ORGANISATIONAL CULTURE AND THE DEVELOPMENT OF IT IN FURTHER EDUCATION

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ABSTRACT

Organisational Culture and the development of IT in Further Education

Central government funding has assisted the introduction of Information Technology (IT) to many areas of the curriculum through a variety of schemes over the last ten years. The funding has been provided to support a wide range of educational organisations differing in, amongst other things, size, geographical location and ethos.

There has been extensive research into the relationship between organisational structure and the organisation's ability to manage innovation in industry and commerce. An attempt has been made to distinguish four organisational types or 'cultures' and apply these concepts from industrial and commercial organisations to educational institutions. (Handy. 1986).

Furthermore Handy maintains that if one particular culture, task culture, is dominant then the organisation is likely to be more amenable to the management of innovation and the introduction of new technology.

The researcher has made an attempt to grasp the nature of the organisational culture of an opportunity sample of colleges of Further Education as perceived by lecturers that have been involved in a government funded project to introduce IT to the curriculum.

A social psychological approach has been used with the aid of questionnaires, diagrams and focused interviews to elicit the lecturers' perceptions.

An attempt to use computer aided analysis of qualitative data has been made with the use of macro commands from a word processing package to facilitate the coding, sorting and retrieval of data.

It appears that the preferred organisational culture, from the small sample of lecturers taking part in this investigation, is that of 'task' culture according to Handy's terminology. There was also evidence of shared concerns about the nature and implications of the introduction of IT to the curriculum.

It is concluded, however, that organisational culture is a dynamic concept and that a study of a small group of colleges can only provide a snapshot glimpse into the nature of lecturers' perceptions of their organisations' culture. Sometimes there is more than one cultural type perceived as operating in the same organisation and such perceptions as these may vary contingent upon an individual's position in the organisation.

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CHAPTER 1

INTRODUCTION

The Council for Educational Technology (CET), now known as the National Council for Educational Technology (NCET) since its merger with the Microelectronics Education Support Unit in April 1988, provided finance jointly with the European Social Fund to support a two year project commencing in 1985, the aims of which are contained in the Final CET Report (1987) on the project:

> "To demonstrate how microcomputers and new technology generally can help students with moderate learning difficulties on work preparation courses. The project will set up ten exemplar programmes in further education colleges which will be well resourced and supported thus showing the contribution that is possible."

In return for the resources provided to set up the project each of the ten LEAs involved had to provide matching funding by releasing the full-time equivalent of one lecturer to support the project in their respective Colleges of Further Education.

The researcher was involved by being released as part of one of the full-time equivalent lecturers in one of the ten colleges financed by the project. Through working with the national team of lecturers it soon became apparent that each of the ten supported colleges whilst not only differing in size and geographical location, but also had widely differing structures and ways of organising Information Technology (IT). Indeed, some were already way ahead of the others in managing the innovation of introducing IT to the curriculum of students with moderate learning difficulties.

There are various definitions of IT and it is sometimes referred to as new technology or high technology. A definition that has been offered by the Further Education Unit, DES (1984)a, and has become generally accepted in Colleges of Further Education is as follows:

> "The acquisition, production, transformation, storage and transmission of data by electronic means in forms such as vocal, pictorial, textural or numeric, so as to facilitate the interaction between people, and between people and machines. IT also includes the applications and implications (social, economic and cultural) of these processes."

Three of the ten colleges chosen to take part in the CET project had taken part in a software evaluation to assess its suitability for use with students with moderate learning difficulties in Further Education, DES (1984)b, which might have explained the apparent lead that these colleges had over the others.

To the researcher the government funding appeared analogous to a shovelful of coal and each of the recipient colleges being either a blazing furnace, a smouldering fire or a bucketful of water. The funding could have many different effects. The colleges that had already made a start were at a clear advantage whereas for some, coming at a time when re-structuring was being imposed and no clear policy or strategy for the introduction of I.T. was in place, the funding could form the focus for inter departmental conflict.

It appeared to the researcher that a lecturer, given the responsibility to ensure that their college was making the most of an opportunity provided by the CET funding to encourage

curricular change based on the innovative use of IT with students with moderate learning difficulties, could face a variety of threats or opportunities contingent upon their respective institution's prevailing organisational culture.

1.1 Handy's Typology of Organisational Cultures.

There has been extensive research into the relationship between organisational structure and the ability to manage innovation in industry and commerce. An attempt has been made to distinguish four organisational types or 'cultures' and apply these concepts from industrial and commercial organisations to educational institutions. (Handy 1986).

The four cultures are: club culture, role culture, task culture and person culture.

Handy identifies the head of an organisation as the focal point of the club culture. He or she surrounds themself by ever widening circles of intimates, and their influence follows the shape of a spiders web. The closer one is to the spider the more influence one has.

Role culture is typified by a structure resembling a greek temple, the pillars representing the departmental lines being co-ordinated at the top. The 'organisational idea' behind this type of culture is that organisations are sets of roles joined together in a logical and orderly fashion so that together they can discharge the work of the organisation.

The 'organisational idea' of task culture is that a group or team of talents and resources should be applied to a project,

problem or task. In that way each task gets the treatment it requires. It does not have to be standardised across the organisation and the teams can be changed, disbanded or increased as the task changes.

The person culture differs from the other three by putting the individual first and making the organisation the resource for the individual's talents. The 'organisational idea' behind this culture is that the individual talent is all-important and must be serviced by some sort of minimal organisation.

A diagrammatic representation of Handy's four organisational cultural types can be found in Appendix VI on page 148.

Handy maintains that if one particular type of culture, the 'task culture', is dominant then the organisation is likely to be more amenable to the management of innovation and the introduction of new technology.

Indeed it is this assertion that forms the focal point of this study.

1.2 Aims of the Study.

The initial aims of this study were as follows:

> 1) To have examined the application of Handy's theoretical framework and subsequent models of organisational cultures to Further Education institutions by exploring how lecturers perceive the organisational culture of their college.
>
> 2) To have investigated how an opportunity sample of lecturers from six Further Education Colleges viewed the introduction of I.T. to the curriculum of the students they teach, specifically those with moderate learning difficulties studying on work preparation courses.

Subsequently, during the early months of 1989 as the study progressed and after having collected the data, a third aim concerning the methodology was identified by the researcher as follows:

> 3) To have explored the use of computer aided analysis of qualitative data using a word processing application package.

The researcher had previously gained experience in using computers to aid the analysis of quantitative data by using the Statistical Package for the Social Sciences (SPSS) and was keen to explore the possibilities of computer aided analysis of qualitative data.

At this stage of the study, during 1989, there was very little available, to the knowledge of the researcher, in the field of computer aided analysis of qualitative data.

The following was an implicit aim that was also identified at a later stage in the study:

4) To have identified a model of organisational culture that could assist F.E. colleges with policy formulation and implementation strategies not only for introducing Information Technology to the curriculum but also in administration and management.

By being involved with the CET project, the researcher was able to obtain an opportunity sample from the lecturers that were members of the national team and were teaching on work preparation courses for students with moderate learning difficulties.

Of the ten colleges that were involved with the project, six lecturers representing their respective institutions agreed to complete questionnaires and take part in interviews for this study. The remaining four lecturers from the national team were unable to give a commitment to support this study for a variety of personal reasons; for example some had moved on to take up promotion in other organisations. In addition to the six lecturers from the national team that did agree to support this study, fifteen lecturers from the researcher's college agreed to take part in the pilot of the questionnaire.

It was the differences in structures, which in turn appeared to reflect a variety of cultures and ways of organising IT in the colleges, that became one of the focal points for this investigation. The other main interest focused on the way in which the lecturers involved with the project perceived the introduction of IT to the curriculum. In other words, could any differences in the perceived organisational culture of the colleges in this study explain any differences in the perceptions of how IT was being organised and developed?

CHAPTER 2

REVIEW OF LITERATURE AND METHODOLOGICAL BACKGROUND

2.1 The Funding of the Introduction of IT in FE Colleges.

Central government funding has assisted the introduction of Information Technology to educational organisations through a variety of schemes over the last ten years. Since the beginning of the decade there has been the Microelectronics Education Programme (MEP), the Department of Trade and Industry (DTI) Initiative and a range of Educational Support Grants (ESG) from the Department of Education and Science (DES).

A feature of many of these projects was that of matching funding whereby a successful bid would usually require an amount of money to be provided by the recipient local authority to make up the total budget. Norris (1990) refers to this type of finance as 'categorial funding'.

Given that IT resources, both hardware and software, were relatively expensive and at a time when, under the central government's monetary policy, Local Education Authorities (LEAs) faced serious financial problems, central government, through its control over funding, increased its influence over educational policy formulation.

Norris (1990) comments on the emergence of categorial funding:

> "While the innovative programme or project remained as one of the main strategies for promoting educational innovation, an important point of departure was the emergence of categorial funding which in times of fiscal constraint can prove a powerful lever for change."

Indeed this, often unstructured approach to the introduction of IT without a clearly defined policy, was commented upon in an occasional paper from the Further Education Unit (1984)b:

> "There is a wide variation in college IT policy and development. Few colleges appear to have an effective and structured approach to policy formulation and development in this area. As a result many departments have little awareness of IT. Inter-college co-operation is rare."

This observation would appear to support the view that colleges that had not developed IT policies to support the cross-college innovation of the new technology were perhaps tending towards a more dominant 'role' culture and less towards 'task' culture.

The need for a formal statement of college IT policy is highlighted by the DES (1988):

> "Without such a policy, there is a danger that individuals and departments may go there own way, with no central co-ordination. A college policy for information technology and information management, agreed by the academic board, will focus on meeting the needs of government, industry, education and individuals."

A similar observation was made in schools by the DES (1989a), maintaining that there had been successful policy development and implementation where schools had adopted a whole school approach by: a) setting up working parties representing a wide cross-section of departments; b) co-ordinated through the nomination of a teacher with designated responsibility for IT across the curriculum, supported by a member of the senior management team.

Indeed, according to the DES (1990a), the Educational Support Grant funding for the IT in Schools Initiative was contingent upon LEAs providing a five year development plan with the expectation that schools would, in turn, also develop policies for the implementation of IT across the curriculum.

The lack of support for those involved in college-wide policy formulation in FE colleges was commented upon by FEU (1988). Indeed, the differences in the rate of progress of colleges in evolving policies with regard to their approach to the emerging and developing new technology needs of companies was pointed out by the DES (1989b), in the findings from the Department of Trade and Industry Pilot Scheme for IT Skills Updating in FE Colleges: "much of the colleges work had been almost ad hoc in responding to immediate perceived needs."

The absence of policies for the introduction of IT in educational organisations was not only limited to schools and FE colleges. In a survey of educational establishments engaged in initial teacher training, carried out by Information Technology in Teacher Education, (ITTE), (1988), the findings suggested that in many cases there was a lack of a coherent policy for the introduction of IT and little support from senior management.

Ennals (1987) looking retrospectively at the difficulties of managing innovation encountered with the Micro Electronics Education Programme (MEP) warned:

> "The MEP was a short term ephemeral initiative,part of a growing tradition in British government technology policy. A problem was identified, a political posture was struck, a programme was launched, a public relations victory was scored, a limited scale and duration budget was committed. Underneath little may have changed, or the change may have been for the worse."

Fothergill (1988a), looking retrospectively at the work of the Microelectronics Education Support Unit (MESU), pointed out that there is a tendency for a short-term view to be taken by the funding programmes, seeing it as a one-off, quick-return, activity. Esterson (1985) maintained that integrating IT into the curriculum and administration of schools involves a large hidden commitment of human, physical and financial resources over a long period.

Indeed, concern was expressed with the short-term nature of the funding for the CET project on IT for FE students with special needs by Fowler (1988):

> "It is our worry that projects like this take place within a vacuum, with no apparent co-ordination of this approach to the use of the computer in FE Special Needs courses on the horizon. It would be tragic if the expertise built up by the lecturers of the C.E.T. project were to result in isolated pockets of excellence, with no institutionalised development of the work in sight."

Information Technology can be used as a tool in colleges in two ways: firstly, to enhance and enrich the curriculum delivery for both students and staff. Secondly, as a tool to provide college managers, at a variety of levels, with reliable, accurate and timely information to aid their decision-making.

The implications of this were pointed out by KPMG Management

Consultants (1991) in a their report to the DES:

> "Developing an effective Computerised Management Information System (CMIS) requires considerable experience with systems, appropriate training for operational and management staff and a process of evolution from using computers for administrative information to the support of decision-making by managers. All this takes considerable time and experience as well as a corporate approach to the development of systems. It also requires key senior staff with a vision about what can be achieved, trust in the systems - especially the output - by college staff at all levels, a willingness to develop and change existing systems and procedures and a commitment to improve the quality of information for management purposes. There is no substitute for sound management practices and capable managers who have the vision to plan strategically and support their decision making with a responsive college organisational structure."

The need for quality management information to be available at all levels is well documented by the DES (1990)b. This DES report also focused on the lack of success of the implementation of college management information systems.

Commenting on the ESG funded implementation of management information systems in the FE colleges Corcoran (1990) concluded:

> "It must now be seen that the disbursement of £50m in ESGS to local education authorities to install management information systems in their FE colleges was something of a reckless enterprise. No doubt the authorities would have baulked at anything less than total discretion over how to spend money which they considered theirs in the first place. Nevertheless, anyone who still believes that this is the correct model needs to consult their phrenologist."

Indeed, the model for many of the central government's schemes for introducing I.T. to educational organisations during the 1980's appeared to be to throw money at a project with scant regard for the implications for strategic management in the recipient organisations.

Clearly the type of organisational culture prevailing at the time these central government funds were made available could have influenced the development and future take-up of the curriculum innovations that were being funded.

2.2 The Introduction of IT to the Special Needs Curriculum.

The CET project that commenced in 1985, which aimed to demonstrate how microcomputers and new technology generally could help students with moderate learning difficulties, was quite innovative.

A survey that was funded and commissioned by the Further Education Unit (FEU), DES (1984)c, found the following:

> "There is an increasing use of microcomputers in Colleges of Further Education, including their use with students with special needs. However, it is apparent that there is little educational software currently available which has been written specifically for students age 16+ with moderate learning difficulties."

The findings of this survey were published in December 1984 and in January 1985 a staff development resource pack for FE teachers of students with moderate learning difficulties was also made available, DES (1985), in which the curriculum was defined as follows:

> "What we are proposing then is a definition of the curriculum as a process whereby students are assisted toward desired learning. This entails four interrelated components:
> - aims and objectives
> - content and subject matter
> - teaching methods and learning experiences
> - assessment and evaluation."

During 1985 the Certificate of Pre-Vocational Education (CPVE) was being made available for 16+ students in FE colleges and the view that the common core for CPVE should be available for all young people was put forward in the staff development resource pack.

One of the ten core aims of the CPVE curriculum was IT: "To provide an appreciation of the implications of information technology for society and the individual and to introduce the young person to the applications of IT."

It can be seen that the timing of the CET project coincided with the release of the 'From Coping to Confidence' staff development resource pack in which a warning was given concerning the aims and objectives of the curriculum:

> "Aims and objectives are no longer clear-cut in many sectors of education; there has been such an expansion in knowledge that there is a need of clear selection criteria to guide the inclusion and exclusion of potential content; students need to be involved to a greater extent in the teaching/learning process and in there own assessment. These considerations are all the more problematic where students of moderate learning difficulties are concerned."

The rational for introduction of the use of IT to the curriculum of students with moderate learning difficulties was based on the core entitlement of IT in the CPVE curriculum.

2.3 Organisational Culture.

The concept of organisational culture is by its very nature a dynamic one. Any attempt to observe this phenomenon can only be a snapshot taken in a particular period of time.

The notion of organisational development in relation to the introduction of IT to the curriculum in FE colleges is focused upon by Donovan (1986). He claims that curriculum-led organisational development needs the development of an organic, flexible and responsive organisation and furthermore that this has implications for authority relationships and for organisational structures and procedures and emphasises such areas as structures, decision making, communication, morale, team-building and use of resources.

Turner (1990) asks the question:"What structures and operating systems encourage an adaptive and change-seeking institution?". He goes on to maintain that:"The literature on organisation seems agreed that innovation and constant adaptation occur best in highly-flexible, participative, loose and untidy structures and least well in departmentalised, hierarchic, tight and well organised structures."

It is important here to distinguish between structure and culture. Handy (1985) maintains that organisations are as different and varied as the nations and societies of the world. Furthermore, he adds, that organisations have differing cultures (sets of values and norms and beliefs), reflected in different structures and systems. The cultures are affected by the events of the past and by the climate of the present, by the technology and the type of work, by their aims and the kind of people that

work in them.

Although there are many definitions of the term culture, according to Deal and Kennedy (1988), in every day usage it is typically described as 'the way we do things around here.' It consists of patterns of thought, behaviour and artifacts that symbolise and give meaning to the workplace. Meaning derives from the elements of culture: shared values and beliefs, heroes and heroines, ritual and ceremony, stories and an informal network of cultural players.

Schein (1985), defines culture as:

> " a pattern of basic assumptions - invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration - that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems."

Schein goes on to identify three levels of culture and maintains that at the deepest level culture is invisible, pre-conscious and taken for granted, at level two there is a greater level of awareness, at level three culture is visible but it is not necessarily decipherable. He warns against facile assumptions that culture is obvious, and its analysis is easy.

Turner (1990) points out that, "an organisation's culture is not a seamless robe. There are sub cultures and counter-cultures, and power relationships are an intrinsic part of the culture story."

This is consistent with Handy's view (1985) which maintains that: "Often an organisation will find that the forces in the environment push it towards a power culture, that its size and technology push it towards role, and the personal inclinations of the middle managers incline it to a task orientation." In other words it is quite normal to expect a mix of cultures, sometimes a dominant culture with underlying sub-cultures.

A survey of college management structures carried out by The Further Education Staff College, Janes Ed. (1989), revealed a considerable amount of change in college structures.

The main reasons given by principals for modifying or changing structures were:

1) the growth in the number of multi-discipline courses cutting across departmental boundaries
2) the development of more sophisticated methods of financial accounting leading to the need for a greater degree of central college control
3) pressures on colleges to be more responsive to the market, again requiring increased central control
4) a growing dissatisfaction within the colleges themselves with the rigidity in operation of some departmental systems
5) mergers of colleges following rationalisations by local authorities posing the need to consider appropriate management structures
6) periodic reviews of structures and procedures as colleges grow in size
7) the establishment of tertiary colleges creating the need to devise appropriate structures

The report went on to say that to the above reasons should be added a consideration of the effect of the Education Reform Act of 1988. Some diagrammatic examples of model structures from the report are to be found in Appendix V, page 147.

Hierarchical structures are seen as a particular problem for FE Colleges by Turner (1988), who maintains that hierarchies discourage risk taking, trust and innovation.

The anticipated effects of the introduction of IT on the hierarchical nature of the structures of organisations is described by Cleveland (1985), where he argues that previously held assumptions based on five hierarchies will be no longer tenable. The hierarchies are of: power, based on control; influence, based on secrecy; class, based on ownership; privilege, based on early access to valuable resources and politics, based on geography. Cleveland goes on to point out the implications for leadership and management in these new information based organisations:

> "Out of the dozens of assumptions requiring a newly sceptical stare in the new knowledge environment, these five hierarchies seem to bear most directly on leadership and management, because they are likely to affect most profoundly the ways in which, and the purposes for which, people will in future come together in organisations to make something different happen."

The implications of the new information society for decision-makers and corporate leaders are also identified by Marien (1985), who maintains that the most important learning needs are among adults especially leaders of organisations: political, intellectual, scientific, corporate and religious. The decisions of these leaders will be shaping the information society over the next two decades:

> "Their decisions, for better or worse, will largely determine whether the information society is humane, just, productive, free, participatory, and safe, or whether it is a society characterised by greater inequalities, more centralisation, accelerating dangers and further alienation."

Clearly the corporate leaders of FE colleges will have a major responsibility for the strategic planning and implementation of IT policies which in turn will shape the nature of the curriculum offer and the level of access students will have to computing resources.

With respect to the first aim of this study i.e., 'to have examined the application of Handy's theoretical framework and subsequent models of organisational cultures to Further Education institutions by exploring how lecturers perceive the organisational culture of their college.' The researcher considers that although for the purposes of this study great emphasis was placed on Handy's concepts of Club, Role, Task and Person cultures, it is important to draw the reader's attention to there being alternative concepts available to identify organisational cultures.

One set of alternatives are described by Deal and Kennedy (1988), who after having examined hundreds of corporations found that many fall into four general categories or types of cultures. The following is a brief description of these four types of organisational culture:

"1) The tough-guy, macho culture. A world of individualists who regularly take high risks and get quick feedback on whether their actions were right or wrong.

2) The work hard/play hard culture. Fun and action are the rule here, and employees take few risks, all with quick feedback; to succeed, the culture encourages them to maintain a high level of relatively low-risk activity.

3) The bet-your-company culture. Cultures with big-stakes decisions, where years pass before employees know whether decisions have paid off. A high-risk, slow-feedback environment.

4) The process culture. A world of little or no feedback where employees find it hard to measure what they do; instead they concentrate on how it's done. We have another name for this culture when the processes get out of control-- bureaucracy!"

As with Handy, Deal and Kennedy are quick to point out that the division of organisations into four categories is, of course, simplistic and in the real-world a mix of all four types of cultures will be found. They maintain however that this framework can be useful in helping managers begin to identify more specifically the culture of their organisations.

2.4 Theoretical Background to Organisational Culture.

The study of organisational culture has been made from a variety of approaches and theoretical backgrounds. However, there are three main approaches each with separate theoretical groundings according to Smircich (1983).

The first is a cognitive approach to culture. Culture is seen as a system of shared cognitions or a system of knowledge and beliefs. Exploring organisational culture is a matter of

finding out what the rules are and how members see and describe their world. The members of organisations are seen as thinking as well as behaving.

The second can be described as the structuralist or semiotic approach. This approach has been used more widely in anthropology and follows the lead given by the anthropologist Claude Levi-Strauss (1908) who popularised the term structuralism. Structuralist concepts have been applied to the study of the media, ideology and culture in general.

The third, and perhaps most common approach, can be described as belonging to the field of symbolic interactionism. This approach focuses attention on the detail of interpersonal interaction, and how that detail is used to make sense of what others say and do. According to Smircich (1983):

> "The emergence of social organisation depends upon the emergence of shared interpretive schemes, expressed in language and other symbolic constructions that develop through social interaction. Such schemes provide the shared systems of meaning that allow day to day activities to be routinised."

2.5 Social Psychology.

The symbolic interactionist approach stems from German Idealism and the works of G.H. Mead, M.Weber and A. Schutz in which there was substantive concern with the problem of subjective meaning as basic for an understanding of the social world.

A social psychological approach, which places emphasis upon the ways in which people construe their social world, has been adopted in this study. This is because the data relies upon

lecturers' perceptions of their institutions' organisational culture.

However, the researcher would like to point out that the assumption that the recognition of the cultural type of a college could be based on one person's identification in each case, is a dangerous one. The perceptions of the culture would appear to be contingent upon one's position within, or from outside of , the organisation. These perceptions could vary over a period of time and they could be affected by the perceiver's individual circumstances.

Gergen (1981) maintains that, in forming impressions, the perceiver applies concepts or labels. The concepts reflect cultural rules of usage, the motives of the perceiver, and the context in which the action takes place - that is, the range of surrounding circumstances, both physical and social.

A social psychological study of social change needs to start from some basic assumptions. Eiser (1986) maintains that these assumptions have to be assumed 'a priori', and without them the research activity itself becomes pointless. The assumptions are:

> 1) That actions directed at producing (or resisting) change in the structure of relationships within a society or social group depend at least partly on the motives of the individual actors concerned.
>
> 2) That such motives for action can be a function of how the actors interpret (parts of) the social system to which they belong, and their own relationship to it.
>
> 3) That such interpretations of the social system will be at least partly responsive to external events - either through events causing a change in the interpretations, or through making it more likely that different interpretations will be called to mind.

Clearly the lecturers' perceptions, that the researcher was seeking to elicit, could have been influenced by the lecturer's motives, their role and function in their work organisations, or indeed by the researcher himself!

Indeed, the researcher could have contaminated the data by the way in which the perceptions were elicited from the respondents with the questions and the way in which they were asked, during the focused interviews. There is also a problem concerning the interpretation and coding of the data which will be discussed later.

Early forms of social psychology had used both qualitative and quantitative methodologies but emphasis was placed on the quantitative techniques of positivism which relied upon the observation of phenomena, usually through experimentation, with a view to discovering universal laws. This approach also relied upon the scientific method of the natural sciences with the testing of theories and the use of quantitative statistical analysis.

2.6 Leadership and Strategic Management.

Perhaps the most influential of the early social psychologists to study organisational theory was Max Weber. Clark (1985) maintains that Weber's enthusiasm for bureaucracy can be understood in the context of his time. Clark maintains that Weber was viewing its rationality, efficiency and reliability in contrast to feudalism, with its foundation in charismatic authority. Indeed Max Weber placed great emphasis on the bureaucratic form of organisations, however Peters and Waterman

(1989) maintain that Weber's ideas are being challenged by current research:

> "The state of theory is in refreshing disarray, but moving towards a new consensus; some few researchers continue to write about structure, particularly that latest and most modish variant, the matrix. Primarily the ferment is around another stream of thoughts that follows from some startling ideas about the limited capacity of decision makers to handle information and reach what we usually think of as "rational" decisions, and the even lesser likelihood that large collectives (i.e., organisations) will automatically execute the complex strategic design of the rationalists."

Weber had dismissed the importance of charismatic leadership and strategic management. One of the major factors affecting leadership, according to Handy (1989), is the need for leaders to develop good conceptual skills. Handy goes on to say of learning organisations, that they need to constantly re-frame the world and their part in it. Asking the question: what business are we in this year? is also re-framing, maintains Handy.

> "Re-framing is the ability to see things, problems, situations or people in other ways, to look at them sideways, or upside-down; to put them in another perspective or another context; to think of them as opportunities not problems, as hiccups and not disasters.
> Re-framing is important because it unlocks problems. Like an unexpected move on a chessboard it can give the whole situation a new look. It is akin to lateral thinking at times, to using the right side of the brain (the creative pattern forming side) to complement the more logical left side."

Leaders will need to communicate a <u>vision</u> of where the organisation is going together with a plan or strategy of how to

work towards perceived goals that are shared with the various teams of workers. Handy maintains that a vision has to:"'re-frame' the known scene, to re-conceptualise the obvious, connect the previously unconnected dream."

There has been a move away from the experimental research of the early social psychologists to a nonexperimental approach which Carlsmith, Ellsworth and Aronson (1976) suggest is appropriate for the study of cultures:"Sometimes, social psychologists decide to do nonexperimental studies in the 'real world' in order to reduce the chances that their subjects will feel like 'guinea pigs' and therefore behave differently than they would in normal interactions."

Ethnography has developed as a reaction to the positivist method and places emphasis on studying the social world in a natural setting and not 'artificial' settings like experiments or formal interviews.

2.7 Ethnography

One method of qualitative research that can be used for describing and analysing practices and beliefs of cultures or communities is that of ethnography.

Goetz and Le Compte (1984) define the process of ethnography as:

> "Ethnography is ... a way of studying human life. Ethnographic design mandates investigatory strategies conducive to cultural reconstruction.
> First, the strategies used elicit phenomenological data; they represent the world view of the participants being investigated, and participant constructs are used to structure the research.
> Second, ethnographic research strategies are empirical and naturalistic. Participant and nonparticipant observation are used to acquire firsthand, sensory accounts of

> phenomena as they occur in real world settings, and investigators take care to avoid purposive manipulation of variables in the study.
> Third, ethnographic research is holistic. Ethnographers seek to construct descriptions of total phenomena within their various contexts and to generate from these descriptions the complex inter-relationships of causes and consequences that affect human behaviour toward and belief about the phenomena. Finally, ethnography is multimodal or eclectic; ethnographic researchers use a variety of research techniques to amass their data."

The ethnographic process was considered by the researcher to be suitable and appropriate for this study which focused on lecturer's perceptions of their institution's organisational culture. Furthermore, the elicitation of these perceptions relied partly upon participant observation in a natural setting by the researcher interviewing the lecturers in their colleges.

Hammersley (1983) maintains that any account of human behaviour requires that we understand the social meanings that inform it and such understanding requires that we learn the culture of those we are studying:

> "This cannot be done by following standardised procedures; it is a natural process analogous to the experience of any stranger learning the culture of a group. The task becomes cultural description; anything more is rejected as imposing the researcher's own arbitrary and simplistic categories on a complex reality. The centrality of meaning also has the consequence that people's behaviour can only be understood in context. For this reason 'natural' settings must be investigated: we cannot understand the social world by studying artificial simulations of it in experiments or interviews. To restrict the investigation of social behaviour to such settings is to discover only how people behave in experimental and interview situations."

Qualitative researchers tend to lay considerable emphasis on situational and structural contexts, in contrast to many quantitative researchers, whose work is often weak on context. Ethnographers tend to rely on a variety of materials for their data including: field observations converted into field notes; verbatim transcriptions of observed activity; rewritten versions of transcriptions that are "fleshed out" from memory; transcriptions of elicitation sessions, interviews or conversations.

A variety of research tools have been used in this study, including questionnaire and diagrammatic representation of organisational cultures together with focused interviews, to elicit perceptions from the opportunity sample of lecturers.

In reviewing the work of Tesch (1990), in which a variety of computer aided qualitative data analysis packages are reviewed in relation to distinct theoretical approaches and disciplines, Atkinson (1992) warns that there is a danger that inexperienced researchers may be misled: "The impression is too readily created that a fetishistic loyalty to one or another paradigm is more important than a creative and imaginative use of whatever methods and perspectives are to hand."

The methodology adopted for this study stems from qualitative research using a social psychological approach with an ethnographic study of curricular innovation and organisational culture in an educational setting.

2.8 Questionnaires.

One of the stated aims of this investigation was: "To examine the application of Handy's theoretical framework and subsequent models of organisational cultures to Further Education institutions by exploring how lecturers perceive the organisational culture of their college."

In an attempt to do this, in addition to the focused interview with the preceding open task, a replication of the questionnaire cited by Handy (1985), originally compiled by Harrison (1972), was made after having first obtained permission from Charles Handy and making some minor changes to avoid gender stereotyping. For example one of the opening statements in the original questionnaire reads as follows: 'A good boss ..... is strong, decisive and firm but fair. He is protective .....' This was considered by the researcher to have been likely to cause offence to the lecturers from the sample and therefore some minor changes were made to the text to make it more acceptable by including for example She/he.(see Appendix III, page 140)

Although Handy refers to this instrument as a questionnaire, it could be argued that it is an Attitude Scale. Borg and Gall (1979), maintain that these instruments are frequently developed to measure an individual's attitude toward a particular group, institution, or institutional practice. The use of attitude scales have their limitations and Cohen and Manion (1985) warn that they are often culture-bound, time-bound, do not take into consideration the fact of social change and are rarely replicated. Cohen and Manion go on to suggest that the principle of triangulation can be used to give more validity to data

collected from sources such as attitude scales. To be consistent with Handy the instrument will be referred to as a questionnaire throughout the remainder of this study.

One of the factors, suggested by Cohen and Manion (1985), that helps in securing a good response rate to postal questionnaires is the appearance, which they maintain is vitally important. In order to improve on the layout of the questionnaire a Desk Top Publishing package was used by the researcher to re-compile and replicate the document.

The researcher piloted the questionnaire with a sample of lecturers, not from the opportunity sample but from his own college. The response rate to the pilot questionnaire was poor, out of the fifteen distributed to lecturers in the researcher's institution only five were completed and returned. Fortunately all members of the opportunity sample completed their questionnaires, perhaps because they had already made a written commitment to support this research. However one respondent had to telephone the researcher for additional guidance as he was unsure how to complete the questionnaire from the written instructions provided.

2.9 Focused Interview Technique.

Cohen and Manion (1985) maintain that there are four kinds of interview that may be used specifically as research tools: the structured interview; the unstructured interview; the non-directive interview; and the focused interview.

The structured interview is one in which the content and procedures are organised in advance. This means that the

questions are predetermined by means of a schedule and the interviewer is left little freedom to modify the pattern of the interview which is therefore characterised by being a closed situation.

In contrast, the unstructured interview is an open situation having greater flexibility and freedom where the interviewer can alter the content, sequence and wording, however this is not a casual approach and still has to be carefully planned.

The non-directive interview derives from the therapeutic or psychiatric interview. There is minimal direction or control from the interviewer and the respondents are free to express their subjective feelings as fully and spontaneously as they choose or are able.

The need to introduce rather more interviewer control into the non-directive situation led to the development of the focused interview. The salient features of the focused interview technique are listed by Cohen and Manion (1985) as follows:

> 1) The persons interviewed are known to have been involved in a particular situation: they may, for example, have watched a T.V. programme; or seen a film; or read a book or article; or have been a participant in a social situation.
>
> 2) By means of the techniques of content analysis , elements in the situation which the researcher deems significant have previously been analysed by him. He has thus arrived at a set of hypotheses relating to the meaning and effects of the specified elements.
>
> 3) Using his analysis as a basis, the investigator constructs an interview guide. This identifies the major areas of enquiry and the hypotheses which determine the relevant data to be obtained in the interview.

> 4) The actual interview is focused on the subjective experiences of the persons who have been exposed to the situation. Their responses enable the researcher: (a) to test the validity of his hypotheses; and (b) to ascertain unanticipated responses to the situation, thus giving rise to further hypotheses.

A combination of questionnaire and focused interview techniques were adopted to elicit the perceptions of the six lecturers forming the opportunity sample.

2.10 Case Studies.

As this study contains a relatively small sample of six lecturers from the opportunity sample the researcher used case studies to give depth to the data obtained by the use of other research tools.

According to Lincoln (1985), case studies are peculiarly suited to providing thick description, without which naturalistic generalisations or judgements about transferability are not possible. Lincoln goes on to outline an additional advantage of case studies:

> "Because such works are in the narrative form, they are more skilful weapons in the consideration of mutual shapers and webs of influence. Although a picture may be worth a thousand words, those thousand words are worth considerably more than a statistical table when the subject is: why."

The six lecturers came from different colleges and therefore could not be treated as a single case. Studies of this kind, according to Yin (1988), have to use a multiple-case design. Furthermore Yin maintains that such designs have increased in frequency in recent years:

> "A common example is a study of school innovations (such as open classrooms, teacher aides, or new technology), in which independent innovations occur at different sites. Thus each site might be the subject of an individual case study, and the study as a whole would have used a multiple-case design."

Yin goes on to maintain that the evidence from multiple cases is more compelling, however the conduct of a multiple-case study can require extensive resources and time. The case study method described by Yin involves developing a theory by relating it to previous theory followed by selecting the cases and designing the data collection protocol. This in turn is followed by conducting the first or pilot case study.

The pilot case study helps investigators to refine their data collection plans with respect to both the content of the data and the procedures to be followed. Indeed, the data collection plans for this study were refined as a result of piloting the questionnaire and this will be discussed later.

Following the refinements identified in the pilot study the actual case studies are undertaken. These involve collecting data by making field visits to the case study 'site', according to Yin, who suggests the use of direct observations coupled with focused interviews and collection of documents. The researcher used this approach for collecting the data for this study.

Having collected the data the researcher has to analyse it. Yin maintains that the analysis of case study evidence is one of the least developed and most difficult aspects of doing case studies and furthermore that many investigations easily become stalled at the analytic stage.

Despite the potential difficulties in analysing the data Miles & Huberman (1984) have suggested an approach using various analytic techniques including: putting information into different arrays; making a matrix of categories and placing the evidence within such categories; creating data displays for examining the data and tabulating the frequency of different events. The researcher found this approach helpful and further details of how it was used can be found in Chapter 5.

The use of case studies to explore some of the opportunities and problems associated with the introduction and development of IT in organisations has been made by Legge, Clegge and Kemp (1991) in which they maintain: "all the cases illustrate the accepted principle that microelectronic technology does not predetermine the human, organisational and economic consequences of its application; rather its effects reflect managerial choices, which are inevitably influenced by existing organisational structures, processes and cultures."

CHAPTER 3

DESIGN OF THE STUDY

3.1 Opportunity Sample.

There are various types of sampling available for use as a tool in research design. Wragg (1984) maintains that when attempting to answer the question: Whom to interview? The choice is between a random sample and an opportunity sample.

"A random sample gives everyone an equal chance of being interviewed whereas an opportunity sample consists of those whom it is convenient to interview, either because they are willing to talk or because they come your way." The sample of lecturers interviewed for this study agreed to be interviewed in advance and although their respective institutions were a great distance apart it was considered by the researcher to be convenient to use this group as an opportunity sample because all the members had shared the experience of introducing IT to the curriculum in their respective colleges by being involved with the CET project.

Furthermore, on the use of opportunity samples Wragg (1984) maintains that:

> "It should be said that there is nothing wrong with an opportunity sample provided that (a) the investigator states clearly that this is what he has chosen, and (b) he does not make over-bold claims or inferences from his interview data. Many interesting pieces of research based on interviews have used opportunity samples."

This study has used a sample of six lecturers that were involved in the CET project at national level and they come from a range of colleges that vary in both size and geographical location.

3.2 Data Collection.

A schematic diagram showing the various phases of this study in relation to time can be found in Table 1 on the following page.

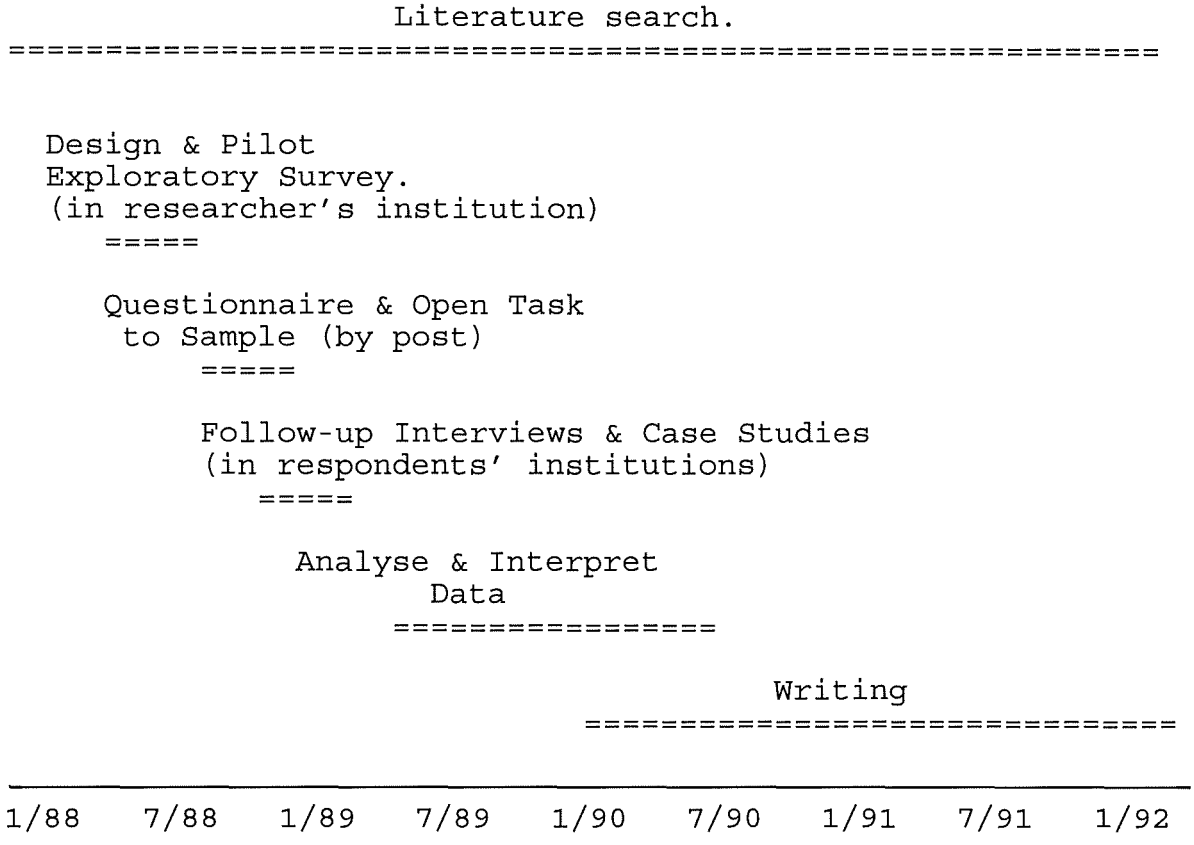
During the month of June 1988 the researcher sent a letter to the group of lecturers from which it was hoped to form an opportunity sample. This letter requested written confirmation that the lecturers were willing and able to assist this study by responding to questionnaires, and at a later date, during the Autumn term of 1988, to take part in some in-depth, follow-up interviews in their respective institutions.

Fortunately, most of the lecturers invited to take part in the study felt that they were able to. Two were unable after having been recently promoted and moving on to other colleges, the other two were unable to give a committment for personal reasons.

Also during the month of June 1988, the researcher re-compiled the Harrison/Handy questionnaire using a desk top publishing application (Xerox Ventura Publisher). The desk top publishing application was chosen as the researcher thought it important to replicate the questionnaire cited by Handy (1985) as closely as possible. However, as previously discussed, the implicit stereotyping was avoided by introducing slight

TABLE 1

Schematic diagram to show design of the study in relation to time.



amendments to the use of pronouns (she/he) throughout the questionnaire. This was done after seeking and being given permission to use the questionnaire in this way from Handy.

Towards the end of June and during early July 1988 the researcher piloted the questionnaire with fifteen lecturers from his institution. The lecturers who agreed to pilot the questionnaire were not from the sample of lecturers to be used for the case studies and interviews which were to be carried out at a later stage of the study.

As the response rate to the pilot trial of the questionnaire was poor, five out of fifteen, the researcher made enquiries to

ascertain an explanation. It was apparently because of the nature of the language used. Clearly the lecturers in the pilot either did not understand the language used or could not find the time to make a meaningful response.

One of the respondents gave the following explanation:

> "I've done this to the best of my ability, but I must admit that I found it very confusing! 1) The language is awful. 2) I wasn't sure if its how I think it should be, or how it is! Anyway, best of luck."

As a result of piloting the questionnaire the researcher provided some additional help with the instructions by giving an example of a ranked response using an analogy of the attitudes of a boss to coffee drinking in the work place. This can be found in Appendix III on page 140.

After having received replies from six of the ten lecturers that had taken part in the CET project confirming that they would be willing and able to take part in the study, the researcher sent copies of the questionnaire with the revised instructions together with an open task, to be completed and returned to the researcher prior to arranging the field visits and interviews in their respective institutions.

The open task was given to each member of the sample in order to compile a check list of focal points before carrying out the interviews. (see Appendix IV page 146.) This was sent to the members of the sample in August 1988, well in advance of the planned focused interviews, in order to allow sufficient time to compile the check list before undertaking the focused interviews during the field visits later in the Autumn term of that year.

Essentially, the open task requested the respondent to identify up to three outcomes of the introduction of IT that were considered important to the curriculum from the courses on which they were involved. These were to be sub-divided into positive/ successful outcomes and negative/ unsuccessful outcomes.

The inclusion of the following sentence was considered important to indicate to the respondents that they had a completely free and open task to carry out: 'Please interpret these tasks in any way that you consider appropriate.'
After all it was the lecturers' perceptions that were being sought and not the researcher's.

Although the six lecturers in the sample had given their consent prior to taking part in the interviews, the time available for this was limited as they were all teaching a full timetable and had to fit the interviews into their available time. The interviews therefore had to be kept within a reasonable timescale whilst at the same time obtaining as much relevant data as possible. On average the interviews were completed within ninety minutes.

At the end of each interview the lecturers were shown the diagrammatic representation of Handy's Cultural Types which are to be found in Appendix VI on page 148. The researcher used these to elicit perceptions from the lecturers, not only about how they perceived their organisation's culture, but also how they perceived their preferred organisational culture from the four typologies of Handy's model.

The field visits and in-depth interviews were all carried out during the Autumn term of 1988. Because of the sensitive nature of the data, requiring lecturers to divulge personal views about their organisation, the researcher decided not to tape record the interviews as this might inhibit the responses. Instead the retrospective rewriting of the field notes was undertaken using a word processing package within a day of the interview taking place. This approach is recommended by Pfaffenberger (1988) as having many advantages including the fact that software originally intended for business purposes, such as word processing and database management, are useful for qualitative computing providing that their limitations are kept in mind.

After having used the approach offered by Pfaffenberger in 1988, the researcher has become aware of criticism of this by Atkinson (1992), as being, "totally inadequate," in comparison with the later published work of Tesch (1990).

The researcher maintains however, that teachers are likely to be more confident in using a wordprocessing application and furthermore are likely to have access to such software for use in their research.

3.3 Triangulation Using Diagrammatic Representation of Cultures.

The researcher wanted to replicate the use of the questionnaire, as cited by Handy (1985), as closely as possible, apart from avoiding the gender stereotyping, as discussed previously. As a result the researcher decided to use a diagrammatic representation of the four organisational cultures

(see Appendix VI, page 148) as described by Handy (1985) to act as a backup and cross check to the responses from the questionnaire given by the sample of lecturers.

This is a form of triangulation which is consistent with the ethnographic method as Hammersley (1983) points out:

> "Ethnography's use of multiple data sources is a great advantage. This avoids the risks that stem from reliance on a single kind of data: the possibility that one's findings are method-dependent. The multi-stranded character of ethnography provides the basis for triangulation in which data of different kinds can be systematically compared."

Cohen and Manion (1985) maintain that there are six principle types of Triangulation:

> 1) Time Triangulation which attempts to take into consideration the factors of change and process by utilising cross-sectional and longitudinal designs;
>
> 2) Space Triangulation which attempts to overcome culture bound studies conducted in the same country or within the same sub-culture;
>
> 3) Combined levels of Triangulation using more than one level of analysis from the three principal levels used in the social sciences namely: the individual level, the interactive level (groups) and the level of collectives (organisational, cultural or societal);
>
> 4) Theoretical Triangulation which draws on alternative or competing theories;
>
> 5) Investigator Triangulation which uses more than one observer and
>
> 6) Methodological Triangulation which uses either a) the same method on different occasions, or b) different methods on the same object of study.

Using the above typologies, type 6 b) ie Methodological Triangulation using different methods on the same object of study was employed by the researcher as follows:

At the end of each interview the interviewees were shown the diagrams and asked to comment on how they perceived their institution's organisational culture in relation to the diagrams and also which of the diagrams best represented their preferred organisational culture.

This action was very productive in eliciting perceptions from the lecturers and many interesting responses were forthcoming. A picture tells a thousand words! It became clear that the sample of lecturers perceived that the structures represented by the diagrams were limited and they went on to describe their organisation's as having a mixture, usually a combination of the matrix net and the greek temple.

3.4 Computer Aided Analysis of Qualitative Data.

Nearly all qualitative techniques produce text, and in copious amounts. Interview transcripts are no exception. There is a balance to be struck between the richness of the data and the tedium involved in analysing it. The use of computers to assist in the analysis of qualitative data is a recent phenomenon, perhaps brought about by the now apparently widespread use of the personal computer amongst academics.

The researcher had previously gained experience in using computers to analyse quantitative data using the Statistical Package for the Social Sciences (SPSS) and was keen to explore the possibilities of using computer aided analysis of qualitative

data by using commonly available applications packages for microcomputers.

It was during the autumn of 1988 whilst collecting the interview data from the field visits and retrospectively rewriting the field notes using a wordprocessing application that the third aim of this study emerged:

> To have explored the use of computer aided analysis of qualitative data using a word processing application package.

To realise the promise of text processing applications for qualitative research, Pfaffenberger (1988) warns that:"it is necessary to adopt a critical perspective on the new technology. At the minimum, qualitative researchers should take great care to grasp just what today's hardware and software can be expected to do -- and what such tools cannot do."

Pfaffenberger (1988), goes on to describe the use of macro functions in word processing applications to codify data to be used in a code-retrieve model of analysis. Macro functions allow the user to store and retrieve a recorded series of keystrokes, for example, the commands required to append a coded length of text to a named file. This approach has been adopted by the researcher using Wordperfect version 5.0. A more detailed explanation of this procedure is contained in Chapter 4, page 63.

The choice of a word processing application was made because of the nature of the data which was in the form of retrospectively rewritten field notes. As Fitz-Gibbon (1989) points out:"It does seem necessary to actually read qualitative data...to process it through one's own mind as well as through the computer."

There are many word processing applications packages available with a variety of features to choose from. Wordperfect was selected because the researcher was particularly impressed with the package's ability not only to store and manipulate very large documents but also to sort blocks of text with the aid of macro functions in a similar way to that described by Pfaffenberger (1988). Indeed this proved to be a very useful tool in assisting with the analysis of the data.

CHAPTER 4

ANALYSIS OF DATA

The data collected for this study falls broadly into two types. Firstly, the responses from the six lecturers responding to the questionnaire that was sent to the members of the opportunity sample prior to the interviews taking place, ie one respondent from each of six out of the ten institutions that were involved with the CET project.

Secondly, the retrospectively re-written field notes from the interviews with the six lecturers from the sample. These provided data for both the case studies and the lecturers' perceptions of their institution's organisational culture from the diagrams.

The interviews were undertaken over a three month period between October and December 1988 and involved visiting the six lecturers of the sample in their respective colleges.

After having made extensive notes, including many verbatim quotes, during each interview, the researcher entered and stored these using the word processor within twenty four hours of each interview taking place. This formed the data for later analysis.

4.1 Questionnaire Methodology

The first data type for this study came in the form of results from the questionnaire, a copy of which is to be found in Appendix III on page 140, that was sent to the six lecturers from the opportunity sample prior to the interviews and field visits.

The four sets of statements, contained in each of the fifteen sections of the questionnaire, describe the four cultures that Handy (1985) has identified i.e.: Club, Role, Task and Person cultures.

The lecturers were first asked to rank the statements in the order of how they perceived the dominant view in their respective organisations. A '1' would represent the statement which best represented the dominant view and a '2' for the next closest and so on.

Secondly, the lecturers were asked to go back and rank the statements again, a '1' representing their strongest cultural preference and a '2' for the next strongest and so on.

As discussed in the previous chapter, the researcher was aiming to replicate the use of the questionnaire as closely as possible. This included the use of the instructions provided with the questionnaire cited by Handy (1985) which on closer inspection appear to be confusing which perception should be ranked first, that of the organisation's culture, or that of the respondent's preferred organisational culture.

After having piloted the questionnaire the researcher added the example of a ranked response to the instructions in an attempt to overcome this confusion. After telephoning the respondents from the opportunity sample only one required further clarification before completing the questionnaire.

The rankings for each cultural statement were then summed and the totals recorded for both the perceived dominant organisational culture and the preferred organisational culture in each case. Therefore the lowest totals would indicate the

perceived dominant cultures and the preferred organisational cultures in each case.

This procedure can be illustrated by looking in closer detail for example at the results of the questionnaire received from the lecturer from college <A> (from the top row in the body of Table 2, page 67): The addition of the rankings of the first group of cultural statements from the questionnaire gave a total of 25, the sum of the rankings for the second group of statements was 33, the total for the third group was 39 and the fourth group total was 53. As the lowest total score was 25, this would indicate that the perceived dominant organisational culture for college <A> was that of 'club' culture. In a similar way the lowest total for the preferred organisational culture being 26 would indicate a preference for a 'task' oriented culture.

The results of this process can be found in Table 2 on page 67. A summary of the results of this questionnaire can also be found in Table 3, page 70, in comparison with the results of the perceptions obtained from showing the diagrams representing the organisational cultures to the lecturers from the opportunity sample.

4.2 Analysis of Interview Data.

The analysis of qualitative data is favoured by ethnographers who rely mainly on data from field observations converted into field notes and on interviews. Strauss (1987), maintains that this style of doing qualitative analysis includes a number of distinct features, such as theoretical sampling, and certain methodological guidelines, such as the making of constant

comparisons and the use of a coding paradigm, to ensure conceptual development and density. Indeed, once the core category or categories have been identified, then the researcher will be seeking to relate other categories to them.

Strauss (1987) goes on to describe a concept-indicator model upon which, he maintains, grounded theory is based:

> "Grounded theory is based on a concept - indicator model, which directs the conceptual coding of a set of empirical indicators. The latter are actual data, such as behavioral actions and events, observed or described in documents and in the words of interviewees and informants. These data are indicators of a concept the analyst derives from them, at first provisionally but later with more certainty."

After having retrospectively rewritten the field notes of the interviews to the word processing package, as described in the previous chapter, these were then scanned by the researcher and a list of categories of data together with associated codes began to emerge. A list of these categories and codes are as follows:

CODES FOR ANALYSING QUALITATIVE DATA

1	STUDENTS
1.1	Students Motivation
1.2	Students Progression
2	CURRICULUM OFFER
2.1	Curriculum Development
2.2	Curricular Change

3 STAFF

3.1 Motivation

3.2 Development

3.2.1 Facilitators

3.2.2 Receivers

4 TEACHING AND LEARNING STRATEGIES

4.1 Groupwork

4.2 Team Teaching

4.3 Cross Curricular/Faculty

4.4 Departmental

4.5 Integrated Approach

5 RESOURCES

5.1 Hardware

5.2 Software

5.3 Time

5.3.1 Remission

5.4 SUPPORT

5.4.1 Technical

5.4.2 Advisory

5.4.2.1 L.E.A.

6 ORGANISATION

6.1 Club

6.2 Role

6.3 Task

6.4 Person

Once the field notes had been coded by using a system of Diacritical Marks similar to those described by Pfaffenberger (1988) they were scanned again by using the word processing package (Wordperfect Version 5.0) and by constructing and using a suitable macro command, the various data types were sorted and saved by being appended to a generic file, thus enabling all similar data types from the various field notes to be viewed together, compared and counted.

By using the basic field note conventions as described by Pfaffenberger (1988), contextual data or interpretations were shown in parentheses. For example (SPECIAL NEEDS STUDENTS), although not actually said by the interviewee, was implied by the use of the word 'they'. Woodwork and Engineering referred to the staff of the respective (DEPARTMENTS). Verbatim quotes were contained in double apostrophes.

Case codes were contained in chevrons, for example <F>, represented the college to which had been attributed case code F, to respect the confidential nature of the data. There were occasions where the interviewee referred to a college that they used to work in, in this case the code was attributed with a lower case letter for example <f>. Indeed this is an important point to consider. Lecturers' perceptions are not necessarily how they perceive their respective organisations as they appear at a specific time. They can be perceptions of how things used to be, either in their current organisation or in a different one that they may have belonged to in the past.

A sample of the data obtained from the six interviews and the various stages of the processing, as described above follows:

Firstly the uncoded text of the extract from the field notes. The underlined text is that which was said by the researcher/interviewer.

> Thank you for completing the tasks that I sent you. I am interested in what you had to say about social skills being reinforced through the use of a digitiser with a video, could you elaborate on that.
> Well..... its more than increased motivation, staff are more willing to try out different approaches. In the past a lot of games type programs were used mainly because lecturers were unsure of how to integrate I.T. into the curriculum. However I have been running some INSET and things have improved.
> Also the software has to be age appropriate.... we must remember with our students having the drawing skills of 6/7 year olds in 18 year old bodies.....Take 'Video Draw Professional' for example, they can produce images similar to those found in Melody Maker, this encourages conversation, groupwork and with a printout there is instant feedback and positive reinforcement. For example Darren took home a video scan of himself..... not only does it enhance the curriculum but it can encourage parental involvement.
> The use of computers is seen by the special needs students as something that the mainstream students do and they begin to feel they are achieving something.
> After 'Coping to Confidence' the Curriculum has taken new directions however the packages are weak in I.T. .... Staff are unaware of the potential of I.T. .... it's still seen by the lecturers as a bolt on extra!
> Tell me more about your involvement in Staff Development.
> Well it's hard to achieve in terms of courses... if you take the C.E.T. model of the roving 'computer consultant' for example a vocational cookery teacher has been writing recipes with word processing software together with an I.T. teacher..... this can be successful but it is difficult to find also many teachers are worried about having another teacher in 'their' room. However with a change in teaching and learning strategies say for example adopting a team approach developing integrated

assignments similar to the B.T.E.C. approach and coupled with team teaching but you are still faced with the problem that staff are unaware of the potential of I.T. as an aid to curriculum development.

Why do you feel that is so?

Well the lecturers see the computers as belonging to other people...(courses, faculties, departments.....) When they approach Advisory centres they receive glossy packages but these are generally at a much higher level than the staff can cope with.They don't even know how to access the blue files. They are overwhelmed. There appears to be a lack of information on I.T. for special needs provision in F.E.

A proposal to changing the communications curriculum into making a newspaper, using I.T., was seen as too threatening for people to take on.

There is also the problem of resources..... getting the machines to the right place at the right time. There is also a problem with course teams because of the risk that people delegate .... for example let him do the I.T. let her do the cookery. Before there can be real team work all the lecturers should own the I.T. skills not just the so called 'experts'.

Tell me more about your role in the College.

Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs.) For example .. everybody is responsible for Special Needs, I.T., Communications etc.

Secondly the same sample of data after having been codified:

Thank you for completing the tasks that I sent you. I am interested in what you had to say about social skills being reinforced through the use of a digitiser with a video, could you elaborate on that.
Well..[3.1]. its more than increased motivation,[4.5] staff are more willing to try out different approaches. In the past a lot of games type programs were used mainly because lecturers were unsure of how to integrate I.T. into the curriculum.[3.2] However I have been running some INSET and things have improved.
Also[5.2] the software has to be age appropriate.... we must remember with our students having the drawing skills of 6/7 year olds in 18 year old bodies..[1.1] Take 'Video Draw Professional' for example, they can produce images similar to those found in Melody Maker, this encourages conversation, [4.1] groupwork and with a printout there is instant feedback and positive reinforcement. For example Darren took home a video scan of himself.[2.2].... not only does it enhance the curriculum but it can encourage parental involvement.

[1.1] The use of computers is seen by the special needs students as something that the mainstream students do and they begin to feel they are achieving something.
[2.2] After 'Coping to Confidence' the Curriculum has taken new directions however the packages are weak in I.T. .... [4.5] Staff are unaware of the potential of I.T. .... it's still seen by the lecturers as a bolt on extra!
Tell me more about your involvement in Staff Development.
Well it's hard to achieve in terms of courses.[3.2.1].. if you take the C.E.T. model of the roving 'computer consultant' for example a vocational cookery teacher has been writing recipes with word processing software together with an I.T. teacher..... this can be successful but it is difficult to find also many teachers are worried about having another teacher in 'their' room.[4.2] However with a change in teaching and learning strategies say for example adopting a team approach developing integrated assignments similar to the B.T.E.C. approach and coupled with team teaching but you are still faced with the problem [2.1] that

staff are unaware of the potential of I.T. as an aid to curriculum development.
Why do you feel that is so?
[6.2] [5.1] Well the lecturers see the computers as belonging to other people...(courses, faculties, departments.....) [5.4.2] When they approach Advisory centres they receive glossy packages but these are generally at a much higher level than the staff can cope with. [5.2] They don't even know how to access the blue files. They are overwhelmed. There appears to be a lack of information on I.T. for special needs provision in F.E.

[2.2] A proposal to changing the communications curriculum into making a newspaper, using I.T., was seen as too threatening for people to take on.

[5.1] There is also the problem of resources..... getting the machines to the right place at the right time.[4.2] There is also a problem with course teams because of the risk that people delegate .... for example let him do the I.T. let her do the cookery. Before there can be real team work all the lecturers should own the I.T. skills not just the so called 'experts'.

Tell me more about your role in the College.
[6.3][4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs. For example .. everybody is responsible for Special Needs, I.T., Communications etc.

Thirdly the data was sorted into categories by code:

> [1.1] Take 'Video Draw Professional' for example, they can produce images similar to those found in Melody Maker, this encourages conversation, [4.1] groupwork and with a printout there is instant feedback and positive reinforcement. For example Darren took home a video scan of himself.[2.2].... not only does it enhance the curriculum but it can encourage parental involvement.
>
> [1.1] The use of computers is seen by the special needs students as something that the mainstream students do and they begin to feel they are achieving something.
>
> [2.1] that staff are unaware of the potential of I.T. as an aid to curriculum development.
>
> [2.2].... not only does it enhance the curriculum but it can encourage parental involvement.
>
> [2.2] After 'Coping to Confidence' the Curriculum has taken new directions however the packages are weak in I.T. ....
> [2.2] A proposal to changing the communications curriculum into making a newspaper, using I.T., was seen as too threatening for people to take on.
>
> [3.1]. its more than increased motivation,[4.5] staff are more willing to try out different approaches. In the past a lot of games type programs were used mainly because lecturers were unsure of how to integrate I.T. into the curriculum.
>
> [3.2] However I have been running some INSET and things have improved.
>
> [3.2.1].. if you take the C.E.T. model of the roving 'computer consultant' for example a vocational cookery teacher has been writing recipes with word processing software together with an I.T. teacher..... this can be successful but it is difficult to find also many teachers are worried about having another teacher in 'their' room.However with a change in teaching and learning strategies say for example adopting a team approach developing integrated assignments similar to the B.T.E.C.

[4.1] groupwork and with a printout there is instant feedback and positive reinforcement. For example Darren took home a video scan of himself.[2.2].... not only does it enhance the curriculum but it can encourage parental involvement.

[4.2] However with a change in teaching and learning strategies say for example adopting a team approach developing integrated assignments similar to the B.T.E.C. approach and coupled with team teaching but you are still faced with the problem [2.1] that staff are unaware of the potential of I.T. as an aid to curriculum development.

[4.2] There is also a problem with course teams because of the risk that people delegate .... for example let him do the I.T. let her do the cookery. Before there can be real team work all the lecturers should own the I.T. skills not just the so called 'experts'.

[6.3][4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs. For example .. everybody is responsible for Special Needs, I.T., Communications etc.

[4.5] staff are more willing to try out different approaches. In the past a lot of games type programs were used mainly because lecturers were unsure of how to integrate I.T. into the curriculum.

[4.5] Staff are unaware of the potential of I.T. .... its still seen by the lecturers as a bolt on extra!
[6.2] [5.1] Well the lecturers see the computers as belonging to other people...(courses, faculties, departments.....)
[5.1] There is also the problem of resources..... getting the machines to the right place at the right time.

[5.2] the software has to be age appropriate.... we must remember with our students having the drawing skills of 6/7 year olds in 18 year old bodies..[1.1] Take 'Video

Draw Professional' for example, they can produce images similar to those found in Melody Maker, this encourages conversation, [4.1] groupwork and with a printout there is instant feedback and positive reinforcement. For example Darren took home a video scan of himself.[2.2].... not only does it enhance the curriculum but it can encourage parental involvement.

[5.2] They don't even know how to access the blue files. They are overwhelmed. There appears to be a lack of information on I.T. for special needs provision in F.E.

[5.4.2] When they approach Advisory centres they receive glossy packages but these are generally at a much higher level than the staff can cope with. [5.2] They don't even know how to access the blue files. They are overwhelmed. There appears to be a lack of information on I.T. for special needs provision in F.E.

[6.2] [5.1] Well the lecturers see the computers as belonging to other people...(courses, faculties, departments.....)
[6.3][4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically

> disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs. For example .. everybody is responsible for Special Needs, I.T., Communications etc.
> [6.3] There are 10 Divisions each with an SL or PL in charge. Next above these are the HoD's and Assistant Principals they are all housed in adjacent offices and form a Senior Management Team.
> There is Line Management with people reporting to different people depending on the particular problem. Because of that people understand that people could have a cross-college role and go up other lines without people being upset or offended. Because I.T. was Cross College it was easier to cover and ask for access to rooms. "Of course you can use the room... its a college resource" There was a lot of servicing/ cross college teaching by every body and the Senior Management Team were committed to new initiatives and supportive of innovations

Fourthly the various data types from the other interviewees needed to be sorted and stored in groupings and in order to keep track of the origins of the data it was decided to attribute a case code for each of the lecturers interviewed with a preceding letter. For example, a data type [1.1] from a lecturer at college 'A' would be recorded as [A.1.1]. An example of all the data types belonging to category [4.4] is as follows:

> [<F>4.4] "People haven't thought through the implications eg. NCVQ might revolutionise the Catering Department.... straight Departmental lines inhibit a broader understanding of F.E. issues."
> [<F>4.4] "At <F> the SMT don't understand what Special Needs is all about... they are still

in pursuit of excellence, academic measures, exams etc. The Principal supports in words but no real priority. I.T. is messy... supposed to be cross-college with a computer manager. But the computer manager is ineffective. Requests for computer equipment have to go through him but this is a token. If one Department buys Amstrads and another Apple Macs !! Access to rooms... maths lecturers, engineering lecturers... where do the computers come from? There is no open access unit. There are some for GCSE workshops but no computers in the library. At <F> there are three computers in an annex from a 16-19 school. We have ordered 3 more with peripherals and software out of the special needs budget."
[B4.4]..." the Gen Ed Dept. ... extension studies, ice skating pony trekking i.e. personal development, employer needs
if they are well motivated and get on well with people, social skills, if they are pleasant and get on well the employers will take them on. ... the Engineering Dept. however concentrates on vocational training and think that the Gen Ed approach is playing ...'they should learn how to make coffee tables' (SPECIAL NEEDS STUDENTS).... woodwork, engineering (DEPARTMENTS) 'whats the use of computers? How can it help me lay bricks, make slabs etc.'
In Special Needs we have a conflict! ... what kids need is to be able to catch a bus.
There is also a division of language in the staff room... those staff using computer jargon and those who don't.... possibly a division of the sexes as well ... Engineering staff are predominantly male and fixed in their ways... sewing and caring staff are predominantly women and seem more flexible."

<u>How is your college organised?</u>
[B4.4]... "There are loads of Departments ... at this site there are auto engineering, and voc prep including ESL/Adult Lit/ Numeracy, Drop in courses links with schools/ special schools."
<u>[B4.4] How are I.T. resources organised?</u>
"Through specific departments but because of this not everyone knew what everyone had."
[G4.4] A lot of computers are not where they are needed... other departments/sections/rooms

indeed there are not enough computers.
[C4.4] "We have open access at a set time. Up to 30 staff input to special needs... its been open to all but there has been a poor take up.... possibly through resentment! There is a poor image of special needs in staff attitudes. They feel we are empire building with better staff ratios and unfair amounts of equipment."

The use of a macro function whilst scanning the data in order to codify and sort it into categories was most useful and allowed the researcher to be immersed in the data. The procedure was as follows:

Using the word processing application (WordPerfect Version 5.0.) first the required coded string of text was highlighted, using the 'Block' command (keys ALT F4). Then the macro command containing the following stored set of key strokes was executed.

1) Ctrl F4 (MOVE)

2) 1 (to select a block of text to be moved)

3) 4 (to append to a named file)

A file was created for each of the data types 1.1 to 6.4 and whenever data of a particular category emerged, it was saved together with data of the same type thus enabling the researcher to compare, contrast and sort the various categories of data.

4.3 Frequencies and Consistency of Interview Data.

In order to assist the researcher in looking for patterns and trends in the data, the use of a Spreadsheet application (Lotus 123) was used to enable the construction of tables. This is consistent with the approach suggested by Miles and Huberman (1984)

as described previously, however, the researcher was unaware of the previous use of spreadsheet applications to assist with the construction of tables to analyse qualitative data.

Table 4 can be found on page 72 and shows the analysis of the data codes by college. By using a spreadsheet there was a temptation to attribute weightings and quantify the data but this temptation was avoided. Clearly trying to weight such data would have been unsound. On what criteria would one be able to place a value on such subjective data? What confidence could have been placed in the resulting figures? Instead, a (+) was used to indicate a positive attribute to the data and a (-) to indicate a negative attribute. For example:

> [F2.1] that staff are unaware of the potential of I.T. as an aid to curriculum development."
> Why do you feel that is so?
> [F6.2] [F5.1] "the lecturers see the computers as belonging to other people...courses, faculties, departments....

The above data was considered as having a negative tendency for the data type [2.1] Curriculum Development, whereas the following data was considered to be a positive sample in this category:

> [B2.1] What curriculum development has followed if any?
> ..." the caring staff are now using databases in an integrated assignment, the sewing staff are now using a weaving simulation program, fashion staff are using a business simulation of a clothing factory planning / designing manpower etc.. .... the attitude seems to be 'if they can use it then we can'" (SPECIAL NEEDS STUDENTS).....
>
> Has there been a change in teaching and learning strategies with the introduction of I.T.?
> [B2.1] "Sewing staff using computers to help

> learn how to weave ie more flexible saving time. Special Needs staff planning trips to London. [B5.3] CET Secondment allowed time to plan and prepare thoroughly. Indeed this term we are planning to take them to Priory shopping centre at Leamington Spa. The students wrote off, using a word processor, to various shopping centres London, Birmingham etc. and gave presentations to the rest of the group / costings etc. Then there was a group decision based on the presentations of the students. This was not previously possible as word processing was not available. They built up an itinerary and a spread sheet of the costs. They built maps of the ground floor showing facilities for the disabled. And then word processed a report after the trip."

At the time the researcher was analysing the data for this study, despite an extensive survey of the relevant literature, the researcher was unable to find evidence of an approach, using macro commands in a word processing application to assist with the classification and sorting of coded qualitative data. However, since the analytical stage of this study, the researcher has become aware of other work in this field.

Tesch (1990), has identified a number of packages available to analyse qualitative data using a personal computer. These are however, bespoke packages tailored to specific analytical tasks such as: text retrievers and database managers. The researcher maintains that there are many advantages to using macro-commands from a word processing package being used as a research tool. These include firstly, the saving of training time required to learn a new package and secondly, using the same package to write up one's findings minimises the problems that can be experienced in transferring data from one package to another.

CHAPTER 5

FINDINGS

5.1 Results from the Questionnaire.

The results from the questionnaire, which sought to elicit perceptions both of how the lecturers viewed their organisation's culture and how they perceived the culture that they preferred and would feel most comfortable in, are to be found in Table 2 on the following page.

As explained in the previous chapter, the lowest score in each row represents the sum of the rankings that indicate the respondent's matching of the statements from the questionnaire that give the best resemblance to their perceptions of both their organisation's culture and their preferred culture.

For example reading across the first row in Table 2 the respondent from College <A> scored 25 for Club culture and this, as it was the lowest score in that row, indicates that the organisational culture of College <A>, as perceived by the respondent, is Club culture. On the other hand, an inspection of the second row of Table 2 shows the lowest score to be 26 indicating that the preferred culture of this respondent is Task culture. (The lowest scores in each row have been highlighted by enclosing them in parenthesis.)

A closer inspection of Table 2, on the following page, reveals that in several cases there is no one clearly dominant cultural type but a mixture of at least two. For example College B scored 29 for both Role and Task culture, however from the diagrams a Club culture was perceived as being dominant.

TABLE 2

Questionnaire Results (Perceived & Preferred Culture)

	CLUB: 1	ROLE: 2	TASK: 3	PERSON: 4	TOTAL
COLL A					
PERCEIVED CULTURE	(25)	33	39	53	150
PREFERRED CULTURE	52	39	(26)	33	150
COLL B					
PERCEIVED CULTURE	39	[29	29]	53	150
PREFERRED CULTURE	56	39	(27)	28	150
COLL C					
PERCEIVED CULTURE	55	32	(23)	40	150
PREFERRED CULTURE	55	33	(23)	39	150
COLL D					
PERCEIVED CULTURE	46	33	(30)	41	150
PREFERRED CULTURE	53	37	(25)	35	150
COLL F					
PERCEIVED CULTURE	34	(29)	39	48	150
PREFERRED CULTURE	41	50	(29)	30	150
COLL G					
PERCEIVED CULTURE	33	(28)	40	49	150
PREFERRED CULTURE	55	43	(16)	36	150

It is interesting to note that in cases <B>, <C> and <D> there is a strong match between perceived and preferred culture by the respondents. This would indicate that the lecturers from these colleges were in harmony with their institution's organisational culture. This is demonstrated with the following data:

> [D4.3] Is there any cross college teaching?
> "Yes I enjoy it and it works well it gives an opportunity to do what they want to teach and encourages cross- fertilisation through being a member of different teams"

It is also interesting to note in the remaining three cases, <A>, <F> and <G>, that a mismatch between perceived and preferred culture was found. In case <A> the respondent perceived Club (1) culture to be dominant in her organisation however she expressed a preference for working in a Task oriented culture.

Similarly in cases <F> and <G> a Role culture was perceived as operating when both respondents from the respective colleges preferred to work in a task oriented culture. This is demonstrated in the following data:

> Tell me more about your role in the College.
> [F6.3] [F4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U.

Publication: A College Guide to Meeting Special Educational Needs.) For example .. everybody is responsible for Special Needs, I.T., Communications etc."

5.2 Findings from the Diagrammatic Representation of Cultures.

A summary of the findings from the diagrams that were shown to the respondents at the end of each of their interviews, together with a comparison with the findings from the questionnaire, can be found in Table 3 on the following page.

The numbers in the body of the table correspond to the codes in the key at the bottom of the table. Taking the first column for College <A> for example, the lecturer from the sample perceived her college's organisational culture to be Role (2) after having been shown the diagrams, however according to the results of the Harrison/Handy Questionnaire, Club culture (1) was perceived as being the dominant organisational culture in her institution. Clearly there is a mismatch in perceptions as measured by the diagrams and questionnaire in this case.

However, an inspection of the third and fourth rows of the first column of Table 3 shows that there is a perfect match with the respondents perceptions of her preferred organisational culture when using both the diagrams and the questionnaire.

In three out of the six cases there was a perfect match between the perceptions of the organisational culture as measured by both the diagrams and the questionnaire with cases <D>, <F> and <G>. In other words, three of the six lecturers in the sample perceived their organisation's culture as being of the same type, both according to their responses from the questionnaire and to the diagrammatic representation of cultural types.

TABLE 3

Perceived and Preferred Culture by College

	COLL A	COLL B	COLL C	COLL D	COLL F	COLLG
PERCEIVED CULTURE OF ORGANISATION						
DIAGRAMS	2	1	2	[2/3]	2	2
QUESTIONNAIRE	1	[2/3]	3	[2/3]	2	2
PREFERRED CULTURE OF ORGANISATION						
DIAGRAMS	3	3	[2/3]	3	3	3
QUESTIONNAIRE	3	[1/3]	3	3	[3/4]	3

CLUB = 1 ROLE = 2 TASK = 3 PERSON = 4

Perhaps the most striking result that can be seen from this table is that there was a close match between the lecturers' perceptions of their preferred organisational culture elicited from both the questionnaire and the diagrams.

In four out of the six cases the preferred culture was perceived as Task Culture and in the remainder, a mixture of Task Culture with another culture type: in one case 'Club' and the other case 'Person'.

This is consistent with Handy's view (1985) who maintains that: "Often an organisation will find that the forces in the environment push it towards a power culture, that its size and technology push it towards role, and the personal inclinations of the middle managers incline it to a task orientation." In other words it is quite normal to expect a mix of cultures, sometimes a dominant culture with underlying sub-cultures.

5.3 Findings from Interview Data

An inspection of Table 4, on the following page, shows a breakdown of the codified data from the interviews. As mentioned in the previous chapter, the use of (+) in the table indicated a positive statement. For example the first row for data type 1.1 (Motivation) contains five (+) which indicates that five out of the six lecturers interviewed mentioned increased motivation from their students. Some possible explanations for the perceived increase in student motivation can be found by examining the following examples of data type 1.1 :

> [A1.1] "They work for hours at things they would not normally do ... writing, spelling, numeracy ... its all computers and because its grown up, sophisticated ... its different."
>
> [F1.1]...Take 'Video Draw Professional' for example,(SOFTWARE PACKAGE) they can produce images similar to those found in Melody Maker[F1.1]" The use of computers is seen by the special needs students as something that the mainstream students do and they begin to feel they are achieving something."
> [B1.1] "If you take the example of Mary Hope in The Magic of the Micro..... 'give them a piece of paper and they'll write two lines but with a word processor!'....
>
> [G1.1] Thank you for responding to the tasks that I sent you. I am particularly interested in what you had to say about enhanced motivation of the students. Could you elaborate on that?
> "It is particularly noticeable with word processing.... the students can produce effective looking work. Word processing also gives an enhanced dimension to group work eg; individuals contributions to a news sheet or poster.... its not held back by the limitations of the individuals lack of skills.
> I.T. also provides opportunities for learning without realising it! ... screen images use movement and colour for games/CAL and they learn things without realising they are doing it.. its active, they are making

TABLE 4

Analysis of Interview Data Codes by College

	COLL A	COLL B	COLL C	COLL D	COLL F	COLL G
STUDENTS						
MOTIVATION 1.1	+	+	+		+	+
PROGRESSION 1.2			+	+		
CURRICULUM OFFER						
CURRIC DEV. 2.1		+			-	
CURRIC CHANGE 2.2	+	+	+	+	+	
STAFF						
MOTIVATION 3.1				-	+	
DEVELOPMENT 3.2	+		+		+	
FACILITATORS 3.2.1		+	+		+	
RECEIVERS 3.2.2			+		+	
TEACH & LEARN STRATEGIES						
GROUPWORK 4.1			+		+	
TEAM TEACHING 4.2	-		+		+	
CROSS FACULTY 4.3	-		+		+	+
DEPARTMENTAL 4.4	+	+	+		+	+
INT. APPROACH 4.5			+		+	

	COLL A	COLL B	COLL C	COLL D	COLL F	COLL G
RESOURCES						
HARDWARE 5.1				+	+	
SOFTWARE 5.2	+				+	
TIME 5.3	-	+	-	+	+	+
REMISSION 5.3.1	+					
SUPPORT						
TECHNICAL 5.4.1	-		-			-
ADVISORY 5.4.2	+				+	
L.E.A. 5.4.2.1	+					
ORGANISATION						
CLUB 6.1		+				+
ROLE 6.2	+		+		+	+
TASK 6.3		+		+	+	+
PERSON 6.4						

it happen its not you doing it for them. There is an element of realism you get in simulations. eg: with Micro Special Insurance/ booking holidays ... we visited travel agents! but it was curriculum led."
What about positive outcomes?
[C1.1] "There is increased motivation through the introduction of I.T.. a longer concentration span... our students generally have poor relationships with adults but a computer has endless patience its not a person ... its not critical.. with turtle logo they can try and try again."

On the other hand the row for data type 5.4.1 (Technical Support) contains three (-) indicating that three out of the six lecturers interviewed mentioned a lack of technical support.

[A5.4.1] "There has been no technical support."
[G5.3] [G5.4.1]" There is inadequate time for preparation to set up the equipment and a lack of technical support. You have to learn and evaluate the software you cant just flick through. The constant problem of updating and upgrading hardware with associated compatibility problems... built in obsolescence."
What about negative outcomes?
[C5.4.1] "There is a lot of staff stress caused through lack of support with resources .... who to ask? ... no support..... one tries to do everything... poorly! .... low wages are a problem."

Further examination of Table 4 shows that increased motivation was mentioned by most interviewees, together with curricular change and a shared concern for lack of technical support. Although most lecturers mentioned Departmental structures, there appeared to be a mixture of perceptions of organisational culture using Handy's typology.

The interview data was used as the major source of information for each of the case studies and allowed an in-depth study of the perceptions of the six lecturers from the sample.

5.4 Case Study Findings.

One of the most important sources of case study information, according to Yin (1988), is the interview:

> "Overall, interviews are an essential source of case study evidence, because most case studies are about human affairs. These human affairs should be reported and interpreted through the eyes of specific interviewees, and well informed respondents can provide important insights into a situation. However, the interviews should always be considered verbal reports only. As such, they are subject to the problems of bias, poor recall, and poor or inaccurate articulation. Again, a reasonable approach is to corroborate interview data with information from other sources."

Yin goes on to maintain that direct observations might be made throughout a field visit, including those occasions during which other evidence, such as that of interviews, is being collected. The fabric of the buildings or the furnishings of a respondent's office can indicate something to the researcher about the culture of the organisation and the status of the respondent within it, however this would be a subjective view.

This study sought to elicit lecturer's perceptions of their institution's organisational culture and the introduction of I.T. to the curriculum. According to Yin (1988) a 'case' may be an individual and in each situation, an individual person is the case being studied thus forming the primary unit of analysis. Information about each relevant individual would be collected, and several such individuals or 'cases' might be included in a multiple-case study.

In each of the following case studies, interview data has been used and corroborated by direct observations on field visits

together with information from the Education Authorities Directory for the year during which the field visits were made.

5.4.1 Case <A>

Case <A> was a female, part-time lecturer from a college with 500 FT and 11,000 PT students, in the South East with an urban environment. Before she became involved with the CET project she had been a part-time care assistant in the Department of Community Care Studies.

After having been approached by the Vice Principal, who had heard that she had been using a computer with some of the special needs students, she agreed to be seconded to support the project on a part-time (0.5) basis on the understanding that technical support and help with staff development would be provided by another member of staff making up the remaining (0.5) to complete the one full-time equivalent post that was required from the college to enable the European Social Fund to be made available.

This commitment was taken on at a time when the college was undertaking some major changes by moving from a total of seven sites around the borough to set up on one site which was made available by the closure of a secondary school.

The special needs section in this college was spread around various remote sites around the borough housed on old victorian school buildings and prefabricated huts.

There was little evidence of the students with moderate learning difficulties being integrated with mainstream students and the staff of this section were looking forward to ending their relative isolation with the proposed move to be housed on the new site even though this would be in a block that was

separate from the main building complex.

Indeed one observation that the researcher found common to several of the field visits was that the special needs staff and students were often to be found in huts or buildings that appeared to be peripheral to the main centres in the colleges.

Despite the upheaval caused by the moves and changes, some interesting innovations were introduced to the curriculum of the students with moderate learning difficulties on their work preparation courses.

There is some evidence from the interview data that this case <A>, a temporary part-time lecturer, perceived that the departmental structure hindered the cross-college development of I.T.:

> [A4.4] "The college has problems ... as other people get their hands on it <I.T. resources> ... Community Care Dept. could lose it to the Independent Learning Unit. They are afraid that when they want to use it , it will not be there, they will lose it and it will be swallowed up by Bus Ed. We had a specialist room set up by the funding from the project but because the college was reorganising the Community Care Dept. we had to move out of the building and no replacement room was found ... our resources are now spread out all over the place. Since the end of the project I have had £100 to update! [A5.3] There has been no commitment from the Senior Management Team its all expected out of the kindness of your heart!" [A4.3] A cross-college role has to break down barriers. I teach on the Bus. Ed. equipment on Tuesday mornings ... I feel an outcast ... I'm the Community Care person encroaching on their equipment!"
> <u>How is your college organised?</u>
> [A6.2] < shown diagrams with explanation>
> "Its more like a temple. There is not a lot of cross-college co-operation and this probably hinders the development of I.T. Its very difficult to introduce I.T. into all Departments ... it will fall on Bus Ed. to cater for Gen Ed.. Straight I.T. is not what

> they want. It needs more people to put it in to perspective. [A5.2] I.T. specialists are not aware of the software available for students with Special Needs. Nursery Nurses need an awareness but not a detailed knowledge of how it works. [A4.3] The entitlement curriculum will be very difficult to deliver if there is no cross-college co-operation."

It was interesting to note that this case <A> perceived the organisational culture of her institution to be that of Club culture, from the results of the questionnaire, with Role culture coming a close second in the rankings. She may have perceived the culture to be a Club to which she did not have full membership because she was a temporary part-time member of staff.

There is certainly evidence from the interview data in this case that the rigid departmental lines of a Role culture are perceived as hindering the cross-college development of IT. Furthermore, this person having been given a cross-college brief, perceived that her preferred culture was Task.

5.4.2 Case <B>

Case <B> was a male, full-time lecturer from a college with 1760 FT and 6,600 PT students, in the North with an urban environment.

This case was a full-time lecturer in the Automobile Engineering and Vocational Preparation Department of an expanding college that was in the process of being re-organised after the retirement of a principal that had been in post for over twenty years. As with the previous case this college was in the middle of reorganisation following a merger from two former colleges.

The special needs section was housed in shabby old victorian buildings. The interviewee insisted on the interview taking place in the area that formed a model 'flat' for the skills for life course so that confidentiality and spontaneity of the interview could be maintained as he was sharing an office with several other members of staff.

The researcher welcomed this as interruptions could have had a hindering effect on the flow of the interview. Indeed all the interviews for this study were undertaken in areas that were free from the threat of interruptions and in areas where the interviewee felt secure enough to talk in confidence.

There is evidence from the interview data that this lecturer perceived the prevailing culture to have been that of club but he had also perceived that structural changes had been put in place to change it to a more task oriented culture.

> How do you see the organisation of your college?
> (DIAGS &EXPLANATION)
> [B6.1] "Definitely club! We have had a very powerful Principal for the last 20 years. Who ever was closest got the money. The way was to bypass the HoD's and go straight to the Principal. He had his own pet ways and the power of veto. He would say there is no money even if there might have been. However with tertiary reorganisation imminent the old structure was collapsing with temporary Vice Principals as acting Principals."
> [B6.3] "There has been amove away from Departments towards matrix. No longer HoD's but Directors both cross curricular and cross college."
>
> What is your preferred organisational culture?
> [B6] "Ideally matrix but if it were club with an interested spider the money would come our way."
> [B6.3] Is there a college I.T. committee?
> Yes.

Who is represented on it?
Its not by departments just those who are interested and skilled in the use of I.T. together with the Vice Principal.
Is the I.T. committee useful?
eg: The Electronics Department ordered spectrums but now they are lying around in cupboards because they did not consult. Now there is a broad overview..... County Council are hot on I.T. equipment and orders over £200 are not approved.
[B6.3] "I like being in the Club culture its good to know who to see and how to get what you want..... its ok with the system you are used to. But with the instant change to matrix nobody is going to know. There will be initial chaos.... however matrix could work better.... it depends on individuals. Could be difficult with loads of committees and meetings etc. .... zones of interest."
What do you mean by zones of interest?
eg: Liberal studies wanted to get something through cttee. They flooded the cttee with their members and hence got what they wanted.... you need to check who is on the cttees.
[B6.1] What about the cross college I.T. cttee?
"Its not working as a team but there are still vested interests. I can see a time when it might work! When Departments go!"

There is clear evidence here again of the hindering effect that the rigid departmental lines of Role culture, coupled with the spheres of influence associated with Club culture, can have on the cross-college development of IT in the curriculum.

It is interesting to note that this lecturer's perceptions of his organisation's culture, as measured by the questionnaire, indicated a split between both Role and Task culture scoring 29 each. This could possibly be explained by the changes brought about by the new management structures. Perceptions can be of how an organisation used to be or indeed of how it might be at some time in the future.

During the field visit it was interesting to observe that members of the Engineering Department had been instructed by the new management to take their breaks in the staffroom that was used by the Care and Sewing staff, presumably in an attempt to encourage cross-college communication and break down departmental barriers.

5.4.3 Case <C>

Case <C> was a female, full-time lecturer from a college with 900 FT and 9,000 PT students, in the South West with a rural environment.

This college was housed in modern buildings on a purpose built campus on the edge of a small country town. However, as with the previous cases, the special needs students with moderate learning difficulties were based in two adjoining prefabricated huts on the far side of the car park and somewhat isolated from the mainstream of college life.

The interviewee had already established a lead in introducing I.T. to the curriculum of students with special needs with the help of funding from a previous project. The interview was carried out in her office in one of the huts and was only interrupted by a telephone call. The telephone was re-directed for the remainder of the interview.

This college was also in the middle of a major structural change from eight departments to four faculties each with a cross-college responsibility. There was again evidence from the interview data that departmental structures were seen to inhibit cross college developments in IT:

How do you see your college organisation structure?<with diags>
[C6.2] [C6.3] "Its the greek temple. I would like to see it as a mixture of the temple and the matrix. We work too rigidly within schools we only see each other and don't know what others are doing even in the schools within our own faculty. The present organisation hinders the development and integration of I.T."
Why?
"With the greatest reluctance Business Studies & Computing acknowledge other uses of I.T. They are unconstructive, they don't put on beginners courses only programming. They have been asked for help and have continually refused."
How are other departments involved with I.T.?
[C4.5] "Motor Vehicle Studies have helped with evaluation of software. There could be more integration if we gained support from other members of staff/ other Departments. There is no open access unit! A member of the Art Department was carrying over a computer and dropped it in the mud!"

Indeed one observation from the field visits, not only in this case, but in others as well, was that the special needs section was all too often out on a limb in a hut away from the main building and away from the mainstream students.

Despite the difficulties encountered in integrating IT across the college in this case, the special needs section later became a nationally recognised centre of expertise for the use of IT in the curriculum of students with moderate learning difficulties.

5.4.4 Case <D>

Case <D> was a male, full-time lecturer from a college with 1,100 FT and 8,200 PT students, in the Midlands with an urban environment.

The college was housed in modern, well equipped buildings in a purpose built campus. There was evidence of an effort to fully integrate the special needs students with ramps and lifts for students with mobility problems. The special needs courses were based in the main buildings.

The interviewee insisted that the interview should be conducted off-site as he did not have an office of his own and wanted to minimise the possibility of his colleagues overhearing what he had to say.

This college, like some of the others, had previously been organised on departmental lines but at the time of the interview was in the fifth year after a re-organisation to a matrix system.

The evidence from the interview data for this case is consistent with the results of the questionnaire with both the perceived organisational culture and the preferred organisational culture being Task oriented:

> How is you college organised?
> [D6.3] "We have a matrix system with sections ... Boards of study... Assistant Principals with areas of responsibility: staffing, marketing, buildings/resources, F/T classes. There are 28 sections each like small departments... just as empire building ..... entrepreneurial grabbers and spenders. There is a computing and a special needs section. There is also a cross-college computer users group, very powerful with loads of money and responsible for the purchasing policy. They have to make sure it gets to where it is most needed."

On what criteria?
"eg: They are users but with bad ideas... the computer section wanted to buy a mini, a VAX, but one person in the group said a Prime was better.
How do you see your colleges organisational structure?<diags& explanation>
[D6.3] "<D> used to be Departmental.. role but we have had 5 years of matrix. The new Principal forced matrix on the college with the help of the management team. I used to like the Departmental system... now if I have a problem I have to decide who to go to ... are they F/T or P/T students? etc.
I used to know where I was.... I prefer matrix because of the flexibility but you need to keep your nerve... things in a matrix system do tend to work locally. eg: a keen Head of section can influence I.T. its easier to manage because its smaller and has less funds."
[D4.3] Is there any cross college teaching?
"Yes I enjoy it and it works well it gives an opportunity to do what they want to teach and encourages cross- fertilisation through being a member of different teams"

An observation worth noting from the field visit was that before the focused interview the interviewee reported that staff from the Special Needs section were all formerly teachers from special schools and were not integrating with other staff in the college. As a result they had been instructed to take their tea breaks in the staff lounge. It would appear that there was a commitment from senior management to ensure that every opportunity was given for cross-college communication, which would indicate a Task culture.

5.4.5 Case <F>

Case <F> was a male, full-time lecturer from a college with 1000 FT and 1500 PT students, in the West Midlands with an urban environment. Although he was at this college for the duration of the project, this case took up a promotion in another college and it was interesting to note how his perceptions compared the organisational cultures of the two differing colleges:

> [<f> 2.1] that staff are unaware of the potential of I.T. as an aid to curriculum development."
> Why do you feel that is so?
> [<f> 6.2] [<f> 5.1] "the lecturers see the computers as belonging to other people...courses, faculties, departments.....
> [<f>6.2] "Its rigidly departmentalised. The Principal called a meeting and gave a model showing cross-college roles ..... TVEI, Special Needs, I.T., Media Services, Library, Open Learning, Staff Development..... He expects it to happen but its not."
>
> WHY?
> [<f>6.2] "People are concerned about their Departmental role and they want to protect their own area. They don't have an understanding of initiatives across college, also they don't know people outside their departmental groups. Its strong on Day Release....Traditional..rigid, traditional, old fashioned. Therefore it hinders integration, staff development etc. It does not encourage flexibility, every thing has to be done through Departmental lines, notes and memos to HoD's .... lots of things get missed."
>
> Can you give an example?
> [<f>6.2] "We lose understanding of what other people do... he gets away with not doing when I ask (in cross college role) and plays off against HoD. Then I have to chase up through both my and their HoD.
> With TVEI all schools have written

submissions but I am restricted to curriculum issues only as other issues are not seen as my role. Therefore it is very frustrating and curriculum inhibited because of attitudes eg. traditional plumbing ... You are hear to cut a pipe."
[<f>6.2] "<f>..... Temple. Cynically management by astonishment."
Tell me more about your role in the College.
[F6.3] [F4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs.) For example .. everybody is responsible for Special Needs, I.T., Communications etc."
Can you tell me how your College is organised
[F6.3] "There are 10 Divisions each with an SL or PL in charge. Next above these are the HoD's and Assistant Principals they are all housed in adjacent offices and form a Senior Management Team.
There is Line Management with people reporting to different people depending on the particular problem. Because of that people understand that people could have a cross-college role and go up other lines without people being upset or offended. Because I.T. was Cross College it was easier to cover and ask for access to rooms..... 'Of course you can use the room... its a college resource.' ... There was a lot of servicing/ cross college teaching by every body and the Senior Management Team were committed to new initiatives and supportive of innovations."

There is clear evidence here of the contrast between a college management that places emphasis on cross-college roles in a Task oriented culture and is supportive of innovations such as introducing IT to the curriculum of students with special needs, compared with a college that operates a rigid departmentalised Role culture that is seen to inhibit the development of cross-college initiatives using IT.

5.4.6 Case <G>

Case <G> was a male, full-time lecturer from a college with 510 FT and 4920 PT students, in East Anglia with a rural environment. The buildings were modern and in good repair however, yet again, the special needs section was housed in prefabricated huts set aside from the main buildings of the campus.

As in the previous case this lecturer was at this college for the duration of the project, after having been promoted from another college. Again it was interesting to note how his perceptions compared the organisational cultures of the two differing colleges:

> [<G>6.2] at <G> its more departmental and SM don't teach and don't attend team meetings. There is less teaching across teams and faculties than at <g>. <G> is like the greek temple and less democratic. The STEPS team at <G> are close and tight and don't get involved in other parts of the college.
> [G5.3] [G5.4.1] There is inadequate time for preparation to set up the equipment and a lack of technical support. You have to learn and evaluate the software you cant just flick through. The constant problem of updating and upgrading hardware with associated compatibility problems... built in obsolescence.
> [G5.3] [G3.2.2] "With I.T. it can get left

up to one enthusiastic individual but it comes down to time, not down to persuading people that it is staff development. How do you get them on a course? They want to know but don't want to go on a course.People don't have the time to get to know how to use it."

Is time made available for team meetings?

[<g>5.3] "At <g> time was given for key members of teams to meet but there was also an expectation and recognition by people that meeting for curriculum development was perceived by senior management as important."

[<G>5.3] "At <G> its not the same, its an imposition, something on top of your teaching load eg: you will do team meeting in your P/M because your conditions demand it therefore people are less prepared to put time in.<G> is less democratic, people are less involved. This is no way to treat professionals. <G> Ac. Bd. does not have the same impetus and has many yes people on it."

Again there is evidence here of how the departmental structures associated with Role culture are seen not only to inhibit the cross-college development of IT but also to isolate special needs staff from the rest of the college.

[Source for student figures: The Education Authorities Directory and Annual (1988)]

CHAPTER 6

DISCUSSION OF FINDINGS

In this chapter the findings are discussed in relation to the aims of the study:

6.1 Handy's theoretical framework.

Aim 1.

To have examined the application of Handy's theoretical framework and subsequent models of organisational cultures to Further Education institutions by exploring how lecturers perceive the organisational culture of their college.

The lecturers' perceptions of their institution's organisational culture, as measured by the questionnaire results, showed that four out of the six colleges were perceived as being either Role culture or a mixture of Role and Task culture.

The lecturers' perceptions of their preferred organisational culture, as measured by the results of the questionnaire, showed that four out of the six lecturers preferred Task culture with the remaining two showing a preference for a mixture of Task with another cultural type, in one case Task and Club, the other case being Task and Person.

The lecturers' perceptions of their institution's organisational culture, as measured by the responses given after having been shown the diagrammatic representations of the four organisational types, gave the following results: four out of the six lecturers perceived their organisation as having a dominant Role culture, one of the remainder being perceived as a mixture of Task and Role, the other being perceived as a Person culture.

The lecturers' perceptions of their preferred organisational culture, as measured by the responses given after having been shown the diagrammatic representations of the four organisational types, gave the following results: five out of the six lecturers perceived their preferred organisational culture to be Task, the remaining one being a mixture of Task and Role culture.

In using Handy's theoretical framework and models of organisational cultures there appears to be a consistency in the data from using both the questionnaire and the diagrammatic representation of the four organisational types which could be interpreted as implying a degree of validity in the findings.

However, the reliance upon the four cultural types: Club, Role, Task and Person to describe how lecturers perceive the cultures of colleges of further education has its limitations.

The culture of an organisation is a dynamic concept. Principals retire or move on and new staff are appointed. Old teams are disbanded and new ones built. New structures are put in place, often after mergers or closures of colleges or parts of colleges. Clearly any attempt at gaining an insight into the nature of lecturers' perceptions of their institution's organisational culture can only be a snapshot at a specific point in time. Even then there is the possibility that the lecturers' perceptions are of another time, of how the organisation used to be. Lecturers that change posts and move on to other colleges might confuse their perceptions with a mixture of two or more colleges to consider or possibly perceive the organisation in a different way following, for example, a promotion.

Indeed in Handy's (1989) later writing, he introduces the concept of The Shamrock Organisation, The Federal Organisation and The Triple I Organisation. Of these new sorts of organisations Handy says:

> "Organisations used to be perceived as gigantic pieces of engineering, with largely interchangeable parts. We talked of their structures and their systems, of inputs and outputs, of control devices and of managing them, as if the whole was one large factory. Today the language is not that of engineering but of politics, with talk of cultures and networks, of teams and coalitions, of influence or power rather than control, of leadership not management. It is as if we had suddenly woken up to the fact that organisations were made up of people, after all, not just 'hands' or 'role occupants'. It is, thinking about it, a startling discontinuity even if it has crept up on most of us unnoticed."

It would appear that Handy is admitting that the concepts of Club, Role, Task and Person culture are insufficient and outdated.

The concept of a college with a smaller core of full-time staff and a greater reliance upon part-time staff to provide a more flexible labour force, which of course is less expensive, is described by Handy (1989) as a shamrock organisation. Handy maintains that all organisations will soon become shamrock organisations.

The Federal organisation is described by Handy as being a flatter organisation in which it is possible to bring the work to the people rather than the people to the work and to link all members of the organisation: "telephonically and electronically instead of in flesh and blood." Handy maintains that Federalism

is a necessary development in the evolution of organisations.

The Triple I organisation, according to Handy, is where the triple effect of Intelligence, Information and Ideas combine to give added value: "In a competitive information society brains on their own are not enough, they need good information to work with and ideas to build on if they are going to make value out of knowledge."

Handy goes on to say that increasingly organisations will come to resemble universities or colleges where intelligent people are concerned with information and ideas. Furthermore, Handy argues that: "these new organisations, making added value out of knowledge, need to be obsessed with the pursuit of truth, or in business language, of quality."

The concept that individuals perceive their organisation's culture differently, depending on where, within, or without, they are in relation to the organisation, will become more obvious if the shamrock organisation prevails. Clearly the perception of the culture from a part-time lecturer or an agency temp on the support staff would be very different from that of a full-time core member of staff. Again this emphasises the observation of one of the interviewees that one's perception of the organisation is contingent upon one's own position relative to the organisation.

The feeling of belonging in a shamrock organisation would be a privilege of the full-time core staff because they would have the security of a full-time contract to which they would respond by giving a professional commitment to the job. The difficulty of bringing part-time lecturers to team meetings and

with that the ability to perform as a member of the team, would be a major disadvantage unless of course part-time staff were paid to attend meetings. Even then the part-time staff may have other commitments elsewhere and be unable or unwilling to provide the level of commitment required by an organisation to which they feel they do not belong. Indeed, one of the lecturers from the opportunity sample was a part-time lecturer. This could have influenced the way in which she perceived the organisational culture of her college.

The following data provides evidence that she recognised that her perceptions could be different to those of full-time members of staff:

> What is your preferred organisational culture?
> [A6.3] "Matrix. Your perceptions as a part timer may be different to that of full timers ... not affected so much by Dept. Politics ... [A4.3] A cross-college role has to break down barriers. I teach on the Bus. Ed. equipment on Tuesday mornings ... I feel an outcast ... I'm the Community Care person encroaching on their equipment!"

6.2 Preferred Culture

It could be argued that the flexibility provided by Task culture, with interacting cross college teams has its advantages in being flexible and responsive to the ever changing demands that are being placed on colleges but the security and basic psychological need to belong is best provided for in a Role culture with clearly established lines of communication and management.

The focal point of this study concerned Handy's assertion that if 'Task' culture is dominant, then the organisation is likely to be more amenable to the management of innovation and introduction of new technology.

In view of Handy's assertion then perhaps one of the most significant findings of this study is that these lecturers' perceptions of their preferred culture, (both by response to the Harrison/Handy questionnaire and by responses to the diagrammatic representations of the structures of the four types of culture), were that of task culture.

There could be a variety of reasons for this. Perhaps they preferred task culture because of their involvement in teamwork at a national level by being members of the CET research project team. Four out of the six lecturers commented on the hindering effect of rigid departmental structures on the progress of introducing IT to the curriculum.

> [<F>4.4] "People haven't thought through the implications eg. NCVQ might revolutionise the Catering Department.... straight Departmental lines inhibit a broader understanding of F.E. issues."

It could be argued that as all of the lecturers interviewed were involved in the innovation of introducing IT to the curriculum of students with special needs, they felt that they would be more suited to a task oriented culture, particularly when operating with IT, which involved many of the sample in liaising with colleagues from many different levels and areas across the college as a direct result of being involved with the CET Project.

Perhaps there is a case for curriculum-led institutional development, providing that a suitable college structure is in place. Turner (1990) in answer to the question: What structures and operating systems encourage an adaptive and change-seeking

institution? Provides the following answer:

> "The literature on organisation seems agreed that innovation and constant adaptation occur best in highly-flexible, participative, loose and untidy structures and least well in departmentalised, hierarchic, tight and well organised structures."

This view would imply that the sample of lecturers from this study, involved in the innovation of introducing IT to the curriculum of students with special needs often requiring changes to the curriculum and liaison with colleagues across the college, would prefer to work in an organisation with a task oriented culture.

6.3 The introduction of IT to the curriculum.

> Aim 2.
>
> To have investigated how an opportunity sample of lecturers from six Further Education Colleges viewed the introduction of IT to the curriculum of the students they teach, specifically those with moderate learning difficulties studying on work preparation courses.

These lecturer's perceptions of the introduction of IT to the curriculum provide an insight into some common concerns and experiences shared by the group.

The two main areas of concern, as reported by these lecturers, were lack of time and lack of technical support. When the colleges took delivery of the various resources (both hardware and software), there was little thought given to where the equipment was to be located and who was going to support it by setting it up and maintaining it.

Four out of the six lecturers complained at the amount of time they had spent, not only in learning how to use and develop software and courseware packages in their teaching programs, but also in the setting up and routine maintenance required for the smooth running of the equipment. Only one of the colleges from the sample had provided technical support and the rest had relied on the goodwill of the lecturers to put in the time required to service the resources.

Indeed, as demonstrated in the data type [F4.2] there appeared to be a reliance upon a great deal of goodwill on the part of the lecturers involved in the CET Project to make up for the lack of an existing IT Policy:

> [F4.2] "Teamwork was encouraged more at <F> than <f>.
> <f> is a sleepy backwater and has not caught up. There is a creche for adult learners at <F> but not at <f>.A lot of good will but no policy."

Some of the lecturers reported instances where the computing specialists in their colleges were hostile and unhelpful because they felt resentful that expensive resources had been allocated to the special needs sections:

> [C4.4] "We have open access at a set time. Up to 30 staff input to special needs... its been open to all but there has been a poor take up.... possibly through resentment! There is a poor image of special needs in staff attitudes. They feel we are empire building with better staff ratios and unfair amounts of equipment."

However, where the computing and IT specialist staff had been involved with the project in a supportive capacity, there was some evidence of cross-faculty developments.

Five out of six of the lecturers interviewed, reported having observed an increase in motivation in both students and staff who had become involved in using IT. Although they also noted that for some students with special needs that there was sometimes an unrealistic expectation of progression, from the students, who often felt that they stood a good chance of gaining employment due to their involvement with computers.

There was evidence of curricular change and where staff development activity had been well resourced, by both payment of staff to facilitate staff training and the allocation of time for staff to attend, there were many examples of curriculum development that have been identified as good practice by the CET. There also appeared to be evidence of a change in teaching and learning strategies with examples of team teaching and a more integrated approach with some cross faculty work being developed. These findings are consistent with those of Donovan et.al. (1991) from a major survey of IT in Further Education in which it is found that: "The integration of IT across the curriculum is still a relatively infrequent occurrence, although some good examples can be seen. Special needs education presents sound models of curriculum applications."

6.4 Codification of Data

Aim 3.

To have explored the use of computer aided analysis of qualitative data using a word processing package.

Perhaps the most daunting task of this study concerned the analysis of the data and the codification and identification of the various categories of data types.

There were many instances when the data of one type contained within it data of another type or when data appeared to fall into more than one category. Some examples of this are as follows:

> [G5.3] [G5.4.1] There is inadequate time for preparation to set up the equipment and a lack of technical support. You have to learn and evaluate the software you can't just flick through. The constant problem of updating and upgrading hardware with associated compatibility problems... built in obsolescence.

> [G5.3] [G3.2.2] "With I.T. it can get left up to one enthusiastic individual but it comes down to time ... not down to persuading people that it is staff development. How do you get them on a course? They want to know but don't want to go on a course.People don't have the time to get to know how to use it."

> Tell me more about your role in the College.
> [F6.3] [F4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor

> not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs.) For example .. everybody is responsible for Special Needs, I.T., Communications etc."

Assuming the codification was refined so as to have a discrete set of codes, how could one ensure the validity of such a coding system? Possibly by asking several or many people to codify the same text but would they be familiar enough with the concepts or have the time to be able to do this meaningfully?

A major problem with a simple code retrieve model is that it does not allow for the exploration of possible relationships between or within categories of data types. A solution to this problem is offered in a package developed by Richards & Richards (1990) called "NUDIST" which stands for Non-numerical Unstructured Data Indexing Searching and Theorising. Unfortunately this has only been available on mainframe computers until recently. However, it is planned to release a version that will run on a powerful microcomputer in the near future.

This package not only allows unlimited retrievals of text labelled with any code, but also allows the researcher to explore relationships both between and within sets of data using a complete set of boolean operators (AND, OR and NOT etc). Furthermore, each retrieval can be documented to assist with the efficient management of the data analysis. 'NUDIST' not only caters for flat lists of codes but also supports more complex binary tree-structured indexes that are highly organised.

Having explored the use of computer aided analysis of qualitative data the researcher maintains that the use of this approach is particularly useful for analysing the data collected in the form of retrospectively rewritten transcripts of interviews and furthermore the use of wordprocessing applications are likely to be available for teachers to use with confidence in their research without necessarily having to undertake the training that might be required with the more sophisticated packages that are becoming more widely available.

6.5 The Need for IT Policy and Strategy for Implementation.

Aim 4.

To have identified a model of organisational culture that could assist FE colleges with policy formulation and implementation strategies not only for introducing Information Technology to the curriculum but also in administration and management.

As discussed before in section 6.1 the earlier models of organisational culture described by Handy were insufficient and somewhat outdated to be applied to colleges of FE. However some of the models described in Handy's later work namely the Federal and Triple I types of organisation have similarities with an organisational cultural type that could be described as Information Culture. It could be argued that a necessary pre-requisite for Information Culture to flourish in a college of FE would be the agreement of an IT Policy together with a strategy for implementation.

Perhaps the most significant omission from the check list for the focused interviews was reference to the college IT Policy. This could partly be explained by the fact that none of the lecturers from the opportunity sample mentioned the existence or importance of IT Policy in their replies to the Open Task that was used to assist with the construction of the check list.

This omission can also be explained by the naivety of the researcher who was relying heavily on the responses from the open-task to form the check list for the focused interviews. This highlights the distinction between an a priori approach, in which data is used to prove or disprove a theory and the grounded theory approach in which the theory is derived from the data.

A combination of these approaches has been used by Skrtic (1985): "We allowed the issues to emerge from our respondents by asking open-ended questions. However, we asked questions about other issues, (a priori theory from other research), when respondents failed to mention them as part of their listing."

However, with the benefit of hindsight, to have been able to elicit these lecturers' perceptions of an IT Policy for their colleges, assuming one existed, could have contributed substantially to the findings of this study.

The Education Reform Act (1988) coupled with the effects of demographic trends has forced many changes upon colleges of further education in recent years. Over these years the introduction and development of Information Technology in these organisations has been difficult.

Donovan et.al. (1991) in drawing conclusions from the NCET Survey remarks:

> "This is a time of great change for many in which the multi-campus college is becoming commonplace and other forms of restructuring are occurring. It is evident that colleges are considering the place of IT in their new structures. However, the externally funded 'pump-priming' in human and hardware resources has been only partially successful. While policies on IT have been produced, many colleges have not yet developed planning strategies to translate intention into action."

Clearly there is a need for IT Policy formulation, together with an appropriate strategy for implementation, to be taken into account when considering the strategic management plan for a college.

Perhaps the reason for the lack of data referring to policy, is that when the interviews for this study were carried out (Autumn term 1988), the respective interviewees were unaware of the existence of an IT policy statement for their respective colleges or perhaps indeed the policies had not been formulated:

> [<F>4.4] "At <f> the SMT don't understand what Special Needs is all about... they are still in pursuit of excellence, academic measures, exams etc. The Principal supports in words but no real policy. I.T. is messy... supposed to be cross-college with a computer manager. But the computer manager is ineffective. Requests for computer equipment have to go through him but this is a token. If one Department buys Amstrads and another Apple Macs !! Access to rooms... maths lecturers, engineering lecturers... where do the computers come from? There is no open access unit. There are some for GCSE workshops but no computers in the library. At <f> there are three computers in an annex from a 16-19 school. We have ordered 3 more with peripherals and software out of the special needs budget."

It could be argued that a necessary pre-requisite for the development of a college policy for IT is the college's mission statement. Mission statements, according to David (1989) are an: "enduring statement of purpose that distinguishes one organisation from other similar enterprises." Essentially the mission of a college is its attempt at answering the question: 'what is our business?', whilst the mission statement is a written declaration of the answer.

In our rapidly changing world it could be argued that a mission statement, whilst answering the question of what business is it that we are in, may not necessarily address the image of the future goals of the organisation that could be encompassed by a shared vision of where the organisation is going.

Once the mission and shared vision of where the organisation is going are agreed there comes the question of how do you get to where you are hoping to be? This is where the strategy is required to give direction to perceived organisationl goals. However, hoaving established the what? and how? there is the underlying question of why?

It is here that the cultural values, beliefs, behaviours and principles relate to policy formulation and implementation strategies. Clearly anyone attempting to formulate an IT policy for a college must take account of the college's missions and the relationship that the policy will have to the mission statement.

There is however a major problem for some colleges, particularly those from inner-city communities. These colleges

are placed in a difficult position because of the delegated budgets and associated formula funding that has been applied to colleges as a result of the Education Reform Act (1988).

A college that has a declared commitment to serving the needs of students with special needs or students whose main language is not English, usually requiring an element of double staffing, will find these courses relatively expensive to resource.

With the need to generate income to supplement the usually inadequate budget, there may be the emergence of an entrepreneurial culture, whereby the use of Information Technology to provide short, profit making courses could provide the extra income required to resource the more expensive courses that the college is committed to through its mission.

The answer to the question: 'what business are we in?' might be a two-fold one i.e. to make a profit and to serve the needs of the community, thus dealing with both the commercial and the social marketplace.

Indeed with the incorporation of FE colleges in April 1993 the funding of the Maintained Further and Adult Education Sector is to become similar to that of the PCFC with colleges having to make statistical returns to the Further Education Funding Council (FEFC) to secure their main source of funding.

In gaining corporate status the answer to the question 'what business are we in?' is likely to be more sharply focused on the financial implications of the curriculum offer.

The inherent conflict between central and local government that was so much a feature of funding of IT in the colleges in the past decade, will now be replaced by competition for scarce resources and the freedom of market forces to operate.
Indeed, the goverment's policy for the funding and control of education appears to involve the dismantling of LEA influence and control and replacing it with a centralised system which will increasingly rely upon the statistical returns, performance indicators and the publishing of league tables to determine the level of funding that an educational organisation might receive.

Either way, the colleges are being forced towards enterprise culture with emphasis on making a profit, or being cost neutral. What form of strategic management will be required in this "new age" for colleges? Clearly with the need for greater efficiency the role of Information Technology will have a major part to play. Perhaps what is required to develop and flourish is not one of the cultural types that Handy (1985) has identified but a new and different cultural type. This could be described as an information culture.

6.6 Information Culture.

Whilst the concept of Information Culture does not rely upon the earlier cultural types identified by Handy, it does share some of the features of the Federal and Triple I organisational types identified in Handy's later work.

In particular, an Information Culture will require a flatter, less hierarchical structure enabling the empowering of employees to be responsible for decision making based on their access to corporate information. Information Culture will also involve the microelectronic networking of organisations to enable the flow of information to and from the corporate database thus enabling the monitoring and control of quality.

For example, Heads of Department responsible for the delivery of the curriculum in FE colleges having both, the access to corporate data and the ability to manipulate it, will be able to make informed decisions about resourcing implications for the provision of various courses together with the monitoring of student progress, made increasingly difficult with the greater modularity of courses and introduction of individual learning programes, they will be better placed to provide performance indicators and hence a measure of their quality provision.

Handy (1989) describes the type of organisation that empowers employees to make decisions and be responsible for them as the Federal organisation: "The new manager must learn to specify the measures of success as well as the signs of failure and must then allow his or her people the space to get on with it in their own way." Handy uses the analogy of an inverted doughnut to describe the inner 'core' activities of an employee

loosely bound by the 'space' contained by the boundary of the employee's discretion.

Information Technology can be used as a tool in colleges in two ways: Firstly, to enhance and enrich the curriculum delivery for both students and staff. Secondly, as a tool to provide college managers, at a variety of levels, with reliable, accurate and timely information to aid their decision-making.

The concepts of Club, Role, Task and Person cultures may not be sufficient to describe organisations, such as FE colleges, in the rapidly changing climate in which educational institutions are now finding themselves.

The learning organisation, according to Handy (1989), should mean an organisation that learns and/or an organisation which encourages learning in its people. Will our learning organisations only be available to those members of our community that can afford to pay for the privilege of learning? Where will our students with learning difficulties and special needs fit in with their relatively costly courses?

Perhaps the part that Information Technology has to play in shaping the future of tomorrow's organisations, is to provide the means to enable information culture to flourish and deliver the tools required to assist with the task of re-framing and in seeking answers to the question: what business are we in?

Information Culture could operate in a similar way to Task culture with emphasis on communication across Faculties, Departments and Sections in addition to communication to a central corporate database thus forming a kind of matrix of communication and information flow.

Perhaps what will be required of FE colleges to be able to cope with the demands of the proposed new system of funding, indeed even to ensure their own survival, is the emergence of an information culture. Where Wide Area Networks (WANS) connect the various faculties, departments and sections of the organisation, to provide instant access to the corporate database and enable cross college communications via electronic mail. Indeed information flow would be both lateral and vertical, access to certain areas being controlled by one's attributed privileges and access rights, contingent upon one's place in the organisation.

Quite how the new cultures will emerge, if at all, depends on a variety of factors. Clearly the colleges mission will have a major part to play bringing with it the need to answer the question: what business are we are in? This might be different from the answer to the question: what business is it we would like to be in? or: what business is it that we ought to be in?

The role and style of senior management will be crucial to the emergence of information cultures. A positive and charismatic leadership through which a vision can be shared with teams of staff will depend on enhanced communications through the effective use of advanced information systems.

The implications for both physical and human resources will have to be faced and substantial investment in both people and machines will be required before the benefits of an informed and empowered workforce will be realised for the organisation.

The necessary prerequisite for information culture to flourish in the new incorporated colleges would have to be the development of a Whole College IT Policy together with a strategy

for implementation. This would require continual review and monitoring perhaps by an IT Standing Committee.

6.7 Implications for the Methodology Used.

One of the major problems with the methodology used in this study was the use of the questionnaire, originally compiled by Harrison (1972). Before sending the questionnaire to the lecturers forming the opportunity sample, and after having made minor changes to eliminate the gender stereotyping implicit in the original text, the researcher was interested in the reasons for the poor response rate from piloting the questionnaire in his college, especially after having used a desk top publishing package to provide a good presentation of the material.

Piloting showed that many of the 'would be' respondents did not understand some of the language used and found it too textual with confusing instructions. As a result the researcher had to clarify the instructions before sending them to the members of the opportunity sample.

To rely on the questionnaire as the sole source of data would have been unwise and the results of the pilot highlighted the need for triangulation to both provide a second source of data and to assist with validation of the questionnaire data. In other words the researcher relied upon the diagrams of the structures that Handy maintains represent the respective cultures (see Appendix VI, page 148) both as a backup to the questionnaire and in order to cross check the responses to the questionnaire.

Indeed Handy (1990) now uses photographs to elicit perceptions of organisational cultures from students on management training courses:

> "As part of the exercise I now ask them to take photographs of the outside of the building, of the entrance and the reception area, of some of the offices and the work places. They are then asked to present these pictures on a screen in front of the whole class, without identifying the organisation or saying anything about it. The rest of the class is then asked to predict the culture and the style of the organisation."

Handy (1991) has further adapted the questionnaire, originally compiled by Harrison (1972), in a shorter version, in which less cumbersome language and clearer instructions have been used. An attempt has also been made to eliminate the stereotyping of the earlier version. The researcher would recommend the use of this modified questionnaire in any further study.

It became apparent to the researcher that in any future study of this nature it would be useful to ask people to draw a diagram of their organisation and how they saw their place relative to it. This could be fruitful in eliciting perceptions and the diagrams could be used as evidence to support the data.

Another improvement in the methodology to be considered in any future study would be the sending back of the transcripts of the retrospectively re-written field notes of the interview to the interviewee and asking for verification that they represented an accurate record of what was said during the focused interview. There are however, limitations to the confidence one can have in respondent validation.

Hammersley and Atkinson (1983) maintain that it is important to recognise the limitations of respondent validation:

> "we cannot assume that any actor is a privileged commentator on his or her own actions, in the sense that an account of the intentions, motives, or beliefs involved are accompanied by a guarantee of their truth."

Furthermore, Burgess (1985) maintains that:"we need to consider the extent to which truth is socially constructed. Indeed, lies may be told in different circumstances - to protect peers, to maintain confidentiality and in crises."

The use of the open task (see Appendix IV, page 146) was very helpful in providing the check list for the focused interviews and provided a good lead in to the interview process. The interviewer was able to focus on the leads provided by the lecturers and this assisted in eliciting their perceptions. However to rely solely on the responses from the open task to form the check lists was insufficient and a reference to I.T. policy should have been included.

The use of computer assisted analysis of qualitative data was also helpful although this method had its limitations. However, this is a relatively new area of methodology and these techniques are still in their infancy. Perhaps when the more sophisticated programs and packages are more readily available and affordable it will be possible to use them on personal microcomputers. The exploration of relationships both between and within categories of data types will be possible with relative ease.

The coding of data categories is not easy and requires well developed skills and experience. With the support of a team of researchers a more objective approach to the coding of the categories could be undertaken whilst at the same time allowing for the refining of the coding system to enable models to emerge from the data.

CHAPTER 7

SUMMARY AND CONCLUSIONS

7.1 Summary of Findings and Conclusions.

Having examined the application of Handy's theoretical framework and subsequent models of organisational cultures to FE institutions the findings of this study would indicate that the earlier models of Club, Role, Task and Person cultures are limited and have possibly been superseded by later more appropriate models that might apply to educational organisations namely the Shamrock, Federal and Triple I types of organisational culture or what could be described as an Information culture.

Having investigated how an opportunity sample of lecturers viewed the introduction of IT to the curriculum of students with moderate learning difficulties who were on work preparation courses, evidence of perceived changes was found. This included increased motivation by both staff and students. There was also a perceived need for further curriculum and staff development.

However, these perceived changes highlighted lecturers' concerns over the management implications for the innovation including limited resources, lack of technical support and an unstructured approach to staff development.

After having gained first hand experience of the above problems, often exacerbated by rigid departmental structures with their associated difficulties in encouraging cross-college co-operation, the lecturers from the opportunity sample perceived their preferred organisational culture to be task culture.

This expressed preference would lend support to Handy's assertion that, if 'task culture' is dominant, then the organisation is likely to be more amenable to the management of innovation and the introduction of new technology.

However, as discussed earlier, there are problems with Handy's model of the four types of organisational culture. How can we tell which cultural type is dominant at any particular point in time? Given that this may vary depending from which viewpoint it is observed. A part-time lecturer may have a different perception of the organisation's culture to that of a Senior Lecturer, Head of Department or Cross College Team Leader. This in turn could be different again from that of a member of the Senior Management Team or the Principal.

Although the findings from this small number of pilot studies may be limited, an insight has been gained by the researcher into some useful methods and approaches that could be used in future research including the use of computer aided analysis of qualitative data using a word processing application package.

The title of a programme of research that could be conducted using a similar approach to this study could be as follows:

> "FE College Staff Perceptions of their Institution's Strategy for the Management of Information Technology in relation to their Institutions' Corporate Culture."

A research programme such as this should include the design and piloting of a new instrument to measure perceptions of organisational cultural types perhaps based on the more recent typologies identified by Handy (1989), ie: The Shamrock, The Federal and The Triple I types of organisation.

The measurement of these perceptions should involve the use of respondent drawings to illustrate and supplement their perceptions that may have been elicited by focused interviews and attitude scales and perhaps the determinants of an Information Culture could be identified.

In conclusion the researcher maintains that, as the duration of this study coincides with the period from the Education Reform Act (1988) to the inception of Colleges as independant incorporated institutions in 1993, such a study will assume considerable importance in the future, particularly in relation to the changing culture and structure of the colleges facing their respective corporate futures'.

* * * * * *

BIBLIOGRAPHY

ATKINSON, P. — British Educational Research Journal. Vol 18 (1) 1992. pp 93-94.

BURGESS, R. (1985) — Field Methods in the Study of Education. Falmer, London.

BORG, W. & GALL, M. (1979) — Educational Research. Longman, New York.

CARLSMITH, R. & ELLSWORTH, P. & ARONSON, E. (1976) — Methods of Research in Social Psychology. Addison Wesley, London.

CET (1987) — Information Technology and Work Preparation Courses for Slow Learners in Further Education Colleges. Final Report to the European Social Fund of a Project carried out by the Council for Educational Technology in the UK.

CLARK, D. (1985) — 'Emerging Paradigms in Organisational Theory and Research', in Organisational Theory and Inquiry The Paradigm Revolution. Edited by Y. Lincoln. Sage Publications, California. pp43-78.

CLEVELAND, H. (1985) — 'The Twighlight of Hierarchy. Speculations on the Global Information Society.' in Information Technologies and Social Transformation. National Academy of Engineering. USA. pp 55-80.

COHEN, L. & MANION, L. (1985) — Research Methods in Education. Croom Helm, London.

CORCORAN, A. (1990) — Information Technology Lost Opportunities. Education August 1990. p111.

DAVID, F. (1989) — Strategic Management. Merrill 2nd Edition, Oxford.

DEAL, T. & A. KENNEDY (1988) — Corporate Cultures. Penguin, London.

DES (1984)a — A Framework for Action in IT. A Policy Statement. Further Education Unit. Occasional Paper, HMSO London.

DES (1984)b — Information Technology in F.E. Further Education Unit. Occasional Paper, HMSO London.

DES (1984)c — Software for Students with Moderate Learning Difficulties. Further Education Unit. Occasional Paper, HMSO London.

DES (1985) — From Coping to Confidence. Project managed by Further Education Unit and carried out by the National Foundation for Educational Research. HMSO London.

DES (1988) — Information Technology and the Wasted Resource. Further Education Unit. HMSO London.

DES (1989)a — Information Technology from 5 to 16 Curriculum Matters. H.M.I. Report. HMSO London.

DES (1989)b — Extending Links in New Technology Training. F.E.U. Project Report RP426. HMSO London.

DES (1990)a — A Survey of the Microelectronics Education Support Unit. H.M.I. Report 61/90/NS HMSO London.

DES (1990)b — Computerised Management Information Systems in Further Education. Department of Education & Science. HMSO London.

DONOVAN, K. (1986) — Management of I.T. in F.E.. Council for Educational Technology. London.

DONOVAN, K. (1991) — The Impact of Information Technology in Further Education. National Council for Educational Technology. Coventry.

EDUCATION AUTHORITIES DIRECTORY, (1988) The Education Authorities Directory and Annual. The School Government Publishing Company, Redhill.

EISER, J. (1986) Social Psychology Attitudes, Cognition and Social Behaviour. Cambridge University Press, Cambridge.

ENNALS, R. (1987) Difficulties in Managing Innovation. British Journal of Educational Technology. (No. 3 Vol. 18) pp 194-198.

ESTERSON, D. (1985) 'The Management of Computing Resources in Schools.' in The Journal of Computer Assisted Learning, Vol. 1 No. 3. Edited by R. Lewis. pp 134-148.

FITZ-GIBBON, C. (1989) Computer Analysis of Qualitative Data. Research Intelligence. Summer 1989. No. 32. pp12-14.

FOTHERGILL, R. (1988)a The Problem of Innovation: The British Experience. European Journal of Education. 23, pp 305-313.

FOTHERGILL, R. (1988)b Implications of New Technology for the School Curriculum. Kogan Page, London.

FOWLER, P. (1988) IT Helps. Information Technology for F.E. Students with Special Needs. N.C.E.T. London.

GERGEN, K. (1981) Social Psychology. Harcourt, Brace, Jovanovitch, London.

GOETZ, J. & LECOMPTE, M. (1984) Ethnography and Qualitative Design in Educational Research. Academic Press Orlando, Fl.

HAMMERSLEY, M. & ATKINSON, P. (1983) Ethnography Principles in Practice Tavistock, London.

HANDY, C. (1985) Understanding Organisations. Penguin Business Library, London.

HANDY, C. (1986) Understanding Schools as Organisations. Penguin, London.

HANDY, C. (1989) The Age of Unreason. Century Hutchinson, London.

HANDY, C. (1990) Inside Organisations- 21 Ideas for Managers. BBC Books, London.

HANDY, C. (1991) Gods of Management. Business Books Ltd., London.

HARRISON, R. (1972) How to Describe Your Organisation. Harvard Business Review, May-June 1972. pp119-128.

I.T.T.E. (1988) I.T. in Teacher Education. Under Resourced? Under Staffed? Under Planned? I.T.T.E. Survey. Croydon.

JANES, F. (Ed.) (1989) Managing Flexible College Structures. Coombe Lodge Report. (No.6 Vol. 21) pp 363-368. F.E. Staff College, Bristol.

KPMG MANAGEMENT CONSULTING (1991) Department of Education and Science Selective Audit of LEAs and Colleges- Report of a Study. KPMG Management Consulting. May 1991. p11. London.

LEGGE, K. (1991) Case Studies in Information Technology, People and Organisations. C. CLEGG. & N. KEMP. edi. NCC Blackwell, Oxford.

LINCOLN, Y. (1985) 'The Substance of the Emergent Paradigm: Implications for Researchers.' in Organisational Theory and Inquiry. The Paradigm Revolution. Edited by Y. Lincoln. Sage, Ca. pp 137-157.

MARIEN, M. (1985) 'Some Questions for the Information Society.' in The Information Technology Revolution. Edited by T. Forester. Blackwell, Oxford. pp 648-660.

MILES, M. & A. HUBERMAN (1984) Qualitative Data Analysis. A Sourcebook of New Methods. Sage Publications, California.

NORRIS, N. (1990) Understanding Educational Evaluation. Kogan Page, London.

PETERS, T. & R. WATERMAN (1989) In Search of Excellence. Harper Collins, Glasgow.

PFAFFENBERGER, B. (1988) Microcomputer Applications in Qualitative Research. Sage Publications, California.

RICHARDS,L & T. RICHARDS (1990) Old Goals New Goals; Towards the Next Generation of Qualitative Analysis Programs. Applied Computing Research Unit, Australia.

SCHEIN, E. (1985) Organisational Culture and Leadership. Jossey Bass, Oxford.

SKRTIC, T. (1985) 'Doing Naturalistic Research into Educational Organisations.' in Organisational Theory and Inquiry. Edited by Y. Lincoln. Sage, Ca. pp 185-220.

SMIRCICH, L. (1983) Concepts of Culture and Organisational Analysis. Administrative Science Quarterly. Vol 28 No3 pp 339-358.

STRAUSS, A. (1987) Qualitative Analysis for Social Scientists. Cambridge University Press, Cambridge.

TESCH, R. (1990) Qualitative Research: Analysis Types and Software Tools. The Falmer Press, London.

TURNER, C. (1988) 'Hierarchy, Anarchy and Accountability. Contrasting Perspectives.' in Culture and Power in Educational Organisations. Edited by A. Westoby. Open University Press, Milton Keynes. pp 74-86.

TURNER, C. (1990) Responding to Change: The Need for Flexible College Structures and Practices. Mendip Paper No. 5. Further Education Staff College, Bristol.

WRAGG, E. (1984) Conducting Small-Scale Investigations in Educational Management. J. BELL, T. BUSH, A. FOX, J. GOODEY & S. GOULDING. edi. Harper & Row in association with the Open University.

YIN, R. (1988) Case Study Research Design and Methods. Sage Publications, California.

APPENDIX I

CODES FOR ANALYSING QUALITATIVE DATA

1	STUDENTS
1.1	Students Motivation
1.2	Students Progression
2	CURRICULUM OFFER
2.1	Curriculum Development
2.2	Curricular Change
3	STAFF
3.1	Motivation
3.2	Development
3.2.1	Facilitators
3.2.2	Receivers
4	TEACHING AND LEARNING STRATEGIES
4.1	Groupwork
4.2	Team Teaching
4.3	Cross Curricular/Faculty
4.4	Departmental
4.5	Integrated Approach

5 RESOURCES

5.1 Hardware

5.2 Software

5.3 Time

5.3.1 Remission

5.4 SUPPORT

5.4.1 Technical

5.4.2 Advisory

5.4.2.1 L.E.A.

6 ORGANISATION

6.1 Club

6.2 Role

6.3 Task

6.4 Person

6.5 Other

APPENDIX II

CLASSIFIED COLLECTION OF DATA BY CODIFIED TYPOLOGY

Type 1.1 Motivation.

[A1.1] "They work for hours at things they would not normally do ... writing, spelling, numeracy ... its all computers and because its grown up, sophisticated ... its different."

[F1.1]...Take 'Video Draw Professional' for example,(SOFTWARE PACKAGE) they can produce images similar to those found in Melody Maker[F1.1]" The use of computers is seen by the special needs students as something that the mainstream students do and they begin to feel they are achieving something."
[B1.1] "If you take the example of Mary Hope in The Magic of the Micro..... 'give them a piece of paper and they'll write two lines but with a word processor!'....
[G1.1] Thank you for responding to the tasks that I sent you. I am particularly interested in what you had to say about enhanced motivation of the students. Could you elaborate on that?
"It is particularly noticeable with word processing.... the students can produce effective looking work. Word processing also gives an enhanced dimension to group work eg; individuals contributions to a news sheet or poster.... its not held back by the limitations of the individuals lack of skills.
I.T. also provides opportunities for learning without realising it! ... screen images use movement and colour for games/CAL and they learn things without realising they are doing it.. its active, they are making it happen its not you doing it for them. There is an element of realism you get in simulations. eg: with Micro Special Insurance/ booking holidays ... we visited travel agents! but it was curriculum led."
What about positive outcomes?
[C1.1] "There is increased motivation through the introduction of I.T.. a longer concentration span... our students generally have poor relationships with adults but a computer has endless patience its not a person ... its not critical.. with turtle logo they can try and try again."

Type 1.2 Student's Progression.

[D1.2] you give the students a few programs to use and they expect to be employable in the computer industry. There is also a problem with program listing syndrome.
[C1.2] "There is an unrealistic expectation of progression... but more self confidence... they are not frightened by the technology therefore they are happy to use it. <eg Tesco warehouse>.

Type 2.1 Curriculum Development

[F2.1] that staff are unaware of the potential of I.T. as an aid to curriculum development."
Why do you feel that is so?
[F6.2] [F5.1] "the lecturers see the computers as belonging to other people...courses, faculties, departments....

[B2.1] What curriculum development has followed if any?
..." the caring staff are now using databases in an integrated assignment, the sewing staff are now using a weaving simulation program, fashion staff are using a business simulation of a clothing factory planning / designing manpower etc.. .... the attitude seems to be 'if they can use it then we can'" (SPECIAL NEEDS STUDENTS).....

Has there been a change in teaching and learning strategies with the introduction of I.T.?
[B2.1] "Sewing staff using computers to help learn how to weave ie more flexible saving time. Special Needs staff planning trips to London. CET Secondment allowed time to plan and prepare thoroughly. Indeed this term we are planning to take them to Priory shopping centre at Leamington Spa. The students wrote off, using a word processor, to various shopping centres London, Birmingham etc. and gave presentations to the rest of the group / costings etc. Then there was a group decision based on the presentations of the students. This was not previously possible as word processing was not available. They built up an itinerary and a spread sheet of the costs. They built maps of the ground floor showing facilities for the disabled. And then word processed a report after the trip."

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Type 2.2 Curricular Change

[A2.2] "Previously they had just done keyboarding which may have been useful for a job on the cash register at Mc Donalds but more recently there has been an emphasis on developing life-skills for example with the YTS we have covered paying money into the bank."

[A2.2] "There is a need to liaise with local special schools to save replication. If its cheap and easy to run the chances are that the schools already have it. They are looking to us to be innovative ... concept keyboard overlays, ... big maps on the floor with the Trekker project ... thats about it, but that's enough ... 2 years worth!"

[F2.2]....." not only does it enhance the curriculum but it can encourage parental involvement."
[F2.2]"After 'Coping to Confidence' the Curriculum has taken new directions however the packages are weak in I.T. ....
[F2.2] A proposal to changing the communications curriculum into making a newspaper, using I.T., was seen as too threatening for people to take on.
[F2.2] "At <F> the SMT understood Special Needs. The Principal was an ex HoD. and they were keen to try out new ideas."

[B2.2] eg. organising trips, use of spread sheets for costs, word processed letters to the Principal to ask for permission, CAL use of maps with the Underground software for our visit to London."

Thank you for responding to the tasks that I asked you to complete. I am particularly interested in what you had to say about I.T. adding a new dimension to the curriculum . Could you expand on that?
[D2.2] "Previously students had no contact because I.T. was reserved for the elite/ mainstream students.
With computing schools/colleges don't want noisy often disruptive students in the I.T. suite. Added to the curriculum there is a lot of software we have been evaluating on life skills, money, maths, communication, it captures their interest."

[C2.2] [C4.5] "The curriculum is more integrated.... computers have contributed.. eg: with catering/ numeracy/ stock control/ shopping lists ... its much easier.

Type 3.1 Staff Motivation

[F3.1]....." its more than increased motivation", [F4.5] "staff are more willing to try out different approaches. In the past a lot of games type programs were used mainly because lecturers were unsure of how to integrate I.T. into the curriculum."

Type 3.2 Staff Development

[A3.2] "We offered some staff development but there was little uptake due to lack of awareness and [A5.3] time implications. Its usually I've got 10 minutes can you show me how to do it?' Apart from the sessions that we provided at the beginning of the project there has been nothing. It was assumed that I would give up my lunch time ... while you have a willing horse there is no need to pay! [A4.2] There was an attempt to team teach but this amounted to me withdrawing about half the group, usually the difficult ones, leaving the rest."

[F3.2] However I have been running some INSET and things have improved."
Was there a Steering Group or Course Teams?
[F3.2] "At <F> I.T. was not isolated from the teams. Just kept in college and other colleges were offered Staff Development."
[F3.2] "You shouldn't start with utilities but start with applications and courseware then go on to copying, formatting etc.. The aim to get them to be efficient users is hard to achieve."
[F5.3] [F3.2] "At <F> time was allocated for regular team meetings for staff development."

Increased motivation? [D3.2] "I.T. provided a means for adding immense interest in the way it is taught both with students and lecturers.This has provided for a lot of INSET work for me both in college with special needs staff and outside. This has led to the development of a range of short courses both general workshops and specific to particular packages. These are more useful than the general courses as they give a more in depth study of the package and allow for greater flexibility and motivation by demonstrating how many ways a package can be used.
These have been open to everyone but mainly special needs staff have attended. DTP and Prestel have more readily been taken up by other sections. There is a great demand from teachers in schools as the County has BBC equipment."
[D3.2] "There is a problem with staff development in that we raise expectations of teachers but we are unable to deliver because of lack of resources."

[C3.2] "Staff Development is on offer but not pushed through pressure of work. We are not too worried about take up. Our main support is to the students."
[C3.2] "Informal staff/courseware development sessions are mainly taken up by part timers in their own time.

Type 3.2.1 Staff Development Facilitators

Tell me more about your involvement in Staff Development.
...."its hard to achieve in terms of courses..[F3.2.1] if you take the C.E.T. model of the roving 'computer consultant' for example a vocational cookery teacher has been writing recipes with word processing software together with an I.T. teacher..... this can be successful but it is difficult to find also many teachers are worried about having another teacher in 'their' room.

What about staff?
...[B3.2.1] " its a new approach, different, more open ended.
I have facilitated SD courses for both sewing and caring staff."
Were these advertised cross-college?
"No. There has been a lot of in-service but not very popular.
The courses I have been running have been more relevant to their area. eg: databases for the caring patients. This has not happened with other courses offering just computing per se. There has been an increase in demand for my courses."

Have you been involved with Staff Development?
[C3.2.1] "I don't facilitate courses but do it more informally.

Type 3.2.2 Staff Development Receivers.

[G3.2.2] With I.T. it can get left up to one enthusiastic individual but it comes down to time ... not down to persuading people that it is staff development. How do you get them on a course? They want to know but don't want to go on a course.People don't have the time to get to know how to use it.

Type 4.1 Groupwork

[F4.1] this encourages conversation, groupwork and with a printout there is instant feedback and positive reinforcement. For example Darren took home a video scan of himself

Thank you for completing the tasks that I sent you. I am interested in what you had to say about group work. Could you elaborate on that?
[C4.1] ... its not just in Special Needs but also in mainstream<see task sheet responses> it encourages good practise.

Type 4.2 Team Teaching

[A4.2] There was an attempt to team teach but this amounted to me withdrawing about half the group, usually the difficult ones, leaving the rest."

[F4.2]"However with a change in teaching and learning strategies say for example adopting a team approach developing integrated assignments similar to the B.T.E.C. approach and coupled with team teaching but you are still faced with the problem"

[F4.2] "There is also a problem with course teams because of the risk that people delegate .... for example let him do the I.T. let her do the cookery. Before there can be real team work all the lecturers should own the I.T. skills not just the so called 'experts'".
[F4.2] "Teamwork was encouraged more at <F> than <f>.
<f> is a sleepy backwater and hasnt caught up. There is a creche for adult learners at <F> but not at <f>.A lot of good will but no policy."
[F4.2] "At <F> there were teams in Special Needs.. Networks eg for the visually impaired.
[F5.4.2.3] There was also contact with National teams or Networks like at <C> for example.

[D4.2] "I have been working with a team of two other teachers from the Computing and Resources centre.(36 wks @ 2 hrs per wk) Using CAL with a variety of subjects. There is a problem with raised expectations...
[D4.2] " There is a lot of team work, it works well but sections with budgets get needley. At the HOD level its a bit dodgy but at teacher level its ok it depends on motivation/money.... "

[D4.2] "Team work encourages communication.. eg: What have you been doing with this student .... its easier to follow up.
Special needs are tucked away in a corner. They see themselves as an entity and do not integrate. They were instructed to have their tea break in the staff lounge (AS AT <B>!). They are all ex-teachers from special schools."

Type 4.3 Cross Faculty.

[A4.3] A cross-college role has to break down barriers. I teach on the Bus. Ed. equipment on Tuesday mornings ... I feel an outcast ... I'm the Community Care person encroaching on their equipment!"

[A4.3] The entitlement curriculum will be very difficult to deliver if there is no cross-college co-operation."

Tell me more about your role in the College.
[F6.3] [F4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs.) For example .. everybody is responsible for Special Needs, I.T., Communications etc."
[<F>4.3] The four cross-college S/L's meet regularly with not only a college but, reluctantly, a county wide role. They (SMT) don't understand that I might need/want to teach in a local special school! They (SMT) maintain an isolationist view."

[G4.3]"At <g> staff were encouraged to teach across faculty and this possibly helped interdepartmental contacts/loans of equipment/software etc. <g> was more matrix than <G> and more geared up with learning resources, workshop based open access approach."

[D4.3] Is there any cross college teaching?
"Yes I enjoy it and it works well it gives an opportunity to do what they want to teach and encourages cross- fertilisation through being a member of different teams"
[C4.3] ...."with profiling again its not only special needs... there is a college working party on profiling it is a cross-college group. It makes courses more accessible by special needs students."

[C4.3]" There is not a lot of cross college co-operation due to the large numbers of part-time staff .... everyone is fighting their own corner .... its very hard to know who is working in the college apart from admin week."
What is the ratio of FT:PT Staff?
180 FT: 400 PT.

Type 4.4 Departmental.

[<F>4.4] "People haven't thought through the implications eg. NCVQ might revolutionise the Catering Department.... straight Departmental lines inhibit a broader understanding of F.E. issues."
[<F>4.4] "At <f> the SMT don't understand what Special Needs is all about... they are still in pursuit of excellence, academic measures, exams etc. The Principal supports in words but no real policy. I.T. is messy... supposed to be cross-college with a computer manager. But the computer manager is ineffective. Requests for computer equipment have to go through him but this is a token. If one Department buys Amstrads and another Apple Macs !! Access to rooms... maths lecturers, engineering lecturers... where do the computers come from? There is no open access unit. There are some for GCSE workshops but no computers in the library. At <f> there are three computers in an annex from a 16-19 school. We have ordered 3 more with peripherals and software out of the special needs budget."

[B4.4]..." the Gen Ed Dept. ... extension studies, ice skating pony trekking ie personal development, employer needs
if they are well motivated and get on well with people, social skills, if they are pleasant and get on well the employers will take them on. ... the Engineering Dept. however concentrates on vocational training and think that the Gen Ed approach is playing ...'they should learn how to make coffee tables' (SPECIAL NEEDS STUDENTS).... woodwork ,engineering (DEPARTMENTS) 'whats the use of computers? How can it help me lay bricks, make slabs etc.'
In Special Needs we have a conflict! ... what kids need is to be able to catch a bus.
There is also a division of language in the staff room... those staff using computer jargon and those who don't.... possibly a division of the sexes as well ... Engineering staff are predominantly male and fixed in their ways... sewing and caring staff are predominantly women and seem more flexible."

How is your college organised?

[A4.4] "The college has problems ... as other people get their hands on it <I.T. resources> ... Community Care Dept. could lose it to the Independent Learning Unit. They are afraid that when they want to use it , it will not be there, they will lose it and it will be swallowed up by Bus Ed. We had a specialist room set up by the funding from the project but because the college was reorganising the Community Care Dept. we had to move out of the building and no replacement room was found ... our resources are now spread out all over the place. Since the end of the project I have had £100 to update! [A5.3] There has been no commitment from the Senior Management Team its all expected out of the kindness of your heart!"

[B4.4]... "There are loads of Departments ... at this site there are auto engineering, and voc prep including ESL/Adult Lit/ Numeracy, Drop in courses links with schools/ special schools."
[B4.4] How are I.T. resources organised?
"Through specific departments but because of this not everyone knew what everyone had."

[G4.4] A lot of computers are not where they are needed... other departments/sections/rooms indeed there are not enough computers.
[C4.4] "We have open access at a set time. Up to 30 staff input to special needs... its been open to all but there has been a poor take up.... possibly through resentment! There is a poor image of special needs in staff attitudes. They feel we are empire building with better staff ratios and unfair amounts of equipment."

Type 4.5 Integrated Approach.
[F4.5] "staff are more willing to try out different approaches. In the past a lot of games type programs were used mainly because lecturers were unsure of how to integrate I.T. into the curriculum."
[F4.5] "Staff are unaware of the potential of I.T. .... its still seen by the lecturers as a bolt on extra!"
What about Staff Development?
[F4.5] "I.T.! How do you get it over that it is not a bolt on extra?"

[D4.5] You say that for true integration of I.T. into the curriculum it must be there ready for use anytime. Can you elaborate on that?
"There should be a bank of computers ready for use, not the library model but small open access rooms with technical support close to the main teaching areas. There must be a change in teaching and learning strategies but it cant happen until there are enough resources .... there is a white board and an OHP in every room but not a computer."
[C2.2] [C4.5] "The curriculum is more integrated.... computers

have contributed.. eg: with catering/ numeracy/ stock control/ shopping lists ... its much easier.

How are other departments involved with I.T.?
[C4.5] "Motor Vehicle Studies have helped with evaluation of software. There could be more integration if we gained support from other members of staff/ other Departments. There is no open access unit! A member of the Art Department was carrying over a computer and dropped it in the mud!"

Type 5.1 Hardware.

[F2.1] that staff are unaware of the potential of I.T. as an aid to curriculum development."
Why do you feel that is so?
[F6.2] [F5.1] "the lecturers see the computers as belonging to other people...courses, faculties, departments.... [F5.1] There is also the problem of resources..... getting the machines to the right place at the right time.
[G5.1] On the negative side there is the frustration of the hardware not doing what you want it to do.

Can you tell me more about your pressure on funds?
[D5.1] "The end of the CET funding was the last we have had. I am in the Computing Section I go and talk to the Head of Computing and he tells me that all the money has been spent on updating the mainframe and the PC's. We are under pressure to put on full cost courses to bring in funds. INSET is paid for Teachers @ £20 per term therefore its not full-cost."

Type 5.2 Software.
[A5.2] I.T. specialists are not aware of the software available for students with Special Needs. Nursery Nurses need an awareness but not a detailed knowledge of how it works. [A4.3] The entitlement curriculum will be very difficult to deliver if there is no cross-college co-operation."

[A5.2] " It is a different approach away from pen and pencil... a more adult medium not encountered before but you are totally dependant on good courseware ... you can't teach the same way behind a computer like you can in front of a board! There is much more individualised learning but enormous pressure on teachers with groups of 15. You have to control their own learning with more teacher intervention as opposed to concentrating on worksheets."

[F5.2] "the software has to be age appropriate.... we must remember with our students having the drawing skills of 6/7 year olds in 18 year old bodies..."
[F5.2] "They don't even know how to access the blue files. They are overwhelmed. There appears to be a lack of information on I.T. for special needs provision in F.E."

Type 5.3 Time.

[A5.3] "time implications. Its usually I've got 10 minutes can you show me how to do it?' Apart from the sessions that we provided at the beginning of the project there has been nothing. It was assumed that I would give up my lunch time ... while you have a willing horse there is no need to pay!"

[A5.3] "There has been no commitment from the Senior Management Team its all expected out of the kindness of your heart!"

[<F>5.3] "<f> however, people don't have time/access to visit all the teams. Management are not supportive.
[F5.3] [F3.2] "At <F> time was allocated for regular team meetings for staff development." [<F>5.3] " At <f> there is no commitment from SMT and therefore some course teams meet mostly during lunch times some don't."

How have these been funded?
[B5.3] "I have been paid out of staff development budget but staff attending out of their own departmental duty time. Staff who were teaching want a chance. Also I have created a further demand from the staff who have already attended. I may offer a mixed ability after xmas."

[G5.3] [G5.4.1] There is inadequate time for preparation to set up the equipment and a lack of technical support. You have to learn and evaluate the software you cant just flick through. The constant problem of updating and upgrading hardware with associated compatibility problems... built in obsolescence.

[G5.3] [G3.2.2] "With I.T. it can get left up to one enthusiastic individual but it comes down to time ... not down to persuading people that it is staff development. How do you get them on a course? They want to know but don't want to go on a course.People don't have the time to get to know how to use it."
Is time made available for team meetings?
[G5.3] "At <G> time was given for key members of teams to meet but there was also an expectation and recognition by people that meeting for curriculum development was perceived by senior management as important."
[<G>5.3] "At <g> its not the same... its an imposition .... something on top of your teaching load.. eg: you will do team meeting in your P/M because your conditions demand it therefore people are less prepared to put time in. <g> is less democratic, people are less involved. This is no way to treat professionals. <g> Ac. Bd. does not have the same impetus and has a lot of yes people on it."

[D5.3] attending course team meetings 1hr/week shows a commitment from senior management."

[C5.3] "Whereas manual stock control was usually left out through lack of time. Therefore students would not have been involved."

Type 5.4.1 Technical Support.

[A5.4.1] "There has been no technical support."

[G5.3] [G5.4.1]" There is inadequate time for preparation to set up the equipment and a lack of technical support. You have to learn and evaluate the software you cant just flick through. The constant problem of updating and upgrading hardware with associated compatibility problems... built in obsolescence."

What about negative outcomes?
[C5.4.1] "There is a lot of staff stress caused through lack of support with resources .... who to ask? ... no support..... one tries to do everything... poorly! .... low wages are a problem."

Type 5.4.2 Advisory Support.

[A5.4.2] "There was a Steering Committee but as soon as the money ran out, so did the support!"

[F5.4.2] "When they approach Advisory centres they receive glossy packages but these are generally at a much higher level than the staff can cope with."
[F5.4.2] "The Local Area Network comprised the Computer Advisor, Teachers Centre providing not only support but also resources and shared access."

Type 6.1 Club Culture.

How is your college organised?

[C6.1] <shown diagrams with explanation>
The only time you see the SMT is during admin week at beginning and end of the year. There is no other commitment. Meetings take place during lunch times and we rely heavily on part time staff there is extensive use of the 12 hour rule! The least experienced by default end up teaching special needs.

How do you see the organisation of your college?
(DIAGS &EXPLANATION)
[B6.1] "Definitely club! We have had a very powerful Principal for the last 20 years. Who ever was closest got the money. The way was to bypass the HoD's and go straight to the Principal. He had his own pet ways and the power of veto. He would say there is no money even if there might have been. However with tertiary reorganisation imminent the old structure was collapsing with temporary Vice Principals as acting Principals."

What is your preferred culture?
[B6.1] [B6.3] "I like being in the Club culture its good to know who to see and how to get what you want..... its ok with the system you are used to. But with the instant change to matrix nobody is going to know. There will be initial chaos.... however matrix could work better.... it depends on individuals. Could be difficult with loads of committees and meetings etc. .... zones of interest."
What do you mean by zones of interest?
eg: Liberal studies wanted to get something through cttee. They flooded the cttee with their members and hence got what they wanted.... you need to check who is on the cttees.
[B6.1] What about the cross college I.T. cttee?
"Its not working as a team but there are still vested interests....I can see a time when it might work! ..... When Departments go!"

[G6.1] [G6.3] How do you see your colleges organisational structure?<with diags>
<g> was like a spiders web but a mixture of departments and matrix. Senior manager came to team meetings and taught students

Type 6.2 Role Culture.

How is your college organised?
[A6.2] < shown diagrams with explanation>
"Its more like a temple. There is not a lot of cross-college co-operation and this probably hinders the development of I.T. Its very difficult to introduce I.T. into all Departments ... it will fall on Bus Ed. to cater for Gen Ed.. Straight I.T. is not what they want. It needs more people to put it in to perspective. [A5.2] I.T. specialists are not aware of the software available for students with Special Needs. Nursery Nurses need an awareness but not a detailed knowledge of how it works. [A4.3] The entitlement curriculum will be very difficult to deliver if there is no cross-college co-operation."

[F2.1] that staff are unaware of the potential of I.T. as an aid to curriculum development."
Why do you feel that is so?
[F6.2] [F5.1] "the lecturers see the computers as belonging to other people...courses, faculties, departments.....
[<f>6.2] "Its rigidly departmentalised. The Principal called a meeting and gave a model showing cross-college roles ..... TVEI, Special Needs, I.T., Media Services, Library, Open Learning, Staff Development..... He expects it to happen but its not."
WHY?
[<F>6.2] "People are concerned about their Departmental role and they want to protect their own area. They don't have an understanding of initiatives across college, also they don't know people outside their departmental groups. Its strong on Day Release....Traditional.. rigid, traditional, old fashioned. Therefore it hinders integration, staff development etc. It does not encourage flexibility, every thing has to be done through Departmental lines, notes and memos to HoD's .... lots of things get missed."
Can you give an example?
[<F>6.2] "We lose understanding of what other people do... he gets away with not doing when I ask (in cross college role) and plays off against HoD. Then I have to chase up through both my and their HoD.
With TVEI all schools have written submissions but I am restricted to curriculum issues only as other issues are not seen as my role. Therefore it is very frustrating and curriculum inhibited because of attitudes eg. traditional plumbing ... You are hear to cut a pipe."
[<f>6.2] "<f>..... Temple. Cynically management by astonishment."

[<g>6.2] at <g> its more departmental and SM don't teach and don't attend team meetings. There is less teaching across teams and faculties than at <G>. <G> is like the greek temple and less democratic. The STEPS team at <G> are close and tight and don't get involved in other parts of the college.

How do you see your college organisation structure?<with diags>
[C6.2] [C6.3] "Its the greek temple. I would like to see it as a mixture of the temple and the matrix. We work too rigidly within schools we only see each other and don't know what others are doing even in the schools within our own faculty. The present organisation hinders the development and integration of I.T."

Why?
"With the greatest reluctance Business Studies & Computing acknowledge other uses of I.T. They are unconstructive, they don't put on beginners courses only programming. They have been asked for help and have continually refused."

Type 6.3 Task Culture.

What is your preferred organisational culture?
[A6.3] "Matrix. Your perceptions as a part timer may be different to that of full timers ... not affected so much by Dept. Politics ... [A4.3] A cross-college role has to break down barriers. I teach on the Bus. Ed. equipment on Tuesday mornings ... I feel an outcast ... I'm the Community Care person encroaching on their equipment!"

Tell me more about your role in the College.
[F6.3] [F4.3] Well I have cross-college responsibility in the Division of Educational Training and Development. There is a problem attempting to carry out a cross-college role in a college which is strongly departmentalised..... Departmental staff do not want to take on cross college responsibilities or understand what people do in a cross college role for example... Take the case of a GCSE student who is physically disabled. When there is a problem they go to the special needs tutor not the GCSE tutor. Indeed there is a risk that special needs can be used as a dumping ground. For cross college roles to succeed there has to be a change in attitudes on similar lines to those outlined as the 'Whole College Approach' (F.E.U. Publication: A College Guide to Meeting Special Educational Needs.) For example .. everybody is responsible for Special Needs, I.T., Communications etc."
Can you tell me how your College is organised
[F6.3] "There are 10 Divisions each with an SL or PL in charge. Next above these are the HoD's and Assistant Principals they are all housed in adjacent offices and form a Senior Management Team. There is Line Management with people reporting to different people depending on the particular problem. Because of that people understand that people could have a cross-college role and go up other lines without people being upset or offended. Because I.T. was Cross College it was easier to cover and ask for access to rooms..... 'Of course you can use the room... its a college resource.' ... There was a lot of servicing/ cross college teaching by every body and the Senior Management Team were committed to new initiatives and supportive of innovations."
Can you describe the two colleges organisational structures?(DIAGS&EXPLANATION.)
[F6.3] "<F>..... Matrix."

[B6.3] "There has been amove away from Departments towards matrix. No longer HoD's but Directors both cross curricular and cross college."
What is your preferred organisational culture?
[B6] "Ideally matrix but if it were club with an interested spider the money would come our way."
[B6.3] Is there a college I.T. committee?
Yes.

Who is represented on it?
Its not by departments just those who are interested and skilled in the use of I.T. together with the Vice Principal.

Is the I.T. committee useful?
eg: The Electronics Department ordered spectrums but now they are lying around in cupboards because they did not consult. Now there is a broad overview..... County Council are hot on I.T. equipment and orders over £200 are not approved.
[B6.3] "I like being in the Club culture its good to know who to see and how to get what you want..... its ok with the system you are used to. But with the instant change to matrix nobody is going to know. There will be initial chaos.... however matrix could work better.... it depends on individuals. Could be difficult with loads of committees and meetings etc. .... zones of interest."
What do you mean by zones of interest?
eg: Liberal studies wanted to get something through cttee. They flooded the cttee with their members and hence got what they wanted.... you need to check who is on the cttees.
[B6.1] What about the cross college I.T. cttee?
"Its not working as a team but there are still vested interests....I can see a time when it might work! ..... When Departments go!"

[B6.3] Who do you identify with?
"Its very difficult to break away from Departments. At the end of July its all change. We don't know who will be in charge. Good teams could be broken up because of the new tertiary structure. On the other hand it could work the other way ..... a lousy team could be split up and more dynamic people put in to get things moving."
[G6.3] How do you see your colleges organisational structure?<with diags>
<g> was like a spiders web but a mixture of departments and matrix. Senior manager came to team meetings and taught students

How is you college organised?
[D6.3] "We have a matrix system with sections ... Boards of study... Assistant Principals with areas of responsibility: staffing, marketing, buildings/resources, F/T classes. There are 28 sections each like small departments... just as empire building ..... entrepreneurial grabbers and spenders. There is a computing and a special needs section. There is also a cross-college computer users group, very powerful with loads of money and responsible for the purchasing policy. They have to make sure it gets to where it is most needed."
On what criteria?
"eg: They are users but with bad ideas... the computer section wanted to buy a mini, a VAX, but one person in the group said a Prime was better.

How do you see your colleges organisational structure?<diags& explanation>
[D6.3] "<D> used to be Departmental.. role but we have had 5 years of matrix. The new Principal forced matrix on the college with the help of the management team. I used to like the Departmental system... now if I have a problem I have to decide who to go to ... are they F/T or P/T students? etc.
I used to know where I was.... I prefer matrix because of the flexibility but you need to keep your nerve... things in a matrix system do tend to work locally. eg: a keen Head of section can influence I.T. its easier to manage because its smaller and has less funds."

How do you see your college organisation structure?<with diags>
[C6.2] [C6.3] "Its the greek temple. I would like to see it as a mixture of the temple and the matrix. We work too rigidly within schools we only see each other and don't know what others are doing even in the schools within our own faculty. The present organisation hinders the development and integration of I.T."
Why?
"With the greatest reluctance Business Studies & Computing acknowledge other uses of I.T. They are unconstructive, they don't put on beginners courses only programming. They have been asked for help and have continually refused."

APPENDIX III

What kind of organisation ?

1 What kind of organisation do you belong to ? What set of values,styles of behaviour, characterise it ?

2 What kind of organisation would you *like* to belong to ?

Please complete this questionnaire:

a) For yourself, your own values and beliefs;

b) For your own organisation.

Rank each statement in order of salience. Put '1' against the statement which best represents the dominant view in your organisation, '2' for the next closest and so on... to '4' which least represents the dominant view in your organisation. Then go back and do the same for your own beliefs.

For example:

Ex. A good boss

(a) (b)

2 2 hides behind his/her desk all day drinking coffee.

3 1 demands a coffee when entering the office in the morning.

4 3 does not allow drinking in the work place.

1 4 lets people have a coffee when they like.

(Own ranking)	(Organisation's ranking)
.....	.....
(a)	(b)

1 A good boss

.... is strong, decisive and firm but fair. She/he is protective, generous and indulgent to loyal subordinates.

.... is impersonal and correct, avoiding the exercise of his/her authority for his/her own advantage. She/he demands from subordinates only that which is required by the formal system.

.... is egalitarian and influenceable in matters concerning the task. She/he uses his/her authority to obtain the resources needed to get on with the job.

.... is concerned and responsive to the personal needs and values of others. She/he uses his/her position to provide satisfying and growth stimulating work opportunities for subordinates.

2 A good subordinate

.... is compliant, hard-working and loyal to the interests of his/her superior.

.... is responsible and reliable, meeting the duties and responsibilities of his/her job and avoiding actions which surprise or embarrass his/her superior.

.... is self-motivated to contribute his/her best to the task and is open with his/her ideas and suggestions. She/he is nevertheless willing to give the lead to others when they show greater expertise or ability.

.... is vitally interested in the development of his/her own potentialities and is open to learning and receiving help. She/he also respects the needs and values of others and is willing to give help and contribute to their development.

3 A good member of the organisation gives first priority to

.... the personal demands of the boss.

.... the duties, responsibilities and requirements of his/her own role, and the customary standards of personal behaviour.

.... the requirements of the task for skill, ability, energy and material resources.

.... the personal needs of the individual involved.

4 People who do well in the organisation

.... are shrewd and competitive with a strong drive for power.

.... are conscientious and responsible with a strong sense of loyalty to the organisation.

.... are technically competent and effective,with a strong commitment to getting the job done.

.... are effective and competent in personal relationships, with a strong commitment to the growth and development of people.

5 The organisation treats the individual

.... as though his/her time and energy were at the disposal of the persons higher in the hierarchy.

.... as though his/her time and energy were available through a contract having rights and responsibilities on both sides.

.... as a co-worker who has committed his/her skills and abilities to the common cause.

.... as an interesting and worth-while person in his/her own right.

6 People are controlled and influenced by

.... the personal exercise of economic and political power(rewards and punishments).

.... impersonal exercise of economic and political power to enforce procedures and standards of performance.

.... communication and discussion of task requirements leading to appropriate action motivated by personal commitment to goal achievement.

.... intrinsic interest and enjoyment in the activities to be done; and/or concern and caring for the needs of the other persons involved.

7 It is legitimate for one person to control another's activities

.... if she/he has more authority and power in the organisation.

.... if his/her role prescribes that she/he is responsible for directing the other.

.... if she/he has more knowledge relevant to the task in hand.

.... if the other accepts that the first person's help or instruction can contribute to the other's learning and growth.

8 The basis of task assignment is

.... the personal needs and judgement of those in authority.

.... the formal divisions of functions and responsibility in the system.

.... the resource and expertise requirements of the job to be done.

.... the personal wishes and needs for learning and growth of the individual organisation members.

9 Work is performed out of

.... hope of reward, fear of punishment or personal loyalty towards a powerful individual.

.... a respect for contractual obligations backed up by sanctions and personal loyalty towards the organisation or system.

.... satisfaction in excellence of work and achievement and/or personal commitment to the task or goal.

.... enjoyment of the activity for its own sake and concern and respect for the needs and values of the other persons involved.

10 People work together

.... when they are required to by higher authority or believe they can use each other for personal advantage.

.... when co-ordination and exchange are specified by the formal system.

.... when their joint contribution is needed to progress the task.

.... when the collaboration is personally satisfying, stimulating or challenging.

11 Competition

.... is for personal power and advantages.

.... is for high status position in the formal system.

.... is for excellence of contribution to the task.

.... is for attention to one's own personal needs.

12 Conflict

.... is controlled by the intervention of higher authority and often fostered by them to maintain their own power.

.... is suppressed by reference to rules, procedures and definitions of responsibility.

.... is resolved through full discussion of the merits of the work issues involved.

.... is resolved by open and deep discussion of the personal needs and values involved.

13 Decisions

.... are made by the person with the higher power and authority.

.... are made by the person whose job description carries the responsibility.

.... are made by the persons with most knowledge and expertise about the problem.

.... are made by the persons most personally involved and affected by the outcome.

14 The appropriate control and communication structure

.... Command flows from the top down in a simple pyramid so that anyone who is higher in the pyramid has authority over anyone who is lower. Information flows up through the chain of command.

.... Directives flow from the top down and information flows upwards within functional pyramids which meet at the top. The authority and responsibility of a role is limited to the roles beneath it in its own pyramid. Cross functional exchange is constricted.

.... Information about task requirements and problems flows from the centre of task activity upwards and outwards, with those closest to the task determining resources and support needed from the rest of the organisation. A co-ordinating function may set priorities and overall resource levels based on information from all task centres. The structure should shift with the nature and location of the tasks.

.... Information and influence flow from person to person, based on relationships which are voluntarily entered into for purposes of work, learning, mutual support and enjoyment, and shared values. A co-ordinating function may establish overall levels of contribution needed for maintenance of the organisation. These tasks are assigned by mutual agreement.

15 The environment is responded to as though it were

.... a competitive jungle in which all are against all and those who do not exploit others are themselves exploited.

.... an orderly and rational system in which competition is limited by law and conflicts yield to negotiation and compromise.

.... a complex of imperfect forms and systems which are to be re-shaped and improved by the achievements of the organisation.

.... a complex of potential threats and support. It is to be manipulated by the organisation to extract nourishment from it, pull its teeth and use it as a play and work space for the enjoyment and growth of members.

Questionnaire originally compiled by Dr Roger Harrison.

APPENDIX IV

CHECK LIST FOR FOCUSED INTERVIEWS

Students

Motivation

Progression

Curriculum Development

Staff Development

Courseware Development

Teaching and Learning Strategies

Resources

Organisational Culture

COPY OF OPEN TASK

(The responses of which were used to construct the above check list prior to interviewing.)

Introduction of Information Technology to the Curriculum in Colleges of Further Education

Tasks:

Please identify up to three outcomes to the introduction of Information Technology that you consider are important for each of the following:

i) Positive/ successful outcomes to the introduction of Information Technology to the curriculum of the courses on which you are involved.

ii) Negative/ unsuccessful outcomes to the introduction of Information Technology to the curriculum of the courses on which you are involved.

Please interpret these tasks in any way that you consider appropriate.

THANK YOU.

APPENDIX V

Diagrammatic Representation of College Structures

(From: Managing Flexible College Structures)
(Coombe Lodge Report [No.6 Vol. 21])

Figure 1: Line Management - Departmental

Figure 2: Line Management - Faculty

Figure 3: Line Management - Non-Departmental I

Figure 4: Line Management - Non-Departmental II

Figure 5: Line Management - A Third Non-Departmental Structure

APPENDIX VI

Diagrammatic Representation of Handy's Cultural Types

Each organisation, each part of an organisation, has a culture, and a structure and systems appropriate to that culture. Individuals will each have a preferred culture.

	Cultures	Structures
1)	power	web
2)	role	temple
3)	task	net
4)	person	cluster

The choice of the appropriate structure will be determined by:

History and ownership;

Size;

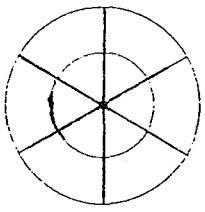
Technology;

Goals and objectives;

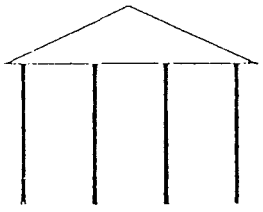
The environment;

The people.

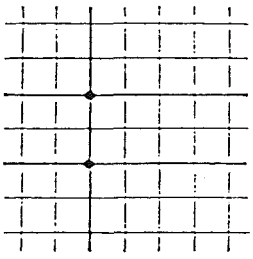
1) CLUB



2) ROLE



3) TASK



4) PERSON