Chapter 3: Further Investigations

3.1 Introduction

This chapter investigates a number of ways to promote change, from ideas developed with further reading and research. It investigates the 'readiness for change' concept as promoted by other authors (section 3.2), investigates how to surface the deeply held beliefs that hinder real progress to change (sections 3.3 & 3.4) and develops a model to further influence (enable) change, by auditing current practice/ proposed changes, within the continuum of possibilities(section 3.5).

3.2 The 'Readiness for Change model'

After completing the initial survey, an article was found that promoted the 'readiness for change concept'. The article (Armenakis, Harris, Mossholder, 1993), clarifies the readiness for change concept and examines how change agents can influence employee readiness for organisational change. As the article explains, although some other authors discuss the importance of readiness (Beckhard & Harris, 1987; Beer & Walton, 1987; Turner, 1982), it has seldom been recognised as being distinct from resistance (Kotter & Shchlesinger, 1979) i.e., it is most often explained in conjunction with prescriptions for reducing resistance (see Chapter 2.2.6).

The paper by Armenakis, Harris, Mossholder (1993), defines 'readiness' as 'the cognitive precursor to the behaviours of either resistance to, or support for, a change effort' i.e., it makes an explicit distinction between readiness (similar to Lewin's concept of unfreezing (1951)) and resistance to change, to help *refine* the implementation of change effort. In essence, the article suggests that, developing readiness for change may act to pre-empt the likelihood of resistance to change, thereby increasing the potential for change efforts to be more effective.

The paper then develops a model, drawing on the individual-level cognitive change, collective behaviour, social-information processing, mass communications, and organisational change literatures (see figure 3.1) that describes the influence strategies that can be bought to bare; illustrating them with examples of 'readiness interventions' in a large multinational corporation's change programme.

The factors defined are:-

Message: Discrepancy and Efficacy

As Armenakis et al state, 'the primary mechanism for creating change among members of an organisation is the message. In general the readiness message should incorporate two issues: (a) the need is for change, that is, the discrepancy between the desired end-state (which must be appropriate for the organisation) and the present state; and, (b) the individual and collective efficacy (i.e., the perceived ability to change) of parties affected by the change effort'. Discrepancy is also about clarifying and gaining commitment to the end-state and justifying the need for change. Efficacy is also about building confidence that the organisation can correct the discrepancy.

Interpersonal & Social Dynamics
Understanding (and working with) the distinction between individual and collective readiness.
Active Participation
Directly involving individuals in activities that are rich in information pertaining to potential discrepancy and efficacy messages i.e., so that individuals learn for themselves (in which they place the greater trust).
Persuasive Communication
Utilising effectively the primary source sources of explicit communication to the organisation i.e., ranging from live speeches to email.

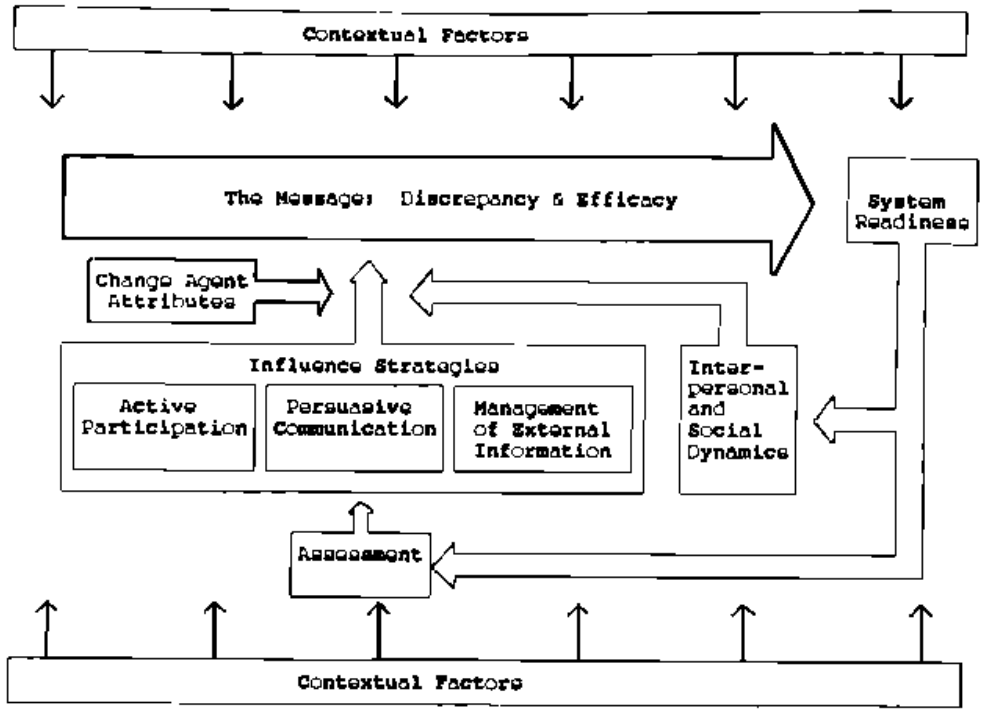

Figure 3.1: Factors relevant in creating readiness for change (source: Armenakis, Harris, Mossholder, 1993).

Management of External Information
The effective use of information from outside the organisation for e.g., informative or diagnostic purposes.
Change Agent Attributes
Using change agents that are credible, trustworthy, sincere, and have appropriate expertise, for maximising their influence on the change process.
Readiness Assessment
Using appropriate techniques to gauge and monitor the state of readiness and from the assessment, direct efforts to increase the readiness, where needed.

In conclusion, Armenakis, Harris, Mossholder (1993), note that (some authors have noticed that) change agents may direct their efforts to areas where organisations are already ready (Beer & Walton, 1987; Pond et al, 1984). Armenakis et al then make a case for 'identifying where change is needed, then designing a readiness programme to influence the appropriate beliefs, attitudes, and intentions so that change can be successfully implemented'. Though they do not explicitly say, it seems reasonable to surmise that efforts should be directed to areas/factors where the organisation is not ready.

3.3 Further Developments

The author attended a colloquium (IEE, 1998) on improving the human dimension of organisations. What was interesting was that it was organised by the Institute of Electrical Engineers (IEE - Professional Group J2: Quality Management) and co-sponsored by the Institute of Personnel Development (IPD) i.e., one of the first meetings to the authors knowledge that bridges the gap between the engineering profession and human resources management. It brought together the Personnel Director of Blue Circles Industry, the training and development director of the Rover Group, the professional policy director of the IPD and some 'change' consultants. Key to a number of the talks was the suggestion that the 'biggest barrier to change was security' (Rover). This was developed further (by a consultant) to suggest that the deeply unconscious set of assumptions and values i.e., beliefs, where the most difficult to change. Strategies where suggested for change, ranging from moving to new thinking (managers as guides and actualised teams etc.) to self-assessment (audit) methods (European Business Excellence Model: see Chapter 2.2). Of particular interest was the initial results from IPD sponsored research (Sheffield University, City University and Birkbeck College), to be published by IPD. For example, Sheffield is working with 67 companies and has found that HRM(human resource management) has significantly higher leverage on production and profitability (17%) than any other factor e.g. strategy(3%), Quality(1%), Technology(1%), R&D(7%). Also an emphasis on a human relations organisational culture, outstrips other approaches (rational goals, open systems, internal processes) in predicting change in company performance (both production and profitability). The Birkbeck research is looking at the 'psychological contract' and also appears to be suggesting that essential to change(which again means changing beliefs and expectations) is *trust*, built on an open, fair, partnership approach.

Missing from the colloquia discussions appeared to be any suggestions as to how to investigate these areas (barriers), identified (as highly important), associated with unconscious beliefs etc. The approaches were all techniques directed to creating climates of trust through positive experiences etc. To investigate further how to explore these beliefs in an organisation, as this area appeared essential to the theme of this thesis i.e., promoting readiness for change, the author turned to a consultant at the Tavistock Institute of Human Relations. In an interview (Parkin, 1998), it was found that the Tavistock Consultancy Service used a combination of psychoanalytic and systems theory,

to uncover the 'unconscious at work' in organisations. The 'model in use' combines insights and theories arising from the work of Bion on groups, Kleieian theories as applied to groups and situations, and Lewin/ Rice's work on group relations training (Obholzer and Roberts, 1994). The basic approach is via role consultation with emphasis on feelings, to understand the organisation N.B., it is suggested that an intellectual approach cannot be used to explore the unconscious (i.e., what is happening 'below the surface'). In the role consultation, the first stage is to work with individuals by gently probing below the surface (with respect for defences etc.) by asking questions such as 'it sounds like …. but I'm picking up lots of emotion …. what might this be?'. The second stage is to work out how much of the feedback is the individual and how much the organisation. The final stage is feeding back (what might be very uncomfortable observations etc.) to the director in the form of 'we see these themes - how is this stopping you from moving forward?' etc. From the conceptual framework of this approach and real life examples of the consultancy approach in operation on public sector (Human Services), the author gained an appreciation of the technique and insights into the target organisation, which though of great value and applicability (e.g., some of the identified roles are reflected in the behaviour of staff), cannot be developed due to time constraints.

3.4 Further thoughts on influencing strategies

The author considered that even with an active 'readiness programme', academics (in particular) may still not be highly motivated, for the following reasons:-

- academics (in this department)are not used to change (only incremental or externally imposed: e.g., on administration procedures; not on the academic sphere). There is also a poor culture of solving problems together/ team working etc.
- academics are not aware of the possibilities associated with more radical change.
- academics often need intellectual challenge or are not interested i.e., they will 'default' to their research or other challenging work. In some extreme cases 'anything' outside the 'subject area' is considered to be of little consequence.

In consequence, two areas from the readiness to change model (section 3.2) where considered of needing further consideration (both relating to motivation - chapter 2.2.4):-

1. Active Participation
2. Message discrepancy

It was felt that if a practical example of a change situation (which had elements of intellectual challenge) could be found, and that could be applied/ adapted to different change situations, then motivation would be enhanced with the academic sector of staff.

Returning to the area of motivation, to identify factors needed in the example/model; the following issues need to be taken into account:-

- the message generated by active participation is essentially self-discovered (Fishbein & Azjen, 1975) and is advantageous since individuals tend to place a greater trust in it.
- experiential learning exercises (Kirton, 1980) may be used to teach the appropriateness of a more innovative style.
- vicarious learning (observing others applying new techniques - Gist, Schwoerre & Rosen, 1989) can bolster confidence.
- 'enactive mastery i.e., taking small incremental steps towards a large-scale change (Thompson, 1981), enables individuals to buy in etc. to the changes.
- creating 'intellectual pain' (Nadler & Tushman, 1989) i.e., the realisation that something is awry and changes need to be undertaken to reach the desired end-state.

From these considerations, an example/ model was sought which would:-
- educate by self-discovery and instil a strong discrepancy message
- motivate through intellectual appeal and by showing that small step changes can reach a desired goal. By also showing the possibilities of large change, greater change steps may become possible.
- be highly relevant and practical, to encourage 'buy-in'.
- be adaptable as a tool for use in investigating other change situations.

This approach is also supported by Carnall(1990) who says 'systematic models of the change process abound, but the issue in planning change is about how to generate creative solutions to what are generally novel problems… there is no shortage of ideas about how to reorganise, deal with the problem … what is usually missing is the framework and support appropriate for encouraging the emergence of creative solutions.'

The model chosen was based on the work of the Massachusetts Institute of Technology/ Sloan School of Management MITs 90 Research Group (MIT, 1990) and is referred to as the MITs 90 model. It is briefly in part (see details later) on auditing and developing the potential of IT in organisations, and as such, is an extremely topical issue in higher education(HE) and this University. The business language it uses, is incompatible with the target organisation, though the subject domain and investigation breadth/approach is likely to elicit respect (and so has application potential). Two groups who have tried to harness the model, are considered here. First is Ford et al (1996), who have applied the model in the HE domain and second, is the National Council for Educational Technology (NCET) (1995) planning tool for senior managers in Schools and Colleges.

3.4.1 MITs 90 Project

The MIT90s research suggests that business turbulence and technological change imply potential organisational change and that the external forces associated with environmental turbulence must be reacted to for survival. It proposes that information technology (IT) offers organisations the opportunity to react constructively. It further suggests that IT is

not just a simple set of tools that an organisation can use for support but one that can alter the way work is done and that can shrink the effects of both time and space.

The MITs 90 Research Group, based at the Massachusetts Institute of Technology, modelled the extent of IT integration within organisations in relation to its effects and benefits. The MITs 90 model identified five levels of development in the application of information technologies, ranging from the 'speculative' to the 'totally planned' and 'wholly integrated'. The MIT90s research suggests that IT-enabled business reconfiguration is an evolutionary process.

Figure 3.2 shows the business transformation levels. Levels 1 and 2 are primarily concerned with improving current practice and can, therefore, be realised by adapting existing processes. Levels 3, 4 and 5, on the other hand, require a redefinition of function and purpose. They cannot easily, if at all, be achieved without establishing new processes. Note, the combination of stages 1 and 2 is the springboard for the three remaining stages: stages 3, 4 and 5 are not necessarily sequential.

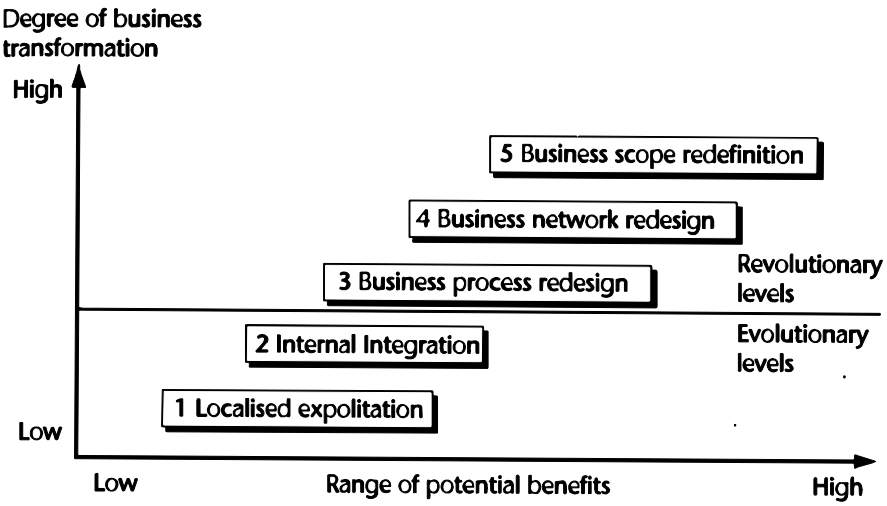

Figure 3.2 Business transformation levels (Source: Ford et al 1996; based on MIT/ Sloan 1990: 107)

3.4.2 MIT Model applied to HE

Ford et al (1996) have applied the five levels of transformation to learning environments in higher education. Table 3.1 shows examples of their thinking. The table also shows that the model can be successfully applied to HE and so it is reasonable to surmise that it can be applied successfully elsewhere in this domain i.e., this example also has potential for using as an example with the authors staff. There are though serious concerns with the 'full' development of stage 5 'thinking', as in its strictest sense, it questions the

fundamental role of higher educational institutions (HEI's). As an example, Ford et al suggest how the business scope redefinition process can be developed:-

- A*ssessing the physical, human and intellectual resources available to the HEI:* institutions need to increase the return on their investments. Existing resources can he managed more effectively (for example annual repetition of lecture courses by academic staff is wasteful of their time and capabilities), and resources owned by students (study space, computers, facilities at work) can be exploited to augment the institution's own facilities
- A*ssessing the market at local, regional, national* and international *levels:* with developments in communication technologies, higher education is becoming globalised and new markets, both local and distant, are emerging. HEIs must understand the markets open to them if they are to develop products which will appeal to new types of student
- *Identification strategies for exploitation that maximise quality and minimise costs:* competition at all levels is likely to intensify so strategies that offer competitive advantage will he needed. Institutions are likely to he most successful if they build on existing strengths. This is likely to lead to increased diversification across higher education and specialisation within institutions.

This level of questioning in the author's view, would be counterproductive and demotivating within the present departmental situation. For example Bandura (1982) has reported that individuals will avoid activities believed to exceed their capabilities. The NCET model in some ways gets around this by redefining the levels (the highest level can then be developed within the individuals/groups capacity).

3.4.3 The NCET Project

The MITs 90 model identified five levels of development in the application of information technologies, ranging from the 'speculative' to the 'totally planned' and 'wholly integrated'. These five levels were transferred into the IT education context by NCET's Educational Technology Project (NCET, 1995).

The NCET Project reported that, 'in education as in business, the more transformation that occurred through the five levels, the greater were the benefits that accrued from Information Technology. It follows that, to achieve maximum gains, a correspondingly deep commitment is required, the aim being not merely to apply IT to existing practice, but to integrate IT fully within education. The first levels of development are evolutionary, and do not require structural changes. In later stages they can be regarded as *revolutionary* because they produce significant changes in the processes of education'. Figure 3.3 identifies the relationship between the range of potential benefits acquired and the degree of transformation related to IT.

MIT levels	MIT90s Report	Ford et al (levels applied to learning environments)	NCET levels and example
Localised exploitation	The MIT90s report (p. 108) defines stage 1 as 'characterised by localised exploitation. In this stage IT is exploited within existing, isolated business activities, normally within one function.' As is to be expected, this is the most widespread form of adaptation since it requires only a slight adaptation to current processes.	Examples include the modification of courses to include small elements of learning technology, or the introduction of computer-based learning packages for student use in libraries. In the former example the process of course design, assessment and examination requires but slight change. In the latter the new material is treated as simply an extension of the resources on offer.	*Localised* Individuals or departments use IT for simple record-keeping e.g. word processed student lists or simple databases.
Internal integration	MIT90s (p. 111) suggests that stage 2 'can be thought of as building the internal electronic infrastructure that permits the integration of tasks, processes and functions. Stage 2 is a necessary condition if the investments in stage 1 are ever to be exploited'.	This level of transformation is reached where the use of learning technology resources in libraries is designed into courses in the same way as the use of paper-based library resources. To enable this it may he necessary to create a unified information services structure incorporating library, computer centre and media services. It is certainly assisted by the drawing up of institution-wide strategies for information and for teaching and learning.	*Co-ordinated* A co-ordinated approach to record keeping across the school. Data entered by an administrative assistant.
Business process redesign	MIT90s (p. 115) suggests that stage 3 'results from a fundamental rethinking of the most effective way to conduct business'.	When associated with a new approach to course design, the move towards the modularisation of courses and the associated arrangements for credit accumulation and transfer is an example of business process redesign. It demands a new approach to course design and information management which cannot successfully be achieved without establishing new business processes. The benefits of the transformation are, however, significant as flexibility of provision is greatly enhanced, enabling the needs of a wider range of students to he more closely met.	*Transformative* Individual teachers begin to take responsibility for entering data into, and retrieving from, a central database.

Table 3.1: Shows the use of the MITs90 model by Ford et al (1996) for application to learning environments (source: adapted from Ford). The NCET equivalent levels are also shown for comparison.

Business network redesign	MIT90s (p. 119) defines stage 4 as 'the use of IT by the organisation to include suppliers, customers or any other trading partner to contribute to the organisation's effectiveness. In a sense one is moving from the traditional, formal organisation, to a 'virtual" or 'networked" organisation that works together to accomplish a particular purpose'.	The modularisation of courses creates a structure in which the distinction between full-time and part-time study can lose much of its significance. If modularisation is accompanied by a wholesale shift towards resource-based learning in place of lecture-based learning, then the distinction between local and distance learning becomes somewhat spurious as well. An institution that ended the distinction between full-time and part-time courses of study and between campus-based and distance education would have completed a process of business network redesign.	*Embedded* Data entry and retrieval becomes a natural part of every teacher's practice.
Business scope redefinition	MIT90s (p. 123) defines stage 5 as 'where an organisation decides to break out and exploit the new technology in the marketplace. The aim is to explain the logic underlying the composition of the organisation's portfolio of businesses, identify differential strategic thrusts and develop criteria for allocation of scarce resources among the businesses. Considerations of business scope dictate major strategic activities such as diversification, divestment, consolidation and mergers and acquisitions.'	This, the highest level of business transformation, calls for a full reassessment of the role of HEI's. Such a reassessment might take as its starting point that the fundamental aim of an HEI is to meet the educational needs of individuals, groups and societies. There is no predetermined way of serving this aim, though there are various constraints, including the need for HEI's to function effectively as businesses. Radical rethinking of aims and the ways that they may be served can lead to a redefinition of the scope of the HEI's activity.	*Innovative* Diagnostic assessment and guidance on demand.

Table 3.1 continued: Shows the use of the MITs90 model by Ford et al (1996) for application to learning environments (source: adapted from Ford). The NCET equivalent levels are also shown for comparison.

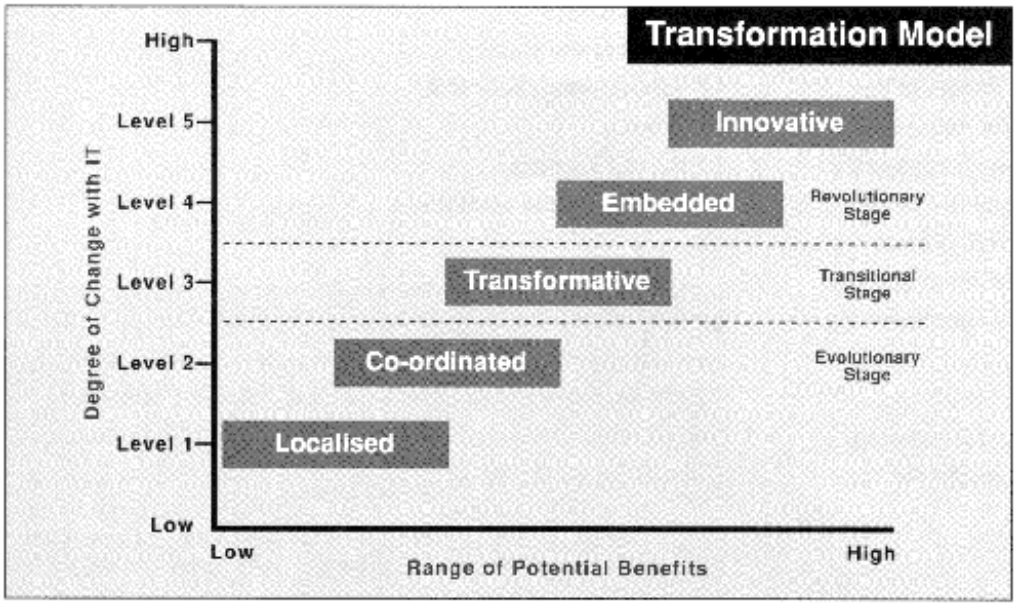

Figure 3.3: The NCET Transformation Model (Source: NCET, 1995).

The NCET Educational Technology Project conducted a survey to identify significant factors in developing the use of IT. From the returns, a small number of schools which had taken significant steps in their development of IT, were visited. Along with the results of the visits, wider reading, and further consultation, 15 significant factors were identified under the broad headings of:-

- **management** (Head /Senior Management Team, IT Co-ordinator, Library Resources Manager, IT Policy, Integration of Curriculum and Administration Data),
- **staff development** (Staff Development),
- **curriculum administration** (Teaching and Learning Styles, IT Skills (pupils)),
- **resources** (IT Technical Support, Funding, Physical Resources),
- **external links** (School/ Community Links),
- **evaluation** (Ethos, Record Keeping, Evaluation and Assessment).

These factors were then mapped against the five stages of implementation, to produce a matrix. Schools were then recommended to plot their own profile i.e. significant factors against implementation stages, and use it as a basis (via SWOT analysis) to identify ways to move up the stages.

3.5 Summary

A number of relevant tools and approaches have been identified and explored in this chapter. Chapter 4 develops the research methods to take these further, and chapter 5 discusses the results from these approaches.