involvement in the planning and running of the course.'

It was felt that formalized bodies such as boards of study, established to deal with development of the courses, had little value placed on them by students or staff.



Wiseman and Pidgeon (1970) in their conclusion to 'Curriculum Evaluation', declare, (p.91) 'Evaluation is not a superficial decoration to be applied once the curriculum structure has been erected: it must be built-in from the start, forming an essential element in the architect's plans and constantly influencing the work of the bricklayers, the carpenters and the plasterers.'

Shipman (1974) in a book based on research into the planning and implementation of the Keele Integrated Studies Project, concludes that (p.177)

'The way to effective curriculum development may lie, not in more efficient projects, but in narrowing the distance between schools and the agencies in education that administer, advise and train, or generate new ideas. Such an education system might not even need development projects.'

Harris (1978), explores the ability of schools to implement the ROSLA proposals, which are perhaps comparable in terms of the required effective involvement of teachers, to the New Training Initiative proposals.(MSC, 1981) Harris's research showed that the original intentions behind the Newsom proposals were largely thwarted by their mis-interpretation on the part of teachers in the schools studied. Instead of Newsom's fundamental changes in the secondary schools curriculum, the teachers' approach, when faced with the tangible problem of the so-called 'Rosla' child, is described as 'piecemeal'.

Webster (1976) questions the ability of teachers and the institutions of which they are a part, to implement major policy changes made at national level. The 1977 Green Paper, 'Education in Schools, a Consultative Document' also states, 'Any future reform cannot simply proceed from a theoretical basis, as was the case with the Newsom Report ... teachers see their work in very practical terms.'

Karol (1972/3) in an article in Liberal Education, deplores the apparent lack of an appreciation on the part of those who introduce new

courses, of the need to consult and involve those who are asked to implement the changes, before it is too late to take their contribution into account. He is particularly concerned at this date with the summary introduction of the OND Technology courses without any consultation with bodies such as the ALE. Catchpole (1972, p.41) reports that the reaction of the ALE to this was to construct a modular integrated scheme to guide the teaching of Complementary Studies and Communications.

Palmer (1976) considered that a 'gap' exists between those who produce reports and guides concerning the philosophy of General Studies and the teachers who need to accept and implement the programmes set out by them.

#### Influence of Industry on Effectiveness of Further Education.

In a study of the attitudes of building craft apprentices towards employment, work and study, Dearden (1977) showed that it is not only the lack of staff development which hinders curriculum innovation. His research indicates that there is a high proportion of disillusionment amongst apprentices with the training and further education they receive, and he recommends that there should be a much closer liaison between colleges and local industry. It appeared from his survey that approximately one third of the course being taken at college by young building apprentices was considered by them to be of little value. In commenting on the lack of motivation which this state of affairs reflects, Dearden says, (p.89)

'This is a difficulty which is exacerbated by the tendency of many craftsmen in industry to deride and destructively criticise apprentices' studies on their course.'

In a study of the introduction of Industrial Studies into the construction craft courses, Siddall (1974) sought to detect whether a limited range of course objectives were being achieved. He points out

the need for fundamental changes in the education of craftsmen, particularly in view of the erosion of the traditional boundaries between crafts. He considers it essential, particularly for the sake of the employers, that Industrial Studies should be seen as a subject in which students' achievements can be measured.

The employers' attitude towards the training and education of their young employees must be seen as crucial. Venables (1974) demonstrates that there is a considerable variation amongst employers in terms of encouragement and support given to day release employees. She provides evidence that many employers attach little value to the college course. In the final chapter of her follow up study of apprentices, (1974) she strongly suggests that this may be partly due to the fact that the concept of education held by society as a whole, including of course the employers, is outdated.

The White Paper, 'Training for Jobs', (Dept. of Employment, 1984) which recommends the transfer of one quarter of the resources for work related non-advanced Further Education to MSC control, appears to have been partly based on the HMI's report on Day Release courses, 'The Education of Employees' (1984) which criticizes the lack of involvement of industry in further education colleges.

In a paper published by the Chartered Institute for Builders, Croome (1983) attempts to explain some of the fundamental differences in the aims and interests of industry and education. He suggests that the solution to the problems which arise, is to value the differences and to find ways of accommodating them in order to produce a more harmonious 'industry-education' system which will make an effective impact on the industry. He explores the idea of secondment of teachers to industry, for short or long periods, as one step in this direction.

The ACFHE booklet, '16-19: Training and Education', (op cit p.3/4)

revealed that less than a quarter of young construction craft employees attended college. The Youth Task Group Report, (MSC,1982) puts forward the hope of a much greater involvement of young workers in their training programme. It is particularly important that the training and education provided should take into account the experience which has been revealed in the literature. There is a danger that the MSC's emphasis on the provision of skills for industry will overshadow the longer term need for general education. Ironically, the Newsom proposals, which were intended to assist the economy, were fundamentally damaged by the poor performance of that economy between 1975/77, which caused massive cuts to spending on education.

The ACFHE booklet emphasizes the danger of failure to develop more schemes appropriate to new working situations, and of a too narrow definition of the 'educational' component in training programmes. (op cit p.4) 'There is no certainty that acceptable and matching solutions which will meet the full spectrum of adolescent needs in education and training will be forthcoming.'

This study attempts to consider in some detail the range of aspects relevant to the development of the technical curriculum, mentioned in this representative sample of the growing literature concerned with it. The detail is relevant to one specific area - that of the Industrial Studies component within the City and Guilds construction craft schemes.

The City and Guilds Schemes.

This study is primarily concerned with the implementation of City and Guilds policy for the construction crafts certificate schemes introduced in 1973. It therefore was necessary first to examine the City and Guilds of London Institute and its role in the Further Education system. The policy changes in respect of the 1973 schemes are considered in order to clarify the intentions of the policy makers, with particular reference to the Industrial Studies component.

In order to determine the events leading up to the production of the schemes and to establish the process by which schemes are normally developed, permission was obtained from CGLI to have access to their unpublished material, including a discussion paper produced by the HMI on the Joint Advisory Committee, minutes and reports of meetings of the CGLI's Committee on Technical Education and of the various subject advisory committees and working parties which were concerned with drawing up the new schemes in detail. As background to the research into the relationship of the training element to the further education schemes, the two Memoranda from the Ministry of Labour's Central Training Council (CTC), issued between 1965/1966; and the Administrative Memorandum 25/67, issued by the DES, which gave direction as to how the advice of the CTC should be implemented, were also made available.

Published documents included the City and Guilds Broadsheets which have been issued approximately three times a year since 1965; the current syllabus pamphlets for the construction crafts - for example 585 Carpentry and Joinery/586 Machine Woodworking, published in 1972, to be implemented in September 1973; syllabus pamphlets for the 1956 and 1962 schemes, for comparison with the present schemes; and the

policy statement issued in 1972 as an early introduction to the new schemes, and the one issued in 1973 as a follow up statement.

There are certain Government publications which have been influential in forming opinions and in directing the policy of qualifying bodies such as CGLI. Examples of these are 'Better Opportunities in Technical Education' (1961) and 'General Studies in Technical Colleges' (1962). Taken with several of the Institute's own publications, including 'Further Education for Operatives' (Wheatley, 1964) one of a series published in the 1960s, these provided a means by which the Institute's concept of 'education' could be explored.

Of particular significance is Circular 323 which was issued by the MoE in 1957. This document is often thought to have initiated the move towards liberalizing the technical curriculum, but to quote from its own first paragraph, 'The need which has already been emphasized by the White Paper on Technical Education, is already widely recognised, and has been the subject of fairly general discussions and experimentation in technical colleges and elsewhere.' Circular 323 was now the means by which the experimentation could be given official sanction.

A number of suggestions were included in it and by 1962 CGLI had adopted one of them, by including the General Studies component as a desirable component in all its schemes. It may have been the emphasis on this particular means of liberalizing the curriculum which lies behind the many problems associated with General Studies and which the introduction of Industrial Studies into the construction craft courses was intended to alleviate.

Other publications from the Institute have contributed to an understanding of its history and its developing role as a forum for educational issues. These include the special edition of the Broadsheet, published in 1978 to celebrate the centenary of the

Institute, and the History of CGLI by Jennifer Lang, published in the same year.

Of the papers written by members of the Institute, the two by Mr. Bill, head of Education and Training at CGLI, were particularly helpful in expanding the viewpoints held by key members of the Institute staff. One was prepared as background to the discussion on the certification of the craftsman in 1977, and the other was presented to the International Association for Educational Assessment, in 1982.

Another paper emanating from the CGLI, the 'Report of the Policy Steering Sub-Committee on Schemes for those using Engineering Craft Skills' formed part of the discussion at the conference of the National Association of Plumbing Teachers in 1982. The paper deals with the current needs of the Engineering Industry in respect of further education and training, and makes an interesting comparison with those of the building industry.

With these documents in mind, a series of semi-structured interviews was conducted with members of the City and Guilds staff who are concerned with policy making in general; and also with members of the Joint Advisory committee for construction, (in particular Eric Tuxworth of Huddersfield Polytechnic) which devised the construction crafts schemes. During the interviews discussion was focussed on the policies expressed in the documents referred to above and the manner in which the Institute conveys its intentions to those concerned with implementing them. In order to resolve any apparently conflicting responses from staff at the Institute a summary of findings was submitted to the head of Education and Training there. The final version was considered to be a fair account. (See letter in appendix C.)

The Sample: Selecting the colleges to be visited.

In view of the limited resources available for the study, it was not possible to interview a sample which would accurately represent all colleges in which construction crafts are taught. It was therefore decided to include in the study a number of types which, in respect of their size, internal organization, and location, would reflect possible variations in response to City and Guilds schemes. A compact area was decided upon, with London as the common factor, thus eliminating the effect of strong regional differences beyond the scope of this study. An example of such regional differences is the greater emphasis on staff development at craft level which is evident in the Midlands and North as compared to the South, due possibly to the fact that three out of the four Technical Teacher Training Colleges are located there. The restricted area covered also meant that there were similar possibilities for environmental studies and industrial visits in all the colleges visited.

It was considered that interviews should be conducted at a minimum of 9 colleges, including the researcher's own college, in order to give a reasonable sample of the way in which City and Guilds schemes are being implemented. It became possible to extend the sample eventually to include a tenth college.

The final selection provides a good coverage of the London area. (See map in appendix B.) They include four colleges just outside Greater London; four inside the Greater London boundary; and two in Inner London. There is also a range of types of college - a Tertiary College; two Building Colleges; three colleges where the construction crafts are taught on a separate site from the main college; a Further Education College and a County College. It also includes several well established construction craft departments and several quite newly



established ones.

Eight of the colleges were selected from the list published by the Regional Advisory Council for Technical Education (RAC) - London and Home Counties Region. A further two were selected to complete the desired range of college types. The RAC lists supply information as to which crafts are taught by the colleges in their region and the methods of provision - that is whether the students attend on day release, block release, or under the CITB's Standard Scheme of Training, which provides selected students who are sponsored by an employer, with six months further education and training in their first year, after which they revert to the day or block release modes. The sample includes all methods of provision, and various sizes of craft department, teaching a wide range of construction crafts. For instance in college 6, only two crafts are taught whereas in college 4, 16 crafts are taught. All had large enough craft departments to allow for the interviews to be conducted with three craft teachers involved in the teaching of Industrial Studies and one other in charge of teaching it.

It was assumed that there would be the same number of general studies teachers involved in teaching construction craft students in each of these colleges and this proved to be the case except in college 5, where the General Studies was being taught by the craft teachers. There were, however two general studies teachers who were teaching communication studies to construction craft students and these two were interviewed.

(There is a brief description of each college visited, and notes on the students studying on these courses in appendix B.)

The Sample: The Number of Teachers interviewed.

The decision to interview three technical and three general

studies teachers in each college was based on the view that three would give an adequate indication of what was happening in each college concerning the two components but yet would not make the field work unduly protracted. From the point of view of the colleges, more interviews would have put a strain on their time and goodwill. As it happened, in most colleges it would have been difficult to have found more teachers to interview, since the teaching of both components is often done by only a few teachers.

The interviewing of the teachers in charge was included in order to establish what was being communicated from City and Guilds to the teachers through those in responsible positions. It was also of interest to discover what guidance was being given to teachers inside the colleges and what plans there might be for developing the work in the two components. The teachers in charge were asked the full range of teachers' questions if they were involved in the teaching because it was considered that their answers would clarify their attitude to the organization of the teaching. For instance attendance at conferences could mean that they were likely to pass on their understanding of the intentions of the policy makers to those working under them. Their inclusion in the teachers' interviews increased the total number of craft teachers answering the main group of questions to 34, and the total number of general studies teachers to 37.

#### The Interview Schedules for the Teachers.

The form and range of questions in these schedules was influenced by those used at the 1975 Huddersfield Conference. (See chapter 1, p.33) The opportunity was taken then to conduct a survey of those present, (Tuxworth, 1975, p.2) 'by means of a simple questionnaire ... structured firstly to elicit information of a factual kind and then, in later sections to obtain some opinions of teachers about the concept of

Industrial Studies, its implementation and its effect on the other parts of the curriculum.'

A good deal of expansion and some modifications were necessary to allow for the very different circumstances of the present study. In particular more emphasis is put on the concept of General Studies as held by those involved in the teaching of the two components, and on the concept of the link which it is recommended should be established between them. The Huddersfield questionnaire was answered by 50 teachers, only 10 of whom were general studies teachers. 35/50(70%) were currently teaching Industrial Studies. Also there has been approximately seven years to consolidate experience of the two components between the two surveys.

In the light of the Huddersfield questionnaire, parallel schedules were drawn up which were designed to ascertain the concepts of the two components held by the two groups of teachers. (See appendix A2.) The questions were constructed in such a way as to encourage respondents to express themselves freely thus allowing important nuances to emerge, while allowing necessary factual information also to be noted. A list of areas in which information was required was compiled, as suggested by Wragg,(1978), and from this list suitable questions were drawn up.

It was thought that the interviews should first establish the aims of the teachers in relation to those set out in the City and Guilds syllabus pamphlets. No aim is specifically identified as being the aim of any one component of the course. However, some aims are clearly more applicable to parts of the course than to others. Those having most bearing on Industrial and General Studies were selected for the particular attention of the respondents in order to discover to what extent the two groups of teachers were in agreement with the official aims.

The main purpose of the interviews was, as in the Huddersfield

survey, to obtain ideas and opinions about Industrial Studies, its implementation and its effects on the rest of the curriculum - in particular General Studies.

The direct question, 'What do you see as the value of Industrial Studies?' was put to both groups. The craft teachers were asked to describe their introduction to it, as a further guide to their appreciation of it. General Studies teachers were asked to describe the way in which they had come into General Studies, again to provide a background to the ideas and opinions expressed. All were then asked to give details of their teaching of the relevant component; of the teaching arrangements established in their department and to give their opinions of these arrangements. They were also asked if they would like to teach more or less of either Industrial or General Studies. An important part of the interviews centred around the statement in the syllabus pamphlet, (p.11) 'Industrial Studies should be incorporated ... partly into General Studies in order to provide a link between general and technical studies.' Questions concerning this statement were intended to bring out facts and ideas about what was happening in the college concerning the relationship between the two components and between the two groups of teachers.

As well as these two schedules, a further two were drawn up for the lecturers in charge of the teaching of each component, in order to add to the information on how they were being organized in the colleges and to discover how communications from City and Guilds were being disseminated to the teachers. (See appendix A1.)

A final question to all teachers was concerned with the relationship of the teachers to the employers of their students. In particular it attempted to ascertain whether the teachers had any knowledge of the employers' attitudes to the two components under consideration.

### Development of the Schedules.

Prior to the construction of the final schedules, discussions were held with other teachers in the field as well as with the research supervisors. As a precaution, a tenth college was added to the list of colleges for interview, so that the first college could be used for pilot interviews if the schedules proved to need adjustment. However the schedules did serve their purpose from the beginning and so no alterations were made to them. This allowed the extra college to be added to the others, making a round number of 10 colleges in the survey.

### Using the Teachers' Schedules.

Guidance in the conduct of the interviews was sought from Smith (1972) particularly with regard to the need for objectivity in the interviewer, while listening attentively and picking up cues from the respondent's answers to enable him/her to expand where necessary. During the interviews most teachers took the opportunity to express their views and experiences at some length. Certain inconsistencies in the overall pattern of some teachers' replies are of interest in that they reveal a lack of previous consideration of either or both of the components under review. This is not to suggest that they did not take the questions very seriously. All answered as carefully and thoughtfully as the circumstances of the interview allowed. On some occasions there was a time limit imposed by their teaching commitments but a minimum of one hour was specified in every case.

With the help of a tape recorder it was possible to write out their replies verbatim and then to draw up coded schedules into which all the replies could be fitted. These coded replies were used to set out the tables given in the Statement of Results.

In addition to the schedule of questions put to the teachers, two

separate sheets were drawn up for all college respondents to fill in. (See appendix A3.) One is a list of 11 statements, some of which were taken from the Huddersfield conference questionnaire and others from various sources of published statements about the two components, including the CGLI syllabus pamphlets. Respondents were asked to mark on a five point scale their agreement or disagreement with these statements. The second sheet is a list of five unfinished sentences, the completion of which was intended to bring out a spontaneous phrase which would indicate strengths and weaknesses being experienced by teachers in connection with the two components. It was hoped that the results obtained from these sheets would go towards reinforcing or expanding those from the spoken answers. In fact some of the statements proved rather too vague or ambiguous to be useful. For instance in Statement 7 - 'One of the main aims of General Studies is to help students to develop mature attitudes', the response depends too much on the interpretation of the word 'mature'. Some teachers said, 'It depends on what you mean by 'mature''. It was considered that these written answers would add to the desired picture which the research required, partly because the rather lengthy answers given to the spoken questions might lack spontaneity and partly because in some matters direct questioning might not be welcome. As Oppenheim suggests (1966, p.77) it is possible that the 'first quick response is less open to defensive bias and face-saving.'

#### The Employers Schedules.

An essential element in the enquiry was thought to be the extent to which the employers of students in the colleges are familiar with the components of the course and whether they see them as serving a useful purpose in preparing their employees for their work. A further schedule was therefore devised which would elicit answers to these questions.

As an aid to the design of these schedules an attempt was made to ascertain the part played by the Construction Industry Training Board in the preliminary work on the new City and Guilds schemes. The recommendations emanating from the Central Training Council emphasized the need for full integration of the further education and the training elements. Unfortunately the passage of time has made it virtually impossible to discover what took place in this connection during the early years of the CITB. All attempts to see relevant documents or to interview members of the Board who might have been involved in devising the new schemes were unsuccessful. Eventually an interview was obtained with the present representative of the CITB on the CGLI Advisory committee for construction. Although he was unable to help with the earlier period, he did give the views of the Board on the present relationship of the training element to the further education schemes. He pointed out that the work of the Board has forced the colleges to be more in touch with industry and has meant better provision of facilities for training in colleges. Documents discussed at the interview included the Building Research Station's Report on Training in the Industry, (1966), the Boards own 'Plan for Training in Operative Skills '(1969), and the NFBTE's 'Apprenticeship and Training Arrangements for the Building Industry' (1981).

This interview provided useful material for the design of the schedule for the employers. (See appendix A4.) It consists mainly of a number of open ended questions, some based on the points made by HMI Nield in his discussion paper described in detail in chapter 1. Respondents were first asked for an indication of their attitudes to the course in general. Then a check list of the aims of the course was put to them and they were required to respond in more detail as to whether they considered these aims suitable and whether they considered

them to be achieved by the work done in the colleges known to them.

The attention of the employer was then drawn to the aims and objectives of the Industrial Studies component and to a lesser extent those of the General Studies component. Further questions dealt with aspects of the construction industry relating to apprenticeship, training and further education. They were asked to give suggestions about how to make the teaching more effective and how to improve the relationship between the employers and the colleges.

As in the other schedules the questions were designed to be unbiased in their wording, using such phrases as 'Would you like to comment on ...?' It was considered that such 'permissive' wording, as Oppenheim calls it, (p.97) would allow the respondent to feel in charge of the situation and so be less likely to adopt a defensive or non-committal response. The schedule was designed to take approximately half an hour and no tape recorder was used, in case it caused undue anxiety.

#### Selection of Employers for Interview.

Although it was planned to choose only three employers from each college visited, the teacher in charge was asked to supply more than that to allow for failure to contact and arrange an interview. In all, 43 attempts were made to arrange an interview and 30 were accomplished. Of these only two required a great deal of persuasion. Very few kept to the suggested limit of half an hour and many gave up as much as one and a half to two hours of their time to discuss the questions put to them.



Views of other bodies which Influence the Implementation of the CGLI schemes.

There are a number of bodies, in addition to the employers and their organizations which exercise an influence on the schemes as they are taught in colleges. Their views, in particular on the part General Studies should play in the technical curriculum, were sought in order to gain a better understanding of the way in which technical studies and general studies might be linked. Informal interviews were conducted with the following people: the head of the faculty of Humanities and Business Studies at Garnett College, because it is there that many teachers in the London area receive their training; the Chairman of the Association for Liberal Education, because this body has been an important voice in the development of General Studies from its early days and with the Secretary of the NATFHE General Studies Section who is also one of the originators of the General Studies Workshop. Both these bodies have recently played a very active part in discussing the place of General Studies in City and Guilds craft schemes as well as in pre-vocational schemes introduced by the MSC.

Chapter 4.

STATEMENT OF RESULTS.

List of Tables. Chapter 4.

Table.

1. Teachers' choice of City and Guilds aims most nearly achieved.
2. Value of Industrial Studies expressed by teachers.
3. Teachers' opinions - 11 Statements.
4. Teachers' opinions - Completion of Sentences 1. 4. and 5. See appendix A3.
5. Q.3. Do you think course content should be given for Industrial Studies?
6. Q.5. Do you think General Studies should be given course content/learning objectives?
7. Craft teachers' response to Q.11c. Do you think Industrial Studies should be assessed by City and Guilds?
8. General Studies teachers' response to Q.11c. Do you think General Studies should be given some form of external assessment?
9. Craft teachers' response to Q.5b. What do you think should be the aims for General Studies?
10. Teachers' Opinions - Completion of Sentence 2. Appendix A3.
- 11a. Craft teachers' introduction to Industrial Studies.
- 11b. Craft teachers taking Industrial Studies classes.
12. General studies teachers' backgrounds.
13. General studies teachers taking craft General Studies classes.
14. Q.4. Do you think the incorporation of Industrial Studies into General Studies is a good idea?
15. Comments of teachers in answer to Q.4c. Do you wish to add anything in respect of co-operation with general

- studies/craft teachers?
16. Teachers' opinions - Completion of Sentence 3.  
Appendix A3.
  17. Incorporation of Industrial Studies into General Studies in 10 London colleges.
  18. Those designated as being in charge of Industrial Studies. Contact with CGLI. Appendix A1.
  19. Dissemination of information inside the colleges - craft teachers. Appendix A1.
  20. Development of Industrial Studies in the colleges.  
Appendix A1.
  21. Teaching arrangements for Industrial Studies.  
Dissatisfaction with teaching arrangements.
  22. College schemes of work for Industrial Studies.
  23. Use of text books in Industrial Studies.
  24. How craft teachers introduce students to Industrial Studies. Craft teachers methods of assessment of Industrial Studies. Q.11b. Do you ever fail students in Industrial Studies?
  25. Evaluation of the teaching in Industrial Studies.  
Revision of the scheme of work.
  26. Q.13c. Would you welcome more interchange of ideas and materials between colleges? Craft teachers.
  27. Feedback from employers about Industrial Studies.
  28. Those designated as being in charge of craft General Studies. Contact with CGLI. Comments on CGLI's Green Book on General Studies. Appendix A1.
  29. Dissemination of information inside the colleges - general studies teachers. Appendix A1.

30. Development of craft General Studies in colleges.  
Appendix A1.
31. General studies teachers Contact with craft department.  
Combining with craft teachers.
32. College schemes of work for craft General Studies.
33. Textbooks used in craft General Studies. Teaching  
methods used in craft General Studies.
34. How general studies teachers introduce students to  
General Studies. Methods of assessment.  
Q. 11b. Do you ever fail a student in General Studies?
35. Evaluation of the teaching in General Studies.  
Revision of the scheme of work.
36. Q. 13b. Would you welcome more interchange of ideas  
and matderials between colleges? - general studies  
teachers.
37. Feedback from employers. General studies teachers.
38. Employers' responses. Appendix A4.  
Overall view of City and Guilds course.
39. Length of apprenticeships.
40. Details of course aims. Q.3. Do you think the course  
should/is doing -----?
41. Industrial Studies as part of the course.
42. General Studies as part of the course.  
Visits and speakers a good idea?
43. Changes in the industry. Suggestions as to how  
these changes could be incorporated in the teaching.
44. Contact with young employees. Contribution of employers  
to their education and training. Value of full time and  
block attendance, as opposed to day release.

45. Contact with colleges. Suggestions for improving the relationship between employers and the colleges. More comments about education and training in the construction industry.

TABLE 1

TEACHERS' CHOICE OF CGLI AIMS MOST NEARLY ACHIEVEDCode letter

- W. 'To help the student craftsman to appreciate the work and problems of craftsmen engaged in associated occupations and the relationship of his work to theirs' (abbreviation - 'teamwork')
- B. 'To widen the student craftsman's understanding of the industry in which he works and the society in which he lives.' (abbreviation - 'industry and society')
- P. 'To develop the student craftsman as a person, so as to encourage the growth of mature attitudes in industry and in society generally, of powers of thought, reasoning and communications, and of his appreciation of the value of of learning.' (abbreviation - 'personal development')
- Y. 'To better equip to adjust to changes in the nature of his work caused by technological development, changes in industrial conditions, change of job within his own industry or transfer to a similar occupation in another industry' (abbreviation - 'change')
- G. 'To provide an opportunity for the development of responsible attitudes to quality of work and costs.' (abbreviation - 'quality and costs')

<u>College number</u>	<u>Craft teachers</u>	<u>General Studies Teachers</u>
1.	B W G Y P B P W Y G B W - G Y P G W P B Y	B G Y W - P B W G Y - P P B Y - W G P B G W Y
2.	W B P Y G B P Y W - G B W P Y - G B W - P Y G	B P G Y W P B G Y W P B G Y - W B Y P W - G
3.	W Y G P B W B Y P - G B W P Y G P W B Y G	B P Y W G P Y B G W P - B Y G W B P Y W G
4.	W B G - Y - P B W G - P Y W B G P Y W B G Y P	P Y B G W B P W Y G

TABLE 1 (continued)

<u>College number</u>	<u>Craft teachers</u>	<u>General Studies Teachers</u>
5.	W P G B Y B W Y G P B G W Y P W B Y G - P	P Y B G W B - others equal Y P B W G P W G B Y
6.	Y P B W - P B W P - G Y P G W B - Y W B G Y - - P	P B W Y G P B - - W Y G P B Y W G P B Y W - G
7.	W B - P Y G P W B Y G B Y W P G W B P Y G	W B P Y - G Y P W - B - G P B Y G W P B - G W Y
8.	B P W Y G W B P G Y W R - P G Y G W B P Y	B P W Y G P W B Y - G B P Y W G B Y G P W
9.	P B G W Y W P B G - Y B - W P Y G W B P G Y	P B W Y G B P W G Y B W P Y - G P B Y W - G
<u>TOTALS</u>		
W first	18/40	W first 1/38
B "	15/40	B " 14/38
P "	4/40	P " 21/38
Y "	1/40	Y " 2/38
G "	2/40	



TABLE 2

Item	<u>Value of Industrial Studies expressed by teachers</u>	Craft	G.S.
1.	Gives a wider understanding of the construction industry	22	22
2.	Gives a better understanding of the building process.	17	-
3.	Teaches them about other trades and the relationship of their work to others; helps them see themselves as part of a team; to be tolerant of others.	30	13
4.	Helps them to see the relationship of the industry to the economy; to the environment; to the community.	13	17
5.	Broadens their outlook generally; helps them to question society's values; is a general education.	13	7
6.	Helps them in their careers.	5	4
7.	Helps them with their own homes later on.	2	-
8.	Helps them to understand what they are doing in their own craft. Makes them safer workmen.	8	1
9.	Helps them to communicate; express themselves; read and understand better; find information on their own.	5	3
10.	Helps them become more productive.	1	-
11.	Helps them to see the need for change and accept it.	1	-
12.	Helps them to see that some things have to be done by law.	1	-
13.	Makes a good link with general studies.	1	-
14.	Gives guidance to general studies teachers.	-	5
15.	Shows them how the whole course is related to their work.	-	3
16.	Shows them how companies are organised.	-	3
17.	Enables the student to put his training into perspective.	-	4
18.	Has value in staff development - encourage teachers to work together.	-	3
19.	Is a way of realising general studies values; may give a sense of personal identity.	-	4
20.	Gives scope for a different teaching approach.	-	2

General Studies teachers familiarity with the IS component.

Yes. I'm familiar with it. I know it well	12
Yes. I know it fairly well.	7
I've seen it but I'm not really familiar with it.	14
No. I've never seen it.	5.

TABLE 3

Teacher Opinions (Figures for Craft teachers are on the left in the columns, " " " right " " " )

	Strongly agree	Please tick.		Disagree	Strongly Disagree
		Agree	No Opinion		
1. The achievement of the overall aim of the course is helped by the inclusion of Industrial Studies in the course.	9. 10.	28. 24	2. 3.	1. 1.	1. -
2. Most craft students only appreciate the value of education in a context which is relevant to their immediate work situation.	17. 6.	22. 20.	- -	1. 11.	- 1
3. Industrial Studies is not providing the intended link between general and technical studies.	7. 4.	7. 9.	4. 11.	21. 11.	1. 3.
4. It is beneficial for craft students if the craft teachers are involved in General and Industrial Studies.	14. 7.	21. 24	1. 4.	3. 2.	- 1.
5. It is not possible to assess the effectiveness of either Industrial or General Studies.	1. -	5. 5.	5. 1.	27. 29.	2. 3.
6. The craft course should be presented to the students as a unified whole, not as a series of disconnected subjects.	16. 15.	20. 18.	1. 1.	3. 4.	- -
7. One of the main aims of General Studies is to help students to develop mature attitudes.	12. 12.	21. 22.	5. 1.	2. 3.	- -

TABLE 3 (continued)

Teacher Opinions (Figures for Craft teachers are on the left in the columns, " " " right " " )	Please tick.				Strongly Disagree	Strongly Disagree
	Strongly agree	Agree	No Opinion	Disagree		
• Craft teachers would welcome more guidance in the development of Industrial Studies.	12. 4.	24. 11.	2. 21.	1. 2.	1.	-
9. General Studies is failing in its aim of developing mature attitudes in students.	7. -	13. 9.	12. 8.	8. 20.	-	1.
10. When General Studies teachers refuse to co-operate with craft teachers the Industrial Studies component suffers greatly.	5. 9.	18. 15.	11. 12.	6. 1.	-	1.
11. Craft General Studies should be given more direction by the establishment of some form of agreed assessment.	12. 5.	23. 20.	2. 2.	2. 9.	1.	2.

TABLE 4

Teachers' Opinions.

Completion of Sentence 1.

The greatest problem for craft teachers when teaching Industrial Studies is..

Item	<u>General Studies teachers</u>	<u>Craft teachers.</u>
1.	Adapting their teaching methods; lack of teacher training. 8	Lack of guidance on what to teach and how to teach it. 8
2.	Lack of recognition of IS as a relevant part of the course; consequent lack of student motivation. 6	Lack of support for the top; students' lack of motivation and low ability 16.
3.	Avoidance of specialization; lack of wider knowledge of the industry. 10	Getting away from own specialism 4.
4.	Not understanding the subject. 2	Lack of time for preparation; lack of knowledge and experience of the subject. 6.

TABLE 4a

Teachers' Opinions.

Completion of Sentence 4.

The students often enjoy Industrial Studies because..

Item	<u>General Studies teachers</u>	<u>Craft teachers.</u>
1.	They enjoy the experience of other knowledge; it is different; it adds an extra dimension to their study; gives them a new confidence in their ability to see beyond a narrow range of activities. 10.	It widens their outlook; gives them thoughts and ideas they find of interest; is an opportunity for discussion; is a challenge. 12.
2.	It is work related and seems worthwhile; provides a background to their studies; they become aware of their own role in relation to the industry. 11.	They see it as useful and relevant although different; for some it gives an insight into the industry. 18.
3.	The lecturers have more freedom than in the other components. 3.	The lecturer is interested in what he is teaching. 3.

Completion of Sentence 5.

The students often do not enjoy Industrial Studies because...

1.	They are not good at writing and other school like activities; they are required to deal with abstractions which is alien to them. 8.	It is like school, it's hard work; they are not prepared to meet the challenge. 3.
2.	They refuse to see its relevance; regard it as an intrusion as it is not related to their trade. 18.	Some can't find it relevant; they are only interested in their own trade; they haven't the experience to see its relevance. 25.
3.	It could be bad presentation, bad teaching. 6.	Bad teaching; treated as an isolated subject 11.

TABLE 5

Question 3. 'Do you think course content should be given for Industrial Studies?'

Teachers in favour - Craft teachers 20/40(50%)

General studies teachers 20/38(53%)

Item	Reasons	Craft	G.S.
1.	Teachers need more guidance; they don't understand learning objectives or don't find them helpful.	14	15
2.	Teachers need help so they don't make IS into another technology lesson.	3	4
3.	If there is no course content IS isn't valued; could show it to students; it would make the lesson more purposeful; make it more like the rest of the course.	8	2
4.	Would give it standards in respect of level and content; teachers don't know what level is expected.	12	5
5.	Course content would help integrate General and Industrial Studies.	1	1

Teachers Opposed - Craft teachers 20/40(50%)

General studies teachers 18/38(47%)

Item	Reasons	Craft	G.S.
1.	IS needs to be allowed a wide range of subject and level to suit the students' (and teachers') abilities. Teachers need to work from their own initiative.	18	4
2.	IS would lose its local flavour if given course content. It needs to be flexible.	7	15
3.	IS needs to be adaptable so it can be fitted to a particular trade.	6	-
4.	Course content would take too long to cover.	3	-
5.	Course content would have to be kept up to date.	1	-
6.	If course content not right it would do more harm than good.	2	-
7.	Course content is confusing in other parts of the course.	1	-
8.	Learning objectives are guidance enough.	2	7
9.	Some guidelines would be better than course content.	-	3

TABLE 6

Question 5. 'Do you think General Studies should be given course content/learning objectives?'

Teachers in favour - Craft teachers 28/40(70%)  
 General studies teachers 23/38(61%)  
 (2/40 'Don't know')

Item	Reasons	Craft	G.S.
1.	To give general studies teachers more guidance.	21	14
2.	To have something to show to students and others to reassure them; to help GS to be accepted.	3	3
3.	General Studies is part of the course and so should be like the rest of it; it would show City and Guilds were backing it.	9	7
4.	It would enable the link with technical studies to be made more easily.	10	2
5.	There is a core of knowledge and basic skills which should be the concern of GS.	-	2

Teachers Opposed - Craft teachers 10/40(25%)  
 General studies teachers 15/38(39%)

Item	Reasons	Craft	G.S.
1.	General Studies needs to adapt to teachers' abilities and individual class needs; should be free to incorporate topicality; it is different from technical studies in these respects.	6	13
2.	General Studies teachers are professional people This college already has a good framework	3	2
3.	City & Guilds are not good at it; I don't like learning objectives.	1	8

TABLE 7

Craft teachers response to question 11c  
'Do you think Industrial Studies should be  
assessed by CGLI'  
Teachers in favour: 22/34

<u>ITEM</u>	<u>Reasons</u>	
1.	Industrial Studies needs guidance in what should be done, and external assesment would help bring that about.	7.
2.	It would give Industrial Studies more value in everybodies' eyes; provide students with motivation and give impetus to the teacher; it would ensure it was properly taught.	11.
3.	It would help give a standard and uniformity to the teaching; would make it more objective.	7.

Teachers opposed: 12/34

	<u>Reasons</u>	
1.	City and Guilds are not in a position to do it; they don't know the localilty or the students. It would be too difficult to organise.	10.
2.	We are quite able to do it ourselves.	6.



TABLE 8

General Studies teachers response to  
Question 11c. 'Do you think General Studies  
should have some form of external assessment'  
Teachers in favour: 13/34

Comments: It would be useful to have it done by a moderator, as a check on the teaching. City & Guilds 772. Communication Skills scheme would be a good model. It should be done like TEC, with college participation. It would make it a more essential part of the course. It would give more motivation to the students. It could be done by a City & Guilds moderating panel. The College Assessment Panel could be taken over by an external consortium.

One General Studies head of section contributed the following longer comment: At present General Studies is not clearly identifiable as being an assessed component although there are some questions in the multi-choice which are based on General Studies and the students may be required to produce answers to questions in the exams which involve the use of communication skills. An exam is not suitable. Assignments, more rigorously assessed than at present, would be better, possibly with a multi-choice. Assessment should be built into the course in such a way as to incorporate Industrial Studies, General Studies and the existing Communication Skills certificate. This could be done by CGLI. Anything that could be done to identify General Studies as part of the assessment would be to the benefit of all.

Teachers opposed: 20/34 (1 'Don't know')

- |    | <u>Reasons</u>  |    |
|----|---|----|
| 1. | CGLI are not good at it   | 8. |
| 2. | It is not in the nature of General Studies to be externally assessed; there are too many intangibles. | 4. |
| 3. | General Studies must have flexibility   | 9. |
| 4. | I don't agree with the pass/fail principle.   | 2. |

TABLE 9

Craft teachers' response to Question 5b.  
'What do you think should be the aims for  
General Studies'?

ITEM

- |    |   |     |
|----|---|-----|
| 1. | To develop the students personally; widen his horizons; give them knowledge of life in general; help them get on with all sorts of people; get rid of prejudices; to look at his attitudes and standards; help him to be aware; to give him the ability to think. | 24. |
| 2. | To help students communicate better; to help them cope with the rest of their course.   | 22. |
| 3. | To bridge the gap between work and life; to go beyond what we do with them; to give a background to our teaching; to help with job satisfaction.  | 9.  |
| 4. | To develop the students' social skills; to help with the practical aspects of our complex modern life.  | 9.  |
| 5. | To help the students be socially responsible.   | 4.  |

TABLE 10

Teachers' Opinions.

Completion of Sentence 2.

The greatest problem for general studies teachers when teaching craft students is..

General Studies teachers

Craft teachers.

Students lack of acceptance of General Studies; inability to understand long-term aims; lack of motivation; wide range of ability.

21. Students find it hard to accept need for General Studies. 8.

Teachers don't know enough about the students' background at work or socially; find it hard to get the right relationship; to motivate the students; get frustrated that they can't achieve their aims.

8. Teachers find it hard to relate to students; they have no relevant experience etc. 22.

The nature of General Studies; its difficult to relate it in a meaningful way to the students' lives and interests; its difficult to give it relevance and educational value.

9. -----

No opinion. 10.

TABLE 11a Craft teachers introduction to Industrial Studies.  
(see Question 6.)

College	Date of introduction	Method of introduction	See code below.		
			Very useful 1.	Quite useful 2.	Not much use 3.
1.	1972	(Non-teaching HOD)	5.		3.
	1972		5.		3.
	1977		1. 4.		3.
	1979		1.		1.
2.	1973	(non-teaching HOD)	3. 7. 1.		1.
	1973		1. 4.		2.
	1975		1. 4.		2.
	1976		2.		3.
3.	1973	(non-teaching HOD)	1.		3.
	1973		4.		2.
	1973		6.		3.
	1978		1.		3.
4.	1972	(non-teaching HOD)	3. 4. 1. 7.		2.
	1972		8.		2.
	1975		1.		3.
	1976		8. 1.		3.
5.	1972		4.		1.
	1976		1. 8.		2.
	1979		4. 1.		1.
	1980		4.		1.
6.	1972		5. 7.		1.
	1972		3. 7.		1.
	1976		4. 1.		2.
	1976		4. 1.		2.
7.	1972		5. 1		1.
	1975		4. 8		2.
	1975		4. 8		2.
	1981		4. 1. 8.		2.
8.	1972	(non-teaching HOD)	5.		1.
	1972		4.		1.
	1979		6.		1.
	1981		2.		3.
9.	1973		1.		2.
	1974		4.		3.
	1974		4.		3.
	1977		4.		3.
10.	1972		5.		1.
	1972		4.		2.
	1978		4.		3.
	1981		4.		3.

TABLE 11a (continued)

Totals	Date of introduction Teachers who started:	Teachers who considered introduction:
	From the beginning 18	1. Very useful - 12
	Early days, 1974-77 13	2. Quite useful - 13
	Recent 9	3. Not much use - 15
	<u>Methods of introduction</u>	<u>Number of teachers</u> <u>(first only)</u>
<u>Code</u>		
1.	Syllabus pamphlet.	9.
2.	Learning objectives extracted from syllabus.	2.
3.	Through connections with CGLI eg. examining panel.	3.
4.	Through help from own college; sometimes just given topics to teach.	16.
5.	Through going to meetings or conferences outside the college eg. at Huddersfield, Bolton, Guildford.	6.
6.	Through a teacher training course.	2.
7.	Reading the Policy Statement circulated by CGLI.	-
8.	Through the scheme produced at Bolton conference, or through reading the textbooks.	2.

TABLE 11b

Craft teachers taking Industrial Studies classes. Total 34.  
 (See Question 7)

<u>Classes taken</u>	<u>Number of craft teachers</u>
1 - 2 classes	25.
3 - 5 classes	7.
6 - 10 classes	1.
Full time	1.
Teachers wanting to teach <u>more</u> Industrial Studies.	10.
(2 others said more if it were better co-ordinated with General Studies.)	
Teachers wanting to teach <u>less</u> Industrial Studies.	6.
Teachers wanting to teach the <u>same</u> amount.	16.

Comments of craft teachers on teaching Industrial Studies

I enjoy it (1 said only with own students)	4.
I think it very useful to the students (1 said only parts of it were useful)	3.
Its more informal than the rest of the course; there is more feedback; it gives me an opportunity to meet students of other crafts.	4.
I find it interesting; its a challenge.	5.
I would like more (or better) liaison with General Studies.	5.
I prefer to teach other things - own craft, advanced.	8.
The students resent it; they are hostile.	4.
Its hard to assess its effectiveness; its too vague.	2.
Its too much extra work; its a very demanding type of teaching; it needs a lot more time to prepare it.	7.
Its a change but I don't want too much of it.	1.
Its not good for my career to do too much of it.	1.
Its not examined so there is no incentive.	1.
Its not as rewarding as other teaching.	1.

TABLE 12

General Studies Teachers Backgrounds

<u>College</u>	<u>Introduction to</u>		<u>Teacher Training</u> →		<u>Value</u>	<u>Experience outside teaching</u>	<u>Values</u>
	<u>Date</u>	<u>Method</u>	<u>Type</u>	<u>(See codes below)</u>			
1	1979 3	5.2.	2.	1.	Many jobs in industry Many jobs in industry, including building. Short periods only. More would have been useful.	5.	
	1978 3	5.2.	5.	2.			
	1971 2	1.3.6.	-	-			
2	1971 2	3.	2.	2.	----- ----- -----	-	
	1972 2	3.	1.	2.			
	1976 3	1.	1.	2.			
3.	1972 2	3.6	3.	1	Technical writing. Technical writing. O.P.C.S. interviewer. Mental hospital assistant. Variety of jobs and unemployed.	3.1 3. 1.2.7. 7.	
	1973 2	5.	-	-			
	1979 3	2.	1.	1.			
	1978 3	1.	1.	1.			
4	1973 2	1.	1.	1.	----- Wide range of jobs including building. Wide range of jobs including building. -----	- 1.7.4.5. 1.7. -	
	1980 3	5.	-	-			
	1978 3	5.	2.	1.			
5.	1973 2	5.6.	4.	1.	Working in accounting dept. of a brewery. -----	1.4. -	
	1973 2	4.	2.	2.			
	1981 3	3.5.1.	2.	3.			

TABLE 12 (continued)

<u>College</u>	<u>Date</u>	<u>Method</u>	<u>Type</u>	<u>Values</u>	<u>Experience outside teaching</u>	<u>Values</u>
6.	1967 1	5	5.	1.	In N.C.B. and in building.	4.5.6.
	1967 1	1.6.	2.	1.	Variety of jobs, including a firm of flooring specialists.	5.7.
	1967 1	4.	5.	1.	Civil Servant (DES)	6.7.
7.	1966 1	1.6.5.	-	-	In advertising and the Consumer Association.	6.2.7.
	1976 3	1.2.	2.	1.	-----	-
	1977 3	5.6.	1.	3.	In commerce and much travelled.	7.
	1974 2	5.6.	-	-	In the Post Office and work study analyst.	2.7.
8.	1965 1	4.5.3	5.	1.	With an engineering company.	1.7.
	1965 1	3.6.	5.	2.	With an insurance company and in a factory.	4.7.
	1964 1	3.4.1.5.	3.5.	2.	Short periods only.	-
9.	1968 1	5.3	2.	1.	-----	-
	1970 2	5.	1.	1.	-----	-
	1975 2	5.	1.	1.	-----	-
					Road haulage	1.4.7.
10.	1965 1	5.	2.	1.	Architectural librarian	1.2.7.
	1966 1	4.2.	2.	2.	Apprentice at I.T.T. Technician at technical college.	2.5.
	1973 2	7.	2.	2.	Computer programming. Copy writing.	3.
	1972 3.	5.	2.	1.	-----	-
<u>Totals</u>	1 - 10	1 - 7	1 - 8	1 - 18		1 - 8
	2 - 14	2 - 5	2 - 12	2 - 9		2 - 5
	3 - 10	3 - 9	3 - 2	3 - 2		3 - 3
		4 - 5	4 - 1			4 - 6
		5 - 19	5 - 6			5 - 6
		6 - 8				6 - 4
		7 - 1				7 - 14



TABLE 12 (continued)

Code for dates

- 1 = 1960's
- 2 = 1970's
- 3 = late 70's to 1981

Code for method of introduction to General Studies (can be several)

1. University course, reading etc.
2. Teacher training college (Garnett, Bolton etc.)
3. Applying for a job in related field, then given GS to teach.
4. Through own experience of GS as a student.
5. Through talking to friends or experience in other field of education.
6. 'Baptism of fire' or 'Thrown in at the deep end.'
7. By an occupational psychologist.

Code for type of teacher training

1. P.G.C.E. or Diploma in Education or B.Ed.
2. Certificate of Education (Garnett etc) or C & G Teacher's Cert.
3. Part-time courses in associated subjects (Drama etc.)
4. Teacher training in primary education.
5. Teacher training in secondary education.

Code for value of teacher training

1. Very useful.
2. Of limited use.
3. Not useful.

Code for value of work experience

1. Learnt about the workings of industry,
2. Learnt how to get on with people of all sorts.
3. Learnt to use language effectively.
4. It helped me in relating to the students.
5. Helps in relating study to the work situation.
6. It gave me a subject area.
7. It gave me experience outside teaching.

TABLE 13

General Studies teachers taking construction Craft classes. - TOTAL 34

<u>Classes taken</u>	<u>Number of General Studies teachers</u>
1 - 2 classes	6.
3 - 5 classes	14.
6 - 10 classes	10.
More than 10	4.
Teachers wanting to teach <u>more</u> craft level General Studies. (only 3 of these said so without reservation)	9.
Teachers wanting to teach <u>less</u> craft level General Studies. (1 of these said he would like more if it were better structured).	8.
Teachers wanting to teach the <u>same</u> amount.	17.
<u>Comments of general studies teachers on craft classes.</u>	
I enjoy it; I like the students	11.
I like to specialize; there is always scope for more development in craft level.	3.
I find it very hard work; these students take a lot of energy; the input is far heavier than with TEC students; I can't relate to them the way I would like.	9.
I haven't time to develop it although I need to keep in touch.	6.
I like a variety in my teaching; I have a good balance now.	13.
I prefer - (another teaching level mentioned.) I don't find craft level very satisfying.	8.

TABLE 14

Teachers in favour: Question 4a 'Do you think the  
incorporation of Industrial Studies  
into General Studies a good idea?'

Craft Teachers 37/40

General Studies teachers 35/38.

<u>Item</u>	<u>Reasons</u>	<u>Craft</u>	<u>G.S.</u>
1.	It helps students to make the connection between General Studies and their trade. When done in isolation GS fails.	12.	-
	It shows students that GS is an integral part of their course. There should be a close liaison to reinforce what everyone is doing.	-	23.
2.	It gives an opportunity for integration with their department; it widens everybody's horizons.	8	-
	If the link is really attempted, the result can amount to much more than the two separate parts; its one of the things education is about - making links.	-	7.
3.	Craft teachers need help. They are not well versed in literacy and numeracy, which is important for the students.	10	-
	There is a danger of too much specialization if general studies teachers are not involved; they can expand on parts of the syllabus, especially section 3. General Studies should be part of all FE.	13	-
	It helps the General Studies aim of broadening the course; makes it more purposeful. GS should be related to student's vocational training. There is too much emphasis on the industrial side if no general studies teacher is involved in Industrial Studies.	-	17.
4.	General Studies and Industrial Studies tend to run into each other. GS is the basis of IS.	9	-
	IS is the same thing as GS only from a different focus. Students find separate packages of information difficult to grasp.	-	10.
5.	It is a good idea if you can make it work.	4.	-
	Its a good idea if its feasible, but I don't understand exactly what is meant by the link.	-	6.
6.	It gives General Studies better status.	-	4.
7.	It gives a way to control General Studies.	6.	-

TABLE 15

Comments of teachers in answer to Question 4c. - 'Do you wish to add anything in respect of co-operation with - general studies/craft teachers'

<u>Craft teachers on general studies teachers</u>	<u>General studies teachers on craft teachers</u>
1. I would like much more co-operation. (Often qualified by 'general studies teachers need more guidance' etc.)	16. It needs improving. I'm in favour of it and do all I can to improve it. 22.
2. Relationships are good but it is very difficult.	17. Co-operation is good; they help with discipline etc. 16.
3. There are too many problems of time and space; too many people are involved. (Some felt these problems could be dealt with)	9. There is often a physical separation (staff rooms etc.) Co-operation is fraught with difficulties but very rewarding even so. Technical management is not supportive. 10.
4. Craft teachers cannot relate to general studies teachers; they don't want to go along with us; they don't have knowledge of industry etc.	11. There will always be suspicion between craftsmen and academics. Craft teachers are not used to discussing their teaching. Inertia a strong element. They see IS as peripheral whereas we share its aims. There is an element of them not wanting us to poach. 10.
5. General studies teachers are often better at co-operation than craft. They sometimes do technical subjects and this makes it easier to discuss teaching methods.	4.
6. There is no need for co-operation.	2. Co-operation should be done the same as with the TEC courses. 1.

TABLE 16

Teachers' Opinions

Completion of sentence 3. The most difficult thing about combining with another teacher is ..

<u>ITEM</u>	<u>Craft</u>	<u>G.S.</u>
1. Personality problems; fear, threat to status; inability to co-operate; the other teacher's lack of knowledge of what is being taught.	6.	8.
2. The clash of ideas, outlook, background of the teachers; students often share craft teacher's attitudes; difficulty of finding common ground.	15.	11.
3. Lack of time, opportunity to discuss; difficulties of time-tabling and physical arrangements not suitable (small rooms, use of different buildings etc.)	15.	19.
4. No problems.	4.	-

TABLE 17 (continued)

Incorporation of IS into GS in 10 Colleges in the London Area.

<u>Colleges</u>	<u>Replies of Craft teachers</u>	<u>Replies of General Studies teachers</u>
8.	Original allocation of IS to GS not kept to by them. Now useful informal discussions and we use some of their handouts. Recent meetings to discuss GS work.	One GS teacher saw IS as quite separate from GS. Others not aware of any link but would like one.
9.	GS teachers doing some IS classes. Some planning of the teaching at individual and policy levels. Two thought not enough co-ordination on IS teaching.	Teaching and planning of IS between individuals, organised by IS co-ordinator. Only incidental relationship with GS classes. Some combined IS project work.
10.	We do team teaching in which we fully integrate IS and GS, with GS teacher alongside craft teacher in combined classes. Also combined one day courses. Some find it difficult to really share the planning which needs ample discussion and good GS teachers who are willing to liaise with craft teachers. Also some find it difficult to share the teaching which needs practice and guidance. Planning is on 3 levels - general meetings three times a year; meetings between two people who are teaching together at beginning of term; and discussion before each lesson.	Combining of all IS and GS. The teaching is planned and taught by members of the craft and GS department. It can still amount to separate teaching of technical and GS elements, even when both are in the same classroom, but good planning can result in very effective teaching.

TABLE 17 (continued)

Incorporation of IS into GS in 10 Colleges in the London Area.

<u>Colleges</u>	<u>Replies of Craft teachers</u>	<u>Replies of General Studies teachers</u>
8.	Original allocation of IS to GS not kept to by them. Now useful informal discussions and we use some of their handouts. Recent meetings to discuss GS work.	One GS teacher saw IS as quite separate from GS. Others not aware of any link but would like one.
9.	GS teachers doing some IS classes. Some planning of the teaching at individual and policy levels. Two thought not enough co-ordination on IS teaching.	Teaching and planning of IS between individuals, organised by IS co-ordinator. Only incidental relationship with GS classes. Some combined IS project work.
10.	We do team teaching in which we fully integrate IS and GS, with GS teacher alongside craft teacher in combined classes. Also combined one day courses. Some find it difficult to really share the planning which needs ample discussion and good GS teachers who are willing to liaise with craft teachers. Also some find it difficult to share the teaching which needs practice and guidance. Planning is on 3 levels - general meetings three times a year; meetings between two people who are teaching together at beginning of term; and discussion before each lesson.	Combining of all IS and GS. The teaching is planned and taught by members of the craft and GS department. It can still amount to separate teaching of technical and GS elements, even when both are in the same classroom, but good planning can result in very effective teaching.

TABLE 18

Those designated as being in charge of Industrial Studies were as follows:

College	Head of Teaching Team for Construction Crafts.	Not teaching Industrial Studies
1.	Head of Department of Building Crafts.	"
2.	Principal Lecturer in Charge of Building Crafts.	"
3.	Head of Department of Building Crafts.	"
4.	Lecturer in charge of Industrial Studies.	"
5.	Director of Studies - Construction and Surveying.	"
6.	Lecturer in charge of Industrial Studies (unofficial)	"
7.	Principal Lecturer - Department of Construction.	Teaching Industrial Studies
8.	Lecturer in Charge of Industrial Studies.	Not Teaching Industrial Studies
9.	Director of Studies - Craft Courses.	Teaching Industrial Studies
10.		Teaching Industrial Studies

Contact with City and Guilds.

Question 1 on schedule for teachers in charge of Industrial Studies. Appendix A1

Receipt of information from CGLI	General Policy Statement	Policy Broadsheet	Enquiries to CGLI	Suggestions to CGLI
1. Promptly	Yes	Regularly	Phone to make a general enquiry	Yes. Through National Assoc. Plumbing Teachers
2. Promptly	Yes	Regularly	Phone someone I know	Yes. Wrote a paper for the Advisory Committee.
3. Quite promptly	No.	No. unless HoD marks something	Phone a particular department	No. except through involvement with Committee once.



TABLE 18 (continued)

	Receipt of information from CGLI		Enquiries to CGLI	Suggestions to CGLI
	General Policy Statement	Broadsheet		
4.	Promptly	No	Regularly	Regularly
5.	Often held up	No	Irregularly	Irregularly
6.	Could be delays	No	Irregularly	Irregularly
7.	Get it eventually	Yes	No. Available in library	No. Available
8.	Internal hold-ups	Yes	Regularly	Regularly
9.	Fairly prompt	No	No. Parts of it put	No. Parts of it put
10.	Reasonably prompt	Yes	Regularly	Regularly

Totals saying YES  
6/10      5/10      5/10

5/10

Yes, frequently. I've been connected with them for a long time.  
 Yes, about IS but response unsatisfactory.  
 No. Only when they ask us.  
 No. Would come from course tutors etc.  
 Yes. About arrangements for marking assignments.  
 No. Except in role of examiner.  
 No. Only when asked.  
 No response to complaints.

Phone someone I know.  
 Phone to make a general enquiry  
 Phone a particular department  
 Phone to make a general enquiry  
 Phone. Might be someone I know  
 Only discuss it with someone in college.  
 Phone a particular department

TABLE 19

Dissemination of information inside the colleges. Craft teachers

Question 2 on schedule for teachers in charge of Industrial Studies. Appendix A1.

<u>College</u>	<u>Method</u>	<u>Attendance at meetings</u>	<u>Staff with special interest in Industrial Studies</u>
1.	Distribute documents. Have informal discussions.	Meetings about whole course. RAC curriculum development in IS.	No-one, but encourage it in order to get more co-ordination.
2.	Meetings of all teachers. Distribute documents. Write if necessary.	Not in last 4 years, except RAC curriculum development meetings.	Yes, one teacher doing IS full time. Encourage it because IS needs interest.
3.	Meetings only of course tutors. Circulate documents	NAPT & P&D Teachers meetings. Staff who attend write report if of general interest.	Two are interested. Don't encourage, makes time tabling difficult if one does a lot.
4.	Informal discussions. Full meetings once a term. Section heads more often. Might write something, ask for comments. Some informal discussion.	We are represented at most meetings and on most committees.	No-one, but one teacher was given responsibility to produce an IS package which could be used by all sections. Don't encourage it. All should be interested.
5.	Informal discussion. Some meetings. Might write something.	I went to Wolverhampton in approx. 1973. Don't know about others.	Two teachers interested. Encourage it for continuity.
6.	Distribute documents. Informal discussions.	Some have been to Coombe Lodge. One to Wolverhampton 1981. Nothing in IS.	Two teachers interested. Encourage it because it broadens their scope and gives continuity.

TABLE 19 (continued)

<u>College Method</u>	<u>Attendance at meetings</u>	<u>Staff with special interest in Industrial Studies</u>
7. Write memos. Might distribute documents. Informal discussions.	I went to Huddersfield Conference 1973.	One other interested. Not for me to encourage specialization. Best if everyone interested.
8. Section head meetings. Send documents to people if of particular interest to them.	I went to Bolton Conference 1974. Others to some meetings but lack of time sometimes prevents attendance.	Yes, one interested. Encourage it. IS needs someone to help. Its a difficult subject.
9. IS Panel meetings Write memos. Informal discussions.	I went to RAC Curriculum Development meeting on IS. Not heard of any others.	Some are interested. Encourage it because they produce information for the general good.
10. Meetings of all teachers. Informal discussions. Documents sent to section heads.	I went to Huddersfield when IS introduced. Would be me that goes usually. Some go to NAPT conference.	One teacher interested but encourage everyone to participate. Its wrong to teach only own craft.

TABLE 20

Development of Industrial Studies in the Colleges.

Question 3 on schedule for teachers in charge of Industrial Studies. Appendix A1

'How would you like to see the teaching of Industrial Studies developed in your department'

<u>Improvements wanted</u> How would you like to see IS develop in your dept.,	<u>Ideas and values being developed</u> which are not part of the formal curriculum	<u>Problems of CITB students</u> Are there any problems assoc. with full time students in relation to Industrial Studies.
1. More resources - information on building failures; samples of materials.	I have no knowledge of any.	They find it difficult to see themselves as builders.
2. More teachers to teach across the crafts. Resources centre.	Hope people are more aware of depth of other crafts.	None.
3. Perhaps have a specialist IS teacher and a GS teacher attached to the department.	I don't see much benefit from that.	None.
4. Relate IS content more to the requirements of industry or to the changes of industry.	They get an overview of whole C.I. which is important at craft level.	They lack site experience Need visits and films.
5. One teacher to be responsible for all IS and co-ordinate the others teaching it.	Presentation of work seen to be important. Such ideas assist good building.	They lack site experience
6. Staff must keep on top of the subject. Need good rapport between GS and technical teachers.	They learn to think for themselves. Some do begin to develop.	None.

TABLE 20 (continued)

Improvements wanted How would you like to see IS develop in your dept.,	Ideas and values being developed which are not part of the formal curriculum	Problems of CITB students Are there any problems assoc. with full time students in relation to Industrial Studies.
7. Much more integration with GS - make sure our scheme really works. More official support.	High standard of craftsmanship. Staff offer students any help they need.	None. We have extra time with them, so its better.
8. More visits outside. Facilities for telephoning exercises etc.	Bound to pick up ideas. Staff co-operation on projects. Insist on good time keeping.	None. IS more academic so not outside their expectations,
9. More commitment from staff. Should stay with IS for whole year. Need a block of remission time to develop resources and teaching methods.	Start to appreciate aesthetic qualities of buildings; acquire positive attitude to conservation. Develop good relations with students.	Some discipline problems. They become a group very quickly.
10. More time and thought put to developing what we have now.	Improved attitudes to standards and appreciation of knowledge.	Shortage of time. Childish attitude to IS.

TABLE 21

Question 8. - Appendix A2 - Teaching arrangements for  
Industrial Studies

College	Trades combined	Teacher of a different trade	Combine with G.S. teachers	Special arrangements for IS.
1	Never	Occasionally for convenience	Never	Occasional outside visits for P&D and full time C&J
2	Never	One teacher doing other trades	P&D combine occasionally for projects	Use all media. Some visits and looking at buildings
3	Never	Occasionally for convenience	Some combined visits	Slides. Occasional outside speakers
4	Never	Never	Never	Look at buildings; visit other work-shops; speaker on safety
5	Never	Never. One would like to	No, except one GS teacher did a joint project once.	Some films. Slides taken by teacher. Safety speaker.
6	No. Did some years ago	No. Did some years ago	No. Did some years ago	Look at buildings Visit other work-shops. Some outside visits.
7	Some-times	Occasionally	Never	Look at buildings. Some films. Slides. Visit other work-shops. Some outside visits.
8	Never	Occasionally for convenience	Never	Look at buildings. Visit other work-shops. Own slides. Speaker on safety.
9	Some-times	Yes, when possible	Yes on visits and assignments	Look at buildings. Emphasis on students own work. Discussions. Visits. Occasional speakers.
10	Yes when possible	Yes encourage it	Yes in class room, on visits	More use of library. Use own slides. Look at buildings. Visits. Speakers. Emphasis on students own work.

TABLE 21 (continued)

24/34 craft teachers were dissatisfied with the teaching arrangements.

The following reasons for dissatisfaction were given:

1. There should be more of a link with General Studies 5.
2. There is not enough support for IS from the top 5.
3. IS too isolated. It needs co-ordinating in the department. Should be taught to a common syllabus. 5.
4. IS needs more facilities and a special room to teach it in. 5.
5. Teachers need educating about Industrial Studies. 1.
6. The objectives are not being achieved. 1.
7. We need more time for preparation and discussion. 1.
8. Prefer to be more section based. 1.

TABLE 22

Question 10 - College Schemes of work for Industrial StudiesCollege

1. No. College one drawn up by several people in 1978 no longer used. Each teacher has own list of topics to be covered. No learning objectives, or suggested teaching methods.
2. No. Section has its own list of topics drawn up by one person common person in each trade in consultation with others and help scheme. from HoD. One section's scheme has specific learning objectives. No suggested teaching methods.
3. No. Each teacher works from City & Guilds learning objectives.
4. No. Two teachers use their own adaptation of the scheme drawn up at the Bolton Conference in 1974. The other one uses City & Guilds learning objectives only.
5. Yes. Drawn up by one person specially interested. Contains specific objectives written from City & Guilds general objectives; time allocation; course content. (suggested teaching methods to come) Used by 2 others with their own modifications. 1 other teacher works from City & Guilds general objectives.
6. Yes. Scheme drawn up by one person specially interested with some consultation. Contains general course content allocated over 3 years.
7. Yes. Joint scheme of work drawn up by Industrial Studies specialist in consultation with General Studies and circulated for comment. Gives general topic area and course content. Used by all teachers except 1 who uses City and Guilds learning objectives. (See appendix D)
8. No. Some use adaptations of the scheme drawn up at the Bolton Conference in 1974. Others use the City & Guilds learning objectives.
9. Yes. Drawn up by all concerned at the time. Contains general topic areas and course content; also suggested time allocation and resources. Gives aims as introduction.  
(See appendix D)
10. Yes. Joint scheme of work drawn up by one person specially interested in consultation with all concerned at the time. Contains allocation of a theme for each term, with a aims for that term; general course content and suggested resources and teaching methods. (See appendix D)



TABLE 23

Question 12 - Use of Textbooks in Industrial Studies

<u>Huddersfield Handbook.</u>			<u>Boucher</u>		
Nos.	How used	Comments.	Nos.	How used.	Comments.
1.	2 Objective tests ideas, sketches	Useful	2	Sketches, ideas for presenting material.	Useful. Needs a lot of amplifying.
2.	1 Ideas for content	Helpful. Too difficult to use.	1	Extracts	Too limited except at first.
3.	0 -	-	2	Extracts. As a whole text book	Cover most of the topics needed.
4.	2 Student activities; lesson	Good format. Useful.	2	Extracts.	Useful guide to depth of treatment.
5.	2 Ideas for content and structure of programme. M.C. tests	Too difficult. Idea of projects good.	2	Extracts.	Useful but no depth.
6.	0 -	-	1	Ideas for content.	Would like a set for the students.
7.	1 Ideas on content and M.C. tests.	It would take too long to use.	1	Ideas	Own ideas can be triggered off by it.
8.	0 -	-	3	Extracts. Ideas.	Clear drawings. Concise notes. Good for Safety. Otherwise it doesn't cover things fully.
9.	1 For basic ideas.	Prefer to develop my ideas.	2	For basic ideas.	Useful to see how he has approached a topic.
10.	3 Use any ideas I can find.	Very useful but no time to use it.	3	Exercises and notes.	Have reservations A bit limited.
Total: 12			Total: 19		

TABLE 24

## Question 9 - How craft teachers introduce students to Industrial Studies.

Item	
1. Tell them the value of Industrial Studies as I see it. (See table 2 for details)	23.
2. Tell them what the syllabus will be or perhaps only tell them part of it.	18.
3. Explain the assessment procedure. Tell them they must pass it to get their certificate.	11.
4. Give them a handout about Industrial Studies; sometimes discuss it.	9.
5. Tell them how it fits in with the rest of the course.	8.
6. Prompt questions and have a discussion about it.	4.
7. Tell them the City & Guilds aims for Industrial Studies.	4.
8. Explain how it will be taught.	2.

## Question 11a - Craft teachers' method of assessment of Industrial Studies.

1. Short answers or word filled into unfinished sentences; objective tests.	25.
2. Assignments; some type of test which requires some thought and self-expression.	20.
3. Projects; implies longer term activity which requires the exercise of initiative. eg. design of a bungalow. (These two activities are not always distinguishable)	9.
4. Essay type questions which call for some expression of students' own views.	7.
5. Oral tests. Could include role-play.	6.
6. Contributions in class.	5.
7. Note-books checked.	2.

## Question 11b - Do you ever fail a student in Industrial Studies?

Yes - if they have not shown willing; they have to put the work in; if no effort made. But they can usually repeat their final assessment test. Most unlikely they will fail, they only need 40%; there is no reason for not passing.	19.
No - It would stop them getting their certificate; their certificate is too important to them to fail on the Industrial Studies; they always get it right; they get satisfactory whatever marks they get. Its too general to fail in; we are not sure of the standard anyway.	15.

TABLE 25

Question 13a - Evaluation of the teaching in Industrial Studies -  
and  
Question 13b - Revision of scheme of work.

College.	Method of evaluation.	Revision of scheme of work.
1.	No formal method. Some informal discussion with the students.	No system. Teachers update own teaching programme constantly.
2.	No formal method. No tie-up between teachers but some informal discussion in each section. Only subjective evaluation.	Individual teachers update own notes yearly. One teacher renews most notes every three years.
3.	No method apart from the tests on the students.	No system.
4.	No method. Sectional meetings are on college matters. We talk to students but its a pep talk really.	Its rare.
5.	Those doing IS try to meet but there is little time. We get some informal feedback.	Lecturer in charge is working on revision but thinks it should be left for another two years. One lecturer reviews own material constantly.
6.	We have much informal discussion - we are always together. Tests show how effective the teaching is.	It has not been changed in 5 years but we discuss it every year.
7.	Only the results of the assignments show effectiveness. Informal help given by teacher in charge of IS. One teacher has formal talks.	After 3 years those concerned asked to comment on a revision which is circulated. Teachers always revising own materials.
8.	Informal discussion between teachers only.	Never revised.
9.	Occasional review meetings about the assignments and administrative matters. Discussion between individuals.	Continually considered for revision. One teacher said not revised in 5 years.
10.	Formal meetings of all teachers concerned in joint course. 3rd year students interviewed formally.	Reviewed annually at joint meetings and revised where necessary.

TABLE 26

Question 13c - Would you welcome more interchange of ideas and materials between colleges?

College

1. Yes - RAC are doing it. Yes - if the right colleges are involved (eg. NESCOL) Yes - but I don't know how. Yes.
2. Yes - anything is good which will further educational standards; Yes, but ideas only. Other peoples materials are hard to use. Yes, copies could be circulated and discussed and then incorporated. Yes.
3. Yes, but it should be done in the college first. Yes. Yes. Yes.
4. Yes but it should be part of a consortium looking at the whole course. Yes, exchange of ideas is good but we have given out materials before and got nothing back. Yes, but don't know how. Yes.
5. Yes, it could mean more involvement of all staff in curriculum development. Yes but I am happy with my own materials. Yes. Yes.
6. No, you can get tied up with a lot of meetings which don't produce much. Yes. Yes. Yes.
7. Yes, exchange of ideas can be very fruitful. Yes but it would need to be more to do with method than with subject content. Should be equal contributions from all concerned. Yes. Yes.
8. Yes, it would inject new ideas into the teaching but colleges would need to be shown how to use them by those who had tried it. Yes, you can get good ideas from others. Yes but not sure its practical. Yes.
9. Yes, RAC might produce a working document. Materials could go into our resources bank and the people concerned could be informed of their presence. Perhaps have two meetings a year, in the local area and then do the wider area by post. Yes, just basic ideas to be developed by others. Yes, its always worth trying. No.
10. Yes - ideas and materials can be fitted into the teaching through discussions. Yes, if they dont try to force their ideas on me. I dont mind them taking my ideas. Yes. No - we have it all.

TABLE 27

Question 14 - 'Can you give me any feedback from employers about the courses especially the IS component?'

Craft teachers.

College

1. Feedback is very favourable; the course satisfies their needs, especially the CITB course which has construction projects. Other 3 teachers said they got no feedback.
  
2. There is a lot of discontent about the training and education of apprentices being expressed now. Industry feels colleges ought to be training, but they have an educational role. There is no coherent system of training. CITB course is only for 6 months. Industry says the training they get is irrelevant. Employers see IS as a waste of time and don't distinguish it from GS although on several occasions they have been convinced of its value.  
Employers are only concerned with the students trade. Several employers say their boys are showing a good interest in the industry - especially those working for their fathers. Also a T.O has asked the IS teacher to keep any eye out for lads with a flare for promotion.
  
3. They feel that Part 3 of IS is something the individual should do in his own time.  
We get it back from employers when the boys don't understand what IS is about.  
Other 2 teachers said they got no feedback.
  
4. Very little feed back except to criticise an odd isolated thing. They are reasonably satisfied with the whole course - not aware of IS.  
Other 2 teachers said no feedback.
  
5. Most employers are not aware of IS or even of the other contents of C&G syllabus. However the recent NFBTE report on Apprenticeship gives a fair statement of their views - depreciating standards of craftsmanship in level and range. Also C&G assignments are too easy. Don't think the employers are aware of what we do. Perhaps they trust us. Other 2 teachers - no feedback.

TABLE 27 (continued)

College

6. Employers are generally satisfied; more than satisfied with the CITB course. Some still moan about GS. Other subjects not directly related to the trades are 'tarred with the same brush'. IS if known about gets dismissed because its nothing to do with their trade. Some complain about GS. Otherwise no feedback.
7. They let us get on with it; they think the college knows what its doing. IS is put on the reports but it doesn't come into the CITB open nights. We visit some firms and have open days. They think IS is a waste of time but it could do good if public relations were done better, although some employers don't want students to have a broad view. They won't stay if they are too good.
8. Employers have little criticism of the course. They might not like GS. Majority can be convinced of the value of IS. 3 other teachers said no feedback but thought they didn't know of IS.
9. Employers often link IS with GS. Not many take a real interest in college. One teacher said, 'We don't take a real interest in IS. It could be left out all together'. They seem to be happy to have IS as part of the course.
10. No feedback means they accept it. There used to be constant complaints about GS. General/Industrial Studies Liaison teacher goes to Craft Advisory Committee meetings. I've given talks to employers organizations on how we do the combined course and there has been a good response. On CITB Open days IS work is included. Also exhibit on occasional College open days. Most employers are apathetic. Some T.O's have commented favourably. Other 2 teachers said no feedback.

TABLE 28

Those designated as being in charge Craft General Studies were as follows:

<u>College</u>			
1.	Responsibilities divided between Lecturer in charge Communication Skills and Lecturer in charge General Studies.		
2.	Lecturer in charge Craft General Studies - Department Liberal Studies.		
3.	Lecturer in charge General and Communication Studies - Department General Education.		
4.	Senior Lecturer in charge General Studies - Department General Education.		
5.	No lecturer in charge - General Studies taught by craft teachers. 2 Communication Skills lecturers service craft Department.		
6.	Principal Lecturer in charge General and Communication Studies - attached to School of Science, Arts and Food Technology.		
7.	Co-ordinator for General Studies - attached to Department Building and Surveying.		
8.	Senior Lecturer in charge General Studies - attached to Department Professional and Business Studies.		
9.	Head of Department General and Communication Studies.		
10.	Lecturer in charge craft General Studies - attached to Department Construction Studies.		

Contact with City & Guilds.

Question 1a on schedule for teachers in charge of Craft General Studies. Appendix A1

Receipt of information from CGLI		Enquiries to CGLI	Suggestions to CGLI
General	Craft syllabus <u>Yes/GS.</u>	Broadsheet <u>Occasionally</u> see one.	General enquiry or write To 772 moderators only.
1. Nothing.	Yes - not recently	Occasionally see one	To 772 assessors, otherwise general enquiry.
2. It varies	Yes - not recently	Occasionally see one	To 772 assessors, otherwise general enquiry.

TABLE 28 (continued)

Receipt of information from CGLI	Craft syllabus	Broadsheet	Enquiries to CGLI	Suggestions to CGLI
General	Yes - only keep GS pages.	Occasionally HoD marks one for my reference.	Would try to find a name.	Yes, through ALE & GS Section. NATFHE.
3. Some delay through HoD.	Yes.	Regularly	Don't know any names. Would write.	Yes, via HoD.
4. Promptly	-	-	-	-
5. Desultory	Seen it but I'm only concerned with GS.	See them around occasionally.	I would speak to someone I know.	Frequently as ALE representative on Committees.
6. No, and only if specific on GS	Yes. Not lately	See them around occasionally.	Phone a general enquiry or through ALE representative.	Yes. about 772.
7. Everything goes to HoD. I asked to be put on mailing list but it hasn't happened.	Yes.	No.	I know someone and would write as well.	No.
8. Promptly.	Yes.	Regularly.	Know name for 772 not otherwise.	Yes, re 772.
9. Some delay via HoD	Yes, but not when I started.	No, although asked to be sent it regularly.	General enquiry or write	Yes.
10.				



TABLE 28 (continued)

Question 1b - Appendix A1.

Comments on CGLI green book on 'General Studies' by those in charge of Craft General Studies.

1. It is quite useful, although very general. It expresses views now pretty universally held. Its good because it leaves a lot to the teacher.
2. I've not seen it.
3. It allows good teaching to happen. I would like to see a different way of dealing with assessment and curriculum development.
4. I'm in agreement with its aims and underlying philosophy, but it would be useful to have more specific guidelines.
5. No respondent.
6. Its a policy statement, which CGLI have partly ignored. Its about attitudes which is important, but you've still got to get it into the classroom.
7. It is useful as a reference but it is now out of date.
8. I welcomed it. It was important at the time; it gave credence to General Studies. It puts emphasis on the importance of language, compared to which the Communication Skills approach is a retrograde step.
9. It was a useful statement. It improved the status of General Studies in colleges.
10. It is very philosophical and inspiring but rather too remote from reality.

Dissemination of information inside the colleges.

## Question 2 on schedule for teachers in charge of Craft General Studies.

Appendix A1

<u>Method</u>	<u>Attendance at meetings</u>	<u>Staff with special interest in craft GS.</u>
1 All 4 methods	Arrange own visits to other colleges to exchange information	Yes. encourage it. Good to have someone keeping up to date.
2 All 4 methods	To Birmingham (ALE) N.E. London Poly. in conjunction with CGLI.	Yes; but encourage all to do everything; feed-back between different areas useful
3 All methods but meetings best time tabled weekly	To Hounslow (GSW) 772 conferences. ALE meetings	Myself. Don't encourage it. Need to spread the load. Its harder work and it doesn't help advancement.
4 Meetings only very occasional. Other 3 methods.	Encourage them to go. Courses on 772 (ILEA) Madingly. Building Teachers Conference.	Yes. Don't encourage it to the exclusion of other areas. We need teachers to be flexible.
5 -----	-----	-----
6. Meetings once a month. Documents to those directly concerned.	To Hounslow (GSW)	Yes; its good to delegate responsibility. (Teacher responsible for craft work not teaching it.)
7. All 4 methods, including a periodic newsletter.	Most have been to at least 1. We ran our own seminar on 772. GSW. meetings.	Myself. Best for teachers to have variety but don't discourage special interest.
8. Meetings are difficult; try 1 a month; informal discussions; circulate documents as well as additional information.	Madingly (ALE) 1968. Salisbury (DES) 1964. Brooklands on craft GS (ALE and GSW)	Yes but encourage flexibility for time-tabling reasons and in teachers own interests.
9. Meetings once a month and 3 other methods. Write discussion documents.	Coombe Lodge. Hounslow (GSW) Ran own conference for ALE. Buxton on 772	All interested but try to give everyone a spectrum of students; otherwise bad for job prospects.
10. All 3 methods include occasional newsletter. No official documents.	Basingstoke (ALE) Hounslow & Brooklands (GSW). Redhill (ALE) on Communication Workshop.	Yes. Encourage it. Useful to have committed people who can spend time on resources and increase expertise.

TABLE 30

Development of Craft General Studies in the Colleges.

Question 3 on schedule for teachers in charge of Craft General Studies.  
Appendix A1.

<u>Improvements wanted.</u>	<u>Ideas and Values being developed.</u>
1. Integration of General and Communication Studies and more techniques of integration with craft teachers; they need to become more aware of the broader framework.	Try to break down students prejudices and poor self image but need better accommodation; more mixing with other students, especially girls.
2. Less splitting of General and Communication Studies. More exciting resources be provided on a departmental basis so teachers could teach better with less anxiety. More participation in Industrial Studies.	Students learn things like adapting to the situation; getting on with each other and the teacher. They can pick up new attitudes. Its difficult to know what they are learning.
3. Relationship of GS with '772' being worked out. Make use of 'Basis for Choice' ideas. Better relationship with craft tutors.	As described in NATFHE GS Section document on Craft General Studies.
4. More curriculum development in GS and Industrial Studies. More cohesion between staff and between GS and Communication Skills. Production of learning packages. Closer integration of of GS in the Craft Certificate - One certificate for all aspects including Industrial Studies.	Students will always draw conclusions which are not the main intention. They can develop during the course and can be encouraged by it. GS is a process of socialization.
5. -----	-----
6. More systematic assessment of Craft GS. Give it more status as in TEC.	The personal development side is the whole of GS. They gain in self respect in project work.
7. More teachers with the right experience (eg. as craft apprentices) GS get more into the workshops; I would like to see it completely integrated with craft teaching. We can teach craft teachers a lot about teaching.	Our influence on student's opinions is difficult to gauge - probably very little. Perhaps they get ideas from us.

TABLE 30 (continued)

Development of Craft General Studies in the Colleges.

Question 3 on schedule for teachers in charge of Craft General Studies.

<u>Improvements wanted.</u>	<u>Ideas and Values being developed.</u>
8. We need access to wider range of staff - recent trend is for GS teachers to be trained in Communication. That narrows it. Also we are inhibited by having no GS department.	Not sure of having any influence on their values - contact is too transient although there is more regard for GS lately.
9. Rationalization of assessment and validation procedures for GS. We need to review the study option system we have here; perhaps return to the single class based scheme. We could still have some negotiation between the teacher and students.	They develop pride in their work also responsibility towards the community. We try to develop ability to evolve their own ideas.
10. More linking between all components of the course - more sense of team work; more staff development. Also more student based teaching - this requires a lot of co-operation between staff. More use of Communication Workshop methods.	Students get the idea of co-operation from the team teaching; see teachers are able to disagree and also learn from each other. They may get the value of learning and also the worth of the building crafts.

TABLE 31

Question 8a. 'What contact do you have with the construction craft department', and

Question 8b. 'Do you ever combine with craft teachers in the clasroom, on visits, speakers, other?'

Colleggs

1. No serious contact; very little discussion of the teaching, except with P&D section which is imroving as I get to know craft teacher. Contact casual but pleasant.
2. Informal contact in joint staff-room. Formal contact through craft tutor. GS department organizes joint meeting twice a year about GS. Keep in touch for good relationships. Combine on visits. Did combine in classroom some time ago.
3. Informal contact only, except for memos through HoD. Combine occasionally for visits and speakers - quite willing to combine in the classroom. Craft teachers support me. Contact with some quite frequent; I make a special effort to keep in touch.
4. Frequent contacts across the sections and at all levels. Have combined for Communication Skills and for visits and speakers. We worked together on a community project. Very little contact, mainly just messages. Regular personal contact but on a social level really.
5. Contact good because I'm in their department but even then I have to take the initiative, but need more contact with others teaching General Studies. No combining except sometimes invited to go on visits or see films.
6. Meet them frequently on social and preffessional level. No combining. Very regular contact meet them before and after class and socially; invited to go on their visits.
7. Attached to building department; contact good but I'm cut off from general studies teachers; I need more support. There is not much response to attempts to discuss educational topics. Combine occasionally on visits and I know them socially. Combine occasionally in classroom, visits and for speakers. Contact only on chatty level; only combine very occasionally for speakers.
8. We meet informally and on Union Education Sub-committee. Combine occasionally on visits and for speakers; invited to their functions. Only very casual contact. No combining. Meet on chat level only.
9. A lot of contact. We combine on assignments, visits and for speakers; also on MSC course. We have role amongst staff to introduce them to experiential learning. There is genuine respect between the two groups. Contact good, except for 1 section. A lot of personal contact but not really about Industrial Studies. Contact between the departments not good. Only social contact and on union committees.

TABLE 31 (continued)

10. A lot of contact - informal discussions and arranged meetings. Also meet socially. We help each other in lots of ways - eg. with displays. Combine in many activities. One day courses very valuable. General studies and craft teachers get to know each other very well. Limited weekly contact, chats. They are not anti General Studies; they are always very helpful and friendly.

Question 8c 'Are you satisfied with the teaching arrangements for Craft General Studies?'

21/34 (62%) general studies teachers dissatisfied.

Reasons for dissatisfaction

1. Inadequate contact with craft department; lack of information on classes and on individual students; need to pool resources. 13
2. We need better accommodation, equipment and technician backup. Time tabling is not flexible enough. 11
3. Not enough concern for General Studies from technical staff. Needs formal acceptance; everything left too much to chance. 3
4. We need longer class time. Shorter class time. 6
5. General Studies needs to be better integrated with the rest of their course. 3
6. There needs to be more curriculum development in craft education generally. 2
7. There are too many part timers in General Studies - its college policy. Its not satisfactory having general studies teachers doing only 1 or 2 craft classes just for time tabling convenience. 2

TABLE 32

Question 10 - College Schemes of Work for Craft General Studies?

College

1. Only for Communications for 1st year full-time students. Otherwise each teacher has own list of topics to be covered.
2. No. Have been developing a scheme of work for a college certificate in General and Communication Studies, (as alternative to 772).
3. Yes. An agreed list of topics drawn up by one person in consultation with those concerned, which divides the work up between first and second years. It has no authority.
4. Yes, drawn up by Head of General Studies section in consultation with Craft Department. General Studies staff asked for comments at the time, but no consultation since.
5. Yes, drawn up by the only teacher involved, but the other teacher now being consulted. List of topics varying with different crafts involved.
6. Yes - drawn up by HoD in consultation at the time with those involved (10 years ago) Some use their own version although they keep to the year allocations. It is a list of recommended topics.
7. Yes - drawn up by General Studies and Industrial Studies lecturers in consultation in order to link the two together.(See appendix D) One said he didn't use it.
8. No - have given the craft department a 'statement of intent'. Others said there was a 'very flexible' scheme of work, drawn up by all concerned.
9. No college scheme of work but an outline of options was drawn up some years ago. Otherwise everyone has their own scheme of work - each person offers an option and explains it to the students.
10. Yes - drawn up by one person in consultation with others concerned. Consultation has increased over the years with annual re-assessment. It includes suggested topics, teaching methods and gives resources available. (See appendix D)

TABLE 33

## Question 12.

<u>Textbooks used in G.S.</u>	<u>Teaching methods used in G.S.</u>
1. Extracts from business and sociology books. Forbes & Ross 'Landscape in Towns' Boucher for some diagrams but like Huddersfield Handbook it is too specialized. Communication skills have a bank of materials.	Discussion work important. CCTV. Have always used student centred learning.
2. A wide range of books and materials. Miles & Miles 'Communicating' right level. Important to be up to date so use articles etc. Many sets of books - extracts need to be adapted to students needs.	Always used a range of methods - group work - simulations and discussions. Learnt some methods from teaching 772 and from courses and conferences; they are valuable for showing students there is often not just a right or wrong. Complete range of methods; it has to be an individual approach to a group of individuals. Learnt from other teachers but have to adapt for own use.
3. All kinds of materials; variety of class sets and handouts from all sources. Use textbooks for information but not to put across ideas.	Have always used whole range of methods. Video making. There's a need to bring real situations into the classroom - teacher as interpreter. Video games and simulation particular interest, learnt from ILEA teacher's Centre. It needs good lead in and follow up. Handouts and questions to go with them. Try to give variety; slides, group work. Learnt at teacher training college.
4. Extracts from Huddersfield Handbook and Boucher, plus a range of other books, slide sets etc. Own resources centre.	Team teaching but not developed as much as would like; workshop strategy especially for Communication Skills. Library exercises. Learnt about them through courses. Group work, useful but difficult - part-time day boys don't see themselves as students. Have always used a variety of methods. Use unspectacular but acceptable methods.
5. Use a lot of extracts. Books on General and Communication Studies for Technical Students useful if adapted. Boucher and own material adapted for each craft.	Students use tape recorder; OHPs and group work; try to vary activities. Look for best method to carry out an idea. Learned from other teachers but would like an AVA course. Always in need of new ways to put material over.



TABLE 33 (continued)

<u>Textbook used in G.S.</u>	<u>Teaching methods used in G.S.</u>
<p>6. Extracts from sets of books but most are either too simple or too difficult. Boucher and Huddersfield Handbook a little, otherwise own exercise and work sheets.</p>	<p>Team teaching and unit teaching. Video camera. Chalk and talk; Slides; OHP. Simulation games; video films and camera work. Learnt from teacher training course. Use leaflets (eg. from CAB) and handouts a lot.</p>
<p>7. Selections from Boucher and a lot of other books. Own material - there is not much useful material available. G.S. is very individual. The teacher is the main resource.</p>	<p>Video camera; tape recorder; lecturettes from students, chalk and talk from me. Always trying new things. Learnt some from ALE conferences and from other teachers. Games, structured experience, discussions. These allow students to devise their own content. Learnt from teacher training. Discussion, video and films - can all be over used, but students claim they can't write down what they want to say. Project method used a lot - allows a mature approach.</p>
<p>8. Boucher a bit, but it is rather beneath the students. Handouts and leaflets. Own notes and M.C. questions. Huddersfield a little. Own materials, handouts and lectures. Use books on English for TEC students sometimes.</p>	<p>Use of library important; also slides; projects. Learned them through reading and talking and experimenting. Have always used a wide variety of methods gleaned from reading, teacher training or own experience. Informal approach suits craft students best. Videos, report writing; hand around artifacts for discussion. It takes a lot of preparation. I'm always having to justify methods - which is valid. There is room for improvement.</p>
<p>9. Use own exercises mostly. We have an IS resources bank eg. pamphlets on Improvement Grants. Also Boucher and Huddersfield handbook. D.O.E. leaflets; slides. Prizeman 'Your house, the outside view.' Prefer own material.</p>	<p>Encourage new methods by getting teachers to go out to industry for short periods to learn about students' world. Library work, slides; group work eg. group of 6 produce folder on a building material - get the involvement of students. Audio-visual aids; discussion. Site visits or from the street - students required to do specific tasks for assessment. Discovery-type learning.</p>

TABLE 33 (continued)

<u>Textbooks used in G.S.</u>	<u>Teaching methods used in G.S.</u>
10. Resources bank of handouts and leaflets. D.O.E. etc N.H.B.C. Manual. Huddersfield Handbook modified; Boucher for some extracts. Use as many sources as possible. 'Urban Growth' Series, Modern Industry' etc. Own material.	Team teaching - it works but it could be better if more time for discussion. The basic philosophy needs to be constantly clarified and re-inforced. Wide range of teaching methods; individualised learning; role-play; projects; questions involving self marking; visits; etc. all necessary in order to keep up interest and touch on all areas of educational development. Barrier to success of methods is too much difference from other lessons, students conservative, and they prefer to be passive.

TABLE 34

Question 9 - How general studies teachers introduce students to  
General Studies.

<u>Item</u>		
1.	Explain the underlying principles of General Studies	23.
2.	Explain the place of General Studies in their course.	16.
3.	Explain the methods of assessment used.	13.
4.	Go through the syllabus, or part of it, to show what they will be doing; describe the sort of activities included.	14.
5.	Explain the importance of developing their communication skills. Refer to their needs in order to progress upwards.	13.
6.	Discuss with students what should be done; get their suggestions for what would be relevant.	9.
7.	Introduce myself to them, to each other and to the college.	5.
8.	Explain how Industrial Studies relates to General Studies.	3.
9.	Discuss the difference between training and education.	3.

Question 11a - General Studies teachers' methods of assessment.

1.	Short exercises in class, including questionnaires to 'see what is getting through'; can involve use of library, form filling, letter writing, comprehension.	26
2.	Assignments, often done over a period, perhaps multi-task, perhaps their final assessment.	15.
3.	Class-room contribution, interest shown in discussions.	13.
4.	Oral exercises, sometimes involving self-assessment.	9.
5.	Short essays which include facts and opinions.	7.
6.	Projects.	5.
7.	Course-work folder (772 type of marking). Some others said they give marks for how well note books are kept.	5.

Question 11b - Do you ever fail a student in General Studies?

1.	<u>Yes</u> if they refuse to do the work but allow for low level of achievement; only if they don't show any interest.	25
	<u>No</u> because they need encouragement not failure; their department takes no notice of it anyway; we are looking for improvement not absolute ability.	9.

TABLE 35

Question 13c - Evaluation of the teaching in General Studies  
- Revision of the Scheme of Work.

<u>College</u>	<u>Method of Evaluation</u>	<u>Revision of the Scheme of Work</u>
1.	Two teachers concerned with GS for craft students talk a lot together. Students given some options so they don't complain too much. Communication Studies - meetings of teachers but don't want to lose the students' confidence by asking them.	Should be done every year. Hope to soon. Communication Studies - revised annually.
2.	No system, but teachers concerned with craft students meet quite often. Also information filters back via craft teachers. Thinking about a system but don't want to encroach on teachers' autonomy. I assess myself; discuss the teaching with students who are behaving badly.	Considered for revision all the time - we can't settle on anything. We have a college certificate panel which would be a means for revision.
3.	Weekly meetings of whole section - as a support group it is very important. Some materials and methods workshops. We take students attitudes into account.	Continual revision - tends to be at the end of year. Revision done individually.
4.	No system. Constant informal evaluation. Feedback from craft teachers	Revision overdue. Individuals revising all the time.
5.	No system. We are not involved in department meetings. Did a questionnaire about the course with one group of students.	Review the scheme of work. all the time.
6.	No system	Revision is mooted. Individuals consider revision all the time.
7.	Have 'swop shop' of examples of teaching end each year. I talk individually to every student once a year. Others have class discussions about the course. Meetings are not concerned with effectiveness. Individuals assess own teaching. Craft teachers also give feedback.	After 3 years.

TABLE 35 (continued)

<u>College</u>	<u>Method of Evaluation</u>	<u>Revision of the Scheme of Work</u>
	8. No formal method - we don't have enough meetings. Get feedback from other staff and students because we have made enough noise to be noticed. Lecturer II's sit in on classes occasionally.	Individuals revise it all the time.
	9. Feed back from other depts., and from the Industrial Studies assignments all the time. System for General Studies options, of class reps. talking to the teacher at the end. There is constant debate about the options between the teachers. Someone observes new teachers and talks with them about it. Staff meetings on Communication Skills.	General Studies options revised every few years. Policy meetings every week.
	10. Formal meetings between all craft and general studies teachers concerned, 2 or 3 times a year, to discuss methods and future plans. Interviews with selected 3rd year students for feed back on the course. Much informal discussion between members of the teaching team. Results of written work discussed in class so students can put their point of view.	Considered for revision formally end of each year. Informally often during the year.

TABLE 36

Question 13b - 'Would you welcome more interchange of ideas and materials between colleges?' General Studies teachers

College

1. Yes, would welcome a resources bank. Yes, we already go to meetings and visit other colleges. Yes. Yes.
2. Yes, there is already a consortium of 5 colleges locally. Yes, it needs to be wider than just about 772. Yes. Yes.
3. Yes, I'm on the ALE Working Party who are recommending a consortium. Yes, but materials are not necessarily useable by others. Yes. Yes.
4. Yes. Yes, but it seems to mean handing out our materials. Yes. Yes.
5. Yes. Yes, went to see Westminster Curriculum Development Project.
6. Yes, it goes on anyway on an individual basis; Yes. Yes. Yes. we will probably call some local college together when we have time.
7. Yes, but it could be better co-ordinated inside the college too. Yes, might be useful, depends what it produced. Yes. Yes.
8. Yes, its beginning. New NATFHE General Studies Section a good idea, could play an important part although reservations about it at the moment. Yes, can't have enough interchange although you need to be able to see the wood for the trees. Yes. Yes.
9. Yes, but ideas like that are not always translated into reality. Yes, we welcome exchange of ideas. Not sure like the idea of a consortium, might be too rigid; staff might not feel any affiliation towards it. Would welcome more rapprochement between colleges. No, you can be snowed under. Yes.
10. Yes, could be very valuable well run, but it mustn't be didactic. Yes, could be a lot of time and effort spent without much to show for it. Yes, but each college has its own problems; exchange of materials alone wouldn't work. Yes, its is done on and individual basis anyway.

Feed back from Employers to General Studies TeachersCollege

1. Never hear anything. No feed back, but I get the impression they are not happy for students to have General Studies; they don't see the connection between rounded education and the long term benefits in terms of better citizens. No, never even invited to the employers' evenings - could be quite interesting. No feed back.
2. Only what I hear at the Building Crafts Advisory Committee. Training Officers and industrialists think Communication Skills are marvellous. Anything is better than the old style General Studies. The Chairman of Governors and myself produced a paper on Communication Skills which was circulated to employers and we had a useful follow up debate on it at the Advisory Committee meeting. There is no regular pattern of meeting with employers. We have been to a few firms to look around and talk but there is a lack of understanding of General Studies.  
Only the parent department is in touch with the employers, although we are invited to the end of year employers' evening. In smaller colleges, where we probably share classrooms, general studies teachers might see more of the employers. It might be because some employers are out of touch that they are so suspicious. I went around getting information from firms for a simulation exercise on the building industry, about 4 years ago, and I get a lot of feed back; I also told them a lot because I had to explain what I was doing, so it did something for them and a lot for me. I've kept in touch with some of them.
3. Not enough feed back; we need a consultative committee like with TEC to talk about what we are doing. We need to answer for ourselves not through the craft Principal Lecturer. We did present a statement on General Studies to the Consultative Committee. There is mistrust and misunderstanding of General Studies in the craft department; things need to be sorted out before troubles arise, its too late afterwards. Only feed back is through course tutor. It seems as if the employer is our enemy.
4. Yes, some feed back; support for attempts to relate General Studies to craft work. The bigger employers have a wider view of the purpose of the course. Other 3 teachers said they had no feed back.
5. There is no system for providing feed back, so we only get it second-hand. It seems employers can't see the point of General Studies although they complain that the students can't read or write.

TABLE 37 (continued)

Feed back from Employers to General Studies Teachers

6. If nobody complains, I don't look for trouble. We get feed back when there is trouble, through the craft teachers. There is no adverse criticism now, so no feed back. There should be a system for feed back.
7. I'm keen on feed back; I talk to training officers when possible. There are fewer complaints than there used to be. I know they see General Studies as a waste of time. I visit firms in the summer to find out about the students' environment. I have to impress on them I am serious and don't intend to waste their time. I only get feed back through the students. More feed back would be useful.
8. Only get feed back through the Principal Lecturer. The lads use their employers to avoid General Studies. There is very little contact, only between tutor and employer. I'm all for more contact but I'm not sure what would be the nature of it. The employers are more interested in the lads' craft skills.
9. Yes, we do get feed back. The liaison panels are very useful. (meetings between employers and senior staff.) There are the usual complaints but we also try to influence them. They help when staff have remission time to go into industry for 2 or 3 weeks, and with the community service option. We have offered the industry a translation service. No contact at all. I've never been on any committee. Feed back would be advantageous but it is usually negative anyway. I think they have an unexamined ambiguous attitude to General Studies. They are more keen on Industrial Studies. We hear only the bad things.
10. We have occasional contact with Training Officers and attend some craft Advisory Committees but they are not very enlightening. Otherwise we hear only what craft department report. At Open Days some employers appear interested in the joint course. Training officers come to talk to students about their work. I've never met any employers but I've heard from Don Carrol at Hounslow that employers want extremely liberal General Studies. They are often more liberal than vocational teachers. I've had no feed back.



TABLE 38

Overall view of City & Guilds Course - Employers' responses  
(Appendix A4)

Question 1 - 'What contribution do you think the C&G course makes to the development of your employees?'

Number of firms interviewed : 6 large, 10 medium, 14 small - Total 30.

Large = over 500 employees approx.

Medium = " 100/500 " "

Small = " 1/100 " "

	<u>Firms</u>			Totals
	Large	Medium	Small	
It gives them the theoretical aspects; a framework of construction.	1	5	8	14
It is essential to have a qualification. City & Guilds is recognised so it gives proof of achievement and it gives the lads something to aim for.	3	4	3	10
It gives them practical skills which they can develop on site; it standardizes the way things are done on site; they test what they learn at college, on site.	3	2	3	8
It gives them an insight into the working of the industry; broadens their outlook; gives a general education; gives a sense of responsibility; gives them a general appreciation of what they are doing.	1	4	2	7
It supplements what we give them at work; puts in what we leave out.	1	1	4	6
Its a good staging post for further development and training. We can get an idea of their potential by discussing them with their tutors.	2	1	-	3
<u>Additional comments about the course.</u>				
Employers actually stating that the course makes a good contribution to employees' development	4	5	5	14
They need to be taught the old skills, especially now with the emphasis on refurbishing.	-	-	4	4
The course gives guidelines but it is too theoretical, the lads think they know it all. Some colleges are better on the practical side than others.	-	1	3	4
The course needs to be more adaptable, otherwise it will lose its edge.	-	-	2	2
The course doesn't make tradesmen; they just pass the exams parrot fashion. It used to mean more when it was more practical.	-	-	2	2

TABLE 39

Length of apprenticeships - Employers' reponses

Question 2 - 'Do you think the apprenticeship time is long enough to produce a satisfactory craftsman?'

	<u>Firms</u>			
	Large	Medium	Small	
No, 4 years would be better; even 5 for some trades. They are too immature after 3 years. Especially for high quality work.	4	7	9	20
Yes; about right for the run of the mill work; if you are not expecting too much.	1	2	1	4
It depends on the individual; 3 years is too long for some.	1	1	2	4
It depends on the trade - various times suggested, e.g C&J - 4 or 5 years, P&D - less than 3.	-	-	2	2

Typical additional comments about the length of appreticeships made by the employers.

They need more time in apprenticeship for their own development but for the immediate purposes of the industry 3 years is enough.

They are more committed when they go to college and they appreciate themselves, that they need more than 3 years to acquire the skills.

The good ones even, haven't learned their trade in 3 years; much more could be done in 4. (One firm doesn't put their apprentices on full pay until after the 4th year - with their agreement when they start.)

Even accepting that they will mature later, 3 years is still too short.

TABLE 40

Details of course Aims - Employers' responses

	<u>Question 3 - Do you think the course.....should.....</u>	<u>is doing</u>
1.	teach the student to use the tools of his trade and acquire its basic skills.	29 said Yes. 1 No, - its our job. 27 said Yes. 3 said not doing it enough.
2.	teach him to understand the principles of his craft.	27 said Yes. 3 said some colleges don't do it.
3.	teach him to be aware of the safety factors in all that he does at work.	23/7 said not enough being done by colleges; the young need it driven home.
4.	help him to be flexible in his attitudes so that he can do the work of another trade if necessary, and accept changes in his own trade.	7/20 said Yes to the first part. 3 don't know. 19 said Yes to the first part 22 said Yes to the second part
5.	give him good standards in respect of the quality of his work.	23 said Yes. 7 had reservations.
6.	teach him to be responsible about time keeping and his behaviour generally.	24 said Yes. 4 said No. 2 said Don't know.

TABLE 40 (continued)

	Question 3 - Do you think the course.....should.....	.....is doing
7.	help him to be reasonably well informed about the construction industry.	27 said Yes. 3 said No.
		22 said Yes. 6 said No. 2 said Don't know.
8.	help him to see himself as a member of a team and appreciate the problems of others at work.	28 said Yes. 1 said No. 1 said Don't know.
		17 said Yes. 5 said No. 8 said Don't know.
9.	help him to communicated well and understand instructions.	28 said Yes. 2 said No.
		25 said Yes. 1 said No. 4 said Don't know.
10.	help him to think clearly and rationally.	29 said Yes. 1 said No.
		22 said Yes. 4 said No. 1 said Don't know.

TABLE 41

Industrial Studies as part of course. - Employers' responses

Question 4 - 'Have you heard of the Industrial Studies component as part of the course at college?'

Yes - 16. Several had only heard of it; few had seen the C&G syllabus, several confused it with the General Studies component.

No - 14.

Do you remember where you heard of it?

At college - 6.

Seen it on the weekly reports from the college - 4.

From Advisory Committee which I attend - 3.

From Group Training Officer - 1.

From the students - 2.

What do you consider to be the reason for its inclusion in the course?

To give the apprentices greater awareness; its important for them to have a complete picture; they should have a wide spectrum; it broadens their outlook, apprenticeship training is very narrow - (a lot of lecturers are blinkered themselves.) To help produce socially acceptable housing; give the apprentices a sense of responsibility. - 20.

To help them with their progression upwards. - 3.

Do you think it is a good idea?.

Yes - 22. 9 with reservations - for example - shouldn't spend too much time on it; it shouldn't be at too high a level; as long as it doesn't clog their minds up; if it is properly controlled; if it is well taught; not Part III.

No - 8. Its too 'high falutin'; its too high a level for plumbers; there is too little time; its the work with their hands which is important; its for after they are 21.

TABLE 42

General Studies as part of course. - Employers' responses

Question 5 - 'Are you familiar with the General Studies component as part of the course?'

Yes. - 22. (4 added 'to some degree').

No. - 8.

What do you see as its purpose?

It is for future foremen.  
It gives them a second chance to get confidence in themselves.  
It develops their communication ability and broadens them a bit.  
It is for general interest but it should be only 20% of the time.  
It is for the general aspects which they wouldn't get in their own job.  
They can't do their craft without numeracy and so on.  
It is doing what the schools didn't do.  
It improves their awareness of life.  
It helps their education.

Other comments made about General Studies.

I'd rather they were doing it in their own time.  
They are trying to do too much.  
I'm not sure of its usefulness.  
It depends what is done - can cause a lot of 'agro'.  
It shouldn't be a blank cheque. It is too widely interpreted.  
The implementation is wrong.  
There is too much talk.  
The schools should have done it.  
College is not the place for it.  
The students need it as it is in the syllabus but colleges interpret it wrong.  
It is good if students are asked to do what they understand.  
It is generally good, gives them a lot of information.  
I wouldn't want a purely practical course.

What do you feel about students going on industrial visits? having speakers, from the local planning office for example.?

Yes, good idea - visits	- 20	speakers	- 16
with reservations	- 7	with reservations	- 9
No.	- 3	No.	- 5

Changes in the industry - Employers' responses

Question 6a - 'Have there been a lot of changes in the construction industry in the last 20 years in your opinion?'

Yes. - 29

No. - 1 (Changes are not relevant to the basic crafts)

Comments made by employers about the changes.

New products and new materials have been introduced - plastics, leadless paints, sprayed plaster, dry lining, new mastics and adhesives, pre-mix concrete, man-made boards, laminated timber.  
New techniques - timber frames, roof trusses, drain laying.  
Improved machinery and electric tools; increased production generally.

Changes are accelerating, forced on by rising costs. There were drastic changes in the industry after the war; the industrialization of industry dispensed with the need for a lot of craftsmanship and the industry has never recovered. This co-incided with shorter apprenticeships. Craftsmen today have less pride in their work; older craftsmen are heavily relied upon but they are fast disappearing. Craftsmen are expected to be able to read drawings.  
More sub-contractors - Loss of loyalty to the firm.

There is a move back to traditional building; also refurbishing of old properties. Old crafts are more needed now than 15 years ago; also a wider range of work needed since the decline of high rise.

New legislation - thermal insulation requirements, Health and Safety at Work Act; better conditions of employment.

Question 6b - 'Have you any suggestions as to how these changes could be reflected in the teaching of student craftsmen?'

Colleges need more feed back from industry; they need to be aware of the changes and act upon them. Teachers should have a period in industry so they can be aware of the practicalities of the changes. City & Guilds courses can't keep up with them. The course should be widened to include new developments.

Students should do more of the traditional skills - would be possible if the apprenticeship was lengthened. They could save old buildings if they learned more about the old type of building - lead for example.

Students should be taken on visits; firms should encourage visits from students to see new techniques being used. Colleges could arrange demonstrations of new materials and equipment. New tools and equipment should be provided. Colleges need project areas.  
Students need more contact with industry - I would like a return to day-release. Versatility in operatives is important.

TABLE 43 (continued)

Colleges do incorporate the changes now; the City & Guilds course is keeping place. The students learn construction anyway. Students see it all on site; there is too much ground work to cover the basic skills; there is a lot to be taught in 3 years. You can't make suggestions from outside.

Colleges should be liaison centres for firms, to help pass on enquiries and advice. We would help if we were invited to. Colleges should not operate in isolation. Technical colleges tend to lag behind industry instead of leading it. They should be tapping industry for new ideas and passing them on.



TABLE 44

Contact with young employees - Employers' responses

Question 7a - 'Do you ever discuss the college course with your employees?'

	<u>Number of employers</u>
No.	2
Yes.	28
Regular meetings arranged in office.	12
Go to see them.	11
Go to see them at college.	8
Casually ask them how they are getting on when seen.	6

Question 7b - 'What contribution do you think the employer should make to the education and training of young craftsmen?'

To give him a broad spectrum of site work, with suitable tradesmen supervising him. Its up to us to get the best out of him; also to consider his career prospects.	27
To keep in touch with college, and pay for his attendance. Show an interest in his work there. Back the college up - help him to see it as other than a necessary evil.	13
To take an interest in him personally; encourage and discipline him. 'A happy man gives better work'.	5
Be involved in industrial training - say what we want. The wrong people are often involved on committees.	2

Question 8 - 'What opinions to you have about the value of full time attendance (and block release) at college as opposed to day release?'

Full time and block preferred.	15
Day release or very short blocks preferred	14
Advantages to both - it depends.	1

TABLE 45

Contact with College - Employers' responses

Question 9a - 'When did you last speak to a member of the college staff about anything to do with the college course or anything to do with your employee's attendance and progress there?'

In the last month.	20
During the last term.	2
During the last year.	8

Reasons for contact (not all respondents gave a reason)

Student's attendance or discipline problems.	5
College prize giving.	5
Committee meetings.	4
Discuss student's progress.	3
About the course or possible future courses.	2
Visit to view the College by Federation of Master Builders.	1

Question 9b - Suggestions for improving the relationship between employers and the college.

No need to, its good already	10
Employers should be brought into the life of the college; more liaison between middle level people (foremen and tutors) and include senior management. All employers invited to visit the college; Christmas buffet. More evenings for employers - ask them their views. Better Open Days.	10
Approach should be from employers - colleges do what they can.	7
Lecturers go to visit apprentices on site; exchange visits; ask employers for information about the students.	4
Improve system of reporting by the colleges; also letter to employers when students first start; not wait too long to tackle discipline problems.	4

TABLE 45 (continued)

Question 10 - 'Are there any comments that you would like to make about anything to do with the education and training of craftsmen in your industry?'

The length of apprenticeship is too short; they need more site experience rather than formal training;

NFBTE Paper good, agree with much of it; colleges should take more account of what builders want; should not be dictated to by City & Guilds. There should be a better balance on advisory committees; even NFBTE still too remote; need a lot of feed back which they don't get.

MSC Vocational Preparation scheme ill thought out; CITB should take a firmer line, but it should not all be left to them, employers Federations should be involved too.

City & Guilds course degraded, can complete apprenticeship without having passed it. I'm happy with Craft training now. Present system not perfect but I can't see any way to better it; its a general course which produces rounded craftsmen which is good although our needs are specialized.

CITB maths and space relationship tests been useful for recruitment; employers don't know how to interview. I only take on those who have been recommended. Advice to young people in school getting better; they ask us if they can show parties of school children round. Quality of intake going up with the employment situation as it is.

Teachers in colleges too old and out of date, they get into a rut; its important to keep up to date; it can be frustrating for them if students not responsive. Perhaps spend a week on site in their holidays.

Some companies are more training minded than others; firms need to be encouraged to take full advantage of training schemes. If apprentices were centrally employed they could be farmed out to small firms so they could help with the training, otherwise they can't afford it. Loyalty is important so perhaps sign on with a firm for 5 years but swop apprentices for wider experience. Increase in labour only contractors has done harm. We pay the apprentices too much, it inhibits intake. I don't see why we should pay for them to be educated, although I'd like to see them getting more education; they get more out of life than an ignorant person.

Students need to be adaptable to do the simple jobs of another trade, so the work can be got on with. College discipline important, otherwise the students get bad habits.

## Chapter 5. INTERPRETATION AND DISCUSSION OF RESULTS.

### THE TEACHERS' VIEW.

Sections 5a to 5g of this chapter are concerned with the results of the interviews conducted with teachers in the ten colleges visited in order to establish the teachers' view of the introduction of the Industrial Studies component into the City and Guilds construction craft schemes.

#### 5a. City and Guilds' Aims as seen by the two groups of teachers.

It was considered necessary to establish the aims to which both groups of teachers were working in order to set the scene for the more detailed investigation into their concepts of the two components under review. With the aid of cards on which City and Guilds aims were printed, teachers were requested to rank the aims in the order of the extent to which they judged them to have been achieved in their Industrial or General Studies teaching. This, in addition to their comments, facilitated the examination of the teachers' acceptance of the stated aims of the City and Guilds and the extent to which the two groups of teachers shared the same aims in relation to the building craft students.

During the interviews, a considerable number of teachers said they considered the aims to be of equal importance. One expressed it thus, 'I see them as equally important; as part of the seamless garment of learning. There is a thread running through them all - the aim being to encourage students to learn how to learn.' However they were asked to arrange them in the order of achievement because it was thought that this would lead to a more realistic appraisal.(see table 1). Some found it difficult to decide on an order of achievement, although all

attempted to do so. It was in anticipation of this difficulty that a further choice was given - 'Would you prefer to say that you achieve them all equally well?' In the event only six chose to say so.

It is of course fair to say, as many did, that the achievement of these aims is extremely difficult to assess. Others pointed out that it is impossible to decide which part of the course is responsible for any one achievement. The course is designed to be closely integrated and these are only two components in it.

Table 1 sets out the order in which teachers ranked their achievement of the aims.

Aim W - 'To help the student craftsman to appreciate the work and problems of other craftsmen engaged in associated occupations and the relationship of his work to theirs.

W is the aim seen by most craft teachers as being the one most nearly achieved in their Industrial Studies teaching 18/40(45%). This result accords with the majority opinion of the value of Industrial Studies in table 2 (item 3). Only one general studies teacher put W as his first choice. He did so because he considered it to be concerned with the affective domain - that is with attitudes. However, 11/38(29%) of general studies teachers put W amongst the first three of their choice, suggesting that it had something of the same meaning for them. 9/38(24%) thought it 'peripheral' to their work or 'requiring specialist knowledge'.

Broadly speaking it may be said that here is an example of some teachers from each group sharing the same aim. Although in commenting on the aims, several craft teachers said they put the emphasis on the practical aspects, such as with W 'helping the students to avoid the mistakes caused by ignoring the work of others', it was quite common for them to use the phrase, 'to see themselves as part of a team'.

Others put it more explicitly. For instance, 'If anyone is going to be a good craftsman, he has got to have an appreciation of what everyone else does - his attitude is most important'. The use of such terms as 'appreciation' and 'attitude' in these comments implies something more than just giving the students technical knowledge.

Several craft teachers pointed out that appreciation of others is a by-product of being involved with another trade on site. It is the result of experience. 'You can point out at college the need to be part of a team but that is all.' The employers, in their interviews, also asserted that this is something that cannot be taught at college.(p.13). Such opinions may reflect the feelings of people of a practical nature but it is important not to lose sight of another point made throughout the interviews - the value of attitudes picked up from craft teachers. Nevertheless the comment does point up the need, so much easier to appreciate than to act upon, for the teacher to involve the students in their learning, preferably in conjunction with other trades, rather than allow them to be passive recipients of information.

Aim B 'To widen the student craftsman's understanding of the industry in which he works and the society in which he lives.'

This is the aim which comes closest to being shared by the two groups of teachers. It was chosen by 15/40(38%) of craft teachers and 14/38(37%) of general studies teachers, as being the aim most nearly achieved by them.

Perhaps because the wording is so general, this aim is particularly adaptable to the ideas of the individual teacher, although the fact that the 'industry' is mentioned first does seem to give it a

bias in that direction. One craft teacher said, 'An understanding of the industry is my basic aim', and another said, 'Students must have an understanding of the industry whatever else they fail to get.'

Comments from some general studies teachers suggest similar priorities.

'B is the one I do best, to show them they are not limited to the small world of their trade.' 'I do tend to concentrate on the industrial side as opposed to the social side, but I might do parts of P 'personal development' while doing B '. 'B is difficult for non-builders; I do try but understanding the society in which he lives is a large part of General Studies.'

Aim P 'To develop the student craftsman as a person, so as to encourage the growth of mature attitudes in industry and in society generally, of powers of thought, reasoning and communication, and of his appreciation of the value of learning.'

This aim was chosen by 21/38(55%) of general studies teachers as the aim they most nearly achieve, although they all acknowledged that it is very hard, if not impossible, to judge to what extent it is being achieved. 4/40(10%) of craft teachers also chose it as their first aim, but 10/40(25%) put it last.

Many general studies teachers said they felt they could only say they would like to think they achieved P best. One said, 'P must be the aim of all education'. The 4 craft teachers who also put it first obviously agreed with this, making such comments as 'P is the hardest to achieve; I would be very satisfied if I achieved a high percentage of that.'

Of the 10 craft teachers who put it last, six of them said it was outside their scope. During discussion it emerged that it was the first phrase, 'to develop the student craftsman as a person' which they

felt to be too ambitious in tone, especially in relation to their experience of Industrial Studies. P also presented some problems to others who felt that boys should not be asked to be concerned with 'that sort of thing' at 16+. Such responses could very often be related to the poor organization and lack of support for the teaching of Industrial Studies in the respondent's college. (This point will be developed further in the section on the Courses, 5g. For instance, table 21 shows 24/34(71%) of craft teachers to be dissatisfied with the teaching arrangements for Industrial Studies in their college. Their reasons for dissatisfaction included, 'There should be more of a link with General Studies.' and 'There should be more support for Industrial Studies from the top.')

It could also be claimed that the craft teachers sense of being rather ineffectual in this area is partly due to the peculiarity of the Further Education system which appears to separate out the 'personal development' of the student as a job for a specialist group of teachers - the general studies teachers - who might as far as the students are concerned have no apparent connection with the work for which they are preparing.

One craft teacher who chose P as his first aim, put the dilemma thus: 'Craft teachers have a dual role - to encourage competency and maturity. There is a danger of leaving the spiritual side to the general studies teachers, but I won't let that happen. In some ways it is a pity the separation ever happened.'

The same kind of anxiety might be illustrated on the 'other side' by the general studies teacher who said, 'They are all aims to which I happily subscribe, but I would be worried if the marginal ones (G 'quality and costs' and W 'teamwork') seemed to be gaining too much weight.' This comment points to the apparent underlying fear of general studies teachers that their efforts will be smothered by the



technical college ethos, or that their special contribution will be either disregarded or taken over by the technical teachers, who have not spent the same amount of time and thought preparing for it. Such fears may be associated with anxiety about job security, but they also reflect the very idealistic nature of the general studies teacher. (This point will be further discussed in Section 5e on the General Studies Teachers.)

Aim Y 'To better equip him to adjust to changes in the nature of his work caused by technological development, changes in industrial conditions, change of job within his own industry or transfer to a similar occupation in another industry.'

Only 1/40(3%) of craft teachers put Y as his first aim and 14/40(35%) put it last. 2/38(5%) general studies teachers put Y first, but only 4/38(10%) put it last.

This response is surprising, especially in view of the fact that Y, with W 'teamwork' appears to be the aim most closely linked with Industrial Studies by City and Guilds. The syllabus pamphlet refers to the inclusion of 'relevant science and technology, with relevant industrial studies, so that the student craftsman ... is better equipped to adjust to changes... '(p.2). Indeed the need for flexibility in construction workers was one of the determining factors in the City and Guilds' Joint Advisory Committee's decision to include the Industrial Studies component in the construction craft courses, as described in chapter 1.

Although Y was not put high on the list of what they thought they were able to achieve, almost every craft teacher had some comment to make about it. These comments perhaps point to some of the reasons for its apparent neglect. For instance, 'Y is too idealistic; you can

only point out the changes.'; 'Y is difficult to get through to students. Its something you can't do at college. It has to come from the firm.'; 'Y is something for later' and 'Its not clear what is meant by Y.'

Yet Y did seem to command some positive response from the general studies teachers. This may have been partly influenced by the current employment situation. Some general studies teachers see counselling students about their future employment prospects as part of their job. Nevertheless, as one general studies teacher, who put Y near the top of his list, said, 'I think right attitudes to work are important but the students gain their attitudes from the craft teachers not from us.'

In college 9, where the general studies teachers were more involved in the teaching of Industrial Studies as such, than in any other college visited, the distinction between their aims in teaching the two components was made explicit. For instance one explained that W 'teamwork' would be his aim for Industrial Studies because he saw it as 'serving the needs of industry', but for General Studies it would be Y because 'it has personal relevance for the student.'

The responses shown on table 1 suggest that many general studies teachers agreed with him in respect of Y, although like W 'teamwork', it is open to a variety of interpretations. One general studies teacher associated the concept of flexibility with 'determinism'. In other words she saw the aim as aiding industry by forcing the individual to dance to its tune. However it is surely not right to assume an exclusive concern with the needs of the construction industry on the part of the JAC. Flexibility in the work situation would appear to be advantageous to all concerned. Indeed a few craft teachers pointed out that the last phrase in Y 'to better equip him to ... transfer to a similar occupation in another (industry).' would not be in the best interests of the construction industry. A final point

might be made here. Teachers in both groups pointed out that if the other aims were achieved, Y would follow automatically. In this case it would be natural for it to be put at or near the end of the list.

Aim G 'To provide an opportunity for the development of responsible attitudes to quality of work and costs.'

G is the aim put last by the greatest number in both groups. 15/40(37%) of craft teachers and 20/38(53%) of general studies teachers did so; and of these 10 craft and 13 general studies said they regarded it as outside their scope.

The most typical comment about G was, 'It is difficult to do because industry neglects it.' On the other hand one craft teacher said, 'Society doesn't hold Industrial Studies principles but we must set high standards.' Other comments suggested that G is the function of the technology lessons rather than of the Industrial or General Studies lessons.

General discussion about the aims.

All the teachers considered the aims very carefully. In answer to the request for comments on them, 19/78(24%) said, 'They are very good aims and valuable to have for guidance.' or words to that effect. 2/78 said, 'They are ridiculously ambitious and quite impossible of achievement.' 2/38 general studies teachers said, 'There is no aim that really points to the main aim of General Studies', and one of them added, 'P comes closest to it but the implication is that education is a preparation for an occupational role, which I think is too limited.'

Others picked out individual aims as being either too ambitious or outside their scope. Others again said that some aims, particularly P 'personal development', Y 'change' and G 'quality and costs' were 'long-term' or that they were for later in the students' development.

The JAC, when devising the schemes, clearly wanted teachers from a wide variety of backgrounds to be able to relate to the aims, while at the same time they needed to keep the needs of the employers and the aspirations of the students in mind. The careful working out of the aims has been described in chapter 1. No aim was intended to be exclusive to any particular component but the fulfilment of many of them required the introduction of the Industrial Studies component, the concept of which was hammered out over a number of years.

The words used to express the aims were chosen with care. For example the word 'mature' replaced the earlier 'appropriate' to describe the attitudes to be aimed for in P. In their response it was apparent that 'mature' also presented difficulties for some general studies teachers. One suggested that appropriate attitudes would be better if students were to be realistically prepared for the industry. Another said, 'I'm not sure that maturity is a worthwhile objective.' If such comments are taken seriously, they suggest that even more consideration and amplification of abstract concepts is required in the official documents.

The strong impression gained from the teachers' answers to the question about the aims, is that the majority not only accepted them but also understood their spirit and took them seriously. The answers of the craft teachers also showed how important they saw Industrial Studies to be in fulfilling the aims. A typical comment was, 'The student's attitude to Industrial Studies depends on what sort of firm he works for, but he will certainly need it if he stays in the industry.'

Several respondents gave the impression of not being very familiar with the aims as set out in the syllabus pamphlet. However, having had them brought to their attention, they found the expression of them rather too simple and precise to convey the full meaning. They felt they deserved more attention both from those who wrote them and from those who tried to execute them. The ambiguity of some of the wording, and the overlap in meaning between aims, prompted several teachers to suggest that they would be better expressed as one single comprehensive aim.

#### Summary of teachers' views of the City and Guilds Aims.

The response to the detailed consideration of the aims by the two groups of teachers showed that aim B 'industry and society' was shared by some teachers in each group. Aim W 'teamwork' was also shared, although to a lesser extent, and was particularly chosen by a majority of the craft teachers.

Aim P 'personal development' was chosen by a majority of general studies teachers but was put last by more craft teachers than put it first. There was some evidence that the craft teachers felt at a disadvantage in respect of this aim, particularly in view of the fact that in most colleges visited, Industrial Studies is not effectively linked with General Studies. Aim Y 'change' drew more response from general studies teachers than from craft teachers, although few in either group felt they could achieve it to any great extent.

Aim G 'quality and costs' was considered outside the scope of either Industrial or General Studies by a large number of teachers in each group. Others felt it to be a difficult aim to fulfil because of the attitudes of industry.

On the whole the aims were considered to be valuable as a guide to their work by both groups of teachers. The impression emerged however

that there is still more work to be done in involving the teachers in the expression of the aims so that they are fully aware of them and feel them to be a realistic background to their teaching.

5b. Concepts of Industrial Studies: The Craft Teachers' Concepts  
of Industrial Studies.

The craft teachers' concepts of Industrial Studies is one of the key concerns of the investigation. The way they see it will affect the way it is taught; the way the students respond to it; and it will also have a bearing on the co-operation between the craft and general studies teachers.

Value of Industrial Studies.

The first question on the craft teacher's schedule, 'What do you think is the value of the Industrial Studies component as part of the construction craft courses?' was designed to elicit their immediate reaction to the mention of the component. Subsequent questions were intended to develop the concept further. As can be seen from table 2 the majority of craft teachers see Industrial Studies as being primarily about the relationship between the trades (item 3). 30/40(75%) mentioned that its value lies in helping young craftsmen to have an understanding of each others work. This response is not as clear cut as it may at first appear. At one extreme it may mean that students should be helped to develop an understanding and tolerance of people of all kinds, including those they work with, while at the other extreme it may mean simply that they should be helped to become aware of the work done by other craftsmen on site. There were expressions of it which fall between the two extremes.

The second most widely held 'value' of Industrial Studies was mentioned by 22/40(55%) 'It gives a wider understanding of the construction industry' (table 2.item 1). This is of course, closely connected with item 2 'Gives a better understanding of the building process', mentioned by 17/40(43%). In fact items 1,2 and 3 are all

variations of the theme of understanding the industry, but some respondents mentioned them separately, so they have been itemised separately. However the fact that they apparently represent different ways of saying the same thing may explain why only 17/40 explicitly mentioned an understanding of the building process.

There was no very strong concensus about what the students do need to know in respect of the building process. Although the term 'common core' was used in some of the answers, many respondents were particularly concerned with the needs of their own craft students. One painter and decorator thought Industrial Studies was not of any practical value to his students (although he did acknowledge that they might benefit from it as a type of general education), because they come on the job when all the other trades are finished. The opposite view was taken by another painter and decorator who pointed out that the finishing trades particularly need to learn about the whole building process, because they need to understand the background to their work to be able to do it properly and to remedy faults. They also increasingly need to be versed in traditional building methods for the restoring of old properties. This is now quite an important part of the work being done by builders in the London area.

Plumbing teachers too differed in their views of what their students need to know. Some thought it important that they should have a knowledge of the whole building process just because they are not involved in a large part of it. 'They don't know what is going on around them without Industrial Studies.' Others could not see the need for that. They felt it to be necessary for their students to have a knowledge of building construction and the jobs done by other trades where it would affect their own trade on the job. An example given by several plumbing teachers was, 'Plumbers would be less likely to cut through joists when putting in their pipes if they know there is



a minimum thickness required for the structural stability of the building.' They considered that Industrial Studies for plumbers should be different from that taught, for instance, to bricklayers. It is clear from the syllabus pamphlet that, while a certain amount of difference in examples and perhaps in emphasis might be expected, the intention is that Industrial Studies should have the same content for all the trades.

Items 4 and 5 represent two different themes of a more extended concept of Industrial Studies as seen by craft teachers - for example, 'It helps them to see the relationship of the industry to the economy' and 'It broadens their outlook generally.' Each of items 4 and 5 was mentioned 13 times, making a total of 26(65%) and if taken with item 9 'Helps them to communicate' which was mentioned 5 times, they make a total of 31, indicating that for a substantial number of craft teachers Industrial Studies is seen to have a function outside the usual sphere of craft studies.

This indication is borne out by part of the answer to question 7b 'Would you like to teach more or less Industrial Studies?'(table 11<sup>b</sup>). In giving their reasons for their answer, 7/34 (21%) expressed the view that Industrial Studies is more demanding than their own craft subjects. Some enjoyed the challenge. 12/34(35%) said they would like to do more because they found it worthwhile and enjoyable - (one other was doing it full time and enjoying it.) However of the 12 who said they would like to do more, none were proposing to do so. Their reasons varied from not having the time to devote to it because of administrative commitments, to not being happy with the co-ordination with General Studies.

The part they desired the general studies teachers to play in helping them to meet the challenge is indicated in the answers to question 4a 'Do you think the idea of a link between general and

technical studies is a good one?'(table 14) and to question 4c 'Do you wish to add anything with regard to co-operation with general studies teachers?'(table 15). These answers are discussed in section 5f on the Link. Their concept of General Studies is discussed in the next section - 5c.

A small number of other elements in the concept of Industrial Studies were identified by a few teachers as can be seen from items 6,7,8,and 10,11,12,13 on table 2. For example eight craft teachers said, 'It helps them to understand what they are doing in their own craft.'

Further evidence of the craft teachers' concepts of Industrial Studies is provided on table 3. Statement 1 (table 3) shows 37/40(93%) of craft teachers agreeing, nine of them strongly, that the overall aims of the course are helped by the inclusion of the Industrial Studies component. This seems to be an endorsement of the value they place on it as already suggested by their answers in table 2.

External Control of Industrial Studies.

Statement 5 (table 3) shows that 29/40(73%) considered it possible to assess the effectiveness of Industrial and General Studies. This contrasts with the view of J.N.Siddall, head of department of construction, New College, Durham, in his study presented for the Diploma in F.E., in which he explains that he sought only to detect if the aims of Industrial Studies were being attained over a limited range of objectives because, although he was conscious that Industrial Studies includes the development of 'awareness' and 'appreciation', he was concerned that employers and students should see it as 'having a positive contribution towards the development of the young craftsman ... It would be unfortunate if due to the manner of its introduction into the colleges, the same sort of apathy or opposition which some

employers and students direct towards General Studies, should be directed at Industrial Studies.' He concluded that if Industrial Studies is to be valued by employers and students it should be seen to have specific aims which could be measured. The response of the 73% of craft teachers who disagreed with the statement, 'It is not possible to assess the effectiveness of either Industrial or General Studies', suggests that they do not share Mr. Siddall's doubts and fears. The two components were deliberately coupled together to emphasize that both have aspects which some would consider impossible to assess.

The answers to question 11c, 'Do you think Industrial Studies should be assessed by City and Guilds?', which was asked only of craft teachers involved in the teaching, show that 22/34(65%) think that Industrial Studies should be assessed by City and Guilds (table 7). Their main reason for this was that such an arrangement would give the component the support and guidance which it needs to make it a credible part of the course. In the answers to statement 8 'Craft teachers would welcome more guidance in the development of Industrial Studies' (table 3) the desire for more guidance was made quite clear. 36/40(90%) agreed with the statement.

Question 3 asked, 'Should Industrial Studies be given course content by City and Guilds?' Table 5 shows that 20/40 (50%) of craft teachers thought it should, mainly because they considered that teachers need more guidance, but also to encourage them to treat Industrial Studies like the rest of the course, so that it is not 'squeezed out by exam subjects.' Even some of those not wanting course content, mentioned these two needs of Industrial Studies. There was also much emphasis on the need to rescue it from the tendency to make it 'just another technology lesson.' As very few teachers were teaching students other than their own trade, this was seen as a loss of the intended widening of the students' understanding through

## Industrial Studies.

The reasons for not wanting course content were mainly to do with the danger which some teachers foresaw of it imposing rigidity on the teaching. Also it was felt that City and Guilds were not in a position to give suitable course content, although some suggested they might provide a common core of content. As has already been pointed out, table 7, which shows the results of question 11c, 'Do you think Industrial Studies should be assessed by City and Guilds?' shows that 22/34(65%) of craft teachers were in favour of such assessment, mainly on the grounds that it would help to give the necessary support and guidance in the teaching. The slight discrepancy here - only 50% wanting course content and 65% wanting external assessment - can be explained perhaps by the fact that the present arrangement is for City and Guilds to monitor college assessments by occasionally calling in Industrial Studies assignments as set by the colleges, but this in fact rarely occurs.

## Problems Experienced in Teaching Industrial Studies.

The completion of Sentence 1 'The greatest problem for craft teachers when teaching Industrial Studies is ...'(table 4) again shows craft teachers emphasizing the lack of support and guidance in the teaching of Industrial Studies. It also shows craft teachers pointing up their problems when asked to teach beyond their own craft. (This aspect will be considered further in Section 5d on the Craft Teachers.)

## Concepts of Industrial Studies: The General Studies Teachers<sup>4</sup>

### concepts of Industrial Studies.

The response of the general studies teachers to the question, 'What do you see as the value of Industrial Studies?' must be seen against the figures for the preliminary question, 'Are you familiar with the Industrial Studies component of the construction craft courses?' The answers to this question are graded according to the degree of familiarity revealed (table 2). If grades 1 and 2 are taken as meaning 'Yes' and grades 3 and 4 as meaning 'No', there is a clear indication that half the general studies teachers involved in teaching General Studies to building craft students - 19/34(50%) - were unfamiliar with the component of their course closest to their own. Of the others, 7/19 were only fairly familiar with it.

There is scope for speculation as to why this should be the case. It certainly would appear that these general studies teachers were not consulted at any stage by their construction departments about its implementation. Inevitably, when they were asked the value of Industrial Studies, some felt that they were not in a position to comment. Others made it clear that they were doing so in an impromptu fashion. Perhaps because of this their answers were more diverse than those of the craft teachers, as can be seen from the list on table 2.

A majority of general studies teachers, 22/38(58%) saw Industrial Studies as having a value in giving the student a wider understanding of the industry. No one mentioned its value in giving a better understanding of the building process, but 13/38(34%) thought it helped students to see the relationship of their work to others. This concept was expressed rather less clearly than when the craft teachers spoke of it. The clearest expression was by a general studies teacher who was very familiar with Industrial Studies, in college 9. 'The main

philosophy of Industrial Studies is that students should be made aware that their trade goes over boundaries and that all crafts are interdependent.' When it comes to items 4 and 5 which are concerned with the wider concepts of Industrial Studies there is a close similarity with the craft teachers' answers. If item 9 'helps them to communicate', is taken with items 4 and 5 , a total of 27 expressions of the wider concept of Industrial Studies is indicated, compared with 31 from the craft teachers. The fact that only three general studies teachers saw Industrial Studies as having a value in helping students to communicate, may be due to the lack of involvement of general studies teachers in the teaching of it, as can be seen from table 17, which shows the incorporation of Industrial Studies into General Studies in the colleges visited.

The colleges in which general studies teachers were most closely involved with Industrial Studies undeniably produced the richest contribution to the answers. In college 9 all the teachers interviewed taught at least one class of Industrial Studies each week, as well as General Studies and it was obvious that they had thought out their philosophy about it. For instance, one gave a very full description of it's value, including the following, 'It's a good way of getting lots of complementary General Studies in, during time that is not purely General Studies time. For example subjects like planning and conservation. It's a logical midway point on the spectrum, and it has a value for staff development, in getting general studies and technical people working together.' Such contributions contrast strikingly with the more superficial responses from the majority.

The seven values mentioned by general studies teachers alone, (items 14-20, table 2) suggest that those who were familiar with it were also aware of its value as a link with the students' technical studies. A similar point did not emerge from the craft teachers in

these answers, but was made explicit in their answers to question 4a 'Do you think the idea of a link between general and technical studies is a good one?'(table 14) which seems to confirm that craft teachers too recognise that the potential is there for a broadening and deepening of the subject, given the right conditions.

#### Summary of Concepts of Industrial Studies.

It would seem from the results obtained from the question about the value of Industrial Studies that there is a considerable measure of agreement on the nature of Industrial Studies. Teachers from both groups agreed that it has a value in helping students to understand their industry. Many in each group also saw it as having a value beyond that.

Craft teachers found the teaching of Industrial Studies unusually demanding and very few were willing to involve themselves in teaching it more than they were already. They also felt strongly that the teaching of Industrial Studies needs more guidance and support. Half in each group thought the provision of course content by City and Guilds would be a step in the right direction, while others thought this was not a task for City and Guilds. However 22/34(65%) of craft teachers were in favour of Industrial Studies being assessed by City and Guilds.

An important feature of the findings relates to the lack of familiarity with Industrial Studies on the part of a large number of general studies teachers. However those who were familiar with it were aware of its value as a link with the students' technical studies.

5c. Concepts of General Studies. The General Studies Teachers'  
Concepts of General Studies.

The general studies teachers' concepts of their own work occupies another important place in this study. Some of their responses have been discussed in Section 5a on City and Guilds aims. There the majority of general studies teachers thought that their greatest success lay in the development of the student as a person. That result is endorsed by their response to the Statements 7 and 9 (table 3) which refer to the main aim of General Studies, and this belief would clearly be expected to have an influence on their attitudes to external control of General Studies, by means of published course content or learning objectives, or through external assesment. It might also be relevant to the general studies teachers' commitment to the teaching of craft General Studies. The following is an outline of the items in the teachers' schedules which help to clarify the general studies teachers' concepts of General Studies.

Question 5 asked if teachers thought that General Studies should be given course content and/or learning objectives (table 6). Question 11c asked general studies teachers only, if they thought General Studies should be externally assessed (table 8). The response to these questions, along with the response to Statements 5 and 11 (table 3) raises issues regarding external control.

Question 7 asked general studies teachers how many craft General Studies classes they were teaching and whether they would like to teach more (table 13). The responses to these questions, taken in conjunction with the completion of Sentence 2 'The greatest problem for General Studies teachers when teaching craft students is ...' (table 10) bring the concept of General Studies to the sharpness required for the purposes of the study, particularly in relation to the attitudes of



the general studies teachers to this branch of their work.

Statements 2,4,7 and 9 (table 3) have a bearing on the concept of General Studies held by both general studies and craft teachers. The responses to these statements contribute to the comparison of views and also to the idea of the link between General and Industrial Studies.

All the answers to the questions about how General Studies courses are arranged and taught in the 10 colleges visited, have a bearing on the concepts held by the teachers concerned and these will be discussed during the description of the Courses in Section 5g.

External control of General Studies.

Question 5 'Do you think General Studies should be given learning objectives/course content?' gave an opportunity to teachers to express the range of opinions held by them in relation to some form of external control or guidance. Learning objectives and course content were not considered separately by all teachers although some of the comments made about each type were noted.

A number of teachers said they were not in favour of the learning objectives type of syllabus writing and that course content would be more useful, provided that it allowed flexibility in the teaching. Learning objectives were spoken of with disfavour by craft and general studies teachers but general studies teachers were more confident in their criticisms. For example, 'They are too vague' and 'I never really understand what is meant by them.' Some teachers suggested that typical course content should be provided, or perhaps a common core of the essential areas to be covered. Other teachers thought learning objectives were more suitable because they are less restrictive, and by providing them, City and Guilds would be giving General Studies the same format in the syllabus pamphlet as Industrial Studies.

Table 6 shows that a majority of General Studies teachers were in favour of some form of guidance, although the nature of that guidance was still in doubt for many of them. One General Studies teacher expressed the dilemma in this way, 'General Studies needs both learning objectives and course content but not in the way City and Guilds present them. It is very difficult to do but it is a good exercise. It makes us bring out our ideas.'

City and Guilds make it quite clear that they wish to leave the details of General Studies to the individual colleges (pp.13/14). They do not feel able to go further in guidance than to re-issue their Green book on General Studies published in 1970. Many general studies teachers spoke of this as too abstract to be of practical use and also now rather out of date (table 28).

The general studies teachers revealed a wide range of attitudes towards City and Guilds. Of those who thought it should lend the weight of its authority to supporting General Studies, 7/38(18%) thought that this would be best done by treating it like the rest of the course. On the other hand 8/38 did not want City and Guilds to do the guiding or at least they rejected 'the way they do it'. One said, 'They set such mechanical tasks that the overall aim is lost.' This reaction may partly be due to their experience of City and Guilds Scheme 772 in Communication Skills, which some general studies teachers consider to be restrictive in its effects. Among those who specifically rejected City and Guilds as the body to undertake the task of guidance of General Studies, most had some alternative to offer. One mentioned the idea of consortia which might be set up locally as validating bodies. This idea has been put forward in some detail by a Joint Working Party of NATFHE G.S. Section and ALE. Others recommended the method used by TEC, which issues guidelines for

General Studies and then validates submissions from individual colleges.

The final figures for and against some form of control or guidance for General Studies (table 6), must be interpreted with caution. For example one teacher said 'Yes, General Studies should have something in the way of learning objectives or course content, in the same way as TEC does it'; while another said 'No, City and Guilds should do what TEC does, lay down general requirements.'

In the same way, the idea of a common core for General Studies was quite often mentioned, but the figures on table 6 do not reflect this, because it is mentioned after saying 'No' to learning objectives or course content, rather than after 'Yes'. In fact if all of those who wanted some form of guidance from an outside source were included in the 'Yes' column, there would be another seven, making the total 30/38(79%). This is quite a substantial majority, to which still more might be added from amongst those whose rejection of the idea was based on a reaction to the prospect of City and Guilds doing it, without consideration of other possibilities. Significantly, even those who were against the idea of City and Guilds providing their learning objectives or course content, either because 'They are not good at it', or because 'It is the proper job of the colleges themselves', still felt that City and Guilds were not giving enough support to General Studies in the syllabus pamphlet. They felt that even if some other body took on the job of curriculum development, it should remain the responsibility of City and Guilds to back it up, as an essential part of their scheme for the craft certificate.

Table 8 gives the figures for the General Studies teachers response to question 11c 'Do you think there should be some form of external assessment for General Studies?' It is clear that this idea finds less favour than the idea of some form of guidance. This is

probably because such an idea implies a greater restriction in the teaching. The response to Statement 5 (table 3) has indicated that the majority do not think it impossible to assess General Studies.

The 13 teachers who did want some form of external assessment, gave very much the same reasons as were given for wanting some form of guidance. They were only asked what they had in mind for external assessment, and so table 8 only records typical comments. Those saying 'No' usually did give their reasons and these are included with the relevant figures as in the other tables. Again it will be seen that they are very much the same as those given for not wanting external control, with the exception of the replies from two teachers who said that they did not agree with the pass/fail principle.

Statement 11 - 'Craft General Studies should be given more direction by the establishment of some form of agreed assessment' was intended to include the idea of an assessment agreed within each college, as is the case with some colleges now. This gained agreement from 25/38(66%) (See table 3).

#### Classes taken in General Studies

The General Studies component, being over 20 years old, has had time to develop and change. From the beginning it was inevitable that there would be more than one way of interpreting such an abstract concept. It has often been written about in highly idealistic and ambitious terms. For instance, Cantor and Roberts write of the need for young people to 'develop the attributes of a liberal mind'.(1979,p.78) Those who take up the challenge are likely to be strongly motivated and to have their own interpretation of what they are being asked to do. Any whose work is not based on a realistic philosophy and who are not prepared to adapt and persevere, are likely to move out of the 'pure' General Studies field into work which has an

externally imposed structure. This likelihood is especially true of craft level General Studies, where it is least possible to rely on traditional intellectual structures. Also the need to develop basic skills with these students means that there is a danger of General Studies appearing to be another 'school' lesson, and consequently the student motivation is usually low. The City and Guilds Communication Skills schemes have been developed in order to help with this area of the work.

For the reasons indicated above, it seemed relevant to ask the general studies teachers how much craft level General Studies they were teaching and whether they would like to teach more or less. It was hoped that this would reveal whether there is a group of general studies teachers experienced in and committed to craft level work. Question 7 therefore asked, 'How many construction craft General Studies classes do you teach a week?' (They had been pre-selected because they were either currently teaching construction craft classes or had been doing so in the previous two years.) They were also asked if they taught any other craft classes.

As can be seen from table 13, the number of classes taken by those interviewed represent a good range of teaching hours spent in this work. Four of those in charge of craft General Studies were not teaching it and so were not asked this question. Three of the remaining 34 were not currently teaching it but the classes taken in previous years have been included on the table. Nine teachers were also teaching other craft classes as well as the construction crafts.

The comments made in answer to question 7b 'Would you like to teach more or less?' are given on table 13 in six categories. 9/34(26%) did want to teach more although six of these added qualifications such as, 'but I haven't time to develop it.' The fact that 11/34(32%) of general studies teachers expressed a liking for

craft (usually building craft) students was not unexpected and neither was the fact that some of these were also among the teachers who commented on the draining effect of this type of class. A typical comment was, 'They are much more demanding of you as a person than are the more academic students.' The strain of teaching these students was often exacerbated by the poor conditions in which the work is frequently carried out, including the need to visit a separate building to teach General Studies. (This point will be expanded on in Section 5g the Courses.)

Reasons for wanting less craft level teaching or not changing the amount, are given in comments 3,4,5,and 6.(table 13). Only 3/34(9%) teachers said that they chose to specialize in this field. All three were already teaching more than 10 classes and so they might not be represented among the nine who wanted to teach more.

Table 13 should be taken in conjunction with the results given on table 10, which show the summary of phrases used to complete the second sentence on the teachers' opinion sheet. 'The greatest problem for general studies teachers when teaching craft students is ... ' These results indicate that 21/38(55%) see their greatest problem when teaching craft students to be derived from the students' inability to understand the long term aims of General Studies, their lack of motivation and the wide range of ability they represent. Another 9/38(24%) see the problem in much the same terms; although they tend to put the emphasis on the nature of General Studies and the difficulty of relating it in a meaningful way to the students. They found it hard to give their material both relevance and educational value. The other 8/38(21%) saw the problem as stemming mainly from the teachers themselves - their lack of similar background to the students, and a sense of frustration in not being able to achieve their educational aims. The general studies teachers' backgrounds are looked at in Section 5e.

All the points made in completing this sentence were very closely related to each other, with only a difference in emphasis. Taken with the comments on table 13, they point to the extreme difficulties experienced in teaching General Studies to craft students - a conclusion which is not new to the further education scene. The energy, determination and skill needed in answering this challenge did not appear to be lacking. The impression gained from the interviews was that almost all the general studies teachers were willing to invest the required effort in the work they were presently doing and some felt they were having some success. Section 5g on the Courses shows some of these efforts.

5c. Concepts of General Studies. The Craft Teachers' concepts  
of General Studies.

With the findings about the general studies teachers' concepts of General Studies as a background, it is particularly important to consider what the craft teachers are looking for from General Studies. The results of question 5b 'What do you think should be the aims of General Studies?' which was asked of craft teachers only, are given on table 9. The answers on the table are grouped into five themes which are not, however, mutually exclusive.

Craft teachers' aims for General Studies.

22/40(55%) craft teachers thought that one aim of general studies teachers should be to 'help students to communicate better.' This is a matter of particular concern in connection with craft students because of problems due to their lack of basic skills such as reading,

writing, speaking clearly and performing simple calculations. However, communication is such a complex activity, dependent as it is on clear thought processes, self confidence, motivation and so on, that the teaching of it needs to be considered with care, whereas some craft teachers used the term as if it were a purely mechanical process.

The impression was given that the task of helping the students to communicate better is really a very straightforward one which only needs the general studies teachers to decide to do it, instead of wasting time on things like making films and discussing social problems. One craft teacher for instance, in answering this question said, 'They (the general studies teachers) could be helpful to us, at a very low level, by improving the students' communication skills.'

On the other hand, some gave the impression that they were very aware of the difficulties faced by general studies teachers. For instance, several said that they appreciated their problems much more since they got to know a particular general studies teacher on the college staff. Several others said that they did not think it was the job of the general studies teachers to do what the schools had failed to do. Others thought that that was exactly their job. One craft teacher put his understanding of the situation thus, 'If the students came to the college educationally sound, then real General Studies could be done; but as it is they need help with their English and Maths. and that is an obvious job for the general studies teachers.'

There is little doubt that the craft teachers do want and need some help with this aspect of the teaching. The need to improve the students' communication skills was often linked with another phrase, used by craft teachers in connection with aims for General Studies 'to help the students cope with the rest of the course.' (See table 9 ) This phrase leads into the next group of aims 'to help the students bridge the gap between work and life.' One teacher added



firmly. 'but not too big a gap.' This is a word of caution which was echoed in many of the craft teachers' comments. Some particular lessons were cited which were considered to be beyond the students comprehension. Such an example was an attempt to explain nuclear power. The general studies teachers were often referred to as being too 'airy fairy' - their teaching methods and subject matter not being grounded sufficiently in the needs and abilities of the students.

It was in this connection that the greatest source of disagreement between the craft and general studies teachers arose. Unlike the craft teachers, most general studies teachers did not want their teaching to be regarded as predominantly utilitarian. In considering specifically the craft teachers' aims for General Studies, the disagreement is important because it reinforces a mistrust which might exist between people of very different experience and educational background. The very words used by both groups of teachers underline the difference. For instance, one craft teacher said, 'General Studies should be made to do what they should do.' Others spoke of the need to 'control' general studies teachers. This language is matched by the general studies teachers who when asked in question 4c 'Do you wish to add anything with regard to co-operation with craft teachers?' responded with such phrases as, 'They make you feel you are on sufferance.' and 'They encourage the idea that the trade is all.'

However on a personal level, there is much generosity and appreciation of each others' qualities. In several of the colleges visited, the relationship between individuals of each group seemed to be something quite special. One general studies teacher said, of the craft teachers, 'They are very kind and helpful; they are very nice people.' It does seem, from a study of the rest of the aims suggested for general studies teachers, that the process of communication between the two groups has already gone a long way towards reconciling their

differences; further perhaps than the diehards on each 'side' would care to acknowledge.

The next group of aims is represented by the phrase, 'to develop the students' social skills.' This may at first sight seem to be a continuation of the utilitarian theme, but in this case the intention is to help the students in their everyday lives, rather than with their technical studies. It is certainly an aim that finds agreement from many general studies teachers, as well as from a number of official bodies, including the Manpower Services Commission. (See Youth Task Group Report, 1982, Part 4.9, which lists the development of personal and social skills amongst the criteria to be satisfied in any training scheme.) As with the term 'communication' there is more to the concept of 'social skills' than might appear at first sight, and its value depends on how it is taught. Many general studies teachers pointed this out in connection with City and Guilds Scheme 772 in Communication Skills, the course work for which includes one third in the social skills area, involving assignments such as filling in tax forms. This need not be a purely mechanical activity. Appropriate teaching approaches would allow the development of a discussion from which students could get an insight into the working of the legitimate economy as opposed to the black economy - an area often quite familiar to building craft students. Such a discussion would help fulfil the next aim given on the table, mentioned by four craft teachers. 'To help the students to be socially responsible.'

It is possible to mis-interpret this aim. Some general studies teachers, particularly those belonging to the General Studies Workshop (p.10) gave the impression that they considered craft teachers to be aiming at making the students conform to the employers' ethos of profit before quality and speed before safety. In fact, most craft teachers are unlikely to be involved in this, even unconsciously. By the

nature of their commitment to teaching their craft, they are concerned with teaching quality and safety. This emerged from their replies throughout the interviews. They are, themselves, sometimes in conflict with employers and their organizations about the aims and implementation of the whole course. The general studies teachers may not appreciate this, because the craft teachers tend to play devil's advocate when talking to them, putting the case as it is put to them by the employers. General studies teachers who are ignorant of the industrial background to their teaching or are unwilling to involve themselves in it, only make things more difficult for the craft teachers.

The ~~first~~ group of craft teachers' aims for General Studies contains a very wide expression of ideas, but they all have in common the same ambitious quality. The impression given in expressing these aims was that the annoyance and distrust of General Studies was put aside for the time being. Those who had spoken in one breath of General Studies being too 'airy fairy', in the next breath spoke of the need for general studies teachers to develop the student as a person. They appeared not to have really thought out the implications of either response. Many craft teachers were at the very early stages of understanding the nature of the task which general studies teachers are required to do. One head of a craft department who at least saw the dilemma, expressed it thus, 'General Studies should continue their education, but what is meant by that is hard to decide. It should include practical things like birth control, and hearing other peoples' views of the same problem.' Another head said, 'The general studies teachers should follow the Green book on General Studies', and yet he complained that they went 'off beam' because they did things like role play, which were unacceptable to many employers. (The Green book specifically recommends the use of such teaching techniques as role

play). The most critical were often those who had no real aims to offer.

When another head of department said, 'There is a divergence of views (between craft and general studies teachers) about how General Studies should be taught', he was indicating that General Studies is not a specialism. It is something which anyone can have equally worthwhile views on. This brings out another of the problems of General Studies - its quality of being 'general'. Unlike bricklaying it is not a special art. By its very nature it is something for everyone to take part in. Some general studies teachers have responded to this situation by making the teaching of their 'specialism' into a mystique, which is only open to a limited number of right minded people. Such a closing of doors can only make for further mistrust and rejection of General Studies.

#### External control of General Studies.

Question 5a asked the craft teachers, 'Do you think General Studies should be given learning objectives/course content?' Their answers appear on table 6 alongside those of the general studies teachers. There is a great deal of similarity between them. A majority of teachers wanted some form of external control for General Studies. Among their reasons, 'To give general studies teachers more guidance' was expressed by 21/40(53%) of craft teachers as opposed to 14/38(39%) of general studies teachers. In addition, substantially more craft teachers than general studies teachers expressed the view that some sort of external control would enable the link between general and technical studies to be made more easily - 10/40(25%) craft teachers as opposed to 2/38(5%) general studies teachers.

Amongst the reasons for not wanting General Studies to be externally controlled, only 6/40(16%) craft teachers mentioned the need

for it to be free to adapt to the individual class requirements, as opposed to 13/38(34%) of general studies teachers. Only one craft teacher said that City and Guilds would not be good at giving learning objectives or course content to General Studies, and one craft teacher said, 'No' to course content or learning objectives and added, 'City and Guilds know what they are doing.' This comment seems to express the feelings of more craft teachers than of general studies teachers.

The craft teachers were not asked if they thought General Studies should be externally assessed. Their response to Statement 5 'It is not possible to assess the effectiveness of either Industrial or General Studies' Table 3 shows that 29/40(73%) thought it can be assessed. The fact that 32/38(84%) of general studies teachers also thought the two components can be assessed, suggests that in this respect there is considerable agreement between the two groups of teachers. Among the 29 craft teachers who thought both could be assessed, two added, 'Industrial and General Studies are not the same', and another added, 'In a wide sense they are difficult to assess, but from the point of view of exams a positive assessment can be made.'

In their response to Statement 11, it is not surprising, given their views on General Studies already indicated, that as many as 35/40(86%) agreed that 'Craft General Studies should be given more direction by the establishment of some form of agreed assessment.'

Relationship of students' work to their General Studies.

In response to Statement 2 'Craft students can only appreciate education in a context which is relevant to their immediate work situation' only one craft teacher disagreed and only 12/38 (36%) of general studies teachers disagreed. In view of this result on the part of the general studies teachers, it is perhaps surprising that very few are teaching in a context that is relevant to their students'

work situation. This is clear from the results of the questions in Section 5g. However the desire to do so is clearly there, as will be seen from the answers to the questions discussed in Section 5f on the Link. As many as 6/38(16%) strongly agreed with the statement, and perhaps this is indicative of a move towards sharing the craft teachers' opinions on this aspect of their teaching.

Statement 4 'It is beneficial for the students if the craft teachers are involved in General and Industrial Studies' drew an overwhelming response from both groups. 35/40(86%) of craft teachers and 31/38(86%) general studies teachers agreed with it. The nature of the craft teachers involvement was not specified, but teachers were free to mark 'no opinion' (as five did), if they were not happy at the implication that the two groups should not only work in harmony, but should be jointly involved in the same work. One general studies teacher who marked 'no opinion' added 'It can be beneficial if done in a supportive way.'

Effectiveness of General Studies.

Statement 7 'One of the main aims of General Studies is to help the student develop mature attitudes', again drew very similar responses from the two groups of teachers. 33/40(83%) craft teachers, and 34/38(89%) general studies teachers agreed with it. The fact that 'maturity' is a vague term to some people may have been the reason for disagreement on the part of the few who did so, and probably also on the part of those who marked 'No opinion'. However, it does appear from this result, that a majority of teachers have a reasonably clear idea of what is meant and are willing to commit themselves to it as a main aim of General Studies.

Statement 9 'General Studies is failing in its aim of developing mature attitudes in students', did not get the same measure of agreement. This statement is not so much concerned to clarify the

concept of General Studies as to obtain a judgement of its effectiveness. From the figures given under 'No opinion'- craft teachers 12/40(30%) and general studies teachers 8/38(21%), quite a number in both groups felt they were unable to make the judgement. One craft teacher added, typically, 'No reliable feedback', and one general studies teacher wrote, 'It is difficult to assess its contribution alongside other factors.' However a small majority of general studies teachers disagreed with the statement 20/38(53%). Half the craft teachers agreed with the statement, seven of them strongly. Although student feedback might rationally be considered to be unreliable, the weight of such opinion against General Studies must influence the craft teachers. This result might also be a reflection of the lack of good communication between the two groups of teachers. (This aspect of the problem will be considered in Section 5f on the Link.)

The other item specifically concerned with the craft teachers' concepts of General Studies, is the second sentence on the teachers' opinion sheet (table 10). The phrases used by the craft teachers in completing this sentence - 'The greatest problem for general studies teachers when teaching craft students is ...' indicate that 22/40(55%) see it as being the difficulty they have in relating to the craft students. Most stressed the lack of suitable work experience but some also mentioned the lack of a similar background and experience of life. They appear to think the teachers and students have no common ground.

Another 8/40(20%) of craft teachers said that the greatest problem for general studies teachers is that the students find it hard to accept the need for General Studies. One wrote 'persuading the students to accept involvement, in an otherwise purely technical education'. As with the answers from the general studies teachers,

some were clearly referring to both aspects of the problem - that is the difference in the teachers' background and the students' lack of acceptance of General Studies; but the majority put the emphasis on the first of these two items. 10/40(25%) felt unable to complete the sentence. One wrote 'I shouldn't comment', and others wrote, 'Not applicable.' However the sentence was given to the craft teachers deliberately to encourage them to consider and express their views on the problems of general studies teachers as well as on their own, and vice versa, and the majority were willing and able to do so.

#### Summary of teachers concepts of General Studies.

The two groups of teachers appeared to hold similar views about the need for guidance and support of General Studies. The attitude of the majority of general studies teachers towards some form of guidance or control of General Studies was favourable although there was less agreement about the form it should take. The general studies teachers strongly emphasized the importance of flexibility in the teaching and external assessment was rejected by the majority.

A larger majority of craft teachers (70%) wanted course content/learning objectives for General Studies in order to give general studies teachers more guidance and to help in making the link between general and technical studies. As in the case of Industrial Studies a number of general studies teachers expressed a wish to teach more craft level General Studies but few were willing to commit themselves to actually doing more. However there was evidence of a commitment to their existing teaching programme. Their response to a number of questions pointed to the difficulties experienced by general studies teachers in teaching craft level students.

Important differences arose over the teachers' aims for General Studies. Craft teachers expressed a strongly utilitarian aim, whereas



general studies teachers saw their aims as complex and long term, having the development of the person as its focus. On the whole, craft teachers were ambivalent about this aspect of the work.

#### 5d. The Craft Teachers.

During the interviewing of the 40 craft teachers in the colleges visited, the views expressed ranged widely, often beyond the confines of the questions asked. It appears that for many craft teachers the introduction of Industrial Studies into the teaching programme posed many problems. They had not expected to go outside their own craft and their own experience of that craft when they became teachers. They had envisaged the value of their contribution to the education and training of craftsmen as depending on the knowledge and experience gained mainly while 'on the tools'. Typically one craft teacher, when asked how he was introduced to Industrial Studies, said, 'It was at my interview for the job. I was asked if I would be responsible for organizing it. That made me suspicious. I came to teach brickwork.' Such comments point to the special problems associated with Industrial Studies for many craft teachers.

#### Craft Teachers Introduction to Industrial Studies.

Question 6 asked craft teachers what year they first came across Industrial Studies, how they were introduced to it and whether that method of introduction was a useful one. It was felt that the date of their introduction was relevant because it would give some idea of how the teaching was being shared between the more senior staff and those recently recruited to teaching. Table 11 gives the totals in three groupings - those who were introduced to Industrial studies at its beginnings - 1972/3.(18/40); those who came to know it in its early days - 1974/77(13/40); and those who had learnt about it since then.(9/40). In each college there was a representative from two or three of the groups. It is interesting to note that there was someone from category 1. in every college visited.

Although only 8 of these thought their introduction to Industrial Studies very useful, it might have been expected that there would be some carry over of the original impetus and understanding of the component to the newer teachers. However this appears to have happened infrequently. There were only two of the newer teachers who said their introduction via colleagues was very useful. This may be partly due to the common practice of organizing the trades in separate sections, which inhibits contact between the teachers or the students of different trades. It might even be considered to mirror the divisions operating on site - divisions which Industrial Studies was intended to alleviate.

There are other factors which might inhibit the right kind of communication between teachers even of the same trade. The long hours worked by most craft teachers restricts opportunity for meetings, or even discussions between individuals, about the teaching. Added to this is the convention among teachers that what you do in the classroom is your own affair and it is not really for others to pry into it or to criticise, even if constructively. It is true that teaching is a very individualistic activity and those not involved cannot easily judge whether there is something of value happening or not. Nevertheless such a convention can become a barrier to the development of both the curriculum and of teachers' competence.

The majority of teachers were introduced to Industrial Studies by a colleague already teaching it, usually the teacher responsible for its organization, others by meetings held in the college, and others by reference to the college scheme of work. In some cases the introduction would be by all of these methods. See table 11a.

As has already been shown in Section 5b, nearly all the craft teachers felt that there should be more guidance given with regard to the requirements of City and Guilds for Industrial Studies.

Paradoxically the syllabus pamphlet appears to have been largely disregarded as a means of introducing teachers to it. In several cases the teachers were given the college scheme of work without any reference to the syllabus pamphlet. It might be thought that this would be included automatically as part of any introduction by those in charge. It may of course, have been taken for granted that it was available to all teachers for consultation. However, several teachers said that they did not know Industrial Studies was mentioned on it. In the case of three teachers who were just given the learning objectives for Industrial Studies extracted from the syllabus pamphlet, the attitude of those in charge is hard to understand. One of these three teachers said that the college was short of copies, while the other two said they were told that the learning objectives were all they needed.

The syllabus pamphlet was mentioned by 9/40(23%) of craft teachers as providing their main or only means of introduction to Industrial Studies but only one of these thought it was very useful.(See table 11).<sup>a</sup> Quite often it had to be mentioned by the interviewer first. The most common reply to the question, 'How were you introduced to Industrial Studies?' was a wry smile and statements such as, 'I was thrown into the deep end' or 'It was just on my time table.'

The CGLI has recently conducted a survey of teachers to investigate the use being made of the syllabus pamphlets in colleges in England, Scotland and Wales. The Report (CGLI,1982) of this investigation gives a long list of items on which teachers desire the pamphlet to be more helpful. Surprisingly, Industrial Studies is not specifically mentioned. It would seem that the survey was concerned with the examination subjects only.

This omission reinforces the idea, indicated by many interviewees in this study, that Industrial Studies is a 'cinderella' subject, about

which City and Guilds express high sounding phrases but which they are not willing or able to support properly. If this is the prevailing feeling about Industrial Studies it is no wonder that some teachers are unwilling to take the extra amount of trouble to do the necessary preparation for teaching it, especially when the guidance and support is not forthcoming even within their own college. More will be said about this factor in section 5g on the Courses.

The City and Guilds introductory policy statement, issued in 1972, should be mentioned here. As can be seen from table 11<sup>a</sup>, only 4/40 (10%) of craft teachers had seen it, and none of these mentioned it as their main source of introduction. Most of them had in fact been introduced to it through their connection with City and Guilds committees - an especially privileged method which seems to have always been considered very useful. However, again the handing on of the concept so acquired seems to have been inadequate. The policy statement itself was not distributed to others, and the ideas in it do not seem to have been adequately conveyed. Four teachers mentioned the introduction given to them by a head of department or another colleague with enthusiasm, but others said the help they were given was not much use. It must be acknowledged that the value of this kind of help would depend on the ability of the recipient to accept it, as well as on the ability of the colleague to impart it. In some cases it seems that the help came at the wrong time, when the teacher was pre-occupied with the problems of his new job and was perhaps unable to take in the new ideas.

The four teachers who had attended conferences of some length remembered them with enthusiasm, without prompting. Those who had only been to one day conferences or meetings had difficulty in recalling them and were less than enthusiastic about them.

The third column on table 11<sup>a</sup> gives some indication of how the

teachers felt about the way they were introduced to Industrial Studies.

The impression the teachers receive of the component from the beginning must be reflected in the way they teach it, at least at first. Only 12/40(33%) thought their method of introduction was very useful and of these, four had attended conferences at Huddersfield, Bolton or Wolverhampton. The other nine were introduced to it by a variety of the methods described.

The phrases chosen to pinpoint the teachers' judgement - 'very useful', and 'quite useful' are not precise. Both could suggest a range of meaning, indicated mainly by the tone of voice used. The negative judgement, 'not much use' is less imprecise but sometimes the wording was changed to express a stronger feeling - 'no use at all.' All the judgements must be seen against the teacher's concept of Industrial Studies. If this was rather narrow, 'very useful' could mean that not too much had been demanded of the teacher. In other words he was able to fit the teaching of Industrial Studies into his existing scheme of teaching without any change in style or perhaps even of content. On the other hand those who felt their introduction to be less than 'very useful', were possibly aware of the demands the component would be making on them but were limited in their ability to respond by a lack of guidance and support from any source, particularly at the beginning of their teaching.

Craft Teachers backgrounds.

It seems appropriate here to look at certain aspects of the craft teachers' backgrounds in order to understand the nature of their difficulties in relation to Industrial Studies. Answers to question 7b, which asked 'Would you like to teach more or less Industrial Studies and why?' suggested that only a minority - 10/34(29%) - were really interested in teaching it as opposed to teaching their own

trade. (See table 11b.)

The craft teachers were not asked about their experience outside teaching because it is well known that the overwhelming majority have come from industry. In retrospect it might have been relevant to have asked about the range of their industrial experience, in view of the fact that the teaching of Industrial Studies requires at least some 'on site' experience if it is to be taught effectively. However the opportunity was not taken, mainly because for some teachers it might have seemed tactless.

Gleeson and Mardel, (1980, pp.70-72) consider that craft teachers do not see themselves in the same light as do most academic teachers. For them the relationship with their students, which depends on shared background and experience, is an important source of control and influence. This importance is likely to override any innovation which might be suggested from outside the familiar work situation. In this way, ideas and activities which have not been a part of their own experience present the craft teacher with a great problem of adjustment. He tends to see the student as himself when young and so feels bound to give him the same experience as he enjoyed himself. By the same token, those who did not like the 'English' or 'General Studies' lessons they had when students, resist such lessons on the students' behalf. In this way they are perpetuating their own type of response, when professionally they are being asked to 'break the mould.'

The difficulty in accepting the new 'role' of the teacher especially affects the way craft teachers teach. They were not specifically asked in the interviews if they had had any teacher training, but usually this fact emerged during the discussion of question 6 about their introduction to Industrial Studies. It seems likely that a maximum of 10/40(25%) had been involved in some sort of

teacher training course. As can be seen from table 11 only two mentioned it as their method of introduction to Industrial Studies.

Gleeson and Mardel found that craft teachers were relying on their own experience of teaching to give them their methods. One mining craft teacher they interviewed said, (p.71) 'Basically I just went back to the methods by which I was taught when I was a student at Technical college.' This quotation draws the following comment from them. 'In our view, this reliance on teaching styles that one may have observed as a student creates a self perpetuating cycle, in which pedagogical relations experienced as an industrial trainee becomes a measure of one's competence as a teacher.'

This idea of competence is inevitably bound up with the need for the student to pass his exams and as Industrial Studies is not examinable, it is perhaps naive to expect that many craft teachers, not highly committed to teaching as a profession, will take it very seriously. To quote Gleeson and Mardel again, (p.72) 'The identity of teachers recruited from industry tends to be instrumental in its conception of education and industrial training in its focus upon practice... Thus it is inevitable that certain attitudes towards work, usually associated with the industrial sector, are carried over into teaching, so that time, for example, becomes a very important issue. Indeed any work outside the normal lecturing load is seen as overtime. Moreover administrative figures tend to be perceived as management, so that lecturers, within this conception of the job, become workers.'

There may be a useful point here which might help to explain the lack of support and guidance given to teachers in craft departments by those in charge. If those in charge perceive the teachers as workers who should do as they are told and not exercise much initiative, then to give them a set of learning objectives and tell them to 'do that', would be quite reasonable, provided the learning objectives are seen as



a list of goals to be achieved by routine activities such as learning the meaning of terms used in building. There is a widely held concept among students, not always resisted by craft teachers, that the teachers have a job to do, not different in its nature from any other job. At its extreme this task can be seen as giving the student certain relevant facts which he can then repeat as required by the assessment system in order to become qualified. The concept of teacher as developer of the student is not really part of this thinking. This may account, in part, for the comparative failure of craft departments in the colleges visited, to come to grips with the new component in the craft course which makes demands on teachers' time, requires a change in their concept of their job, and asks them to assume responsibility for the development of the student as a person beyond the exercise of his craft. The extent of this failure will be considered in section 5g on the Courses.

5e. The General Studies Teachers.

As has been seen in section 5b 'Concepts of Industrial Studies', the introduction of Industrial Studies into the construction craft certificate courses did not make much impact on the general studies teachers. In fact even in 1982 only 12/38(32%) were really familiar with it. In anticipation of this, general studies teachers were not asked at what point they were introduced to Industrial Studies. Those who were teaching General Studies were asked for the date of their introduction to General Studies, in order to obtain a clear picture of the way the work with craft students is spread among teachers with different degrees of experience. Table 12 records introductions either in the 1960s, that is in the early days of General Studies; in the 1970s, that is after the publication of the CGLI Green book on General Studies when more direction was being given to the teaching; or in the late 1970s and up to the time of interviewing, after the newly established TEC had introduced their ideas of a more structured form of General Studies for the TEC courses, and the CGLI had brought out their Communication Skills schemes.

The sample included teachers from all three periods, although this did not apply to the spread within individual colleges. For example half the colleges visited did not provide a representative of the early period, while two colleges had representatives from that group only. These variations may not be particularly significant, because the general studies teachers give the impression that they keep up with the developments in their field - although not with changes in the rest of the course. However those who have come into the teaching more recently may find that they have rather different motivation from those who started teaching it in the early days.

## Teachers Introduction to General Studies.

On the whole the general studies teachers' introduction to their work seems to have been a process of deliberate selection. The question, 'How were you introduced to General Studies?' is a more fundamental one than that asked of the craft teachers. The research is not directly concerned with the craft teachers' main teaching activity, that of teaching their own trade, and so the same fundamental question could not be asked of them. The difference in the questions points up an important feature of the enquiry. Whereas craft teachers are specialists who are being asked to go outside their familiar ground and teach something more general, general studies teachers are doing what they have been trained to do, or anyway have, in the main, chosen to do. A proviso might be added here, that they are not necessarily trained or especially keen to teach the craft type of student. Witness their comments on this type of student on table 13.

Table 12 shows that more than half the group -19/34(55%) - came into the teaching through contact with friends who were already teaching it, or through their existing connections with education. Such an introduction suggests that they were informed about its value as a job and were aware of many of its day to day aspects, before they started. This presumption may not hold good in every case, particularly when the contact with friends proved to be part of an otherwise unhelpful introduction. 9/34(26%) came to it by applying to teach another subject and then being required to teach General Studies either as well as or instead of their chosen subject. In three of these cases the teachers referred to their early experiences in teaching General Studies as a 'baptism by fire' or words to that effect. This phrase was also used by five others who had come into it by the various other means listed on table 12. Perhaps for certain personalities the early experience of teaching General Studies could be so described no

matter how they had been introduced to it. Most of those who spoke in this way had started their teaching 10 or more years ago - that is when General Studies was in its less structured stage.

The discussion associated with this question of introduction to their work, tended to bring out the strong motivation of many general studies teachers. Typical comments were, 'I saw it as something I really wanted to do - I still do.' 'I became interested in the possibilities of General Studies.' 'My enthusiasm for the job was very useful at first - there was not much help from other sources.' 'I understand the motives of students who are just working for the money, but I have realised that that is not enough for me.' 'I didn't want to be pushed into an academic life. I wanted something more concrete.' 'I was teaching technical studies and I could really see the need for General Studies.'

Such motivation does seem to have produced general studies teachers who are often intensely interested in their work - its aims, method and content; and in the students they teach. The majority of those interviewed appeared to be quite willing to experiment with a variety of methods to achieve their aims, but they also showed that they felt themselves to be on the defensive. One general studies teacher perhaps summed it up when he said, 'Idealism is one characteristic which marks out general studies teachers, but if their standards are too high they can miss the mark altogether, because they are not practical in the circumstances.'

General Studies Teachers backgrounds.

General Studies teachers see themselves as professional teachers with a strong motivation to do the job they have chosen to do and with good preparation for it.

When looking at the teacher training of general studies teachers,

table 12 indicates that 29/34(85%) had completed some training course. For the majority of them this was a special training in the teaching of General Studies, but the others were careful to explain the suitability of the one they had completed, for example a course in drama. A majority - 18/29(62%) - thought their training had been very useful; another 9/29(31%) thought it of limited use and only 2/29(7%) thought it not useful at all. There is a contrast here with the craft teachers. In that group the answers suggested that only 10/40(25%) had had any teacher training, usually on a part time basis.

The last part of question 6 sought to establish the general studies teachers' range of experience outside teaching. In answer to the question, 'Have you worked in industry or commerce for more than a year?' 21/34(62%) answered 'Yes'. The teachers were also asked to judge the way in which such experience had been of value to them in their teaching. Many thought that the experience of working outside teaching had been of value to them in itself. More specific values were also mentioned. For example 8/34(24%) said that they had learnt about the way industry is run, and 6/34(18%) said that it had helped them to relate to the students.

In view of the comments of craft teachers, and indeed of some general studies teachers themselves, (witness table 10), about the unsuitability of the general studies teachers' backgrounds for the teaching of craft students, it is surprising to find that 20/38(53%) of them (table 12) could quote experience which is certainly relevant to technical teaching. It must be remembered that the majority of general studies teachers are normally teaching a range of students. Only three in this sample were in any sense specialising in craft students.

## Women Teachers in General Studies.

The construction industry is a very masculine one, and those who work in it have very little contact with female influence during their working day. If it is required that general studies teachers should have similar working backgrounds to these students and 'speak their language', this would disqualify most women teachers from the outset. It might be said that women can add something to the students' education simply by being women. In fact 11/38(29%) of the general studies teachers interviewed were women.

### Summary.

On the whole it appears that general studies teachers do have a valuable range of knowledge and experience and a desire to contribute to the teaching. Unfortunately many of them feel themselves to be on sufferance and their contribution discounted, occasionally by both staff and students. They see themselves as a different kind of teacher from the vocational teachers, and this is sure to make for an unsatisfactory relationship unless the problems are brought out and discussed with honesty and goodwill.

5f. The Link.

The concept of the link between general and technical studies, as recommended by the City and Guilds, is of particular importance to this study. In this section an attempt will be made to establish how the idea is viewed by the teachers concerned, before looking at the manner in which it is being implemented in the colleges visited.

Table 14 shows that 37/40(93%) of craft teachers and 35/38(92%) of general studies teachers think the idea of the link is a good one, and it summarizes their reasons. Some teachers did of course provide more than one reason in support of their opinion. Most of the reasons are shared by the two groups of teachers, although they are often expressed slightly differently - an inevitable consequence of the differing standpoints of each group.

The reasons have been grouped together on table 14 in 7 categories, with the craft teachers' expression of them first and the general studies teachers' expression of them underneath. Item 1 of these categories reveals that 12/40(30%) of craft teachers and 23/38(61%) of general studies teachers see the link as having a value in rescuing General Studies from its isolation. As has already been seen in the introductory chapter, this isolation has been inherent in the General Studies component from the beginning. One general studies teacher put it thus, - 'The problem with General Studies was that it was fringe work. Industrial Studies enabled us to relate building to law, planning, regional studies and so on. It gave reinforcement to the things we had been doing; expressed it as part of a syllabus. It enabled us to expand outwards from what might appear to be the narrow confines of complementary studies into contrasting studies. For instance you can go from planning, into how other decisions are made.'

Item 2 of the categories on table 14 includes comments which

extend this notion of remedying an unsatisfactory situation to a more positive way of thinking about it. 8/40(20%) of craft teachers and 7/38(18%) of general studies teachers welcomed the opportunity for integration and for widening of horizons. Some saw the link as potentially a step towards creating a whole new component, one which makes many links and so becomes greater than the sum of its parts. One general studies teacher in particular envisaged an Industrial Studies syllabus, structured to fulfil two functions - to give the students the necessary industrial background and the sense of belonging to a team which the craft teachers most value; and also to develop the necessary skills to understand and appreciate what they are taught. This would enable them to interpret and organize facts so that they are masters of their learning instead of puppets being manipulated to set responses. 'I see this as being more important than adding extra elements to the course, like money management or how laws are made, although these things could be added quite naturally and are seen by many teachers in both groups as being valuable General Studies contributions.'

Item 3 of the categories on table 14 is particularly concerned with the proper teaching of the Industrial Studies component, and like the first two items coincides with the ideas of the originators of the component. There was a total of 23 expressions of the need for help in the teaching of Industrial Studies on the part of the craft teachers, including 10 about basic skills such as literacy and numeracy. The general studies teachers did not mention this need but 17 did express concern about the content of Industrial Studies as they saw it being taught. They wished to take advantage of the opportunity of making a useful contribution by helping to broaden the course.

Item 4 on table 14, in which the comments of the two groups of teachers are hardly distinguishable, gives the logical background to



the hoped for integration of the two components. 9/40(23%) of craft teachers and 10/38(26%) of general studies teachers described the two components as being based on the same idea. 'It is a pity to confuse the students with separate packages of information'.

Item 5 on table 14 contains two elements; that of scepticism about the feasibility of the link - only 10/78(13%) of all the teachers interviewed adopted this attitude - and the element of enquiry as to the nature of the link. This latter element is important. Not many teachers pointed to it as one of the causes of the problems associated with the implementation of the concept, but the results of the lack of clarity are evident in the courses being run by the 10 colleges visited. The difficulty which City and Guilds had in putting across the idea of the link may have been partly due to the fact that they were not sure themselves about the nature of General Studies at the time, and so were suggesting something which required more of a leap into 'unframed' education than could reasonably be expected without much more support and guidance.

Some general studies teachers were anxious about the implications of the recommended link and it is worth considering here the nature of these anxieties. One general studies teachers asked 'What is being implied by the word 'incorporate'?' The actual wording in the syllabus pamphlet is, 'Industrial Studies ... should be incorporated mainly into technical studies and partly into general studies in order to provide a link between them.' In practice this could mean that no actual Industrial Studies class is held - some of the syllabus being taught as part of General Studies and some as part of the associated subjects. This could mean a further emphasizing of the division between technical and general studies. It certainly would not satisfy the ideal of treating the learning objectives for Industrial Studies as a whole and not as a list of items to be ticked off. It also tends to

suggest that Industrial Studies was introduced partly in order to force General Studies to incorporate some related material into its teaching.

Some general studies teachers feared that the ethos of the technical department would be too strong for them if they accepted the idea of the link without it being made clearer exactly what was meant. One said, 'Why not incorporate General Studies into Industrial Studies?' He felt that General Studies is a wider concept than Industrial Studies and so could be more easily extended into other areas of the teaching rather than trying to force technical subjects into General Studies. However other general studies teachers said that they had always incorporated some technical aspects into their teaching and had always gone to the technical teachers when they wanted help. They did acknowledge that the climate associated with General Studies had changed in recent years - probably a change in which the introduction of Industrial Studies had played a part.

This change is part of the long standing controversy about whether General Studies should be complementing or contrasting. The fear for some is that if General Studies is too closely associated with the technical teaching or with the industry, it may be implied that everything worthwhile is to do with work and there is no place for the values of the individual. Some go so far as to insist that General Studies should be emphasized as being different from the other teaching so that the insights gained in the General Studies lesson will enable the student to look afresh at his or her work situation and so develop 'critical awareness' about it - for example to look closely at the effects and implications of the de-skilling of much of industry today. It is not surprising that such a view of General Studies arouses a certain amount of suspicion among technical teachers.

A common attitude among general studies teachers to the idea of the link as recommended by City and Guilds is to accept that it is a

valuable concept, provided that 'work' is not allowed to become too dominant a part of the General Studies curriculum and that the contrasting element should be maintained as an important part of the teaching.

Several general studies teachers said that City and Guilds only pay lip service to the idea of educating the students as opposed to the teaching of their crafts. One said, 'They can easily get through their City and Guilds certificate without having much education at all.' In fact this sentiment was echoed by many craft teachers. They complained about the lack of importance given to Industrial Studies. Many of the craft teachers interviewed expressed the feeling that Industrial Studies was not being taken seriously either by City and Guilds or by any other person in authority. Throughout the interviews teachers spoke of the lack of actual value placed on Industrial Studies, as opposed, for instance, to the apparent value written into the syllabus pamphlet. This complaint is reminiscent of those made by general studies teachers over the years.

#### The Concept of Co-operation.

There was a strong impression gained during the interviews that the degree and quality of co-operation in a college depended to some extent on whether the concept of co-operation had been seriously considered by each teacher.

A small number of craft teachers 6/40(15%) - see item 7 on table 14 - expressed the view that the idea of the link was a good one because 'it gives a way to control General Studies.' The word control in this context suggests a lack of awareness of the value of co-operation or anyway of its appropriateness in the teaching situation.

For many teachers in both groups the idea of co-operation seemed

to be a matter of general studies teachers being given help in relating to the vocational teaching, or of craft teachers asking for help with parts of the Industrial Studies syllabus. This almost always meant asking the general studies teachers to teach it. One craft teacher said, 'They are very co-operative, they do what we ask them to do.' Very few teachers in either group had any idea of a co-operation which went beyond this. One head of construction insisted that what the vocational teachers do, is nothing to do with general studies teachers except in so far as it would help them to introduce related topics into the General Studies curriculum. Another said, 'It is only necessary for co-operation to be one way.'

This attitude to general studies teachers was particularly evident from Heads of department who were not involved in the teaching, and it had led in one instance to such an absurdity as to give the general studies teachers Part 1 (Elements, Functions and Principles of Construction) of the Industrial Studies syllabus to teach, 'in order to be sure that they have something to teach' and then to complain that they were not doing it properly because 'they don't like dealing with the building site.' Again it is hardly surprising that general studies teachers feel under-valued and mis-understood; or that there is a lack of 'co-operation' on their part, if that is the commonly held idea of co-operation in a college. It was implicit in some of the general studies teachers' comments that this resulted in them paying lip service to 'co-operation' and maintaining a 'hidden curriculum' of their own as a counter balance to the dominant and less well hidden curriculum.

All this must be very confusing for the students. As Gloria Cuerdon says in her book on the Communication Skills Workshop (1983), 'Very often the students, especially the younger ones, are not very clear about the internal structures and politics of the institutions

they are in. They come to their lessons looking for some sort of continuity of purpose and central reason for doing the work and if their teachers are all pulling in the same direction, and best of all if they are exchanging information and ideas about the students and their course, then everybody concerned is going to feel that the effort is worthwhile.'

An inadequate concept of co-operation was evident in both groups throughout the colleges visited. This, along with the lack of clarity in the expression of the idea of the link, has led to poor execution of it. This outcome can be seen in outline on table 17 which records the teachers' descriptions of the way their college incorporates Industrial Studies into General Studies.

#### Difficulties in carrying out the Link.

Table 15 shows the answers to question 4c 'Do you wish to add anything with regard to co-operation with general studies/craft teachers?' The answers were very diverse, ranging from the general comment, 'It's very good', to a more detailed consideration of what was wrong with it and of what might improve it. It was hoped that the word 'co-operation' used in this question would draw out spontaneous feelings and ideas, which the rather more formal repetition of the words from the syllabus pamphlet used in question 4a, might not do. Although, as has been seen, the word co-operation could mean a variety of things to different people, it certainly emerged as a desirable objective and 16/40(40%) of craft and 22/38(58%) of general studies teachers expressed quite strongly the need for more of it.(See item 1, table 15).

The administrative problems of physical arrangements, time-tabling, staff deployment and so on, were emphasised by 9/40(23%) of craft and 10/38(26%) of general studies teachers. However it was

felt that these could be dealt with if other factors were favourable. These problems will be looked at in section 5g on the Courses.

The really difficult problems of suspicion and difference in attitudes to the teaching, seemed to loom large with a small number in each group (item 4, table 15). The small numbers may have been due to the fact that their contact with each other was so limited. The basically friendly relationship between them was often mentioned but the few who had tried to co-operate on a deeper level appeared to be aware of some real difficulties. One general studies teacher who had tried to work with his craft department said, 'It is possible to co-operate with the craft teachers. They are willing; but it is very unusual for them to have to discuss what a subject is about and how it should be taught. They are used to being told by City and Guilds, and they do it the way they were taught themselves.' A few craft teachers acknowledged the greater ability of general studies teachers to 'co-operate'. This was seen as being the outcome of the fact that whereas Industrial Studies is somewhat peripheral to the craft teachers' work, general studies teachers, once they have grasped the concept of Industrial Studies, see it as having a value in advancing their own aims.

As a follow up to the interviews, all teachers were asked to write a conclusion to the sentence, 'The most difficult thing about combining with other teachers is ... ' The term 'combining' was used in order to draw out quite specific comments on the activity of teaching together. (Table 21 shows the details of combining between the teachers in the colleges visited).

On table 16, which shows the difficulties mentioned by the teachers about combining with other teachers, items 1 and 2 are very close in meaning and perhaps cannot be completely separated. However there does seem to be a difference in emphasis between the two sets of

replies. Item 1 reflects the problems which could arise in any co-operative enterprise. Human beings do not often find it easy to work together on equal terms and the wording of the sentence to be completed was designed to bring out this basic human factor. 'Another teacher' was used instead of 'teacher of a different department' so that all the difficulties might not be blamed on the difference in attitudes between the two groups of teachers. Item 2 deals with this problem of attitudes and may even reveal a certain amount of stereotyping by both groups. However it has already been established that many teachers in each group see the need for more co-operation and they at least might not be content to use the difference in attitudes as an excuse for doing nothing.

Item 3 on table 16 covers the physical problems of time and space associated with combining with other teachers. This aspect was mentioned more often here than in the answers on the previous table, but here the emphasis was on the lack of opportunity for discussion rather than on difficulties of time-tabling or lack of space for combined classes. The four craft teachers who said they experienced no difficulties were really referring to the friendly relationship already mentioned, which may have little effect on the teaching.

#### Other Factors Supporting the Idea of the Link.

The response to Statement 2 (table 3) shows a majority of general studies teachers - 26/38(68%) - and all except one craft teacher, agreeing that 'Most craft students only appreciate the value of education in a context which is relevant to their immediate work situation.' This provides additional justification for the idea of the link.

The response to Statement 3, 'Industrial Studies is not providing the intended link between general and technical studies', gained

agreement from only a minority in both groups. Some felt unable to express an opinion, and most, of necessity, had to base their response on limited experience. It is perhaps encouraging that so many felt positive in this respect, but looking at the record of co-ordination between General and Industrial Studies in the colleges visited, as shown on tables 17 and 18, these results may indicate rather low expectations.

The results from Statement 4 (table 3), 'It is beneficial for craft students if craft teachers are involved in General and Industrial Studies', bear out what has already been established, that most teachers in both groups see the value of the craft teachers' involvement with the broadening aspects of the course. There is an obvious connection here with Statement 6 (table 3) - 'The craft course should be presented to the students as a whole, not as a series of disconnected subjects', which won almost universal agreement, as perhaps was only to be expected. It certainly supports the notion that neither Industrial nor General Studies should be treated as an isolated part of the course. The statement is taken from the syllabus pamphlet and underpins the whole concept of the link. It is worth noting that nearly half in each group strongly agreed with this statement. Of the few who disagreed, some had already indicated by their answers to such questions as 'Do you think the idea of a link is a good one?', that they regarded the component they taught as being self-contained and not to be influenced by other teachers.

The overall agreement on Statement 10 - 23/40(58%) - of craft teachers and 24/38(63%) of general studies teachers - that 'When general studies teachers refuse to co-operate with craft teachers the Industrial Studies component suffers greatly', again confirms the validity of the concept of teamwork in the teaching, which these two components seem to require. The rather large number who said they had



no opinion - 23 altogether - possibly reflects the ambiguity of the Statement. For some it did not have a clear meaning. It is taken from a comment made by one craft teacher at the one day conference on Industrial Studies held at Huddersfield on 20th June, 1975.

It appears that the will to co-operate exists strongly among those teachers interviewed. All that is needed is the enabling mechanisms and the support in execution which such an innovation requires.

5g. The Courses - Industrial Studies.

It was necessary to establish the nature of the CGLI's contact with colleges, particularly in relation to the Industrial Studies component. An additional interview was therefore conducted with the teacher designated by each college as teacher in charge of Industrial Studies. (See schedules in appendix A1)

In 7/10 colleges the teacher in charge was the head of the construction craft department or section, the other three were teachers given responsibility for Industrial Studies - see table 18. Only one of these heads was currently teaching Industrial Studies. Non-teaching respondents were only asked the more general questions (1-6) of the first schedule. It is noticeable from their replies to questions such as 3a 'Do you think that Industrial Studies should be given course content?' that they had a tendency to express views which were based on educational theory rather than on practical experience. 5/6 of those not teaching it said, 'No' to that question, while 19/34 teaching it (and one not teaching it) said, 'Yes'. (See table 5.) There is clearly a much higher proportion of practicing teachers who are giving priority to the need for guidance which they feel the provision of course content would offer. The natural tendency of those in charge to offer the more theoretical (and possibly the more administratively convenient) solution to such questions was apparent throughout the interviews; but however natural and even necessary, they do have the effect of making those less obliged to carry out official policy feel unsupported and sometimes cynical. The impression did often come across from those whose role was now purely administrative that they were out of touch with the problems of teaching. For example most Heads spoke of the excellent co-operation that existed between the teachers in the two groups, whereas the teachers themselves

often greatly lamented the lack of co-operation and felt that it should have been fostered more from the top. There seems to be a need for one teacher who is taking part in the teaching to be given responsibility for Industrial Studies as a whole. Such a position would require a certain status to carry out the job. This could lead to a greater uniformity in practice and also to better co-ordination with General Studies.

In fact these two qualities - uniformity and co-ordination with General Studies - were exhibited to some extent in the three colleges which had appointed a lecturer in charge of Industrial Studies (colleges 5,7 and 9). Unfortunately other factors tended to operate against the effectiveness of the arrangement. For instance, in college 7, the designation of 'lecturer in charge' of Industrial Studies was unofficial and only worked because of the enthusiasm of the teacher concerned. He expressed his particular problems thus - 'We need to make sure the scheme (for co-ordinating Industrial and General Studies) is actually worked. If I had an official position it might be possible to alter things. The machinery for getting people to do things is not there. It needs a positive effort somewhere.'

In college 5 problems arose because the lecturer in charge was not able to devote as much time to Industrial Studies as he would have liked, having reached a senior position which required him to do a lot of other administrative work. He expressed a desire for someone else to take over the responsibility but he did not have any idea of who would want to do so.

Information from and suggestions to City and Guilds.

Table 18 shows that 6/10 of those in charge thought that they received information from City and Guilds promptly. Only 4/10 said they had a copy of the Policy Statement issued by CGLI in 1972 in which

the reasons for the inclusion of Industrial Studies in the new courses is explained in some detail; 5/10 received the City and Guilds Broadsheet regularly. This latter figure is surprisingly low, considering that CGLI issue it in order to keep all those who are implementing its schemes in touch with changes relating to them.

It does appear that some heads of department (or perhaps some Vice-Principals) are not passing on the official documents they receive. It might be worth the while of CGLI to take this possibility into account and to send their information to the specific people concerned.

When asked what they would do if they had a query for City and Guilds, most in this group said they would either phone and make a general enquiry or perhaps ask for a particular department. Only two said they would speak to someone they knew. On the whole they thought of enquiries as being to do with examinations and those queries would go to a particular department. There is no one in charge of Industrial Studies as such at CGLI and so it would be difficult to find the right person to speak to in that connection. Many in the group said, 'I do not know any names.' Some said they would probably only discuss a problem at college anyway. One lecturer in charge of Industrial Studies, not a head of department, said he would not be allowed to get in touch himself; and two heads of department said that it was best for all contacts to be made by themselves and not by individuals.

The last column on table 18 shows that only 5/10 had made a suggestion to CGLI and 4 of these had done so through their contacts with City and Guilds committees or through their Trade Association. One other lecturer had suggested that City and Guilds should provide sample assignments for Industrial Studies. He was advised to write to the Construction Advisory Committee which meets once a year. Others

had responded to questionnaires sent out by CGLI - an innovation which they felt to be useful.

A conclusion which could be drawn from these answers is that it is only those at the top, with many years of official contact with CGLI, who feel themselves to be fully in touch with the policy making body, either from the point of view of receiving information or of making suggestions.

Dissemination of information inside colleges.

There is some evidence that because of the hierarchical structure in colleges, information was not being passed on. Some fairly senior staff expressed dissatisfaction at the practice of selective dissemination by those above them. One principal lecturer explained that his head of department always selected the parts of the Broadsheet he should read and only sent him those parts, while another said, 'If the Policy Statement was sent to the head of a big composite department he might not think it important to pass it on to the teachers.' This in fact certainly seems to have been the case in many colleges. Table 11<sup>a</sup> shows that only 4/40 craft teachers had seen the policy statement.

The answers to the questions concerning the dissemination of information inside the colleges are shown on table 19. The channels of dissemination appear to be there, but the answers to question 13, (shown on table 25) suggest that meetings in most colleges are not to do with the actual teaching or with the content of the courses, but only with day to day administrative matters. There is never enough time for meetings about complicated curriculum decisions or difficult problems of co-ordination between teachers. Memos and similar written communication are often not read and whereas the distribution of documents is mentioned on table 19, the record of documents not seen - syllabus pamphlets, policy statements, Broadsheets - suggests that this

activity is not so well carried out as the answers might imply. It was quite common to hear teachers say such things as, 'Things one should know about just don't filter down.' This was from one craft teachers when referring to notices of conferences, and he went on to say, 'We had to teach the way we were told at first. I would have been more autonomous in my thinking if I had been to a conference.' Informal discussion was included in most of the lists of methods of dissemination inside the college, and this, it appears, has proved to be the most effective.

The answers to the questions about attendance at conferences and meetings were very much restricted by the fact that few could remember details of those they had attended unless it was very recent, and they had still less memory of what other teachers had attended. However the impression was given again that usually only those at the top attended conferences. One teacher said, 'It was not those at L1 level who went to Huddersfield so I wouldn't have been likely to go.' He was subsequently given the job of developing Industrial Studies in the college even though he was not at that time teaching it.

#### Organization of Industrial Studies.

Table 19 (column 3) shows that some teachers were being encouraged to take a special interest in Industrial Studies for a variety of reasons - mainly to ensure continuity and co-ordination between teachers and to help new teachers coming into teaching it; also to help the development of resources. Only 3/10 teachers in charge said they did not encourage teachers to take a special interest - one because it would make for time-tabling difficulties and the other two because they felt that everyone should be interested. This last point is in tune with the ideas of the originators of Industrial Studies but it appears that, in the light of experience, it is unrealistic to expect that all

craft teachers will be interested enough to make the extra effort required to teach Industrial Studies well. For this reason it does seem that the encouragement of specialisation would help to build up the work on Industrial Studies in colleges and rescue it from vagueness and lack of co-ordination.

Ideas and hopes for the future of Industrial Studies in their colleges were expressed by those in charge and these are listed in column 1 on table 20. It is noteworthy that those in charge who were also teaching Industrial Studies were keen to develop their existing schemes of work (colleges 5,7,9 and 10), while the others had only rather general suggestions. This perhaps is another example of the value of having someone in charge of its development who is also teaching it.

Question 3b (appendix A1), which implied the possibility of a hidden curriculum, appeared to embody an unfamiliar concept for some of the respondents, but several offered informative answers. On the whole they appear to represent hopes rather than clear ideas of what was happening. This is not surprising in view of the fact that there is no easy method of evaluation available.

It was not intended to imply that only Industrial Studies gave scope for the development of new ideas and values. In a well integrated course such a possibility would be woven into the teaching of technology and practical work as well as in the Industrial and General Studies components. In college 7 for instance, the lecturer in charge spoke of the requirement of a high level of craftsmanship. He also mentioned that the staff encouraged the students to come to them for any sort of help needed. A number of others did refer to the fact that they were able to develop a closer relationship with students when teaching Industrial Studies, and others spoke of improved attitudes and of the greater appreciation of the aesthetic qualities in

buildings arising from the Industrial Studies teaching. It may be possible to judge from these answers that Industrial Studies is making a subtle but real contribution to the development of the students.

#### Full-time students.

The last column on table 20 deals with a specific point which often emerges in discussions about the teaching of Industrial Studies to students doing the CITB six months full time course before starting to work on site. Half the lecturers in charge thought this arrangement not ideal because the natural immaturity of 16 year olds is rather artificially perpetuated by the fact that they are kept in a school-like situation. This is in contrast to the longer standing arrangement whereby students come to college one day a week and spend the rest of the week working with adults, and so begin to develop their sense of adulthood sooner. The full-time students also lack site experience and this is a particular problem when teaching a subject which refers frequently to the problems and circumstances of building on site and in workshops. However the other half of this group of respondents experienced no difficulties in this, or even saw it as a better arrangement because it gave them more time or because the attitudes towards study were better. This seems to be a matter which has less clear cut responses than some others associated with Industrial Studies.

#### Teaching Arrangements for Industrial Studies.

Tables 21-27 present information on the courses from schedule A2, given to all craft teachers who were currently teaching Industrial Studies. Question 8 (See appendix A2.) asked for the details of the teaching arrangements in each college. As can be seen from table 21 only three colleges were presently combining the students of different



trades in the classroom. College 6, which had for a time combined plumbing and carpentry students some years ago and had liaised with general studies teachers closely at the same time, looked back on the experience with longing. All those who had been involved in it spoke very highly of it. One said, 'I would like to see us go back to team teaching. If you can mix the trades you get better feedback in the classroom. One trade always has a narrow outlook. The boys liked the mixing of staff too; it was something different.' This arrangement was no longer possible because the two trades were no longer being taught in the same building.

Colleges 7 and 9 combined the trades sometimes and college 10 whenever possible - this meant 2/3 of the Industrial Studies classes, in 1981. This was made possible by the organization of the teaching into a combined Industrial/General Studies course (see appendix D. scheme of work college 10). As many classes as possible were made up of two groups of students, usually of different trades, and taught by a general studies teacher and a craft teacher. The craft teacher may or may not represent a trade other than those being studied by the two groups of students. The practice of having a teacher from a different trade to that of the students only occurred regularly in colleges 9 and 10. In other colleges its occurrence was usually related to the habit, deplored by many craft teachers, of using Industrial Studies as a timetable filler. This means that a brickwork teacher might be required to teach Industrial Studies to a class of plumbers, not because anyone thought it a good idea in itself, but because it would conveniently occupy a vacant hour in his time table. However in college 9 it was considered a good idea, but a brickwork teacher complained that the practice was not satisfactory because he did not have the necessary rapport with the plumbing students, who he only saw for that lesson. On the other hand several others who were teaching

students of trades different from their own, were glad to do so because it gave them the opportunity to get to know them. One teacher in college 5 where the practice was not adopted, said he would like to do so.

The third question in group 8a - 'Do you sometimes combine with general studies teachers in the classroom or on any other activity?' was intended to supplement the answers to question 4b which asked how colleges were implementing the recommended link between general and technical studies. It has already been indicated on table 17 that the link is very tenuous in many of the colleges visited, and column 3 on table 21 confirms this indication. Only in colleges 9 and 10 is any combined activity undertaken on a regular basis. The teachers in college 6 spoke very highly of their experience of team teaching in the past. In college 2 the Painting and Decorating teacher also spoke very highly of his experience of sharing the work on a project with the general studies teacher.

On table 21, column 4 lists any special arrangements for teaching Industrial Studies as reported by craft teachers in each college. Colleges 9 and 10 spoke of a special emphasis on students' own work and other colleges were clearly providing student-based activities such as visits to look at buildings and visits to workshops other than their own. These answers appear to be a reflection of the teachers' perception of Industrial Studies as different in its nature from the rest of the course - referred to by one teacher as, 'the normal informative lesson.' One teacher gave an example of an Industrial Studies lesson in which he would give the students a problem about faults in materials to solve. He would suggest to them where they might find the answers and help them to draw up a report on the problem. This type of work was usually described as an assignment or perhaps a project - the terms were not used very precisely. (See

table 24 for definitions). It can be seen from the list on table 24 that there were 29 instances of the use of assignments and projects by craft teachers. This is the type of work suggested for Industrial Studies in the syllabus pamphlet. The use of such methods may have their repercussions in the whole teaching style of the craft teachers concerned. However it may work the other way as well. One teacher did say he felt he could not change his style of teaching for Industrial Studies. He felt the students would think it strange if he did so. As has been seen in section 5d on the Craft Teachers, their teaching methods tend to be the traditional kind - described by one craft teacher as 'Introduction, expansion, conclusion, and question and answer.' In order to discover what methods and materials were being used in the colleges visited, the teachers were asked for sample materials. Some of them clearly put very little demand on the students' intellect. One craft teacher explained that the methods open to them were limited by the students' lack of the three Rs. (Another pointed out that it is the students' low educational standards that so greatly limit what can be done in General Studies.)

The bottom of table 21 shows 24/34(71%) of craft teachers as being dissatisfied with the teaching arrangements for Industrial Studies. The reasons given are similar to those already expressed - for example, 'There is not enough support from the top for Industrial Studies'. Only one teacher mentioned here the need for more time to prepare and discuss the work. Perhaps the term 'arrangements' did not have that meaning for most of the respondents. This problem was mentioned more often when teachers were completing Sentence 3 - 'The most difficult thing about combining with another teacher is ...' (See table 16). However the sense of dissatisfaction was quite apparent. It is surely a serious criticism of any professional activity that not enough time is spent on planning it. Those experienced in teaching in Further

Education will recognise the phenomenon. It is possibly the most influential factor in thwarting the wishes of policy makers and educational theorists. During term time especially when teachers are involved in overtime, it is a near impossibility to get teachers together except for brief meetings on administrative matters. This fact has already been mentioned in discussing the methods of dissemination inside colleges. The administrative weeks at the beginning and end of the academic year are also very full of matters not relevant to the curriculum, and the opportunity for forethought and reflection is often not available or insisted upon. The consequent lack of proper involvement in curriculum decisions by those concerned in the teaching has inevitable repercussions when teachers feel forced to teach something they do not understand and have had no part in developing.

#### College Schemes of Work for Industrial Studies.

When considering the answers to the question, 'Do you have a college scheme of work for Industrial Studies?', it is evident that individual teachers in 5/10 colleges were solving the problem of poor college co-ordination of the course by adopting their own interpretation of it and developing their own Industrial Studies courses (See table 22).

In the other five colleges a common scheme of work existed but not all teachers were using it. The next question asked was, 'How was the college scheme drawn up?' Colleges 6, 7, 9 and 10 reported having done so by consultation with the teachers concerned. Full participation in this process however, is not easy. New teachers joining will have to accept an interim period during which they will be teaching to an existing scheme anyway. Flexibility to allow for change and for individual needs is valuable but it must not be so great

that the scheme ceases to exist as a common guide. This balance between guidance and flexibility can only be kept by regular discussion and review of the scheme. Table 25 shows that such a practice is unusual in colleges, although individual teachers say they are constantly revising their own schemes.

The schemes of work provided by the teachers are mainly lists of topics to be covered by the teacher. Apart from the scheme developed at the Bolton Conference, which was being used by some teachers in colleges 4 and 8, and the scheme used in college 5 which includes an allocation of time to be spent on each topic, only those used in colleges 9 and 10 (See appendix D) included more than content. Many of them reveal a concentration on a limited range of topics. As has already been pointed out, many craft teachers rely for their success with the students on the similarity of their background and experience. This can mean that they do not see the necessity of learning new things themselves in order to pass them on to their students.

A note might be made here to indicate the length of time given to Industrial Studies classes - part of question 7. The usual time is 60 minutes, although 90 minutes is common with full-time students, but that is only over the 28 week period of their course, or in the case of plumbers 23 weeks. Three teachers mentioned 120 minute lessons. It is not possible to state lesson times for each college because different lengths of lesson can exist in each trade section within a college. In college 2 Industrial Studies was taught as part of the group of subjects called Associated subjects. In this case the time of 150 minutes is divided between the subjects as thought appropriate by the individual teacher. Those interviewed considered Industrial Studies to be rather neglected under this arrangement, the time being taken up by the more obviously examinable subjects.

### Use of Textbooks.

Table 23 shows how the craft teachers were using the two textbooks then available in Industrial Studies. Only 12/34(35%) teachers were familiar with the Huddersfield Handbook (Huddersfield Polytechnic, 1976). In answer to the question 'Have you found it useful?' only five had anything positive to say about it. For example one teachers said, 'Its ideas for projects are good.' and others said its ideas for content were useful. There was more response to the questions about the text book by Boucher, (1976). 19/34(56%) used it and most of them said they got ideas about content or presentation from it (see table 23.) One said he used it as a textbook for the complete course, because it covered most of the topics needed. However others said it was 'too limited' or 'too shallow' for using in this way.

### Introduction of Students to Industrial Studies.

Table 24 lists the way craft teachers introduce their students to Industrial Studies. For many of them - 23/34(68%) - this meant putting across to their students their ideas of the value of it as expressed in answer to the first question of their schedule.(see table 2) and points up the effect that a limited acceptance of its value could have on the students. Quite a large proportion - 18/34(53%) - outline the syllabus or at least part of it. This is probably an innovation as far as the students are concerned. It is not usual for craft students to be given much information about their course at an early stage, but Industrial Studies does seem to require it. 11/34 craft teachers felt that they should explain to their students the methods of assessment they use in Industrial Studies, again probably because it would be different from that used in other parts of the course. Another reason for this emphasis on assessment was sometimes in order to emphasize the importance of the component in obtaining

their craft certificate - as an aid to motivation. However when asked in question 11 'Do you ever fail a student in Industrial Studies?' only 19/34(56%) said, 'Yes', and their follow up comments (see bottom of table 24) revealed that most of these were not really likely to do so in practice. There appeared to be a certain amount of bluff operating in this area.

#### Methods of Assessment.

Table 24 shows the craft teachers methods of assessment of Industrial Studies. The use of projects and assignments has already been commented on. Otherwise the use of ready printed sheets requiring short answers or words to be filled in predominates. (See appendix E for examples.) 7/34(21%) said that their students were required to answer essay type questions. This of course includes those craft teachers who work in conjunction with general studies teachers in college 10. 6/34(15%) mentioned oral tests, which could mean asking the students to give talks, take part in role play exercises and so on or it could mean asking students to give their answers orally in class instead of writing them down. Only 5/34(15%) take into account the contributions students make in classroom discussions in arriving at their assessment.

#### Evaluation of the Teaching. Revision of the Scheme of Work.

The answers to the question about a system of evaluation of the teaching usually referred back to the methods of assessment answers. As has already been suggested the attainment of 'satisfactory' by a student is usually so easily achieved that it is a foregone conclusion. This situation does not leave much scope for questioning the effectiveness of the teaching. However most of the teachers said they had informal discussions between themselves and with their students. On the other hand there appeared to be little formal attempt to see how

the teaching was going in terms of fulfilling the learning objectives. As can be seen on table 25, college 9 had occasional meetings about the assignments which were a major part of the course; one teacher in college 7 had formal talks with his students; and in college 10 there were formal meetings about the course and formal interviews with selected third year students to hear their views about their Industrial/ General Studies lessons.

The emphasis on formality is important because of the need for some degree of objectivity. Informal talks with students as a group can be very misleading, and reliance on informal discussions between teachers can mean very little in the way of analysis although it may be very useful in exchange of ideas and in giving encouragement. The danger of a lack of some formal system of evaluation is that only that which can be easily assessed will be concentrated on and teachers may delude themselves into thinking that they are achieving more than they are. Formal discussions can play a part in keeping the curriculum and the teaching methods alive and effective.

For the same reason it seems essential that college schemes of work should be regularly reviewed, and revised where necessary, even if only to help the teachers to avoid getting stale and mechanical. Table 25 records the teachers' replies to the question about revision of the scheme of work. It is clear from these replies that provision for systematic revision is even more unusual than the existence of a college scheme of work itself. Several teachers did say that they revised their own notes and schemes of work constantly.

#### Interchange of Ideas and Materials between Colleges.

As can be seen from table 26 the response to the suggestion of interchange of ideas and materials was overwhelmingly favourable. Every teacher's answer is recorded and only three responded negatively,



although several added a proviso such as, 'If the right colleges were involved ' or 'If they don't try to force their ideas on me.' Some wondered about the practicalities of such a scheme and others thought that the exchange of ideas and methods would be more use than interchange of materials, because materials are often of use only to those who have devised them.

#### Feedback from Employers.

The last question on the teachers' schedule is concerned with the teachers' contact with the employers of their students. Although the indication from table 27 is that there is very little feedback of a direct nature, there does seem to be a certain amount of anxiety in colleges about the reactions of employers. Many craft teachers seemed to regard the employers of their students as their own employers in some sense, and consequently were very alert to any indication of dissatisfaction. This is a feature in their attitude to Industrial Studies, especially with regard to the parts less concerned with the trade of the students they are teaching. This problem will be looked at in more detail in the next section which deals with the interviews conducted with 30 employers of students from the 10 colleges visited.

5g. The Courses - General Studies for Construction Craft Students.

As with the Industrial Studies component, a separate schedule of questions was put to the teachers designated as being in charge of General Studies for craft students. Tables 28/30 present information gained from this schedule - 2b. Table 28 indicates the position held in their colleges by these teachers. In 8/10 of the colleges visited, they were the lecturer in charge of all General Studies. In college 2 and 10 the teacher had been given specific responsibility for craft General Studies. In college 1, there was a division of responsibility - one teacher in charge of General Studies and another in charge of Communication Studies. In college 5 there was no one in charge - thus reducing the total of respondents in this part of the enquiry to 9. There were two Communication Studies teachers who were attached to the Building department, and servicing the craft students as well as the rest of the department. 5/9 of the teachers in charge were currently teaching the craft students; all of them had taught craft students at some time.

Information from and Suggestions to City and Guilds.

Table 28 shows the amount of contact which teachers in charge of craft General Studies have with City and Guilds on a day to day basis.

2/9 said they received information promptly. All had seen a relevant syllabus pamphlet, but it was clear from their answers that very few regarded it as being of more than peripheral interest. Most said they had only seen one but did not have a copy.

The Broadsheet too, was only received regularly by 2/9 teachers in charge - an even worse score than that of the technical teachers. It does not seem to be the effective instrument which it might be in drawing together all teachers concerned with the City and Guilds

schemes and of keeping them informed of new developments.

In the matter of making enquiries to City and Guilds, 4/9 said they would probably speak to someone they know there - for two of them it would be in relation to the Communication Skills schemes. 7/9 had made suggestions to City and Guilds, again mainly in relation to the Communication Skills schemes. As with the technical teachers some had made suggestions through their 'trade association' - Association for Liberal Education and NATFHE General Studies Section. None of the teachers in charge could remember having seen the policy statement sent out by CGLI in 1972.

Table 28 shows the comments of the teachers in charge about the booklet published in 1970 by CGLI on 'General Studies'. It appears that they consider the booklet to have served a useful purpose in establishing the philosophy of General Studies in the colleges, but that now something more is needed to guide and support general studies teachers.

The overall impression gained from these answers is that while a certain amount of energy and initiative is being exercised, there is a lack of any real sense of communication with City and Guilds and consequently of co-ordinated effort on everyone's part.

Dissemination of Information inside the colleges.

The teachers in charge of General Studies seem more aware of the range of methods for dissemination open to them than do the technical teachers. Perhaps too they are more aware of the need to involve their staff in the administration and planning of the teaching. Their answers to the question on methods of dissemination are shown on table 29. They also appear to be more likely to send their staff to meetings and conferences. Two of them said they had a policy of sending everyone to at least one such activity every few years. Several

had initiated and run a meeting or a conference in their own college.

In answer to the question about special interest in craft General Studies, all said that the interest was there but 5/9 said they did not encourage specialization. In colleges 1,6,7 and 10 the teacher in charge accepted the need for specialization in order to 'increase expertise' in this area. In the case of college 6 responsibility of a kind had been delegated but to a teacher who was not teaching craft students. It did not prove possible to interview him, but the efficacy of such a practice seems open to question.

In colleges 2, 3, 4, 8 and 9 the emphasis was on the need for general studies teachers to be able and willing to teach a wide range of students. This over-riding concern is of interest in relation to the criticism expressed by the technical teachers that general studies teachers do not suit their teaching to the particular needs of the craft students. Perhaps it points to the unrealistic nature of the brief given to those in charge of General Studies when they are asked to cater for the needs of all the students in the college. The fact that, as one general studies teacher said, 'specializing in craft General Studies does not help advancement' also seems to suggest a lack of appreciation at the administrative level of the need to devote time and energy to the needs of each group taken. Probably the solution should be specialization in one field to be followed by further specialization in another. Perhaps the teacher in charge in college 7 gave the compromise answer. 'It's best for teachers to have variety but I don't discourage special interest.'

Table 30 records the improvements wanted for craft General Studies by those in charge in the nine colleges. General Studies teachers were usually highly articulate and their ideas in this connection were often expressed at some length. Most gave evidence of having given careful consideration to the needs of the craft students. It is to be

hoped that the tabulation format represented by table 30 does sufficient justice to their answers. Several important ideas were mentioned repeatedly - the need for General Studies and Communication Studies to be treated together; (In college 1 a particular point was made about this, because the nature of the college organization was working against it); the importance of the relationship with the technical teachers; and the need for better cohesion between the various components of the students' course. The desirability of improving the content and teaching methods of craft General Studies also occurs several times in the answers.

The second column on table 30 shows the attitudes of these respondents to the 'hidden curriculum'. Many general studies teachers see their work as being mainly in the area of ideas and values and so their replies were often to do with their own stated curriculum rather than a hidden curriculum. However some replies dealt with matters which are more dependent on the teacher's day to day attitude and are less accessible to the curriculum planners. For example one said, 'Prejudice and poor self-image begin to be broken down.' Some elements such as poor accommodation will be in the hands of the college authorities. All respondents appeared to be aware of the subtleties of their work and saw the hidden curriculum as being partly outside their control.

The answers of the general studies teachers to the question, 'Are there any special problems associated with the full time students in relation to General Studies?' were very much the same as those of the craft teachers and so have not been included on the table.

Teaching arrangements for General Studies.

Tables 31-37 present information obtained from the teachers' schedule 2a. Table 31 shows the general studies teachers' views of

the contact they have with the craft departments in their colleges and the practice of combining with the craft teachers on various activities. It is evident that there are some wide variations in the replies from teachers in the same college. This is sometimes due to the fact that a teacher was only teaching one or two craft classes so motivation for contact was likely to be limited. It is also likely to be because some teachers did not appear to be willing to take the initiative and perhaps were not able to respond to another's initiative either.

Although many of the answers did reflect the very positive friendliness and goodwill which was so often apparent between the craft and the general studies teachers, there was an emphasis on the casual nature of the contacts. Even when a teacher said, 'very regular contact' (college 6) this turned out to mean brief exchanges before and after class - and these were rarely about the teaching.

General studies teachers who were attached to the Construction department in their colleges (college 5 and 7) reported that their contact was good, meaning that there was plenty of opportunity for discussion, but unfortunately even in these cases there was the qualification, 'I have to take the initiative'. These teachers also said that they missed the support of other general studies teachers because they were used to discussing the teaching, and the craft teachers, on the whole, were not.

In question 8c general studies teachers were asked if they were satisfied with the teaching arrangements for General Studies, and 21/34(62%) said they were not. The lack of adequate contact between the departments was the greatest source of dissatisfaction - 13/34(38%) mentioned it (table 31). However there was clearly an ambiguity in the term 'teaching arrangements' because some who expressed satisfaction went on to point out the need for more contact with the

craft department. Some felt that the contact should be arranged on a formal level by the departments and not left to the individual teachers, while others felt it to be especially important for the teachers to get together and this did not always happen if it was left to formal contact between the heads.

The other main cause of dissatisfaction was the unsuitable accommodation, the lack of technician backup and the lack of equipment and facilities to do the job properly. It was felt that if General Studies was taken seriously by the colleges, teachers would be provided with rooms adaptable to their purposes, and with visual aids and other facilities required for modern teaching methods. It was reported that General Studies was often allocated any room not needed at the time for other classes, however unsuitable. Poor timetabling arrangements were also mentioned. This refers to the fact that General Studies is often given time at the end of the day when the students are less likely to take it seriously; some general studies teachers feel that time tabling is too inflexible and so they cannot take students out on visits. Also it may not allow a teacher who particularly wants to teach a class to do so. As with Industrial Studies, General Studies class times were usually an average of 60 minutes with an extra 30 minutes for the full time students.

#### College Schemes of Work for General Studies.

The question of the extent to which a college scheme of work is desirable must be kept in mind when considering the answers on table 32. It has already been seen that one of the chief qualities of General Studies is its flexibility; its freedom to adapt to the needs and circumstances of the class concerned. Teachers in college 8 said they preferred to be free from the constraints of a syllabus and only issued a 'statement of intent'. This may have been a factor in the

proposal in this college that craft teachers should take over the teaching of General Studies in the next year.

In other colleges individuals preferred to ignore the existing college scheme, and others said they used it as a guide only. If the college scheme of work had been drawn up some time ago and there had been no consultation since, it appeared that teachers did not feel very bound by it. Very few colleges included suggested methods of teaching or lists of resources available in their schemes of work. Most were lists of topics, usually divided into yearly allocations. This ensures that the same topics are not repeated from year to year but leaves a good deal of freedom to the teacher. However in view of the desire for more guidance expressed by so many general studies teachers (table 6) it might be suggested that the guidance should come primarily from the joint wisdom of those teaching in the college, provided that consultation is on a regular basis and all concerned are involved in the discussions. Table 35 shows this to be the practice in few colleges. Some would say let the general studies teachers go their own way if that is what they want, but the history of General Studies suggests that this is unsatisfactory in several ways. The other members of the college staff do not like it because it disrupts the students, who are confused by an apparent lack of continuity. It is not liked either by the general studies teachers who do want some uniformity of approach. They feel themselves 'tarred with the same brush' when there are criticisms of the erratic nature of general studies teachers. Finally the individualistic general studies teachers themselves often appear to feel isolated and to resent the lack of any support.

Use of Textbooks. Methods of Teaching.

General studies teachers were asked if they used any textbooks in



their teaching of General Studies. Their answers to this are recorded on table 33. Predictably there was no one particular textbook used. A wide range of books were mentioned - a few by name - but the most common response was, 'I use my own material.' When shown the Industrial Studies textbooks (Boucher and the Huddersfield Handbook) 8/34(24%) said they had made some use of Boucher and 5/34(15%) said the same about the Huddersfield Handbook. The most striking thing about their response to this question was the impression of enterprise and self-reliance which they gave when talking of their search for suitable materials which they would adapt to the needs of the students. They appeared to be very aware of the importance of using the right type and level of information and exercise. This is probably a reflection of the fact that they do normally teach a wide range of students and so they are particularly aware of the need to be selective and adaptable.

Question 12 went on to ask general studies teachers whether they had introduced any new methods into their teaching in the last five years. The response to this was strikingly different from that of the craft teachers to a similar question. Most general studies teachers said they had always used a wide variety of methods. Table 33 shows many of these listed, with comments about how the method was learned and how effective they thought it was.

Clearly the general studies teachers were much more interested in teaching methods than were the craft teachers. In fact they could be said to be specialists in teaching method and this could be said to be their most important contribution to Further Education. Sometimes their ideas and experiments may have been misunderstood. However, with a growing desire for co-operation between teachers of different disciplines, there may be now a real chance of each learning from the others' expertise. One craft teacher who had been teaching a WEEPS course part of the time in the class room with a general studies

teacher, said, 'I find it stimulating. It forces me not to try to teach off the top of my head.'

#### Introduction of Students to General Studies.

Table 34 lists the way teachers introduced their students to General Studies. A large proportion said they explained the underlying principles or philosophy of General Studies - in varying degrees of detail. It is an opportunity to make clear to students certain things about General Studies which students find puzzling. 'Why do we have to do this?' must be the most frequent question asked in General Studies lessons. However most general studies teachers were aware that the philosophy of General Studies must be put across gradually and carefully. One general studies teacher said, 'I avoid provoking too much discussion at this stage. They can't handle the philosophy of General Studies all at once. Even with mature students, if you start telling them, what sounds like - I'm going to tell you whats good for you and what you should be - they would react against it.'

Explaining the place of General Studies in their course was mentioned by 16/34(47%) - compared to 8/34(24%) craft teachers when introducing the Industrial Studies component. However only three teachers mentioned that they related General Studies to Industrial Studies.(item 8 on table 34). 13/34(38%) emphasised the importance of communication skills. 9/34(26%) said that they asked the students for suggestions as to what would be relevant to them as part of the General Studies course. This was sometimes described as 'negotiating the course',and is probably something that many craft students would find strange. It would possibly be mis-interpreted as 'vagueness' on the part of the teacher or as indicating a lack of importance for the subject. 13/34 said they explained their methods of assessment at this stage.

## Methods of Assessment for General Studies.

The second group of answers on table 34 sums up the general studies teachers' methods of assessment of their students. There is quite a close resemblance to those of the craft teachers for Industrial Studies, the most obvious difference being that 13/34(38%) as opposed to 5/34(15%) of craft teachers assessed the students' contribution to class discussions, although often the assessment was only a comment recorded on a report sheet. Several general studies teachers rejected this method because they felt it to be too subjective. Most of those who used it said, 'I realize it is very subjective' and one added, 'It is always difficult to assess the affective area.' This comment brings out the particular problem of general studies teachers in attempting to 'develop the whole person'. In college 10 the assessment for classroom contribution and improved attitudes to the work formed part of the overall assessment of the third year students in the selection of winners for the local Rotary Club's prize for Industrial Studies. This assessment involved interviews with selected students which gave useful feedback to those teaching the combined Industrial/GeneralStudies course.

Further comments made by general studies teachers about assessment show the concern they have for this area of their work. 'I assess in every possible way' and 'I give credit for everything, including effort' and 'I don't assess for knowledge'. The question of assessment on an individual basis inside the colleges cannot be separated from the question dealt with in Section 3 (Concepts of General Studies). Table 8 gives the answers to the question, 'Should General Studies be externally assessed?' The head of the General Studies department in college 3 associated the two aspects when he

said, 'I believe there should be some form of assessment which gives the lecturer some idea of the effectiveness of the teaching - 'A Basis for Choice' type of assessment. 'A Basis for Choice' has a better than usual statement about assessment, especially for people who think assessment means grading or pass/fail.' The main point he was making, and it was made by others during the interviews, was that CGLI need to come to terms with the whole problem of assessment of the non-factual aspects of their schemes, on a national scale. A general studies teacher in college 10 summed it up thus, 'Why should General Studies not be assessed? No subject is unique. The problem is finding a way of doing it - not of whether it should be done or not.'

Perhaps it is not surprising in the existing circumstances that 25/34(74%) of general studies teachers, when asked if they would ever fail a student in General Studies said, 'Yes', usually adding, 'If they refuse to do the work' (Table 34). This number, which is higher than that of the craft teachers, was probably influenced by the fact that general studies teachers have increasingly been forced to recognise the unwelcome but apparently essential coercive element which the pass/fail system provides. Their reluctance to do so is evident from the comments of those who said, 'Yes', as well as from the small number who said, 'No' (See table 34).

Evaluation of the Teaching. Revision of the Scheme of Work.

Table 35 records much fuller answers to the question about how the teaching is evaluated, than the same table for the craft teachers, but although it does reveal a greater emphasis on the importance of curriculum development, it still does not record a great number of formal methods of ensuring it. Colleges 3, 7 and 10 record formal meetings. In college 10 these are the same meetings mentioned by the craft teachers because it is a joint Industrial/General Studies course.

In other colleges there is a heavy dependence on information about the success of the General Studies being 'filtered back' from the craft department. There is also reference to the 'constant interchange of ideas' which goes on between general studies teachers about the effectiveness of their work. As with the craft teachers there is not much evidence of a systematic approach to the revision of schemes of work, although again there does seem to be an awareness of the importance of doing so regularly. Colleges 3,5,7,9 and 10 all report some kind of system which ensures growth and adaptability to change in the scheme of work.

#### Interchange of Ideas and Materials between Colleges.

The response to the question 'Would you welcome more interchange of ideas and materials between colleges on General Studies?', as in the case of the craft teachers was generally enthusiastic(See table 36). Only one general studies teacher said, 'No, you can be snowed under with ideas and materials.' Others did have reservations. 'You want to be able to see the wood for the trees ' and 'It would be better to co-ordinate inside the college first.' Also the term 'consortium' used by the report published by the NATFHE/ALE Joint Working Party was regarded with suspicion by some. 'It must not be didactic' and 'It might be too rigid' were two typical comments. The enthusiasm of both groups for more contact with others doing the same work is an indication of the sense of weakness and isolation they seem to experience in their work.

#### Feedback from Employers.

In the last table of responses from the general studies teachers (table 37) there is another clear indication of their sense of isolation and even of rejection; this time it is associated with the

employers. One teacher said, 'It seems as if the employers are our enemies.' Most had very little contact with the employers to report, although teachers in some colleges were going to some trouble to make contact. Sometimes, as in college 3, the contact was blocked by the craft department. This was probably not deliberate but simply an extension of a lack of autonomy, which general studies teachers feel should be rectified. It is likely to be another problem which discussion and co-operation on equal terms would go a long way to solve.

## 5h. THE EMPLOYER'S VIEW.

### Introduction - The industrial element in training and education.

The importance of the employers' response lies not only in the fact that they have a strong influence on their young employees, but also in the fact that they represent an important element in society outside the Further Education system. It may be easier to understand their responses if certain background events leading up to the present situation are considered first.

Originally the construction industry differed from most other industries in that their activities were little affected by the industrial revolution, and until the second world war there was not much emphasis on productivity amongst established firms. As a result the City and Guilds schemes were more concerned with quality than with productivity. After the war there was a great demand for buildings to be put up quickly, and public companies were formed with shareholders who wanted big profits. HMI Nield, an influential member of the Joint Advisory Committee which instigated the schemes under review in this study, suggests that the accountants who were brought in to look at the cost of training in these companies considered that it was too expensive for their immediate needs. They were in fact, more concerned with acquiring 'hands' to do straight jobs efficiently than to prepare a man for his life's work. At the same time the National Federation of Building Trade Employers appointed new training directors who also put the emphasis on productivity.

The name given to large building firms today, 'building contractors', itself suggests a situation in which builders are

'contracted' to carry out the work on a building for which all the planning and design has already been done. The emphasis as far as they are concerned is on the production of a building as cost effectively as possible. This clearly will have implications for the nature of the preparation considered appropriate by employers for trainees entering the industry.

With this background in mind it is not surprising that there has been a growing emphasis on 'skills training' over the last 20 years. Mr. Nield considers that if the City and Guilds had been more concerned with productivity earlier, the rift between the 'training' and 'education' aspects might not have become so great. However there does appear to be a need for some body such as City and Guilds to keep in mind the needs of the student as well as the needs of industry.

The 'training' aspects of the preparation of construction craft apprentices for their work, was given great momentum by the publication of the BRS Report in 1966 (See p.21 chapter 1.) This was followed in 1969 by the CITB's 'Plan of Training for the Operative Skills in the Construction Industry'. The BRS Report uses the term 'training' to mean skills training and does not include in it any part of the concept of 'education'. The introduction makes the following statement,(p.2) 'The complete definition of a training programme includes, firstly, a clear statement of the work required of the operatives for whom the training is provided and secondly, for each defined occupation, a statement of the quality and speed of working at which the training is to be aimed. This approach is not indicative of a narrow view which damns all theory or the aim to develop the trainee in the broadest sense. It serves only to emphasise that one aim of any kind of training is to equip a man to earn his living by being able to perform competently a known range of work.'

The CITB's 'Plan of Training' on the other hand, after making



certain recommendations about the training aspects adds, 'Further education is a critical element in the training plan and consultation is proceeding with all interested parties.' It goes on to list three types of further education which will be needed - '1. Remedial. 2. Job knowledge. 3. General education, which should include further technical and liberal studies - to broaden the mind of the operative.' It continues, (p.6) 'Obviously the lad with ambition will want to go further, but the plan provides also for those who, after 'opting out' of their further education, realise later that they are missing out on progress and promotion. Under the new scheme, they can 'opt in', perhaps in their twenties and take suitable further training to up-date themselves and so improve their position in their firm - and life.'

The 1962 City and Guilds schemes for construction crafts are described in the 1972 policy statement, as 'an attempt to identify those elements of craft practice and theory essential for the craft apprentice who is likely to become a competent craftsman.' It was at this stage that the separate component of General Studies was introduced, in an attempt to modify the narrowness of the technical aspects, but the general building construction element was left out of the theory. Mr. Bill of the City and Guilds considers that in trying to satisfy an expressed need for specialist craft courses, these schemes departed from established City and Guilds practice and in so doing became an aberration which the 1973 schemes corrected. The aberration arose from the fact that they did not have the 'promotional' requirements of the students built into them, making the inclusion of the General Studies component appear to be more of an anomaly than it does in the present schemes.

Developments since the 1973 construction craft schemes.

In 1977 the CGLI issued a Consultative Document (Certificates,

Diplomas and other awards of the Institute.) in answer to the growing criticism of the 1973 schemes. It invited individual industries to 'consider the introduction of revised arrangements whereby some form of agreed assessment of skill could be combined with the craft certificate in an overall diploma of vocational education and training.' After consideration of the document the NFBTE replied that they considered the matter of skills testing should await developments from other sources and proposed that the need for modification of the CGLI's 'job-knowledge' syllabuses should be explored.

The NFBTE followed this by issuing their own consultative document - 'Apprenticeship and Training Arrangements for the Building Industry' in 1981. This gives an account of the (p.2) 'key issues raised during the national debate on training that has taken place over the last few years.' (The term 'training' is used here to include the concept of 'education'). The paper describes the Standard Scheme of Training introduced by the CITB in 1974, which is the method of training preferred by the National Joint Council of the Building Industry, the body in charge of apprenticeship arrangements. (See appendix b. for details.) (p.6/7) 'This covers both the practical work carried out by the apprentice at college and the theoretical knowledge gained there, but it is essentially an assessment carried out under the further education system and it is debatable as to whether it provides any real measure of the apprentice's practical ability in the skills of the craft. It is however the only nationally accepted test of any kind taken by most apprentices during their training.'

The paper goes on to outline the main criticisms of the existing system. After referring to such aspects as the poor quality of the newly qualified craft operatives, it lists the shortcomings of the educational side of apprentices' training. It criticises the gearing of the training system towards the production of craft operatives who

will eventually be moving up to supervisory levels, whereas what the industry really requires is more suitable training for those apprentices who will remain craft operatives throughout their working lives. In particular the paper says that employers have directed their criticism at the (p.14/15) 'lack of relevance of some of the studies covered, particularly in the field of General Studies. Many employers have also queried whether parts of the work undertaken in connection with the Basic Craft Certificate are of much practical value...'

The paper outlines possible changes in the training system, including the proposal that craft status should be partly dependent on success in a skills test - regarded by the writers as the most important issue raised by them. A further paper 'Apprenticeship and Training: the next stage', issued in April 1983, extended its scope to consider the the Youth Training Scheme which was due to be introduced in September 1983. This prospect caused some alteration to the timing of the NFBTE's plans. The aim now is to introduce a national scheme of skills testing and certification by 1985 in order to test trainees who entered the Youth Training Scheme in 1983. The role of the examining bodies such as the CGLI was said to need further consideration. (p.17) 'We recommend that NFBTE and its trade affiliates consider what modifications are needed to present syllabuses in order that the educational institutions can be advised of any changes desired by the industry.'

The National Needs, the Employers' Needs and the Individual's needs.

A recurring theme in the literature on technical education published during this century has expressed the idea that there should be no conflict between the needs of those involved in it; that when the skills of its young people are developed along with the knowledge and

understanding which their status as workers and citizens requires, the nation, the industry and the individual are well served. The Hadow Report (Board of Educ.1927,p.xxiii) speaks of 'The training of boys and girls to delight in pursuits and rejoice in accomplishments ... which may become the recreations and ornaments of hours of leisure in maturer years' as well as the 'awakening and guiding of the practical intelligence for the better and more skilled service of the community ... '. The White Paper 'Technical Education' (1956) includes in its definition of a craftsman the statement, (p.4) 'It has become necessary for them to appreciate not only the how but also the why of what they do '. Both the Crowther and the Newsome Reports placed great emphasis on the need to continue basic general education into the post school years, while technical and other studies are being pursued.

There does appear to be a difference however, between the aims of the teachers who are following the recommendations of the policy makers and looking at long term needs, and the aims of the employers who are looking for an employee who is willing and able to do the work demanded as quickly and efficiently as possible. In a paper (Bill,1977) prepared as a background to the discussions on the certification of craftsmen in 1977, Mr. Bill of CGLI points out that apprenticeship documents of the last century incorporated the notion that social, industrial and general studies are all essential parts of the apprentice's preparation for his status as craftsman. Mr. Bill goes on to say, (para.6) 'It is especially interesting to note, in contrast to the prevailing spirit today, that it is the employer who is the main beneficiary of the lad's social upbringing ... by stark contrast the main beneficiary of the 'technical syllabus' is the apprentice himself. He is therefore required to pay (or find from his parents) a fairly hefty sum in acknowledgement of that fact'.

In conversation Mr. Bill pointed out that the Industrial Training

Act (1964) 'turned this notion on its head', insisting that it is the employer who benefits from the apprentice's technical training and so it is the employers who must pay for it through the Industrial Training Board's levy-grant system, leaving the further education to be paid for by the community through the Local Education Authority. Mr. Bill continued his analysis of the changing ideas about 'education' and 'training' by saying that the 1973 Manpower and Training Act represents another change, in that, for the first time, Central Government is paying for the training through the Manpower Services Commission, thus acknowledging that the nation too benefits from industrial training. In all this, in spite of constant reminders about it from official sources, the notion that the 'education' of young people is of universal value too, seems to have been left out of account.

This separation of the education and training elements which has been brought about partly by financial considerations, may also be due in part to the process, described by Kimbell in his thesis 'Craft education in the secondary school : a study of its development and relevance to an industrial society' (1975), by which craftsmanship has been divorced from the design process. The importance of re-connecting these two aspects of craftsmanship has been recognised by the development in schools of a new combination of subjects called design technology.

Starting from a political standpoint, the NATFHE General Studies Section imply in their Working Manual, which was adopted by them in 1980, that the needs of the employers are necessarily in conflict with those of their employees. In their list of principles of General Studies the statement is made, (p.2) 'General Studies is primarily concerned with developing critical awareness and analytical ability'. Later in their comments on the introduction of Industrial Studies into the building craft courses, they say, (p.6) 'General Studies refers to

a distinctive practice ... it exists to supply a critical toehold and to examine those aspects of society which influence those students receiving it ... it is concerned with the study of work according to the principles expressed above ...' In a Paper written for the International Association for Educational Assessment (1982), Mr. Bill of CGLI argues that the distinction between general education and vocational (technical) education, (or perhaps in this context training), varies according to the time and place concerned. (p.4) 'The value placed on general and vocational education stems from one and the same critical base - the use to which a community can put them to ensure its social survival and growth.' With this assessment in mind it seems likely that the statements of NATFHE General Studies Section would be considered too subversive by most societies. Employers might accept that General Studies is included mainly (op cit p.11) 'for the benefit of the student, lest technical studies prove too restrictive', but they are unlikely to accept the need to question the working situation. If there was any doubt about this, a glance at the comments made about General Studies on table 42 will confirm that this sample of employers certainly would not accept it.

#### The Employers' Answers.

The employers' schedule of questions was designed to discover to what extent they were conversant with the course and whether they were in sympathy with it. The sample was chosen, as has been described in chapter 3, in order to get the range of opinions from very large to very small firms. It is well known that the great variety of firms in the construction industry have a correspondingly wide range of needs. Perhaps with such a small sample it was not to be expected that the variety of needs would show up to any great degree. Where differences of response were related to size of firm these have been indicated on

the table - (see tables 38 and 39). Item 1 on table 38 does suggest that more small firms see the best contribution of the course at college to be in providing employees with a theoretical background to their work. 8/14(57%) of small firms mentioned that point, compared with 5/10(50%) of medium sized firms and 1/6(17%) of large firms. This may reflect the need of small firms to have widely competent employees. Many respondents spoke of the need of small firms to have multi-skilled craftsmen rather than specialised craftsmen, but others pointed out that small firms can themselves be highly specialised.

In fact the answers indicated an unexpectedly high level of agreement. Table 38 shows that 14/30(47%) said, in so many words, that the course makes a good contribution to their employees' development, and many others implied in their answers to the first question, that they thought this to be the case. It will be seen that there is some inconsistency here with the general impression gained from the majority of answers to the more detailed questions on the employers' schedule. Such inconsistencies are perhaps all part of the rather ambivalent relationship often apparent between the colleges and the employers.

#### Value of the Course as a Whole.

When asked about the value of the course to the development of their employees, 14/30(47%) mentioned the theoretical aspects; 8/30(27%) mentioned that it develops their practical skills and 6/30(20%) that it gives them extra practical skills. The general broadening contribution of the course was mentioned by 7/30(23%). In additional comments 4/30(13%) complained that the course is too theoretical, especially in some colleges, and two more said that the apprentices were not being made into tradesmen. 'They just pass their exams parrot-fashion'. These comments, although only made by a small proportion of the sample, may represent the feelings of a larger number

of employers than is apparent from this sample. Certainly the NFBTE document already quoted suggests that such feelings are widespread. However it is difficult to know to what extent such views are the perfectly legitimate 'gut reaction' to their apprentices' youthful incompetence and occasional arrogance, rather than a reasoned response to a course which, as has already been suggested, must be a compromise in trying to serve such a wide range of employers' needs. As has already been pointed out, many employers knew very little about the course or how it is being taught in colleges. They indicated that they were not able to give such matters as much attention as they would like because of their crowded work schedules.

#### The Length of Apprenticeship.

Table 39 shows the responses to question 2 - 'Do you think the apprenticeship time is long enough to produce a satisfactory craftsman?' The majority of respondents were strongly in favour of more time. 20/30(67%) were quite definite that three years for most of the trades and four years for plumbers is not long enough. Even those who said, 'Yes' - 4/30(13%) - made such provisos as 'for the run of the mill work'; while those who said, 'It depends on the individual' - 4/30(13%) - made it clear that they were only trying to be realistic because they felt that when boredom sets in apprentices are not likely to learn more anyway. Several said that it is the lack of sufficient general education that hinders some individuals in the pursuit of further learning. Only 2/30(7%) mentioned the differing needs of the various trades. The majority emphasised the need for more time to learn all they need to know and this point came up in the answers to several other questions. However it was the lack of maturity after only three years which was most often mentioned. Several said the the paper recently issued by the NFBTE (1981) 'has some good ideas -



especially their proposal for skill testing.' They felt that these proposals might help to overcome some of the problems caused by the too short apprenticeship. One training officer handed over some comments which he had submitted to the NFBTE about their paper.

#### The Specific Aims of the Course.

Question 3 listed ten important aims of the college course and the employers were asked to respond individually to each. It was assumed that they would know the general outline of the course so they were not shown the CGLI syllabus at this stage.

First they were asked if they thought the aim to be right - table 40, column headed 'should'. Then they were asked whether they thought the college was achieving that aim - table 40, column headed 'is doing'. There was evidence of a lack of knowledge of the course and its effects. (If they said, 'I think so' it has been treated as 'Yes'.) Doubts about the effects are understandable. It is difficult even for those much more closely involved in the course, to be sure of its effects - especially in the case of such aims as ix) - 'to help him to communicate well and understand instructions' and x) - 'to help him to think clearly and rationally.' In this case it was the subjective impression which the employers were receiving about the course and its effects on their employees that was being sought.

As can be seen from table 40, most considered the aims to be right for the course, with the exception of item iv) - 'to help him to be flexible in his attitudes so that he can do the work of another trade if necessary and accept changes in his own trade.' This is a paraphrase of the aim taken from the syllabus pamphlet - 'to better equip him to adjust to changes in the nature of his work, caused by technological development, change in industrial conditions, change of job within his own industry or transfer to a similar occupation in

another industry.' The emphasis was intended to be on flexibility of attitude but 11/30(37%) of employers said, 'No' to it as an aim. Their response may have been influenced by the expectation that this would involve training in more than one trade, for which they felt the apprenticeship time to be insufficient. 8 of the 11 thought there is not even enough time for them to be taught to adapt to changes in their own trade. However, those who said, 'Yes' to this question were quite definite that such flexibility is necessary and presumably were able to conceive of situations where flexibility of attitude would be relevant, even though many of them also thought the apprenticeship period too short for learning another trade.

Thinking in terms of the traditional boundaries between trades has been the subject of criticism for some time. In a Building Research Station Current Paper written in 1968, Nelson and Jeanes discuss alternative ways of grouping building operations. They describe their paper as 'ideas developed from the findings of the Operative Skills Enquiry (Building Research Station, (1966))'. It was this enquiry that was such an important influence in the development of the 1973 construction craft schemes which included the Industrial Studies component as an innovation. More recently, Michael Hatchett in a paper presented to the 1980 National Building Maintenance Conference, sought to establish that the industrial relations issues now appear to be of little consequence, and attention should be directed to the training implications of the multi-skilled building maintenance craftsman. The current thinking at CGLI about multi-skills training appears to be that it is possible to teach groups of skills which can be applied in a number of occupations. (See CGLI, 1982, Report of the Policy Steering Sub-committee Schemes for those using Engineering Craft Skills.)

It appears that the 1973 construction craft schemes attempt to

cater for the need for flexibility, partly in the sense that teaching a person to become a good craftsman does prepare him or her to do other things well. For example a facility in the handling of tools and materials can be used in a number of ways, as can the ability to analyse and solve practical problems. Also the grouping of trades under such headings as Mechanical Services and Trowel Trades represents a change from earlier City and Guilds schemes. City and Guilds assignments questions are set out under headings such as Planning, Communication and so on, in order to emphasize that these are part of the skills required by the craftsman. However, at least some of the burden of developing flexibility lies with the Industrial and General Studies components. It has already been noted in previous sections of this chapter, that these components are still being treated as somewhat peripheral to the main course by the colleges themselves. It should be added perhaps that many craftsmen think that it is important for a young person to be able to identify with a trade and acquire its special ethos as a part of his education.

Achievement of the aims in colleges.

In the second column on table 40 it can be seen that only 7/30(23%) of employers thought that the colleges were helping students to be flexible enough to do the work of another trade if necessary and only 12/30(40%) thought they were being helped to accept changes in their own trade. Some said, 'I don't know' in each case. So while 19/30(63%) and 22/30(73%) respectively wanted these aims fulfilled, only 23% and 40% in each case thought they were being achieved.

It is worth looking in more detail at the employers' response to the second part of the question about the rest of the aims. On the whole items i.) - 'to use the tools of his trade and acquire its basic skills' and ii.) - 'to understand the principles of his craft', were

thought to be satisfactorily achieved. With item iii.) - 'to be aware of safety factors in all that he does at work', 7/30(23%) of employers said that not enough was being done, although many acknowledged that this is an area in which the influence of the employers is paramount. By the same token, with item v.) 'give him good standards in respect of the quality of his work', 7/30(23%) had reservations about the chance colleges have of doing this. 'It's hard for colleges when the work place is only interested in speed.' was one typical comment. Others said, 'They do what they can.' On the whole this is not an area in which colleges are thought to fail, although several employers put in a plea for speed as well as quality.

With item vi.) - 'teach him to be responsible about time keeping and his behaviour generally', 4/30(13%) of employers said that the colleges were not able to do this; and others who said, 'Yes', added, 'but its our job really'. It appeared that the only way they have of judging whether the colleges were helping in this was by reports sent to employers from the colleges letting them know about lateness and absences, so their answers depended on their experience of such reports. Some said, 'The employers often don't give enough support in this area' and others again said, 'The colleges have no means of exercising control.'

It is clear that most employers do not see the colleges as playing much part in this sort of activity. They see them as having a certain job to do - to teach the students the basic skills and the technology behind them - and believe that aims such as teaching them to have responsible attitudes is mainly talk. The employers see the apprentices as their responsibility, not the colleges. This perhaps partly explains why they get so annoyed about what appears to them to be totally irrelevant activities such as occur in General Studies lessons. The time spent at college is so short compared with the time

spent at work, that they only expect very limited aims to be fulfilled. The impression was given that the employers often consider the teachers to be so bound up in their own world that they are quite unrealistic in their expectations about their teaching - especially the general studies teachers.

In response to item vii. (help him to be reasonably well informed about the construction industry) 27/30(90%) of employers thought it a good aim. Many of the 22/30(73%) who also thought it was being achieved in colleges added comments such as, 'There is room for more but there is no time'. Only two mentioned the Industrial Studies component. Table 41 shows that this part of the syllabus is an area on which the employers are largely uninformed. This point will be considered further under question 4. of the employers' schedule.

With item viii. (help him to see himself as a member of a team and appreciate the problems of others at work), only 17/30(57%) said they thought their employees were being helped to do this, although 28/30(93%) thought it a good aim. Again those who said, 'Yes', added comments such as, 'They try to' or 'But we do that really', giving the impression that although it was thought to be a good aim it was not considered that the colleges were able to contribute much towards it.

Many remarked on the connection between this aim and the previous item about having a knowledge of the construction industry and some suggested that these aims should be an integral part of the whole course; that students should be working together on team projects and discussing their work with each other. No one seemed to see a classroom subject such as Industrial Studies as making a contribution towards its achievement. There were 8/30(27%) employers who said 'I don't know' for this item. It is clearly very difficult for employers or training officers to know details such as these about their

employees unless they are working closely with them, or at least have regular contact with someone who is doing so. This difficulty became more apparent as the items progressed.

Item ix. (help him to communicate well and understand instructions) gained wide approval, drawing such comments as, 'It is very important; the construction industry is known for its bad communication'. However, although 25/30(83%) said, 'Yes' to the question that the colleges were achieving this aim, there were again many comments such as, 'Not as much as could be done', which suggests that the apparent satisfaction with this aspect of the course is limited. Others said, 'They do their best', 'Students are lazy at college', and 'It needs a lot of patience'. The City and Guilds Communications Skills Schemes (772) were mentioned twice. One employer spoke of the need for the development of good communication to be built into the whole course, while another said, 'We try to do it; they learn best from experience.'

The few who suggested that teaching good communication should be left till the students have learned their trade, or that it is something necessary only for those who will become foremen, echo many of the students' own opinions about education in general and communication in particular.

When it comes to item x. (to help him to think clearly and rationally) the response was again favourable but the expectation from the college course was strictly limited. Several said, 'It is something which comes with maturity', and others said, 'They are not academic lads'. The minority point of view was summed up by the heartfelt comment, 'If he doesn't think for himself we are all lost. The course does put them on the right lines.'

Overall the impression gained as a result of this detailed question is that most employers are willing to accept the stated aims

of the course and that they considered they were being fulfilled to some extent, but their view of education does not allow them to put much faith in it as a means of satisfying their immediate needs. Perhaps it has to be accepted that there is an unavoidable difference in the aims of the majority of employers and those of the teachers. The most hopeful outcome from these answers seems to be that the majority of employers in this sample are not actually opposed to what the teachers are doing and are willing to see the difficulties faced by them in their task.

The Industrial Studies Component as seen by the Employers.

The employers' response to the question, 'Have you heard of the Industrial Studies component of the course?' revealed a deficiency in this area. Although 16/30(53%) said, 'Yes', it did appear from the discussion that most of these had only 'heard' of it and were quite unfamiliar with it. They were now shown the list of general objectives in the syllabus pamphlet. It is perhaps particularly significant that this group of employers, many of whom showed an interest in the course, were so unaware of the addition to it of this component. It seems that it is often confused with General Studies and anyway the feelings about it were similar - that it is a good idea in theory but that it should be kept very strictly in bounds and not allowed to interfere with the main purpose of the course; that is to produce skilled tradesmen.

If educational institutions are to be leaders in society in any sense, it is surely vital that the other parties in the work they are doing should be kept informed and if possible their co-operation obtained. It is quite unsatisfactory that nine years after the introduction of Industrial Studies only 53% of these employers had even heard of it.

The answers to the question, 'Do you remember where you heard of it?' (table 41) suggest that the most likely source of information is the college, so it is probably in this area of contact that the fault lies. This point will be considered further in the answers to question 9 (table 45).

As can be seen from table 41, not everyone who was asked, 'What do you consider to be the reason for its inclusion in the course?' was able to answer. A majority gave appropriate reasons such as, 'It broadens their outlook'. However, when asked if they thought Industrial Studies to be a good idea, only 13/30(43%) said, 'Yes' without reservations. Now that they had the general objectives in front of them, many felt that they went too far and they seemed rather alarmed at the prospect of such 'academic' work for their employees. It may be, however, that a more careful study of the objectives and of how they might be taught, could change their attitude towards the component. Indeed their contribution in this area could be a useful guide to teachers, if a situation of mutual respect allowed a dialogue to develop.

General Studies as seen by Employers.

More employers were familiar with General Studies than with Industrial Studies - 22/30(73%) - (table 42). This was to be expected considering that General Studies has been a part of the course since 1959, but even here there was evidence that employers were not really familiar with the nature and purpose of General Studies. They were asked what they saw as its purpose, rather than whether they thought it a good idea, and there were some, but only a few, who gave answers which accord with those of the policy makers - for example, 'It gives them a second chance to get confidence in themselves.' Other answers are listed on table 42, as well as other comments made about General



Studies. Some of these are approving, but most are disapproving. A recurring theme seemed to be, 'It depends on how it is done'. These comments reinforced the impression already expressed, that employers seem to be unfamiliar with and distrustful of the processes of education, although they are willing to accept the value of it in theory. It probably also reflects the fact that there have been some strange stories and many complaints about General Studies over the years, which have confused the issue and distracted attention from good work being done.

#### Visits and Speakers.

The question about the use of visits and speakers has been included here because it is often done under the auspices of General Studies, although not exclusively so. As can be seen from the last section on table 42 the response from the employers was very varied. Those who said, 'Yes' to visits without reservations were enthusiastic - 20/30((67%), making such comments as, 'It's essential'; 'Its an admirable idea'; 'We should encourage anything that increases their potential'. There were fewer who responded in this way to the idea of visiting speakers - 16/30(53%), but in some cases there were realistic comments such as, 'It might be hard to judge who to get'. The reservations about both activities were again mainly to do with the feeling that students do not have time for 'extras', unless they are closely related to their work. Several mentioned Trade Unions as being related, but most thought the example given of a Town Planning official being invited to speak, was not related enough or was 'too high level' for these students.

Question 6a, 'Have there been many changes in the construction industry in the last 20 years in your opinion?' received almost complete agreement and the comments made in connection with this

question are listed on table 43. They have been arranged in four groups according to the frequency of mention. These comments are of particular interest coming as they do from those most closely in touch with the industry as it is today; and they are very wide ranging.

The next part of the question, 'How could these changes be reflected in the teaching?' was answered with some practical and interesting suggestions. These are listed on the second part of table 43, again in groups according to the frequency of mention. The employers do not speak with one voice here at all. Their ideas range from, 'It can't be done in the time available' to 'The course should be widened to incorporate the changes'. A few employers even suggested that the colleges should be acting as liaison centres for industry, thus taking them beyond their present role in passing on skills and knowledge, to a wider role of developer and advisor. The few who said that it is not really the job of the colleges to be concerned with the changes in industry, echo the craft teachers who implied very much the same thing in their answers to question 1 of the teachers' schedule about the aims of the course. 14/40(35%) of craft teachers put Y 'change' last in their list of the course aims which they felt they were achieving. The need for versatility in apprentices was mentioned by some but they were not able to give any suggestions as to how it could be achieved.

In answer to question 7a 'Do you ever discuss the college course with your employees?', only two said, 'No, there is no opportunity.' Both of these were training officers. The respondents were not asked to say what the circumstances were for such discussions, but most offered something about that, and the list is given at the top of table 44 - several mentioned more than one circumstance. 12/30(40%) said they had regular meetings with their apprentices, either as a group or individually. The college reports were often used as discussion

points at these meetings. 11/30(37%) went to see them on site where they were 'less inhibited'; and 8/30(27%) saw them in college. A frequent response was, 'Not in detail, I just ask them how they are getting on. To show an interest.'

Some obviously had arrangements such as those mentioned above, which enabled them both to encourage and to keep a disciplinary eye on on their apprentices. Others were doing their best to keep up with them but were not really feeling in touch. One said he felt he should do more and others implied it. Exactly half the sample were training officers - either in a firm big enough to justify it or with a Local Authority, or with a group of small firms under the CITB scheme for group training officers. Although these arrangements usually meant an organized approach to the needs of the apprentices, it could also mean a rather impersonal one. Several training officers were conscious of their peculiar position in relation to the firm and emphasized that others should be involved with the apprentices besides themselves. A visit from the training officer was not the same as one from the employer.

The next question, 7b, 'What contribution do you think the employer should make to the education and training of young craftsmen?', called forth an impressive response. The many interesting answers included one which anticipated the next question by saying, 'We do both education and training on site.' Several mentioned the need to monitor site work, to encourage and to discipline. No attempt was made by any employer to 'pass the buck.' As can be seen from table 44, 27/30(90%) referred in some way to their basic contribution - to give the apprentice a good range of site work, suitably supervised. Some said that they would arrange for work with another employer if that seemed necessary to give further experience. 13/30(43%) mentioned their duty to back up the college in their work,

and 5/30(17%) spoke of the need to take an interest in the apprentice as a person. Although this last was said by only a small proportion of the sample it did appear from the discussion that it was quite usual for employers in many small and some medium and large sized firms to take a personal interest in their young employees.

The answers to questions 7c and 7d were not amenable to tabulation. Question 7c asked, 'Do you think the distinction between education and training is valid?' Many interviewees required this distinction to be amplified, after which some said, 'Yes, the distinction is valid because they are both needed', while others said, 'No, they go hand in hand.' In fact 8/30(27%) used that phrase, adding such phrases as, 'one develops the other' and 'there is too much distinction'. 6/30(20%) said, 'I don't understand the distinction, training is education.' or words to that effect, while another said, 'It is simplistic to call everything that happens on site 'training' and everything at college, 'education'. 4/30(13%) gave the response which City and Guilds would endorse - 'Training is where they practice what they are taught in education'. (See Policy Statement 1972).

Many emphasized the need for 'education' to be related to their trade. Some comments reflected the current confusion about the nature and purpose of 'education' as opposed to training, particularly in respect of education being seen as something which can be added as an extra. For those unfamiliar with the concept of education as the development of the person through everything s/he does, it did not help that General Studies was added as an obvious extra. Industrial Studies too, although better integrated in theory into the main course, could appear to be subsidiary to the more important and to the more specifically trade based aspects of the course.

The NFBTE in the document quoted above, appear to hold a similar view of education to the employer who said, 'Education is the

acquisition of knowledge.' However as has already been indicated, the majority of answers to this question revealed a good commonsense grasp of the overall needs of the young employee. Two further comments which were not untypical might be mentioned, 'The ideal is someone sufficiently educated to absorb and express knowledge allied to his trade' and 'We want well educated as well as trained apprentices - if the education is applicable - otherwise he will never make a good craftsman.'

In their answers to question 7d, 'To what extent do you think the attitudes picked up by a young person at work in the construction industry contribute to his development?', all employers were emphatic that such attitudes were a major influence in a young person's life. This factor could be seen as the employers' 'hidden curriculum'. 11/30 said the apprentice is bound to be greatly influenced by the tradesman with whom he is working. For instance, 'They need to hit it off; we often move them round for this reason'. The site agent and foreman were also considered important in this respect. 'They pick up attitudes at the same time as everything else. They are at a very impressionable age.' Most employers added further points such as, 'The industry has to be responsible for their attitudes' and 'The building industry is casual and leads boys to approach jobs and life casually'. A few said, 'It depends on the home; they have to resist bad attitudes.'

However another point made even more frequently was that the influence of the industry could be a very good one. They referred to the many possibilities open to those working in the industry and the valuable lessons which could be learned from working in a team; from the contact with many different types and the need to learn to deal with a range of people such as clients and officials. Also 'they develop a sense of independence and learn to work on their own

initiative.' On the whole the great majority expressed the belief that the apprentices' development depends on the firm. 'You can tell the ones that come from a good firm'; and 'We are strict with them and try to knock wrong attitudes out of them'.

In their answers to question 8, 'What opinions do you have about the value of full time attendance (and block release) at college, as opposed to day release?' several employers acknowledged the influence the colleges have on the attitudes of the apprentices, especially if they are at college for some time, either on long blocks or full time in their first year. 'They can get bad habits on site' and 'They need to be moulded by the college.' The main difficulty in answering this question appears to be that although too long spent off the site hinders the apprentices' maturation because they are not experiencing the realities of site work, too short a time spent at college, particularly if it is only one day a week, hinders their learning because of the lack of continuity.

Table 44 shows these employers to be equally divided in their preferences between the two types of college attendance. However 7/30(23%) expressed the idea that each way had its good points and that it depended on the ability of the firm to supervise their training. Some firms who were geared to day release preferred to have the extra control over the training which the day release method affords. Others said it depended on the apprentice - some are more able to absorb the college work. Others again said it depended on the college. It did emerge from all this that it is probably best to mix the two methods. Only a few were strongly in favour of one method as against the other.

Question 9a asked when the employer had last spoken to a member of the college staff. The majority had done so in the last month. (See table 45) They were not asked to give the reason for the contact but

many did and these are listed on the table. Question 9b asked employers to give suggestions for improving the relationship between the colleges and the employers. 10/30(33%) said it was not necessary. On reflection some offered helpful ideas. The emphasis was on the need for better liaison between them but there was repeated praise for the willingness of the colleges to be open to them. 7/30 (23%) said, 'It is the employers now who should make the approaches.' They thought many employers were not even willing to respond to the approaches made by the colleges. Some useful and practical suggestions were offered and these have been included on table 45.

Question 10 gave the employers an opportunity to add anything about the course which they felt had been left out of the interview or to emphasize something they felt particularly strongly about. Their comments ideas and reiterations have been set out at the end of table 45. Similar items have been grouped together. The first item about the length of apprenticeships was mentioned by at least 8/30(27%) and the second item about the NFBTE's paper, by at least 7/30(23%). There was some anxiety expressed about the new MSC schemes by several employers. The rest of the comments have been grouped according to their general area of concern. They range quite widely and it was not possible to categorize them more closely.

The most striking impression which came from the limited piece of research into employers' attitudes described here, is that employers do not see post school education as being very effective at all. The interviewees constantly used such phrases as, 'People learn by doing', and 'They can only learn that (for example 'teamwork') on site.' It is salutary for teachers to have this reminder of the strong influences outside their sphere, although such estimates of the value of work done in colleges, in particular classroom work, may be partly due to the employers' own limited experience and consequent limited appreciation

of the educational process. This possibility however, reinforces the idea that there is a great need for much greater contact between employers and the colleges - a contact which both employers and teachers constantly requested during the interviews. The interviews also produced evidence that the employers themselves can see that they are not really in a position to judge the college courses as such, or to comment on the teaching. Their answers often appeared to be intuitive rather than carefully thought out opinions and were sometimes acknowledged to be so. It would certainly seem to be advantageous if the general confusion over the concepts of 'education' and 'training' and the relationship between them could be resolved at all levels.



## CHAPTER 6.

### Conclusions.

#### The Policy Changes.

There is a long standing recognition of the need for adaptability in technical education generally, to allow the curriculum to be continually updated and kept in line with the needs of students, employers and society. It was the intention of the policy makers that the 1973 City and Guilds construction craft schemes should serve such a purpose. The idea of including the Industrial Studies component as a link with General Studies the two together forming a widening element to the students' vocational studies, was well conceived, but the implications of it for the teachers were not fully considered.

#### The Teachers Views.

It appears from the research undertaken that the majority of those teaching Industrial Studies and General Studies were in agreement with the aims of the course as set out by CGLI in their syllabus pamphlets, although some had reservations about the expression of them. While most of the aims were shared by craft and general studies teachers, the aim concerned with the students's personal development appeared to be considered mainly the province of the general studies teachers.

There were some misconceptions about Industrial Studies apparent in the craft teachers answers; in particular some put too much emphasis on the building process as it affected their own trade. However, on the whole they considered that, when well taught, it was an important contribution to the fulfilment of the aims of the course. There was however, a frequently expressed concern about the lack of support and

guidance in its teaching from the policy making body and from those in charge inside the colleges. Enquiries revealed that there was little contact between City and Guilds and those teaching Industrial Studies.

There was also a shortage of effective dissemination of information inside the colleges, particularly in respect of passing on the original impetus associated with the introduction of the new component. These factors appeared to result in a lack of any sense of co-ordinated effort in the teaching of Industrial Studies. In addition, the construction craft teachers reported that they find it difficult to teach outside their own trade, often having little or no teacher training. In view of the fact that effective teaching of Industrial Studies requires considerable extra effort on their part, the absence of leadership in teaching it has contributed in some measure to their reluctance in taking it on.

In the case of the general studies teachers, the intentions of the policy makers have been largely thwarted in many of the colleges concerned by a failure in communication. The link with Industrial Studies was intended to overcome some of the problems inherent in the original concept of General Studies, but the general studies teachers do not appear to have been fully consulted about it at its introduction or about its implementation in many of the colleges visited. Half the general studies teachers interviewed were unfamiliar with Industrial Studies, clearly regarding it as outside their field. Only 3/10 colleges were currently making any serious attempt to link Industrial and General Studies. However, those who were familiar with it were able to see the possible advantages which might be gained for all concerned in implementing the link, particularly in the help each group could give the other in the teaching. The majority agreed that learning occurs best when the study is clearly related to the students' work, although too narrow an approach should be avoided.

General studies teachers were experiencing some difficulties in teaching craft level students. A major reason for this was thought to be the inability of craft students to take General Studies seriously, partly because they are not able to understand its long term aims and partly because, like Industrial Studies, it appears to be inadequately supported by the authorities. Some form of external guidance or control of General Studies was seen as a partial solution to the latter problem by a majority of teachers from both groups.

Although most general studies teachers appeared to have an interest in teaching craft level students and to be well qualified by their experience and training to do so, it was not common practice for them to specialize in this field. The fact that under the Houghton system of promotion it is almost impossible to become a senior lecturer unless a majority of higher level teaching is undertaken was mentioned as a factor in this situation.

Although there appeared to be some conflict of views about the desirable aims of General Studies and varying assessments of whether they were being achieved, the impression was given of a good relationship between the two groups of teachers on a personal level, particularly when they had opportunities to get to know each other. The need for good co-operation between them was expressed almost universally, although it appeared that for many teachers the concept of creative co-operation through collaborative development of the curriculum which takes account of both the industrial and general studies aspects, was under-developed.

Although the response to the idea of the link was well received, concern was expressed by the general studies teachers about the real intentions of the policy makers. Especially evident was the fear of being 'integrated out' and the consequent danger of losing the emphasis on the students' 'personal development'. The lack of clarity in

expressing the concept of the link, and the shortage of support or guidance in implementing it, must be two important factors in the failure to carry it out, in at least 7/10 of the colleges visited. There was evidence of a lack of continuity of purpose between the two groups of teachers in these colleges, which must be confusing to the students. Some practical difficulties in implementing the link also emerged, the most serious being a lack of time and opportunity for discussion and planning of the teaching.

The craft teachers were generally dissatisfied with the teaching arrangements for Industrial Studies. There appeared to be very little cross-fertilization of ideas between the different trades, and insufficient contact with the general studies teachers. In all colleges there was criticism of the physical arrangements for teaching - for instance unsatisfactory rooms, lack of technician backup and unsuitable timetabling. Samples of teaching materials suggest that the teaching followed a traditional style, although there was also some perception that it requires more student involvement than the normal exposition lesson. There were obviously some obstacles other than physical to the teaching of Industrial Studies in the imaginative way suggested, for instance, in the syllabus pamphlet. Probably the most important of these was the teachers' sense of isolation arising from the lack of emotional and practical support for their work in this area.

The general studies teachers by contrast, appeared to be very much involved in their work, although they too were dissatisfied with many aspects of the teaching arrangements. The lack of proper contact between craft and general studies teachers was mentioned most frequently. General Studies teachers showed much more interest in their teaching methods than the craft teachers. The information gained from the interviews with the general studies teachers about

their teaching led to the conclusion that it is a pity many craft departments are not making fuller use of their interest and expertise, both for the students' sake and for the sake of staff development generally.

It would appear from the foregoing that a very good idea for curriculum development has not been fully realized principally because the staff concerned have not been involved in the whole process of curriculum change. The task in fact appears to have been greater than was supposed by the policy makers. The opportunity of creating an integrated or semi-integrated component, which would have valuable repercussions on the whole course, should not be wasted, even now, particularly as the original concept can now be seen as part of a wider movement towards more student based, flexible and integrated further education.

The Employers' view.

Bearing in mind the current emphasis on the need for productivity in industry, there is inevitably some conflict between the employers' views of the needs of young employees in preparation for their work, and the teachers' views of the needs of their students. It is unfortunate that these two viewpoints have become associated in the public mind with 'training' and 'education' respectively, suggesting an unwarranted separation between the two concepts.

The employers' responses to questions about the further education course indicated that in spite of their general approval, they had reservations about the effectiveness of the teaching. The impression given was that they lacked confidence because they were distant observers of a process from which they were excluded, largely through their own pre-occupation with their business. Awareness about the 1973 schemes and particularly about the introduction of Industrial

Studies was negligible. Their immediate response on seeing the list of general objectives was, as with General Studies, to consider that it is beyond the needs and aspirations of their employees.

However there is goodwill and a desire to co-operate with the colleges evident among at least a section of the employers. There is certainly an awareness of the need for constant interchange of ideas between employers and the colleges. Their answers to the more wide-ranging questions were useful and led to the conclusion that a great deal could be gained on both sides from a closer contact between the colleges and the employers. The current emphasis from the MSC on the role of industry in preparing young people for work could have value in achieving this. Such close contact should ensure that the responsibility for education as a whole, including training for jobs, would be firmly established.

#### Summary of Conclusions.

1. The idea of including a new component to link with General Studies was well conceived by the policy makers, but they failed to involve the teachers sufficiently in the curriculum development.
2. Both groups of teachers appeared to be in agreement with the aims of the course, although there was a tendency for the craft teachers to feel unduly excluded from the 'personal development' of the students.
3. Craft teachers valued Industrial Studies but were very concerned about the lack of support and guidance given to it both by CGLI and by those in charge inside the colleges.
4. General Studies teachers had not been sufficiently familiarized with Industrial Studies and were only partially convinced about the idea of linking it with General Studies; consequently the policy makers' intentions were being thwarted in the majority of colleges

visited.

5. Some form of external guidance and support was also considered necessary for General Studies by the majority of teachers in both groups in order to help students to take it more seriously.

6. Each group of teachers expressed a desire for support from the other. Many of the conditions for good co-operation were present in the colleges but a better understanding of what is meant by co-operation is required, as well as opportunity for planning the work together, and positive support and leadership from those in charge in the two departments.

7. There was much goodwill on the part of the employers interviewed, but it appeared that they lacked confidence in the teaching and placed a different emphasis on the needs of the students. More involvement of employers in the work of the colleges seems to be required.

## Recommendations.

If policy changes are to be implemented it is essential that aims are expressed in well defined terms. The confusion associated with the terms 'education' and 'training' should be dispelled, so that the purpose of education in preparing young craftsmen for their work is made evident to all concerned. It was this concern which was the basis of the City and Guilds new schemes for construction crafts drawn up over a number of years and put into effect in 1973. CGLI appear to hold an important position with regard to this need. Their credibility could be further enhanced by an increase in their more recent policy of involving teachers in the development of City and Guilds schemes.

The recognition of the need for better planning of the implementation of curriculum change is implicit in the establishment in the late 1970s of the Further Education Unit (FEU) as a disseminating body. The findings in this study indicate the potential importance of this role. Their publication 'Loud and Clear' looks very thoroughly at the requirements of Further and Higher Education in the planning of curriculum change. There is no other body in Further Education with this specific function.

The problems outlined in the conclusions could be solved in some measure by ensuring that Industrial Studies be put in the charge of one craft teacher who has authority as well as a good understanding of the needs of the subject. It also seems necessary for a general studies teacher to be given some authority to look after the craft level General Studies, and particularly to develop a close working team who are willing to integrate at least some of the teaching in these subjects. Ideally these two teachers in charge would need to agree on their brief, and to be willing and able to devote time and effort to



making the integration effective. It may be worth considering the experiments in combining shown on table 17 of this study - see particularly those in colleges 7, 9, and 10.

Similarly those in overall charge of Craft and General Studies departments would need to be supportive in both moral and practical ways. General studies teachers must not ignore the vital importance of the students' technical studies; they must be prepared to involve themselves in them.

Time would have to be allowed for meetings initially of all teachers concerned with the students, to discuss the relationship of the various components of the course. More specifically, the team who have committed themselves to teaching this part of the syllabus, would need time and encouragement to plan the scheme of work. There should be continual reviews, possibly once a term, of the way the teaching is going with plenty of room for experiment and initiative. It is essential that those who are so involved should take part in drawing up the scheme of work and should contribute to developing new teaching methods and new exercises to cater for the many possibilities which the combined subject offers.

The concept of co-operation should be seriously considered by teachers. Experience in co-operating would help develop its practice, but some degree of understanding and acceptance of its nature and value must underpin the experience, otherwise teachers might become discouraged. It is probably here that leadership is most necessary.

As well as satisfying these specific requirements, college authorities must find ways of helping all teachers to be more fully involved in the development of their curriculum. This can serve two purposes - that of getting the curriculum right and that of helping teachers to have an interest in and understanding of their work.

There is a danger of the various components of the course

becoming unbalanced. However success in integrating Industrial and General Studies would have its effect in aiding the integration of the whole course, as recommended by City and Guilds. One of the problems of General Studies over the years has been the much greater initiative the general studies teachers have been able to exercise in contrast to the more rigidly controlled subjects. If Industrial Studies is combined with General Studies, some craft teachers may experience the same sense of isolation. The lesson to be learned from this is that provision must be made for all teachers on a course to be part of the development of the whole course in a college. No one teaching a particular component should have any sense of isolation or rejection. The CGLI make many pleas for team work but it does appear from the failure evidenced in the particular instance dealt with here, that teamwork is not a normal part of the teaching situation. It must be built into the college philosophy and organization. A definite encouragement to discuss and share in aspects of the teaching would help.

The contribution of the employers in backing up the work done in colleges must be more fully considered. Colleges need to find a means of involving employers in the teaching, so that they acquire confidence in good educational methods and perhaps make a more effective contribution to it. Some arrangement for secondment of teachers to industry would also have the effect of keeping colleges more in touch with the world of work. The idea of a college acting as a liaison centre for local industry might also be developed.

The need for some change in these areas is evident. The means for change in a positive direction are available in terms of ideas, energy and goodwill. All that is needed is a harnessing of those means so that they work in harmony to achieve clearly stated aims.

## Summary of Recommendations.

1. It is essential to make clear at all levels that 'education' is a valuable aspect of the preparation of young employees for their work. It is concerned with the development of the person and should not be considered as an optional extra. The term 'training' should not be used as an alternative to it. It has its place in the total concept of education as preparation for specific tasks.
2. In the light of the findings of inadequate dissemination of curriculum change, methods for improving this function should be developed, perhaps through the work of the FEU.
3. Specific requirements for developing the teaching of Industrial and General Studies in colleges need to be accepted and acted on.
4. It is important that the whole course should be continually developed by teachers in colleges, to ensure that the curriculum is kept in balance and that teachers will feel fully involved and exercise initiative in their teaching.
5. A means should be found of involving the employers more in the work of the colleges.

BIBLIOGRAPHY.

- Arnison, A. The Organization of General Studies departments. Coombe Lodge report, Vol.5.No.20.1972.
- Assoc. of Colleges for F and H.E. 16 - 19: Education and Training. 1981.
- Assoc. for Liberal Education. (ALE) Commentary '80: a policy statement on General Studies.
- Baum, T. Studies of teaching and learning in a Polytechnic. M.Phil. Trent Polytechnic. Nottingham. 1981.
- Bill, L.G. The certification of the craftsman. CGLI. (Unpublished). 1977.
- Bill, L.G. Summary of a paper on: The evaluation of vocational education as part of the general education system. CGLI. (Unpublished). 1982.
- Board of Education. The education of the adolescent. (Hadow Report). 1927.
- Bolton College of Education. Industrial Studies. A scheme of work and lesson synopses. 1974.
- Boucher, R.C. Industrial Studies for building craft students. London, MacMillan. 1976.
- Branwood, P. & Boffy, R. Full circle? The future of General Studies in F.E. 'Journal of Further and Higher Education.' Vol.5. No.1. Spring,1981.
- Bristow, A. Inside the colleges of Further Education. London, HMSO. 1976.
- CGLI. 80. Carpentry and Joinery. (Syllabus pamphlet) 1962.
- CGLI. Joint Advisory Committee. Regional Examining Bodies - Construction Crafts. Paper 9. 1969.
- CGLI General Studies. 1970.
- CGLI. 585/586 Carpentry and Joinery/Machine Woodworking. (Syllabus pamphlet) 1972.
- CGLI. Policy Statement. 1972.  
Policy Statement. 1973.

- CGLI. Certificates, Diplomas and other awards of the Institute. (Consultative document). 1977.
- CGLI. Communication Skills. Level 1.1976.  
Communication Skills. Level.2.1979.
- CGLI. Broadsheet. Special edition. 1978.  
Broadsheet. Nov. 1976.  
Broadsheet. April, 1981.
- CGLI. Marketing and Policy Research Unit.  
Survey investigating the use of syllabus pamphlets by colleges. 1982.
- CGLI. Report of Policy Steering Sub-committee on schemes for those using engineering craft skills.
- Cantor, L.M. & Roberts, I.F. Further Education today. A critical review. London, Routledge & Kegan Paul. 1979.
- Carroll, D. Am I communicating? An examination of the rise of 'Communication Skills' in Further Education. Journal of Further and Higher Education. Vol.4.No.1. Spring, 1980.
- Carter, M.P. Education, employment and leisure. Oxford, Pergamon Press. 1963.
- Catchpole, G.D.A. Coombe Lodge Report. Vol.5.No.20. 1972.
- Construction Industry Training Board.(CITB) A plan of training for operative skills in the construction industry. 1969.
- CITB. The selection and recruitment of craft apprentices. 1981.
- Croome, D.J. Secondment to industry - a challenge and a solution for those in further education. The Chartered Institute of Building. Technical Information Service. No.17. 1983.
- Cuerdon, G. A Communication skills workshop. London College of Printing. 1983.
- Dept. of Education and Science.(DES) Administrative Memorandum. No.25/67  
Joint Planning of industrial training and associated further education.
- DES. Education in schools... a consultative document. 1977.
- DES. A Language for life. Report of the Committee of Enquiry. Chairman Sir A. Bullock. 1975.

- DES. H.M. Education of employees. Report of a survey of day release education. 1984.
- Dept. of Employment & DOE. Training for jobs. Cmnd.9135. 1984.
- Duncan, Alistair. Pioneers, liberators or refugees? 'Liberal Education', No.46. 1982
- Dearden, G. Construction craft apprentices; A study of their attitudes towards employment, work and training. M.Sc. Uni. of Salford. 1977.
- Duthie, I.M. & Tuxworth, E.N.(Eds.) Industrial Studies for construction craft students. A handbook of suggestions for teachers. Huddersfield Polytechnic. 1976.
- Further Education Curriculum Review and Development Unit. (FEU) A Basis for choice. 1979.
- FEU. Day release - a desk study. 1980.
- FEU. Loud and clear. Summary of a study of curriculum dissemination in further and higher education. 1980.
- FEU. Curriculum change. 1981.
- FEU. ABC in Action: Report of an FEU/CGLI Working Party on the piloting of 'A Basis for Choice.' 1981.
- FEU. Project report: Leadership in learning. 1981.
- Flint, C. Project A. Coombe Lodge report. Vol. 5. No.20. 1972.
- Gleeson, D. & Mardle, G. Further education or training? A case study in the theory and practice of day release education. London, Routledge and Kegan Paul. 1980.
- Harris, B.R. The implementation of policy proposals by teachers, with special reference to the ROSLA programme in two schools. M.Phil. Uni. of South Bank. 1978.
- Hatchett, M. The case for the multi-skilled craftsman. DOE. National building maintenance conference. Paper 11. 1980.
- Hughes, R.E.M. Organization of General Studies. Coombe Lodge report, Vol.5. No.20. 1972.

- Ingram, J.B. Curriculum integration and lifelong education. 'Advances in Lifelong Education'. Vol. 6. Hamburg, Pergamon Press and Unesco Institute for Education.
- Kaneti-Barry, S.M. Engineering craft studies: monitoring a new syllabus. NFER. 1974.
- Karol, Lewis. Softly, softly - a vision of the shapelessness of things to come. 'Liberal Education' No. 24. 1972/3.
- Kimbell, R. Craft education in the secondary school. A Study of its development and relevance to an industrial society. M.Phil. Uni. of London. 1975.
- Knutton, H. City and Guilds - A way ahead. Assoc. of Colleges of Further and Higher Educ. Summer meeting. 1978.
- Lang, J. City and Guilds of London Institute Centenary 1878-1978. An historical commentary. CGLI. 1978.
- Liberal Education. Journal of the Assoc. for Liberal Education. No.8. Summer, 1965.
- Liberal Education. No.17. Spring, 1970.
- Llewellyn, D.G.A. A study of the attitudes of lecturers involved in planning and teaching the new City and Guilds 518 course in printing. B.Ed. (Hons.) Garnett College. 1978.
- Min. of Ed. Technical Education. 1956.
- Min. of Ed. Circular 323. 1957.
- Min. of Ed. Better Opportunities in Technical Education. 1961.
- Min. of Ed. General Studies in Technical Colleges. 1962.
- Min. of Ed. Crowther Report. 1969.
- Min. of Labour. Central Training Council. Memorandum No.1. 1965.
- Min. of Labour. Central Training Council. Memorandum No.4. 1966.
- Min. of Technology. Building Research Station Report. Vol. 1. Building Operatives Work. 1966.

Manpower Services Commission.(MSC)	A New Training Initiative. Consultative document. 1981.
MSC.	Youth Task Group Report. 1982.
NATFHE Gen.Studies Section.	General Studies Working Manual. 1980.
NATFHE G.S.Section & ALE.	Joint Working Party. Guidelines for consortia in General Studies and related work on non-advanced courses in F.E.
National Fed. of Building Trades Employers.(NFBTE)	Apprenticeship and training arrangements for the Building Industry. 1981.
NFBTE.	Apprenticeship and training: the next stage.
Nelson,J.I. & Jeanes, R.E.	BRS Current Paper 25/68. 1968.
Nield, D.	Further education for the construction worker. (Unpublished) 1970.
Oppenheim,A.N.	Questionnaire design and attitude measurement. London, Heinemann, 1966.
Palmer, P.M.	An investigation into student commitment and student and staff attitudes to General Studies in two London colleges for F.E. M.A. Uni. of London. 1976.
Reeves, M.	Notes towards ROSLA. (Unpublished) 1959.
Regional Advisory Council for Tech. Education. (RAC)	London and Home Counties. Curriculum Development. Construction crafts - Industrial Studies. 1984.
Shipman, M.D.	Inside a curriculum project. A case study in the process of curriculum change. London, Methuen. 1974.
Siddall, J.N.	Industrial Studies - its introduction into the crafts curriculum. Dip. in F.E. Uni. of Leeds. 1974.
Smith, J.M.	Interviewing in market and social research. London, Routledge & Kegan Paul. 1972.
Tuxworth, E.N.	Industrial Studies (Construction). Evaluation and Review. Huddersfield Polytechnic. Conference report. 1975.



- Watson, J.                   The Loneliness of a long distance innovation.  
ALE Occasional paper.   1980.
- Wheatley, D.E. &         Further education for operatives.   CGLI. 1964.  
Taylor, M.H.
- Wragg, E.C.                Conducting and analysing interviews.  
Rediguides 11: Guides in Educational Research.  
Uni. of Nottingham. 1978.
- Venables, E.               Apprentices out of their time.   London.  
Faber and Faber.   1974.

## APPENDICES.

- A1. Interview schedules for teachers in charge of Industrial Studies and General Studies for construction craft students.
- A2. Interview schedules for construction craft teachers of Industrial Studies and general studies teachers of construction craft students.
- A3. Teachers' opinion sheets, filled in by all teachers interviewed.
- A4. Interview schedules for employers of construction craft students.
  
- B. Notes on colleges visited and on students studying for City and Guilds construction craft certificate. Map showing location of colleges.
  
- C. Extract from CGLI syllabus pamphlet, giving general objectives for Industrial Studies.  
Letter from CGLI Head of Vocational Curriculum Services.
  
- D. Samples of combined schemes of work for Industrial and General Studies used in some colleges visited. (For examples of Industrial Studies schemes of work and for examples of exercises and assignments set in Industrial Studies, see Regional Advisory Council. Curriculum Development, 1984.)

Appendix A1.

Interview Schedule for teachers in charge of Industrial Studies

Are you taking part in the teaching of Industrial Studies now or have you done so in the last two years?

(If 'Yes' all questions on schedule asked, if 'No' questions 1-6 inclusive asked.)

1. Do you receive information from City and Guilds

promptly or do letters and other documents get held up en route?

Have you a copy of the 1972 policy statement about the present construction craft courses?

Have you seen the latest City and Guilds Broadsheet?

Have you had a chance to read it? Do you receive it regularly?

If you wanted to clarify something with City and Guilds would you - phone and speak to someone you know?

phone and ask for a particular department? phone and make a general enquiry?

- write a letter?

- talk to someone in you own college about it?

Have you ever made any suggestions to City and Guilds?

2. How do you disseminate official information to teachers in your department?

- have meetings of all teachers.

- distribute the official documents.

- write something about it yourself.
- have informal discussions with those concerned.
- other ways.

Have any of your staff attended meetings or courses about the whole craft certificate course or about Industrial Studies in particular? Please describe.

Are there any on your staff who have a special interest in Industrial Studies?

Do you encourage some teachers to specialize in Industrial Studies? Why?

- 3a. How would you like to see the teaching of Industrial Studies develop in your department?
- 3b. Do you think there are ideas and values being developed in the students which are not part of the formal curriculum?
- 3c. Are there any special problems associated with the students on the CITB full time course, especially in relation to Industrial Studies?

Interview Schedule for teachers in charge of Craft General Studies.

Are you taking part in the teaching of craft General Studies or have you done so in the previous two years?

(If 'Yes' all questions on schedule asked, if 'No' questions 1-5 inclusive asked.)

1a. Do you receive information from CGLI promptly or do letters and other documents get held up en route?

Have you seen copies of one or more of the craft syllabus pamphlets?

Have you had a chance to read them, especially the parts about General and Industrial Studies?

Have you ever seen a copy of the CGLI policy statement sent out in 1972 about the new courses? (Copy shown)

Do you get copies of the City and Guilds Broadsheet? (Copy shown)

If you wanted to clarify anything with City and Guilds would you

- phone and speak to someone you know? - phone and ask for a particular department? - phone and make a general enquiry?

- write a letter?

- talk to someone in you own college about it?

have you ever made any suggestions to City and Guilds?

1b. What is your opinion of the City and Guilds Green Book on General Studies?

2a. How do you disseminate information to teachers in your department?

- have meetings of all teachers?
  - send around the official documents?
  - write something yourself to explain something new?
  - have informal discussions with those concerned?
  - Other ways?
- 2b. Have any of your staff attended a meeting or conference about General Studies for craft students or about Industrial Studies? Please describe.
- 2c. Is there anyone in your department who expresses a special interest in General Studies for craft students? Do you encourage specialization? Why?
- 2d. How would you like the teaching of General Studies for craft students develop in your department?
3. Do you think there are ideas and values being developed in the students which are not a part of the formal curriculum?
4. Would you welcome a permanent consortium which exchanges ideas and teaching materials about General Studies for craft students?
5. Can you give me any feedback from the employers about the courses, especially about General Studies or Industrial Studies?

Appendix A2.

Interview schedule for craft teachers teaching Industrial Studies.

1. What do you think is the value of the Industrial Studies component as part of the construction craft courses?
  
2. Which of these aims, taken from the City and Guilds syllabus, do you consider to be most nearly achieved by your Industrial Studies teaching? (Please put the five cards in order).

Would you prefer to say that you achieve them all equally well?

Would you like to make any comment on these aims?

3. The CGLI syllabus gives only general objectives, in three sections for Industrial Studies. There is no course content as there is for the rest of the course (except General Studies). Would you prefer to be given course content for Industrial Studies?

Why?

- 4a. The CGLI syllabus states that Industrial Studies should be incorporated partly into General Studies in order to provide a link between general and technical studies. Do you think this is a good idea?

Why?

- 4b. How is it done in your department?
- i. By allocation of certain aspects of the syllabus to the G.S. department, leaving them to do the teaching as they think appropriate. (Which aspects?)
  - ii. By discussion with general studies teachers as to what each department should do and then teaching the agreed subjects separately. (Which aspects?)
  - iii. By combining with craft teachers in planning how some or all of it should be taught, and then teaching it separately, with some consultation between departments during the year. (Which aspects?)
  - iv. By combining with the general studies teachers in planning and teaching some or all of it? (Which aspects?)
  - v. Some other combination - please describe.
- 4c. Do you wish to add anything with regard to co-operation with general studies teachers?
- 5a. CGLI do not give learning objectives or course content for General Studies. Do you think they should give either of these?  
Why?
- 5b. What do you think should be the aims of General Studies?



6. What year were you introduced to Industrial Studies?

How were you introduced to it?

- i. By another member of the craft department?
- ii. By a member of the General Studies department?
- iii. By attending a meeting or conference? Please give as much detail as possible.
- iv. By reading the CGLI policy statement sent out in 1972.? (Copy shown).
- v. By reading the CGLI syllabus pamphlet?
- vi. By some other means - please explain.

Was that method of introduction - very useful?

- quite useful?

- not much use?

Why?

7a. How many classes of Industrial Studies do you teach a week? (Class time ----- minutes)

1-2; 3-5; 6-10; more than 10.

7b. Would you like to teach more or less Industrial Studies than you do?

Why?

8a. What are the teaching arrangements for Industrial Studies in your department?

Always keep trades separate or combine trades?

Teachers not always teaching students of own trade?

Sometimes combine with general studies teachers - in the classroom? on other activities?

Other special teaching arrangements - describe.

(vii)

8b.. Are you satisfied with the teaching arrangements as they are? Why?

9. When you introduce students to Industrial Studies for the first time what do you tell them about it?

10. Do you have a college scheme of work for Industrial Studies?

How was it drawn up?

By HoD? By one person especially interested? By consultation between all concerned at the time? By other means - explain.

Does it contain general objectives? specific objectives? course content? suggestions for teaching methods?

11a. How do you assess the work of students in Industrial Studies? Written work? contributions in class? Other means - explain.

11b. Do you ever fail a student in Industrial Studies? Why?

11c. Do you think it should be assessed by City and Guilds? Why?

12. Do you use the Huddersfield Handbook on Industrial Studies? Do you use Boucher's textbook? Any other textbooks? How do you use them?

Have you found them useful? In what way?

- 13a. Is there any system in your department for evaluating the teaching of Industrial Studies?
  
- 13b. How often is the scheme of work considered for revision?
  
- 13c. Would you welcome mor interchange of ideas and materials between colleges?
  
- 14. Can you give me any feedback from employers about the course, especially about Industrial Studies?

Appendix A2.

Interview Schedule for general studies teachers of construction craft students.

1. Are you familiar with the Industrial Studies component of the construction craft courses?

What do you see as the value of it?

2. Which of these aims, taken from the CGLI syllabus, do you consider to be most nearly achieved by your General Studies teaching? (Please put the five cards in order).

Would you prefer to say that you achieve them all equally well?

Would you like to make any comment on these aims?

3. The CGLI syllabus gives only general objectives, in three sections, for Industrial Studies. The rest of the course, (except General Studies) is given course content as well. Do you think course content should be given for Industrial Studies?

Why?

- 4a. The CGLI syllabus pamphlet states that Industrial Studies should be incorporated partly into General Studies, in order to provide a link between general and technical studies. Do you think this is a good idea?

Why?

- 4b. How is it done in your department?
- i. By allocation of certain aspects of the syllabus to the G.S.department, leaving you to teach it as you think appropriate. (Which aspects?)
  - ii. By discussion with craft department, as to what each department should do, and then teaching the agreed aspects separately. (Which aspects?)
  - iii. By combining with the craft teachers in planning how some or all of it should be taught, and then teaching it separately, with some consultation between department during the year. (Which aspects?)
  - iv. By combining with craft teachers in planning and teaching some or all of it? (Which aspects?)
  - v. Some other combination - please describe.
- 4c. Do you wish to add anything with regard to co-operation with craft teachers?
5. CGLI do not give learning objectives or course content for General Studies. Do you think they should give either of these?
- Why?
6. In what year were you introduced to General Studies?
- How were you introduced to it?
- Have you had any formal training to teach General Studies?
- Please give details.
- Was it very useful? of limited use? not useful?
- Why?
- Have you ever worked in industry or commerce for more than a

year? Please give details.

In what way was that useful?

7. How many construction craft General Studies classes do you teach a week? 1 - 2? 3 - 5? 6 - 10? more than 10?

Would you like to teach more or less?

Why?

Do you teach any other craft classes? Which?

8a. What contact do you have with the construction craft department?

8b. Do you ever combine with the craft teachers - in the classroom - on visits - for visiting speakers - other activities?

8c. Are you satisfied with the teaching arrangements for General Studies?

9. When you introduce students to General Studies for the first time, what do you tell them?

10. Do you have a college scheme of work for General Studies? How was it drawn up? By HOD? By one person specially interested? By consultation between all concerned at the time? By other means?

11a. How do you assess the work of students in General Studies? By written work - describe. By classroom contribution. By other means - describe.

11b. Do you ever fail a student in General Studies?

Why?

11c. Do you think there should be some form of external assessment for General Studies? Explain.

12. Do you use any textbooks in you teaching?

Which?

Have you introduced any new teaching methods into you teaching in the last five years? Please describe.

How did you become aware of them?

How effective have they been?

12. Is there any system in your department for assessing the effectiveness of the teaching? For example meetings between teachers concerned with craft students; formal discussions with students.

How often is the scheme of work, or methods of teaching considered for revision?

13. Would you welcome more interchange of ideas and materials between colleges?

14. Can you give me any feedback from employers about General Studies or Industrial Studies?

Appendix A3.

Teachers' Opinions.

Please complete the following sentences:

1. The greatest problem for craft teachers when teaching Industrial Studies is ...
  
2. The greatest problem for general studies teachers when teaching craft students is ...
  
3. The most difficult thing about combining with another teacher is ...
  
4. Students often enjoy Industrial Studies because ...
  
5. Students often do not enjoy Industrial Studies because ...



Appendix A3.

Teachers Opinions.

Please tick.

- |   | Strongly<br>agree | Agree | No<br>Opinion | Disagree | Strongly<br>Disagree |
|---|-------------------|-------|---------------|----------|----------------------|
| 1. The achievement of the overall aims of the course is helped by the inclusion of Industrial Studies in the course.            |                   |       |               |          |                      |
| 2. Most craft students only appreciate the value of education in a context which is relevant to their immediate work situation. |                   |       |               |          |                      |
| 3. Industrial Studies is not providing the intended link between general and technical studies.                                 |                   |       |               |          |                      |
| 4. It is beneficial for craft students if the craft teachers are involved in General and Industrial Studies.                    |                   |       |               |          |                      |
| 5. It is not possible to assess the effectiveness of either Industrial or General Studies.                                      |                   |       |               |          |                      |

Appendix A3.

Teachers Opinions.

Please tick.

- |   | Strongly<br>agree | Agree | No<br>Opinion | Disagree | Strongly<br>Disagree |
|---|-------------------|-------|---------------|----------|----------------------|
| 1. The achievement of the overall aims of the course is helped by the inclusion of Industrial Studies in the course.            |                   |       |               |          |                      |
| 2. Most craft students only appreciate the value of education in a context which is relevant to their immediate work situation. |                   |       |               |          |                      |
| 3. Industrial Studies is not providing the intended link between general and technical studies.                                 |                   |       |               |          |                      |
| 4. It is beneficial for craft students if the craft teachers are involved in General and Industrial Studies.                    |                   |       |               |          |                      |
| 5. It is not possible to assess the effectiveness of either Industrial or General Studies.                                      |                   |       |               |          |                      |

- |  | Strongly | Agree | No      | Disagree | Strongly |
|--|----------|-------|---------|----------|----------|
|  | agree    |       | Opinion |          | Disagree |
| 6. The craft course should be presented to the students as a unified whole, not as a series of disconnected subjects.        |          |       |         |          |          |
| 7. One of the main aims of General Studies is to help students to develop mature attitudes.                                  |          |       |         |          |          |
| 8. Craft teachers would welcome more guidance in the development of Industrial Studies.                                      |          |       |         |          |          |
| 9. General Studies is failing in its aim of developing mature attitudes in students.   |          |       |         |          |          |
| 10. When general studies teachers refuse to cooperate with craft teachers, the Industrial Studies component suffers greatly. |          |       |         |          |          |
| 11. Craft General Studies should be given more direction by the establishment of some form of agreed assessment.             |          |       |         |          |          |

Appendix A4.

Interview schedule for employers of construction craft students.

1. What contribution do you think the City and Guilds course at college makes to the development of your employees?
2. Do you think the apprenticeship time is long enough to produce a satisfactory craftsman?
3. Do you think the course -----should -----is doing?
  - i. teach the student to use the tools of his trade and acquire its basic skills.
  - ii. teach him to understand the principles of his craft.
  - iii. teach him to be aware of the safety factors in all that he does at work.
  - iv. help him to be flexible in his attitudes, so that he can do the work of another trade if necessary and accept changes in his own trade.
  - v. give him good standards in respect of the quality of the quality of his work..

-----should -----is doing?

- vi. teach him to be responsible  
about time keeping and  
his behaviour generally.
  - vii. help him to be reasonably well  
informed about the construction  
industry.
  - viii. help him to see himself as a  
member of a team and appreciate  
the problems of others at work.
  - ix. help him to communicate well  
and understand instructions.
  - x. help him to think clearly  
and rationally.
4. Have you heard of the Industrial Studies component  
as part of the course at college? (Show syllabus  
pamphlet)  
Do you remember where you heard of it? at the  
college? from students?  
What do you consider to be the reason for its inclusion  
in the course?  
Do you think it is a good idea?
5. Are you familiar with the General Studies component  
of the course?  
What do you see as its purpose?  
What do you feel about students going on visits;  
having visiting speakers from, for example, the

local planning office?

6. Have there been a lot of changes in the construction industry in the last 20 years in your opinion?  
Have you any suggestions as to how these changes could be reflected in the teaching of student craftsmen?
  
7. Do you ever discuss the college course with your employees?  
What contribution do you think the employer should make to the education and training of young craftsmen?  
Do you think the distinction between education and training is valid?  
To what extent do you think the attitudes picked up by a young person at work in the construction industry contribute to his development?
  
8. What opinions do you have about the value of full time attendance (and block release) at college, as opposed to day release?
  
9. When did you last speak to a member of the college staff about anything to do with the college course, or anything to do with yours employee's attendance and progress there? In the last month? During this term?  
During the last year?  
Can you make any suggestions for improving the relationship between employers and the colleges?

10. Are there any comments that you would like to make about anything to do with the education and training of craftsmen in your industry? (For example recruitment)

## Appendix B.

### The Colleges.

The field work for the investigation was conducted in 10 colleges in the London area and with 30 employers of students at those colleges.

The intention was to investigate all aspects of Industrial Studies, including its relationship to General Studies, in a variety of types of college within the boundary of Greater London or just outside it.

Although the colleges differ in their titles, physical layout and internal organization, the arrangements for teaching the City and Guilds construction crafts courses are similar in all of them. All colleges have two or more of the following modes of provision - day release; block release; CITB Standard Scheme of training (six months full time before going on to one of the other modes in the second year.) All the colleges visited teach two or more of the City and Guilds construction craft certificate courses - Carpentry and Joinery, Brickwork, Plumbing, Painting and Decorating are the most common. Naturally the building colleges teach a greater variety than the other colleges. There is some variation in the provision of General Studies, as will be seen in section 5g. Communication Studies are quite widely taught now, sometimes as an extra lesson as well as General Studies and sometimes instead of it. The term usually refers to a lesson in which the emphasis is on comprehension and expression rather than on content, although many consider that it is not wise to make that distinction.

College 1. is a large Tertiary College in an outer London borough. It recently adopted the matrix system of internal organization. The Construction Crafts department, now a part of the construction



division, has been established for many years. Its teaching arrangements are largely unaffected by the college organization except in respect of the servicing provided by the general studies and communication studies teachers. Responsibilities for these two lessons are divided between teachers from the Humanities Division belonging to different teaching teams. Industrial Studies is taught as a separate lesson by the craft teachers.

College 2. is a College of Technology also in an outer London borough and its department of Building Crafts is of many years standing. Its work is carried out on a separate site approximately ten minutes drive from the main building thus presenting problems for the servicing of the building craft students by teachers from the General Studies department in the main college. They usually spend a day at the building crafts annex rather than travel back and forth. This arrangement has advantages in that they spend more time in the craft department than they would otherwise and so get to know the teachers better. However the physical separation of the building craft students is unfortunate because they tend to see themselves as different from the other students and do not benefit from mixing with them. Industrial Studies is taught as part of a three hour composite lesson called associated subjects.

College 3. is a college of Further Education recently separated from a larger college of Technology and is just outside Greater London. The Construction crafts section operates within the department of Technology under a principal lecturer. General Studies is provided by teachers from the General and Communication section of the department of General Studies. Industrial Studies is taught as a separate lesson by the craft teachers.

College 4. is a College of Building and Further Education in Inner

London. The very well established Building college is now combined with the college of Further Education and is seen by many as the leader in building education in London. There is a department of Building Crafts with a large number of trade sections. General Studies is provided by teachers from the department of General Education led by a Senior Lecturer. Occasionally there is some General Studies taught by craft teachers. Teaching arrangements for Industrial Studies vary from section to section but in most it is taught as a separate lesson by the craft teachers.

College 5. is another large Inner London college. It describes itself as a multi-purpose college made up from three smaller colleges. The Building Crafts department is on a separate site, approximately ten minutes drive away from the main college. Industrial Studies and General Studies are taught by the craft teachers as a combined subject but Communication Studies is taught by two general studies teachers who belong to the Building department.

College 6. is an outer London Borough College. Building Craft Studies are taught as part of the construction and surveying courses in the School of Technology. General and Communication Studies are provided by teachers from the School of Science, Arts and Food Technology, led by a principal lecturer. Industrial Studies is taught as a separate lesson by the craft teachers.

College 7. is a County College of Technology outside London. Courses for building apprentices are co-ordinated by a senior lecturer in the department of Building and Surveying. General Studies is provided by general studies teachers belonging to the same department, led by a General Studies co-ordinator. Industrial Studies is taught by the craft teachers as a separate lesson.

College 8. is a comparatively new College of Technology in an Outer

London Borough. The building craft courses are in the charge of a principal lecturer in the department of Construction and Surveying. They are taught in an annex separated from the main college by a five minute drive. General Studies is provided by general studies teachers from the department of Professional and Business Studies who visit the annex just for the General Studies lesson. This arrangement is felt to be unsatisfactory by all concerned and a change was envisaged at the time of interviewing, whereby craft teachers would teach the General Studies. Until a few years ago general studies teachers taught some of the Industrial Studies, but it is now taught by the craft teachers only, as a separate lesson.

College 9. is a College of Building in a county outside London. It describes itself as the main centre of education for the Construction Industry in the County. A wide range of building trades is taught, the majority being organized in the department of Craft and Supervisory Studies, and the rest in the department of Building and Engineering Services. General and Communication Studies are taught by general studies teachers from the department of General and Communication Studies, who also teach some of the Industrial Studies. Students on block release have two lessons a week in Industrial Studies, one taught by a general studies teacher and one taught by a craft teacher. The division of the syllabus is agreed between each pair of teachers responsible for the same class.

College 10. is a College of Technology outside London, serving a wide area of the County to which it is responsible. Construction Crafts is a division of the department of Construction Studies under a Director of Studies. General Studies was, (until 1982/3) provided by general studies teachers from the department of Liberal Education. Since the breaking up of this department, two general studies teachers have been

allocated to the Construction Studies department. General Studies and Industrial Studies are taught as a combined lesson, with a craft teacher and a general studies teacher usually teaching two groups of students of different trades together.

#### The Students.

It was considered that to include the students in the research would extend it too much, the focus of the study being on policy making and implementation rather than on the response of the students to the course. However, the nature of their response will have its effect on those who teach them and on those who employ them, and some comments about them would seem to be appropriate.

As the recruitment of building craft workers is almost exclusively male, the students have been referred to in the masculine gender. Occasionally a female is recruited and there is a noticeable attempt in the promotion literature to attract female applicants.

The traditional, and until 1983, the most common way by which a boy came into the industry was by obtaining a job with an employer who then sends him to college one day a week to study for his City and Guilds. He would also be required to attend on one evening a week in his own time. Since 1974 another method has been introduced by the Construction Industry Training Board (CITB), called the Standard Scheme of Training, (SST) or sometimes referred to as the New Entrant Training Scheme (NETS.) The employer would let the college or the local CITB representative know that he would like to take on a boy who having been selected then spent 28 weeks (23 in the case of plumbers) in college, following the scheme of training set down in the CITB manual and at the same time studying for the City and Guilds craft certificate. At the

end of this period he would continue to study for his craft certificate for one more year at college, normally on a day or block release basis.

All students engaged on the SST must be apprenticed. By the strict rules of apprenticeship, which are reinforced by the Working Rule Agreement on pay rates, the great majority of those doing craft certificate courses in colleges are between the ages of 16-18. There is an occasional older student who has entered the industry late and wishes to obtain his qualification. These of course would not be apprenticed. There would be others also not be apprenticed and the variety of reasons for this are indicated in the Phelps Brown Report (1968, p.40-46).

The National Federation of Building Trades Employers are concerned to diminish the time serving element as part of the qualification for building crafts - witness their latest publication, 'Apprenticeship and Training: the next stage' 1983. The recommendations in this publication, along with the changes being brought about by the introduction of the Youth Training Scheme, will eventually have profound effects on the organization as well as the content of education and training in this field. Since September 1983, the CITB's Standard Scheme of Training has been superseded by the MSC's Youth Training Scheme, with the CITB as managing agent. The Youth Training Scheme is still in a state of experimentation. At present the CITB makes a particular requirement in a letter issued to careers offices that entrants should have sufficient literacy and numeracy to benefit from the off the job training.

Another contribution to the recruitment of suitable trainees for the industry provided by the CITB are leaflets addressed to the school leaver and documents addressed to the employer as a guide to selection

of suitable applicants, (CITB, 1981). In the latter, a checklist of suitability puts 'Health' at the top of the list. Under the heading 'Education', the suggestion is made that, (p.5) 'The applicant should have taken nationally recognized examinations prior to leaving school', and certain subjects are listed as desirable - for instance Mathematics, English language, a science subject, and technical drawing or a practical subject. Under 'Disposition', it is suggested that the applicant should be cheerful and optimistic, have a lively curiosity and interest in the outside world and be capable of adapting to changed circumstances. The CITB have instituted an aptitude testing service which they offer to employers, to be carried out by CITB staff.

The work of the CITB has contributed to a much more thorough approach than formerly to the selection of craft apprentices but complaints were still frequently made about the quality of entrants. It may be that such criticism reflects something about the industry itself. Dearden (1977) has investigated the deterioration in attitude which occurs in apprentices during the first 18 months of their working lives. He also suggests that criteria adopted for 'successful' selection differ between colleges and the industry and recommends that (p.99) 'there should be much closer liaison between Colleges of Further Education and local industry.'

It has been pointed out in chapter 1, that City and Guilds regard the craft and technician work as being different in kind rather than in level. Venables in her study 'Apprentices out of their time' (1974, p.94) found that the pattern of employment for the City and Guilds entrants was not as different as might be expected from that of the ONC apprentices. She did find a marked preference for practical work among them. HMI Nield in an appendix to his discussion paper, (Nield, 1970) writes of the need to give prospective craft students a

clear understanding of the satisfactions which can be achieved in their work, so as to attract boys of ability. He acknowledges that conditions of work, wage levels and limited possibilities of advancement, as well as other factors such as family tradition will largely determine the quality of entry.

In the end it may be necessary to say that there are factors responsible for the dissatisfaction expressed by employers and the young workers themselves, which extend far beyond the particular circumstances of one group of students or one industry. As Venables (1974,p.155) suggests, while society as a whole undervalues education, it is very likely that poor motivation will be common among a large number of young workers. The unsatisfactory attitude to work may be considered a natural outcome of society's confusion about its aims and sources of satisfaction generally.





Appendix C

Industrial Studies general learning objectives.

Letter from CGLI Head of Vocational Curriculum Services.

## COURSE OBJECTIVES

### 585 – CARPENTRY AND JOINERY CRAFT CERTIFICATE INDUSTRIAL STUDIES

(Common to all Construction Craft Certificate courses; colleges may substitute equivalent studies for craftsmen from other industries)

---

#### Note

The following objectives indicate in general terms the desirable achievement of the student craftsman on completion of the course. They need to be interpreted by teachers in a way which will suit the local conditions and the particular needs of individual student groups.

#### 1 Elements, Functions and Principles of Construction

- 1 Recognise different forms of buildings and the main principles involved in their construction.
- 2 Recognise the main elements of a building (e.g. substructure, superstructure, cladding, partitioning, finishing, weathering, services).
- 3 Demonstrate a knowledge of the function and principles of each element.
- 4 Demonstrate a knowledge of the main group of building materials and of their uses.
- 5 Sketch given elements and show the relative positions of components.
- 6 Recognise common faults, defects and failures in buildings.

#### 2 The Process of Building and the Building Team

- 1 Demonstrate a knowledge of the stages in designing a building, from defining function to production of working drawings.
- 2 State the role of each of the main members of the design and construction team (including the client).
- 3 Indicate the main requirements for establishing and maintaining good working relationships within the construction team.
- 4 Demonstrate a knowledge of the structure of contracting firms of various sizes and of the roles and responsibilities of employers and employees.
- 5 Demonstrate a knowledge of the main principles of organisation and management of jobs.
- 6 State the main stages in the construction of buildings.
- 7 Outline the general requirements for safety and welfare in construction work.

#### 3 Construction, the Environment and the Community

- 1 Understand the need for the conservation and improvement of the environment.
- 2 Indicate how buildings and construction may enhance or mar the environment.
- 3 Show how the need for buildings changes with economic and social change.
- 4 Recognise and name the main types of historical buildings and relate their design to the social needs at the time of their construction.
- 5 Demonstrate a knowledge of simple aesthetic principles relating to the interior and exterior appearance of buildings.
- 6 Demonstrate a knowledge of the social effects of building obsolescence and of methods of renewal and renovation.
- 7 Demonstrate a knowledge of ways in which society controls building work through planning and Public Health law.
- 8 Demonstrate a knowledge of the purposes and aims of training and further education and of their value to the individual, the industry and the community at large.

Appendix D.

Schemes of work:    General and Industrial Studies.  
                          (Colleges 7 and 10.)

DEPARTMENT OF BUILDING AND SURVEYING

CITY AND GUILDS CRAFT COURSES

INDUSTRIAL AND GENERAL STUDIES

SCHEME OF WORK

Wk. No.	Industrial Studies	Subject Content	General Studies	Subject Content
1.	Structure of Courses for Craftsmen	The relationship of craftsmen to apprenticeships and F.E. The benefits of training to the individual.	Training and F.E. its value to the industry and community.	Benefits of training and education to the community. Compare conditions of apprenticeship today with medieval times.
2.	Organisation of training.	The role of the C.I.T.B. The main aims as outlined in the J.A.C. Policy Statement. The role of City and Guilds.	Aims of training and education.	Reduction of the period of apprenticeship over the last 30 years. Cost of training and education. The role of the Manpower Services Commission.
3.	The Construction Industry its organisation and function.	Construction firms of small and medium size concerned with public authority and private construction. The role of merchants and suppliers of building materials.	Comparative Education.	Compare training and education of craftsmen in the U.K. with that in other E.E.C. Countries.
4.	The function of the design and construction team.	The function of the architect, client, main contractor, sub-contractor and building control officer. The role of the local authority and service utilities.	Clients for housing private and public & control functions.	Identify the different types of clients for dwelling construction e.g. private owner, estate developer, public authority, local authority. Overall housing policy.
5.	Safety and welfare in construction work.	The Health and Safety at Work Act. The general responsibilities of both the employer and employee.	Accidents, health hazards and precautions.	Main causes of accidents in construction industry. Precautions taken to minimize health hazards. Long-term effects of injury or accident on the worker.

<p>Development of Housing and materials.</p>	<p>Simple dwellings of local materials and the use of those materials in different forms of construction.</p>	<p>Development of the domestic house.</p>	<p>Main functional purposes of a dwelling. Economic and social change factors influencing house design.</p>
<p>The design and construction of buildings.</p>	<p>Factors affecting buildings, the functional purposes of a dwelling its cost limitations, planning and building regulations.</p>	<p>Aesthetic principles of design.</p>	<p>Interior and exterior appearance of buildings. Landscaping.</p>
<p>Buying and preparing the site.</p>	<p>The purposes of sketch plans, building plans, block plans and working drawings. The need for site clearance.</p>	<p>Finance for house construction.</p>	<p>Buying and selling, financial assistance. Role of estate agents, solicitors, building societies and banks.</p>
<p>Laws relating to housing.</p>	<p>The control of building work through planning and Public Health Law. The duties of the Town Planning Officer and Building Control Officer.</p>	<p>Parliamentary procedure.</p>	<p>The making of an Act of Parliament. The passage of a Bill into Law. Specifically the Health and Planning Laws.</p>
<p>Dwellings in Urban, sub-urban and rural environments.</p>	<p>Local authority and private dwellings of the following types: detached, semi-detached houses and bungalows, terraced houses, lowrise and high rise flats. Different types of dwelling on proposed building plots and site layouts.</p>	<p>Historical background of types of dwelling and communities.</p>	<p>Early types of dwellings and settlements. Social organisations:- the Feudal System, Enclosure of Land, the Village, the Town, the City and the development of urbanization.</p>

11.	Different forms of Construction and their main principles	The forms of construction for domestic dwellings. Houses and bungalows, traditional mass walling in brick, blocks and stone.	Historical aspects of building.	Development of the house: Stone age to Queen Anne.
12.	Ditto	Prefabrication, precast and industrialised forms of construction.	"	Development of the house. Georgian Regency - Victoria Period.
13.	The main elements of a building.	The function and main principles of the substructure -foundations, ground floors and damp proof courses.	"	Development of the house: 20th Century.
14.	Ditto Superstructure	The function and main principles of external walls and openings, dampproof courses and internal partitions.	Towns and town life.	Town design and life up to the Industrial Revolution. The movement of population from the land to the towns.
15.	Ditto Superstructure	The function and main principles of upper floors and stairs.	Towns and town life.	From the Industrial Revolution to the present day. The influence of dense populations on town and city life.
16.	The main elements of a building - superstructure.	The function and main principles of traditional and contemporary roof construction.	Mid-Sessional Assignment.	Small project /report.
17.	Internal partitions.	Load bearing and non-load bearing in brick, block and timber.	"	"
18.	The services	Gas, electricity, water supply, drainage and telephones.	Development of services	Introduction of public services - political & sociological aspects - 19th Century.

1.	Domestic hot and cold water supply	The function, main principles and materials used.	Industrial Buildings	The siting of industrial plants, factories, offices, public buildings, power supplies.
2.	Drainage systems.	The function, main principles and materials used for foul and rainwater disposal.	Environment and community.	Development and improvement areas. Sub-standard housing. The effects of modern building design and development.
3.	Electrical supply and installation.	The function, main principles and materials used in house wiring systems.	Electricity and electronics.	The development of electricity as a power source. Growth of electronics and associated industries. Consequences of the above on industrial and domestic life.
4.	Finishings	Main methods of plastering to walls, tiling and floor finishes.	Design	General principles. Shapes, colour, materials, etc. Design outside the construction industry.
5.	Finishings.	Main functions and basic principles of finishings such as paints and wallpapers.	Design	Furniture design through the ages. Ergonomic aspects. The future.
6.	Weatherings	The function and methods of preventing penetration of moisture into a building.	Practical	Visits and/or inspections.
7.	External works.	The reasons and methods adopted for driveways paths landscaping and fences.	Ditto.	Ditto.
8.	Main stages of construction for <b>Houses</b> and bungalows.	Trade operations involved in shell construction first fixing and <b>car</b> gassing.	Assignments	Project work Housing
9.	Main stages of construction for houses and bungalows.	Trade operations involved in second fixing and <b>car</b> gassing.	Ditto.	Ditto.



	Materials used in the construction of dwellings.	Properties of brick, stone cement and concrete and their use for given elements of a building.	Assignment	Project work Housing
29.	Ditto	Properties of timber and timber based products and their use for the given elements of a building.	Assignment	Project work Environment/Design
30.	Ditto	Properties of metals and plastics, their use for given elements of a building.	Ditto -	Ditto.-
31.	Ditto	Properties of ceramics glass, paints and wall papers, their use for given elements of a building.	Ditto.-	Ditto.-

(vi)

NOTES.

1. No allowance has been made in the weekly scheme for testing, visits or projects and it is up to individual lecturers to use the remaining five weeks for this purpose.
2. Industrial studies is not meant to be an indepth study of Building Construction and it is therefore only necessary that students should recognise building elements.
3. This is a common scheme for all crafts and it is recognised that there will always be topics that overlap with technology, where this occurs emphasise must be placed on those items not covered in craft technology.
4. Since this is a combined scheme it is essential that all members of staff involved keep in contact to ensure continuity and coverage of the scheme.
5. General and specific objectives must be read in conjunction with this scheme. 3.

Industrial Studies	Subject Content	General Studies	Subject Content
Job satisfaction and career rewards in the construction industry.	Identify the need for craftsmanship and good working conditions. What the job shows it relates to other jobs and how it suits the ability of the worker.	The construction Industry.	The basic socio-economic features of the industry. Comparisons with other works and professions. Future trends in the industry.
The Town and Country planning Acts and Building Regulations.	The procedure for ensuring compliance with the law. The duties of the Town Planning Officer and Building Control Officer.	Local government.	Operation of local government Structure of the Town Hall Relationships with Whitehall.
The Building Regulations.	Interpretation and use of the Building Regulations and control of building work.	Legal aspects	The need for law and order. Civil & criminal divisions. Operation of the Courts.
Building improvements.	Improvements under the Housing Act of 1969. The amenities lacking in sub-standard housing. The availability of improvement grants.	Sub-standard housing.	Social results of sub-standard housing, overcrowding, violence, community relationships. Problems of the young and elderly.
Work involved in improvements and dilapidations.	Produce check lists for a dilapidations survey. Relate desirable improvements with technical solutions.	Landlord and tenant.	Regulations affecting the role of landlord and tenant. Legal relationships. Types of rented accommodation.
Common faults and failures in Buildings.	Typical faults in new construction due to design, construction or workmanship and action required.	Consumer Protection.	Commercial and consumer law. The need for protection of the individual consumer.

Common faults and failures in buildings.	Damage to buildings caused by dampness, condensation, insect and fungal attack.	Consumer Protection.	Remedies available for inferior, damaged or faulty goods.
Forms of construction-timber frame.	Industrialised buildings of the timber frame type. Balloon and platform frame, erection sequence, outline advantages of framed buildings.	'	Letter of complaint.
Forms of construction. Steel frame buildings.	Basic functions and principles involved in steel frame construction in low and high rise buildings.	Roads & transport.	Importance of road communications. Decline of railways. Increase in air & sea transport.
Forms of construction. Reinforced concrete frames.	Principles involved in R.C. buildings - basic principles of framework.	Roads.	Finance relating to road building. Construction of motorways. Comparisons with other countries.
1. Stages in design and layout of buildings.	Functional requirements, purposes of building, drawings, selection of building types or form, cost comparisons.	Forms & documents	Completion and design of simple forms.
2. The role of the main members of the design and construction team.	Design, production and control functions for housing and the job titles of those who fulfill these functions.	Human relationships.	Chain of command. Inter-personal communication. Degrees of discipline. Leaderships.
3. Forms of contract.	The role, function and parties to a contract for house construction. Different types of client and sources of finance.	Contract law	Simple contracts - hire purchase, buying and selling of goods and services. Function of lawyers/solicitors.

0.8  
PHH

	Mid-session assignment	
14. Elements of superstructure for low rise flats.	The transmission of loads through the primary frame to the foundations. Infill and curtain wall panels.	
15. Forms of construction which reduce tradesmen's work content.	The use of mechanical plant in different forms of construction.	Advances in production techniques due to developments in technology. The problems of unemployment. Comparisons with other industries.
16. Organisation and site management.	Pre-planning and stages of organisation of a small housing contract, purpose of site records.	Language, drawing and other elements of communication.
17. (ix) Ditto	Supply and storage of materials on site.	Communication systems
18. Safety and welfare in construction work.	Main provision for site welfare of site operatives in terms of the working rule agreement.	" Health services
19. Ditto	Main health hazards and causes of accidents in construction work and joinery manufacture.	Computers, television and radio
20. Establishment and maintenance of good working relationships.	Factors likely to promote and those likely to harm good working relationships and communication on site.	The National Health Service. Private & social medicine. Social security, national insurance and welfare benefits.
21. Sub-contractors	Sub-contractors and specialists-labour only contracts, and supply and fix contracts.	Importance of correct diet. Main cause of death. Life expectancy. Serious diseases. Prevention of disease & injury.
		Trade unions
		Industrial Action.
		A trade dispute. Viewpoints of management, worker & various arbitration, withdrawal of labour, 'work to rule', 'go-slow', etc.

	Heating systems	Basic function and the main principles of the various types of heating systems.	Energy resources	
:2.	Insulation of buildings	The simple principles involved in thermal and sound insulation.	Alternative sources of power.	Solar energy, geothermal heat, wind & water power.
:4.	Materials used in construction work.	Compare alternative materials for given elements of construction in terms of cost and performance.	Alternative technology.	De-centralization of production units. Conservation of energy resources & philosophy of 'soft- technology'.
:5.	The Building Regulations.	Outline the use of British Standard and Codes of Practice in relation to the Building Regulations.	Report Writing.	Writing short reports on various aspects of the Construction Industry. General principles of report writing.
:6. (X)	Town planning	House designs and town planning restrictions on uses of buildings in residential areas.	"	Report layout and presentation. Use of diagrams.
:7.	Design and production of dwellings.	Main factors affecting design limitations on private and public authority house, cost limits and land use.	"	Management's need for accurate reports.
:8.	Finishes	External finishes to walls, roofs, drives and paved areas, basic principles and methods used.	"	Writing up of report.
:9.	Ditto	Internal finishes for walls floors and ceiling other than paints and wallpapers.	"	"

0.	Internal fittings	Built-in and fitted units to kitchens and bedrooms.	Report Writing	Writing up of report.
1.	Internal fittings	Selection of sanitary ware and appliances.	"	Conclusion

An assignment, college set and assessed will be based on this two year scheme of work.

## INDUSTRIAL/GENERAL STUDIES: PRELIMINARY NOTES FOR THE TEAM:

Industrial/General Studies has been developed as a combined subject. It is taught, where possible, by teachers from the Construction Studies and General Studies departments together. The object is to integrate the studies so that the technical subjects are seen to have wide implications, and the general studies are seen to be relevant and valuable to technically orientated students. When two departments work together like this, an atmosphere of open-mindedness and mutual respect can be created, which is of great benefit to teachers and students alike. There is of course plenty of opportunity for problems of human relations to arise. In fact such problems are inevitable. However we have found that these can be minimised where there is plenty of goodwill and sympathetic discussion. Often it is a matter of making time to thrash things out.

The work should be planned co-operatively. Programmes for individual classes should be worked out to the mutual satisfaction of the two lecturers concerned. Weekly lesson plans should be drawn up and agreed upon in any necessary detail well ahead. Each lesson should also be discussed prior to the actual class time. Discussion and particularly argument between lecturers in front of the class is better avoided. Likewise criticism of each other's methods should also be kept out of the classroom, although discussion which leads to clarification and even exchange of views can be a useful part of the combined teaching.

Not all items mentioned in the Outline of the year's work need be dealt with. The Outline is meant as suggestions on how to fill out the theme. The theme for the term should be kept in mind all the time and the class should be reminded of it, so that they are aware of what the emphasis is. For example, when dealing with the building team, it is not just the architect's job they are learning about, but how it fits into the team work.

It is important to keep in mind the particular needs of the craft students. No two classes are the same, so don't make too many assumptions, and apply them from one class to another. We want to help them to be flexible, so we must be too.

No one subject should be dealt with to the exclusion of all the others, although some subjects can be looked at in greater detail to give the students an idea of study in depth. This applies particularly to subjects for project work. Projects should be carefully monitored and each individual student helped according to his particular need.

There is a continuous need for class participation and discussion. There is also a need for the students to gain confidence in their ability to read and write effectively. They need help with their study skills all the time. They shouldn't be allowed to get into bad habits of mindless copying or meaningless sentence making. Keep them on their toes in this respect (as in all others)! A good notebook has become a standard requirement for industrial/general studies classes and its importance should not be overlooked. Keeping good notes builds up good presentation habits; gives great satisfaction; and also gives the students something to refer back to in later stages of their course, and even after they have left college.

TERM 1. Theme: Work and study.  
to feel a part of the College and to see their studies as relevant to their present lives.

Aim: To help the students

CONTENT

RESOURCES AND METHODS

Introduction to the College and its place in the education system.

Look at College handbooks, and discuss.

Introduction to each other.

Guided interviews between students using standard form to record information.

Explanation of the Industrial/General Studies course.

Handout for first-year students, with discussion.

Study skills explained.

Cartoon handout, with discussion. Communication Workshop exercises as appropriate.

Use of Library.

Library visit with guided tour.

Use of D.O.E. Advisory leaflets, etc.

Class sets with questions and answers (in cupboard).

The three main methods of construction used today: traditional loadbearing masonry; cross wall construction; framed construction in steel, reinforced concrete or timber.

O/P transparencies and worksheets. Students helped to make notes which are meaningful to them. Development of study skills such as note-taking etc.

The apprenticeship system, including the part played by the C.G.L.I. Work of a Training Officer. The C.I.T.B.

Handouts on City and Guilds, and apprenticeship. Talk from e.g., Peter Tomlinson.

Work - rights and responsibilities, etc.

Introduction to the idea of industrial relations.

Money: how to manage it. The taxation system as it applies to apprentices.



TERM II. Theme: Health and Safety. Aim: To give the students good habits of health and safety by helping them to understand what is involved.

CONTENT

The concept of safety in general;  
how to work (and live) safely.  
What makes for health and how  
working conditions affect our  
health.

Factories Act.  
Health and Safety at Work Act.  
Construction Regulations 1961-4.

RESOURCES AND METHODS

Discussion. Short essay.

The Act Outlined, and other  
publications of the Health and  
Safety Commission. Questions and  
answer sheets. Exercises to prepare  
for project work, culminating in  
a short project on a self-chosen  
topic from the theme of safety and  
health. Talk from Safety Officer  
from N.F.B.T.E.

TERM III. Theme: Building Materials. Aim: To help students to understand the materials they use and the effects of their use on the environment.

CONTENT

RESOURCES AND METHODS.

Building materials; traditional - their effect on the locality. Modern materials: changes brought about by their use. How some of them are made; how the winning of them (and other resources) affects the environment.

Slides from "Villages and Village Life" C. & C.A. slides. O.P. map of distribution of materials. Illustrations of traditional houses (duplic. sheets). Question and answer sheets. Visits to firms and various firms publications. Films appropriate to this theme. "Shadow of Progress" "Environment in the Balance."

How elements and components made of these materials make up the building. What materials are used for which element etc. The fitness of materials for their purpose.

Students must keep good notebooks and they should be taken in for assessment several times during the year. The overall aim of the course is to help the students to express themselves, so the written work and the organisation of their notebooks is essential to this aim.

TERM I. Theme: The Construction Industry. Aim: To give the students an overall picture of the industry and how they fit into it.

CONTENT

The whole process of putting up a building: various types of client; pre-site planning; organisation of the building site; use of drawings and detailing progress charts etc. The contract.

Jobs of various people - architect; quantity surveyor; site agent; etc.

Use of information published for builders on site - D.O.E. Advisory Leaflets; N.H.B.C. Site Manual etc.

Faults and defects in buildings.

House purchase; getting a mortgage etc.

Description of the construction industry in Britain today: public and private sectors; various sizes of firms and their internal structure; how unemployment comes about, especially in the construction industry.

Test at end of term. The development of the necessary skills for doing a small project in the second term should be kept in mind in the teaching during this predominately information-based term.

RESOURCES AND METHODS

Notes and O/P trans. (M. Tilbury).

Handouts from L.A. Architects talk.

Various other possible speakers can be asked to come.

"Programming and Progressing"  
N.H.B.C. Site manuals with questions.

Current reports from newspapers and Building Trades Journal. National Building Agency. (Library).

Boucher. chapter on Structure of a firm. Students own experience - discussion, and drawing up of tree for own firm.

TERM II. Theme: Communication in the construction industry.

Aim: To make the students aware of the range of skills available for communication and of the importance of good communication in construction and in everyday life.

CONTENT

Types of communication - spoken; written; graphic; body language.

The need for each trade and profession to understand the work of the others. Problems caused by lack of understanding and by bad communication. Relationship between employers and clients. Relationships between employers and workforce. Site security.

Part played by local authority in building control, and planning applications.

During the term a small project might be developed on a subject chosen by the student covering some aspect of the theme.

RESOURCES AND METHODS

Students do descriptions of simple aspects of their trade, using O/P sheets, written and verbal work. Students visit each other's work-shops.

Role play exercises.

Students tell each other about their own jobs - work of plumbers, carpenters, bricklayers. N.H.B.C. site manual again. Handout on communication in industrial relations with exercise.

"Mrs. Johnson's extension". exercise.

TERM III. Theme: Services to a building. Aim: To focus students attention on the vital services and amenities which we take for granted.

CONTENT

What services are needed? Who supplies them? How are public services paid for? e.g., water rates.

Historical and social background to water supply and sewage disposal.

Present day provision of clean water and methods of sewage disposal; drainage systems; electricity and gas supply, etc.

Environmental aspects of these services.

Housing conditions today. Provision of basic amenities as part of our high standard of living. Comparison with other countries, especially developing countries.

RESOURCES AND METHODS

Duplicated copies of various household bills and local authority information.

Handout with questions.  
Chart of the natural water cycle.

During the course of the term students should prepare a project on a self-chosen subject from the two years work in Industrial/General Studies. They should make use of the preparatory work done in previous exercises.

Film "Water, water everywhere" (in Library) or "The River must live".

TERM I. Theme: Legal control of building. Aim: To help students to understand the purpose and effects of laws and regulations particularly in their own industry.

CONTENTS

How and why laws are made.  
The work of Parliament and its committees.

The effectiveness of different forms of control (legal, and non-legal, such as guidance information)  
Present day planning problems - conflict of interests, urban housing, etc., and how society tries to deal with them, with some historical background.

Background to building control, leading up to the Building Regs. How the building regs. are administered by the L.A.

Detailed consideration of the Building Regs. in practical situations.

RESOURCES AND METHODS

Lectures and discussion, with some written follow-up.

Perhaps brought out by a case study e.g., of Epsom's traffic problems.

Handout "Planning the environment".

Handout with questions.

Speaker from the L.A. Building Control Dept.

Practice assignment on the term's work.

TERM II. Theme: Industrial and Public Relations in the C.I.

Aim: To consider the effect that public institutions (such as C.G.L.I. and T.U.C.) have on individuals in the industry, and the effects that the industry has on the public (e.g., quality of work).

CONTENT

Industrial relations in the C.I.  
The National Working Rule Agreement.  
UCATT & EETPU and their work.

Education and training in the industry - part played by C.G.L.I.  
Value of education and training to the individual and to the community.

How information is used in the industry e.g., publications of B.S.I.; B.R.E.; D.O.E. etc., their purpose and value, including Parker Morris Report as an indicator of housing standards.

Information needed by consumers in modern society e.g., Which.

RESOURCES AND METHODS

Slide set  
Some copies in cupboard.  
Speakers available from these unions.

Discussion.  
Handouts on development of technical education (and on C.G.L.I. if they haven't had this in the first year).

Sample sets in cupboard

Exercises on B.S.S. and C.O.P. (Trevor Cornish). Multiple copies of Parker Morris in Library.

Handout on Consumer education with exercise.

TERM III. Theme: Building and the community. Aim: To help the students find interest and pleasure in the built environment.

CONTENT

Buildings - their changing style, construction and materials over recent centuries, and decades.

Also changes in types and uses of buildings e.g., big office blocks, schools; and relate these changes to changes in social conditions.

Final City and Guilds Assignment.

RESOURCES AND METHODS

Slides to indicate what to look for in different periods.

Walk abouts in Ewell, Epsom and other appropriate areas so that students can follow up their own observations with photos and descriptions possibly for an exhibition.