Contrasting the Application of Soft Systems Methodology and Reflective Practice to the Development of Organizational Knowledge and Learning – A Review of Two Cases in the UK National Health Service

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ABSTRACT

The following paper seeks to review work undertaken by the two authors in developing and enhancing the contribution made to organizational knowledge and learning by Information Management and Technology (IM&T) Specialists in the United Kingdom (UK) National Health Service (NHS). This paper reviews two national consultancy projects and presents some reflective observations on the epistemological foundations of the approaches used within the context of the cases[1]. Data from this work has therefore been analyzed retrospectively and from a qualitative and largely interpretative domain. Indeed neither of the authors approached this consultancy work from a traditional research approach, our main participation in these initiatives came from our involvement as process and technical consultants. (Schein, 1987)

The first case study focuses on the use of soft systems methodology (SSM) within an oncology project designed to improve cancer services within a local region. The second case study reviews the use of an epistemology of reflective practice as a means of developing a new Professional Award[2] for IM&T practitioners. In the conclusion we compare and contrast how our epistemological stances impacted upon the work we undertook and seek to review the conjunctions and disjunctions we have noted in our approaches.

Keywords

Soft Systems Methodology, Reflective Practice, Epistemology, Organizational Learning, UK NHS

1. INTRODUCTION

In December 1992, the NHS Executive launched an Information Management and Technology Strategy for the NHS in England, initiating a demanding program to ensure that the NHS was equipped with the information management capability and information systems and technology infrastructure to enable it to meet its business and service objectives. A critical factor to the successful implementation of the strategy would be the development of projects that promoted a capacity for the development of organizational knowledge and learning within a highly politicized environment.

The Strategy recognized that a key factor in achieving success was the need to ensure that there was an adequate supply of appropriately skilled and qualified Information Management and Technology Staff available within the NHS. The practice of IM&T in health care embraces a number of specialist fields - some considered professions in their own right - such as statistics, computer science and librarianship. The NHS of the future requires highly skilled

[1] For a more detailed account of the two case studies please refer to the publications cited in the references under Kirkham & LeMaistre and Bond & Wilson.

[2] The UK NHS has a strong tradition of professional education and training leading to nationally and internationally recognized awards. The term Professional Award in this context refers to the development of an award

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information specialists who can integrate all aspects of IM&T to provide an effective infrastructure to deliver the information needs of the health care sector for the benefit of patients. The two cases outlined in this paper operated in the context of this strategic vision.

2. CASE STUDY ONE – APPLYING SOFT SYSTEMS METHODOLOGY

Within this section of the paper we review a consultancy assignment that used Soft Systems Methodology (SSM) as the key approach to managing a complex project to improve oncology services within a local NHS region. We first briefly consider the epistemological underpinnings of SSM and then illustrate its application in this particular project.

2.1 Soft Systems Methodology

SSM is one of the most well-known of a group of alternative information systems methodologies which have been designed to take into account the human and social factors of organizations during systems design.

The methodology was developed at Lancaster University during the 1960's as a response to the perceived limitations of the traditional systems engineering approach that takes a fundamentally rational approach, assumes the minimum of risk and uncertainty, and focuses on optimal solutions. Systems engineering approaches are systematic in that they perceive organizations to be well defined and unambiguously structured entities, hence the activities and functions can be broken down and systematized separately. These more traditional systems engineering approaches are aligned with Taylor's (1911) view of organization and the machine metaphor outlined by Morgan (Morgan, 1997) which regards the whole organization as being equal to the sum of the parts.

Action research carried out at Lancaster revealed that traditional systems approaches were not suitable to all environments, particularly those experiencing some kind of organizational "problem" which could not easily be defined. Any information system based on a flawed environment would itself be flawed, and be compounded by the likelihood that in order to apply the conventional approaches to information system design, solutions would be hastily constructed and ill thought out, leading to further problems later in the systems life-cycle. SSM was therefore developed to provide a structured methodology, which could be used to explore organizational problems, initially as a precursor to information systems design.

Over the thirty years of its' development, two fundamental approaches to SSM have been developed. Checkland's (1981, 1990, 1998) approach takes SSM to be an organizational learning process and the original 7-stage framework (Checkland, 1981) is accompanied by a greater focus on cultural analysis and exploration. Arguably, this developed form of SSM "formalizes" what was already a potent epistemology for organizational learning. The approach developed by Wilson (1984, 1990) focuses on information systems development, comprising additional modeling stages, which are concerned with organization/role mapping and defining information requirements. However, it is the principles upon which Checkland's SSM is based which contain the key to its' effectiveness as a process of inquiry which can be applied to organizational knowledge and learning i.e. "The main characteristic of experienced use of the approach, overall, is the use of the methodology not as a formula to be followed but as a sense-making device, that is to say as a means of helping the process of constructing recoverable and defensible understandings of a complex situation which can lead to action being taken". (Checkland and Holwell, 1998).

The methodology is not designed to be applied to technical or clearly defined problems but has been developed for "fuzzy" problem situations such as those arising from issues of influence and responsibility, political power and effective leadership. These are often rooted in the informal structures of organizational life and could be symptoms of a greater problem, hence "problem situation". Additionally, the notion of an accepted social reality is not taken as given in SSM, instead it is assumed "that social reality in human groups is continuously socially created in never-ending social processes, and hence is not an absolute but will change through time" (Checkland and Holwell, 1998).

SSM is not based on positivist ideologies or rational views of organizations. It is an approach based on interpretation and learning i.e. as humans we are free to interpret our world in any way and by exploring these individual perceptions (or worldviews) we learn more about the contexts to which they apply and consequently are able to effect more meaningful organizational change. The cycle is never-ending, since participants will then have a "new" organization to think about and interpret. The notion of the worldview as a base for systems modeling is one of the most powerful in soft systems thinking, since it demonstrates the systemic, multi-faceted and complex approach which is placed at the opposite end of the spectrum to the systematic, machine-age epistemology of hard systems thinking.

A systemic view of organization implies that the whole is greater than the sum of the parts i.e. the whole will exhibit emergent characteristics which are not present if its' constituent components are regarded separately. The experience of the author's is that declared worldviews usually articulate these emergent characteristics. More recent writing on organizational learning and knowledge has come to recognize these complexities. (Capra 1997, Stacey 1992, 1996, Weil 1998a, 1998b)

A point of departure here might help to elucidate this point further. As young undergraduates we both remember hearing an enterprising but possibly idealistic tutor claim that University should enable one to develop into a "fully rounded" human being. As tutors ourselves, we have heard this view echoed by later generations of students who see their University providing opportunities for social as well as educational development. This represents the "added value" of the whole, but this characteristic may not be present in all of the constituent elements of a University, and it would only

be truly achievable if all the parts, or subsystems, were working together.

In a problem situation it is likely that participants will have different worldviews regarding the purpose or mission of the organization. It is important to gather these, rather than worldviews of "the problem". This is because SSM is designed to be used to explore problem situations and not to model problem solutions. Declared worldviews are developed into more explicit descriptions of how the participant views the organization, through the construction of Root Definitions. These essentially define the transformation process (i.e. the transformation of inputs into outputs) which articulate the purpose of the system and how the worldview can be achieved.

This notion of transformation is embedded in all systems thinking but is particularly important here as it helps to establish systemic integrity and in fact enables systems boundaries to be drawn. The Conceptual Model is a logical and systemic model of activities which would need to be carried out in order to bring the system described in the Root definition into being. Therefore, by constructing a number of Conceptual Models each based on a particular worldview, and debating these within the context of the problem situation, the methodology provides a structured, logical approach to organizational learning. In addition, the formal modeling stages are accompanied by social and political analyses, which further enrich organizational exploration. Here the roles, norms and values inherent in the system are examined, and dispositions of power are explored.

In effect the methodology "legitimizes" open examination of factors which are not normally explicitly acknowledged. It facilitates a more probing analysis which, if done successfully, will result in a thorough and insightful evaluation of the organization. This kind of "front-end" analysis could be seen as an essential prerequisite for organizational change.

The continuing usefulness of systems methodologies is under the microscope given the increase in technical literacy, user-centered networks and the trend for organizations to "grow their own" systems methodologies specifically suited to their needs. Most of the soft methodologies, and particularly Checkland's SSM, have much to offer in the arena of organizational development and change and possibly need to assert themselves more aggressively in this field.

2.2 The Oncology Information Systems Project

The following case study describes a project which was carried out during 1997/8 within the NHS West Midlands Region and which involved the application of Checkland's SSM to a strategic change issue in an attempt to manage the situation more effectively.

This methodological approach was chosen because of its "top down" holistic approach which would appear well suited to an environment driven by ideological considerations, and because it enabled maximum participation from the users. The project facilitators (most of whom were employed by or had very strong working connections with the NHS) also shared a conviction that effective change must be preceded by some form of organizational understanding and learning. With this in mind it was considered appropriate to use a methodology which effectively "deconstructed" a complex situation through the examination of different worldviews, and attempted to "reconstruct" it according to an agreed consensus of what should actually take place.

There were, however, some inherent problems connected with this and the use of Checkland's SSM. Firstly, this methodological approach does not accommodate any form of consensus modeling. Actions for change are intended to arise out of debate about the different conceptual models produced. Secondly, the nature of the change had already been "defined" through a set of national recommendations concerning the re-organization of cancer services. The aim of applying SSM would therefore be to identify the process required to enact these strategically defined changes based on some form of agreed view of the organizational activities needed. Normally, it is the *changes themselves*, which are derived from use of the methodology. In spite of these concerns, it was recognized that use of the methodology could have much to offer in the management of strategic change involving ideologically committed and articulate professionals used to a consultative organizational culture. In the event, use of the methodology in this instance generated very real insight amongst both facilitators and participants regarding its capacity for organizational learning and for enabling people to approach potentially radical paradigm shifts in organizational culture in a reflective and evaluative way.

During 1995 the NHS Executive West Midlands commissioned a scoping study to assess options for improved oncology information, with the aim of assisting in the implementation of national recommendations concerning the re-organization of cancer services. As a result of this study, the Oncology Information Systems Project (OISP) was established. The aim of OISP was to enable the acute Trusts[3] in the region to develop their information management and technology (IM&T) infrastructure to facilitate the collection, collation and analysis of quality data about cancer services.

More significantly in the context of this paper, it was additionally recognized that such an infrastructure must take account of the organizational and human resource issues involved, and in particular focus upon the cultural changes faced by the clinical professions in responding to the re-organization of cancer services. The OISP objectives were:

1. To encourage and facilitate the sharing and dissemination of information to support the delivery and evaluation of cancer services

2. To develop an oncology minimum data set which will support the region-wide evaluation of clinical outcomes and treatment guidelines

[3] Trusts are National Health Service Hospitals that were given a greater degree of autonomy as a result of the 1991 Act – Working For Patients.

3. To develop an information and data requirement by cancer site which supports the evaluation of clinical effectiveness at a Trust level

4. To gain commitment and ownership within West Midlands Trusts in the development of their local IM&T infrastructure

5. To develop a local cancer registration and information system (CRIS).

Not only was there a requirement to identify the activities necessary to support these objectives, but it was also recognized that a cultural shift would be required within the Trust environments. Without this, a number of barriers to change were likely to block any capacity for change. These perceived and actual barriers are summarized below:

People Focussed Barriers - Here the barriers lie with individuals, in terms of their personalities, attitudes, values, preferences, knowledge and skills. Barriers such as these need to be explored and held in dynamic tension through communication, discussion, training and education. Given the idiosyncratic mix of IM&T and health professionals within trust environments, and the anticipated different agendas of these groups, it seemed highly likely that barriers of this nature could occur within this project. Checkland's SSM would be particularly useful in this context, as it would provide a structured approach to exploring and working with these different "worldviews".

Organization Focussed Barriers - Organizational barriers, such as how the IM&T resource is organized and how responsibilities are allocated, could reasonably be anticipated in a project such as this, which involves technological and organizational change. These kinds of changes commonly lead to new ways of working and shifts in social relationships in the workplace, which cut across traditional cultures and established ways of doing things.

Politics Focussed Barriers - Here the barriers relate to the distribution of power within the organization. New procedures and technologies alter the ownership of and patterns of access to information. They effect established protocols of decision-making and the exercise of influence by individuals and groups. The political focus is most relevant where there is not a consensus about the nature of the problem and the proposed solution. It especially applies in organizations with a number of divisions and types of users, such as a NHS trust. Checkland's SSM makes particular use of cultural analysis, which includes an exploration of the political aspects of the situation.

A team of four SSM facilitators carried out a number of appraisal visits to selected Trusts in the West Midlands. The purpose of these visits was to:

1. Agree the participants in each Trust from a site specialist team.

2. Collect worldviews on the question "What is your view of a clinically effective cancer service?"

3. Carry out interviews to convert worldviews into structured conceptual models.

4. Conduct a consensus workshop within each Trust to examine the various models and attempt to reach an accommodation between the viewpoints reflected.

The strategically defined recommendations for change served as the "given" organizational context for the worldviews i.e. all views regarding the cancer service had to be feasible within the national recommendation framework. A number of conceptual models emerged although these took some time to refine and develop due in part to the experiential limitations of the facilitators most of whom were using SSM for the first time. Between visits, the facilitators met with each other on a number of occasions to evaluate progress and share the data gathered from the Trusts. Earlier reservations concerning the difficulty of any form of consensus modeling were largely dispelled, since the "given" organizational context ensured a high level of cohesion in the modeling.

The outcome of this was that many models shared a fundamental similarity from which a consensus could be based. Towards the end of the project, all the consensus models were considered by the facilitators and a master model constructed from identified key activities. Interestingly, the untypical application of SSM to a pre-defined change caused greater consternation amongst both participants and facilitators, some of whom felt that the methodologies' full potential was not being realized. Their use of the methodology had quickly engendered recognition of its usefulness in the formulation of organizational change in addition to change management. Indeed, this relatively constrained application of SSM may have had the negative effect of creating frustration in both facilitators and participants because they were not able to maximize its potential.

During the final stages of the project, facilitators were able to reflect on the overall impact of the methodology on this project. This evaluation was essentially unstructured and interpretative but is not an unusual form of analysis for the kind of action research upon which the development of SSM has been based. The two major conclusions described below were shared by all of the facilitators:

1. The holistic and systemic nature of SSM appears to be well suited to the essentially multi-disciplinary environment of the UK NHS because it enables a variety of worldviews to be considered. If used properly (i.e. without inhibition!) it is egalitarian, and in this case helped to "unfreeze" traditional hierarchies based on expertise, specialisms, and organizational structures. This can be an issue in health environments where power and influence rests upon medical rather than managerial expertise, and where the different cultures of clinical staff, management and IM&T professionals struggle to co-exist effectively.

2. The top-down approach of the methodology enabled people to see the big picture quickly. The "rich

picture" was not used specifically in this application, though many participants acknowledged its essential importance in work of this kind. Health environments are complex and often unwieldy and it is easy for individuals to become pre-occupied with their own areas and lose sight of environmental boundaries. Another major advantage of the rich picture in this context was that it enabled participants to see the impact of recent changes in the NHS on existing system boundaries, structures and processes in a pictorial form, which could be more easily assimilated.

Both conclusions are essentially concerned with the enablement of reflective organizational learning, which is particularly interesting given that the usual starting point for systems modeling in SSM is the individualistic and subjective worldview. The national recommendation frameworks for cancer care involves organizational restructuring into cancer specialist teams - a relatively major shift for the organization of clinical care - and use of SSM enabled participants to explore and evaluate the cultural impact of this in a structured way.

3. CASE STUDY TWO: APPLYING REFLECTIVE PRACTICE

Within this section of the paper we review a case study that used a process of reflective practice and collaborative learning as the key approach to managing a complex project to develop a set of new national awards for IM&T practitioners in the NHS. We first briefly consider the epistemological underpinnings of reflective practice and then illustrate its application in this particular project.

3.1 Reflective Practice

Argyris and Schon (1978), Fish (1991, 1992), Weil (1998c) and other writers have developed and advocated complex models of how an epistemology of reflective practice can enhance individual and organizational learning. Writers in the management field, such as, Kolb (1974), Garratt (1994), Pedlar et al (1992) and Senge (1990) have popularized these somewhat complex epistemological perspectives and sought to promote reflection as a key tool for developing organizational learning and knowledge. We explore below the underpinning foundation of both a technical-rational and professional-artistry approach to the development of organizational learning and knowledge.

Schon (1987) suggests two basic models of professional and organizational knowledge, the *Technical-Rational* and the *Professional-Artistry*. The first of these, it is argued, relates clearly to a competency based or technocratic model of learning, whereas the second is represented by a constructivist approach to learning.

We would contend that the dominant model for developing and applying organizational knowledge in the NHS is based on a technical-rational view of quality control and professionalism. The technical- rational view of professionalism assumes that professional activity is a matter of technical performance and follows a logical sequence as part of an efficient system. Such an approach to organizational learning places paramount importance on instrumental variables that are easily observed and monitored, it appeals to the bureaucratic mind and sits easily with conventional notions of quality derived from the industrial sector.

The technical-rational paradigm adopts a nomothetic approach, believing that systems are what matter and that these, being essentially logical, can therefore be made efficient by the application of logic and strategy. This approach relies upon laws, rules, prescriptions, schedules and routines to control and standardize the system. "Best Practice" therefore becomes that which conforms to the rules and schedules, that which does not disturb the quality framework and that which is easily quantifiable and measurable. Within this paradigm innovation is acceptable as long as it "fits" within the quality framework and can be measured according to the existing rules. Innovation that challenges this paradigm has to be managed and rationalized so the needs of the system can be met.

The technical-rational paradigm of organizational learning values standardization of procedures. In this context it adheres to those values that Taylor laid down in his Principles of Scientific Management (Taylor, 1947). Organizational learning in this paradigm requires that basic standards or benchmarks be clearly defined, usually in terms of regulation and quality indicators, in order to have a base line from which the measurement of learning and reflection can proceed. It relies on these standards which establish pre-determined goals.

This technical accountability and the efficient running of the system inevitably have to be controlled by elaborate mechanisms of assessment, inspection, appraisal and accreditation. In this respect the technical-rational paradigms view of organizational learning fits neatly into an industrial model of quality control[4]. It seeks to commodify and objectify a process, which is inherently unique and complex. Ritzer (1996) notes that at its extreme, it leads to the McHospital, by applying a McDonaldized approach to measuring learning, development and quality in health care.

Lester (1994) states that 'Schon describes the technocratic approach as being based on an objectivist epistemology characterized by three main assumptions:

- means are separate from ends, with problem-solving being a technical procedure to attain predefined objectives;
- practice involves the application of knowledge derived from objective research; and;
- knowing is distinct from doing, action being the implementation of decisions based on knowledge.'

[4] See for example the UK Investors in People (IiP) initiative that uses a largely technical-rational approach to measure organizational learning.

The professional-artistry approach by contrast views organizational learning and development as a practical art rather than a scientific process. It stresses contextualized understanding of learning and development rather than adherence to a set of national standards. This approach takes a holistic approach to organizational development and believes that quality has to be measured from a multi-stake-holder perspective.

Within this paradigm a key emphasis is placed on creativity, innovation and exploration of alternative and sometimes-contradictory perspectives on practice. It thus sees organizational knowledge as more than a technical exercise. More than a set of defined regulations and procedures and above all, more than the sum of its definable parts. It accepts that it is not possible to know everything and does not seek to enshrine a culture where there is no room for risk taking or mistakes. Indeed it believes that a "right first time" culture closes down possibilities for innovation and advancement of quality by its reliance on a pre-determined standard of excellence.

Unlike the technical-rational paradigm this approach views organizational knowledge as temporary, dynamic, problematic and contextualized rather than absolute and permanent. The professional-artistry approach stresses investigation and reflection on practice and operations. Fish (1992) contends that "This involves work in the humanistic rather than the scientific paradigm. Thus the aim of research (quality review) is improved insight into practice and the refinement of it. Theory is grounded (arises from practice), what is sought is data (rather than evidence), what is collected is a range of interpretations from a range of perspectives."

The professional-artistry paradigm takes an ideographic view. It focuses upon individual and collective insight, development and incrementalism rather than a systems approach to enhancing quality. This model expects management to provide a framework within which professional enterprise and innovation can flourish. It regards professional behavior as self-regulating relying on reflection and professional conscience rather than external inspection and validation.

Schon proposes an alternative, contructivist epistemology of reflective practice in which the means and ends are interdependent and interact in problem-solving and setting, research and practice are interwoven, and knowledge arises from doing and informs further action which in turn generates new knowledge. This dynamic perspective on education and organizational learning emphasizes the importance of what Argyris and Schon (1978) call *theories in use* as opposed to purely theoretical knowledge and *espoused theories,* and suggest that both must be informed by the development of *knowledge-in-action* as well as pre-existing bodies of knowledge.

Fish (1992) builds her model of education on the work of Schon (1987) and in particular his distinction between the *"technical-rational"* view of professionalism and the more generous notion of *"professional-artistry"*. The key distinctions between these two paradigms are connected with the relationship between theory and practice; the nature of knowledge; processes of quality control; attitudes to research etc. An overview of the premises on which each paradigm is constructed is represented visually below.

ORGANISATIONAL LEARNING AS A TECHNICAL-RATIONAL ACTIVITY	ORGANISATIONAL LEARNING AS A PRACTICAL ART
Rules, Laws & Schedules	Starts where rules fade
Routines, Prescriptions	Prepared to abandon routine
Efficient systems	Creativity and room to be wrong
Permanent knowledge	Knowledge is temporary
Visible performance, Technical skills	Professional expertise is much more than technical skill - and more than the sum of the parts
Standards 'To be raised'	Quality comes from deepened insight
Pre-determined goals	Not all can be pre-determined
Requires theory to be learnt and applied to practice	Theory comes out of practice
Technical accountability	Moral answerability
Appraisal inspection control	Reflection & investigation of practice
Training	Education & development
The means are all that matter (An instrumental view)	The ends are what matter (At a moral level)

Figure 1: Organizational Learning – Contrasting approaches (Based on Fish, 1992)

The technical-rational view of education and organizational learning as the term implies, assumes that professional activity is a matter of technical performance following a logical sequence as part of an efficient system. This paradigm values the technical aspects of an individuals work and performance.

Adopting this perspective on education and organizational learning views theory (propositional knowledge) as something that is applied to practice (procedural knowledge).

It therefore presents the view that propositional knowledge is prior to and superior to procedural knowledge.

The professional-artistry or constructivist paradigm sees professional practice as a practical art. It stresses understanding rather than technical skills, and takes a holistic approach to the skills and knowledge involved in acquiring a professional education. This approach emphasizes improvisation, intuition and creativity. It is not, however, without structure as it adopts its constructivist approach from a basis of knowledge, skills and routines and a disciplined framework within which there is room for originality and creativity. This worldview on education and organizational learning emphasizes mystery rather than mastery.

The professional-artistry perspective is more interested in interpretation and appreciation of practice and experience than in analysis. Unlike the technical-rational perspective, this model views knowledge as temporary, dynamic and problematic rather than permanent and absolute. In this paradigm procedural knowledge is viewed as at least as important as propositional knowledge.

The constructivist approach is rooted in Schon's vision of professional-artistry and draws from such concepts as personal construct theory. It views education as unique to the individual. Knowledge and learning are not absolute but something that individual learners internalize and reframe for their own purposes. From the author's experience personal and organizational learning occurs through the processes of invention, reflection and reframing rather than simply the accumulation or application of an existing body of knowledge. Knowledge is valid in that it informs action, but like Schon's model knowledge can also arise from action and experience. This epistemological stance rests on such notions as reflection, inquiry and creative action.

3.2 The Professional Awards in IM&T (Health) Project

The second case study focuses on the development of a new set of integrated Professional Awards for IM&T practitioners in the NHS. This award and the project to develop it was innovative in a number of ways:

- It sought to challenge traditional boundaries between disciplines within the field of IM&T and develop an award that recognized knowledge and competence in a transdisciplinary and holistic context;
- It sought to be work based in design but to be capable of securing academic recognition through formal accreditation;
- It built on a pedagogical and epistemological stance that valued reflective practice as opposed to the prevailing technical-rational model prevalent in many health professions.

The new Professional Awards were developed collaboratively between the Institute of Health and Care Development (IHCD), ASSIST (Professional Association for Information Management and Technology specialists in the NHS), representatives from the health care sector and higher education on behalf of the NHS Executive.

Whilst complex the above model of collaborative accreditation recognized the needs of several key stakeholders in the Professional Awards. The project to develop the Professional Awards recognized from the start, the necessity to balance the needs of varying stakeholders including educationalists, employers and the relevant professional association. In order to achieve the needs of this complex and diverse group of stakeholders it established ways in which collaborating organizations could work together effectively.

The development of this framework of professional awards took place over three years and involved key professionals in the field of IM&T drawn from both the health care sector and higher education.

The methodological approach of reflective practice was chosen for this major project for a number of reasons. Firstly, at the time that the project was commissioned concepts of reflective practice and organizational learning through processes of reflection were becoming increasingly popular in the NHS. Government officials and ministers were seeking ways in which there could be increased collaboration across the sector at a time when notions of internal markets and competition had been introduced. In this respect the agency that was managing this project on behalf of the NHS Executive were seeking to demonstrate how a large investment of capital and resources could have application across the health and care sector and not merely serve the needs of a relatively small group of professionals.[5] At a time when public spending was being made more accountable it was deemed important that major projects financed from public funds should be able to demonstrate transferable outcomes as well as meet the specification in their project brief. The IHCD as the managing agency for this project believed that the application of a model of reflective practice to this project should ensure that transferable outcomes as well as key deliverables were met by this project.

Secondly, a key feature of the new awards was to be that they built on a pedagogic and androgogical approach that recognized the centrality of reflective practice. In essence, the new awards were to be work based and ensure practitioner competence as well as the possession of a defined knowledge base. In this respect the project team believed that their approach to this development should seek to mirror and embrace the underpinning philosophies that they were promoting in this award. There has been criticism that reflective practice can be time consuming, esoteric and lead to abstraction. The project team were, therefore, keen to dispel these myths by modeling their approach in practice.

Thirdly the project team that was established to develop this new set of awards were drawn from a wide variety of backgrounds and organizational cultures. The project

[5] IM&T Professionals number approximately 5,500 recognized staff in the UK NHS.

management team consisted of seven key stakeholders who were drawn from the managing agency (IHCD), the sponsor (NHS Executive), the NHS (service users), education (University Professors), the professional body (ASSIST), an educational consultant and a technical consultant. All members of the project management team, with the exception of the representative of the managing agency were seconded part-time to work on this project but still kept their substantive posts with their employing organizations. This rich tapestry of backgrounds, organizational contexts, roles and aspirations led to significant disagreement among members of the project team. In the early days a structured project management methodology was proposed, however, a couple of months into the project it became clear that more flexible and creative ways of working were required. Following a very difficult couple of months where no progress appeared to be being made on the project all agreed to move towards a model of reflective practice as an attempt to move the project on.

In the early days of the project considerable emphasis was placed on developing the modules that would eventually be coupled together to form the awards at various levels within the educational hierarchy. Figure two below indicates the initial vision that was set for a framework of awards that would embrace undergraduate to postgraduate accreditation.

Professional Awards	Educational Levels (CATS)	Vocational Levels (QCA)	Cognitive Skills
Professional Certificate in IM&T (Health)	Undergraduate Level one	Level 3/4	Knowledge and Understanding
Professional Diploma in IM&T (Health)	Undergraduate Level two	Level 4	Analysis and Synthesis
Advanced Professional Diploma in IM&T (Health)	Undergraduate Level three	Level 4/5	Critical Evaluation
Masters in Health Information	Postgraduate Level M	Level 5	Independent Research

Figure 2: The Framework for The Professional Awards in IM&T (Health) - 1994

For reasons connected with funding it was decided that the Professional Diploma and Advanced Professional Diploma would be the first awards to be developed. These, however, could not be developed in isolation, as it was the sponsors' intention that they would eventually fit into the framework of awards identified in figure two above.

In the initial stages of module development key stakeholders from a variety of groupings and professional backgrounds were commissioned to develop the module specifications that would ultimately comprise the awards. After six months of frenetic activity in the form of workshops, critical reviews, pilot testers and critical readers it became clear that little substantive progress was being made. At this point the project team took time out and reflected on the process they were using for module development. We noticed a few key dilemmas that were present:

1. Despite significant learning as a project team about working across cultural and perceptual boundaries we had not passed this learning on to our module development teams. They were, therefore, struggling with the same conceptual and ideological barriers that we had faced early on in the project.
2. Contrary to our view that a methodology for writing the modules would evolve in the process of defining them, it was becoming increasingly clear that a lack of a clear or agreed structure was leading to fragmented and inconsistent development. A review of the workshops and a focus group with a number of participants led to the development of a structure and methodological approach that meant future modules were drafted in 2 days rather than taking six months as in our early stages.
3. There was still considerable tension within the project management team on what the award should be like. It became clear that we needed to work further on articulating a strategic vision if those involved in the development cycles were to deliver to agreed time frames.

At the time when the Professional Awards project was at its most intense (1994 – 1996) there were a number of other standards related projects being funded by the NHS Executive. One key lesson that has been learnt since the original project is the need to link in with and learn from projects taking place with other professional groupings. In the early stages of this project reflective cycles were limited to those involved in this particular project. As work has progressed on the development of the awards at Certificate and Masters level collaborative links have been established with other professions undertaking such work i.e. Clinical Coders, Professions Allied to Medicine. The development of these links has allowed more joint learning and sharing of good practice to develop across discrete professional groupings. There is still, however, a degree of suspicion between different professions and a reluctance to participate in genuine collaborative projects.

Despite the many problems and challenges faced in this project there have been a considerable number of benefits to the Health Service from the development of these integrated and holistic awards. They have promoted a more coherent and less fragmented approach to IM&T and raised the profile of IM&T as a useful aide to enhancing patient care. The launching of a new IM&T Strategy for the NHS in 1998 evidences this.

In addition the authors hope that the emergence and evaluation of the Professional Awards will contribute to raising the status generally of higher level work-based qualifications and substantially contribute to the development of effective systems within Higher Education to support the general principles of life long learning. If this happens, it will be an important step in the direction of a more unified and comprehensive system of higher level work-based qualifications which recognizes and gives credibility to learning gained both inside and outside of formal education.

A largely unintended outcome of the project to develop the Professional Awards has been the establishment of a mapping methodology for comparing traditional and established courses with Professional Awards for the purpose of maximizing individual potential for credit accumulation and transfer. As a result, universities and professional bodies have acknowledged a way of identifying and demonstrating the relationship between the knowledge acquired through a particular course of study and its relevance as a basis for the knowledge based evidence of the Professional Awards. For both Higher Education institutions and those Assessment Centers accredited to deliver the Professional Awards this is a significant step in assisting the establishment of a more flexible provision in life long learning since it develops a common currency for exchange with clearly mapped routes and pathways. In addition, the qualifications framework provides for a more unified system of credit accumulation and transfer which gives credit for learning no matter when or where this has been acquired thus enabling learners to transcend institutional barriers to gain access to continuing professional development and lifelong learning.

Another unintended outcome has been the development of a methodology for designing outcomes based awards in higher education. The Professional Awards specify knowledge and understanding in the form of learning outcomes. The learning in working with curriculums in terms of outcomes rather than process and inputs is now being applied in several UK Universities as a direct result of this project.

4. CONCLUSION

4.1 Contrasting Our Epistemological Stances

Despite our somewhat brief accounts of two very complex national projects we would not wish this paper to simply concentrate on advocacy at the expense of critical reflection. Within this section of the paper we contrast SSM with reflective practice and explore the conjunctions and disjunctions in the two approaches.

Involvement in the two cases outlined and the use of our preferred epistemological stances have now led the authors to reflect on the ability of each approach to offer a framework for working with the complexity of such national initiatives, which involve major organizational learning. The epistemological stances that we adopted did not necessarily contribute to the development of organizational knowledge and learning in its widest sense, although there would appear to be considerable potential in each for such a contribution.

Arguably, no single approach could hope to address the rich complexity of organizational life in these contexts, and there may be some value in the simultaneous consideration of approaches that appear to resonate with each other. This is particularly so in respect to their aim to contribute to the development and application of organizational knowledge.

4.2 Points of Conjunction

First we explore the key areas of conjunction between the two projects. The use of SSM and reflective practice share a common concern for exploring the complexity of real world situations. They also share a value base that recognizes the legitimacy of contrasting and sometimes contradictory perspectives. In the two cases in question these epistemological stances were used to surface and work with the inherent tensions, dilemmas and opposing ideologies that key stakeholders brought to the projects. In the oncology project and the professional awards project individuals were encouraged to articulate and share their own perspectives, prejudices and agendas as part of the development phases.

The use of the two approaches also share a common perspective in that they recognize the value of operating in a largely interpretative paradigm (Burrell & Morgan, 1979). In this sense both approaches might be viewed as operating at the soft end of the spectrum of organizational intervention. In the two cases reviewed there was not a simple formulaic answer to the challenges that were faced. The mix of professional groupings involved and the multi-layered agendas at play meant that time had to be spent reaching a consensus on not only the way forward, but also the key purpose of each of the projects.

Another key point of conjunction between the two epistemological stances was that both approaches framed the projects as living and dynamic processes. This view of change resonates with complexity theories (Stacey, 1992) and non-static models of change management such as flux and transformation (Morgan, 1997, Capra, 1997, de Geus, 1997). In this sense both projects recognized the value of working with both the unintended as well as the intended outcomes and accepting that the nature of the projects was cyclical.

Both stances also legitimized the role of personal subjectivity amongst the key stakeholders. Whilst a methodology based on SSM sought more consensus than the project utilizing reflective practice, both projects were able to work with multiple stakeholder perceptions and agendas. For the overtly managed NHS of the 1990s this was counter cultural to most national IM&T initiatives.

4.3 Points of Disjunction

A key point of disjunction between the two approaches appears to center around the emphasis placed on individual or organizational learning. The fundamental principles and epistemological underpinnings of reflective practice, particularly those approaches that build on the pioneering work of Kolb (1994) appear to largely relegate notions of reflective practice to the realm of individual learning. A key tension within the literature on reflective practice and the learning organization (Senge, 1990, Pedlar et al, 1992, Garratt, 1994) remains, creating an enabling climate that can transform individual learning into organizational learning and knowledge. Many attempts at developing a culture of reflective practice within professional groupings in the NHS have been little more than personal and self-development

exercises with no noticeable effects on organizational practice or functionality. SSM by contrast may be viewed as more systemic in nature. Although SSM takes as its starting point individual worldviews, these are essentially viewpoints of the organization and the process of debate enables these subjective perceptions of reality to be shared. This epistemological stance offers more scope for organizational learning. As mentioned earlier, however, we both feel that each approach on its own does little to develop generative theory in the context of a desire to construct organizational learning or knowledge.

Another point of disjunction between the two approaches appears to be rooted in their relationship to ontological discourses. SSM tests its perceptions of reality against "real world activity". It therefore seeks to test its assumptions against a sense of reality that is both socially constructed and yet also reified or somehow deemed as objective. In this sense there remains a key internal tension within SSM as to what is reality in an ontological sense. Reflective practice, on the other hand, appears to cope better with notions of multiple reality and changing senses of reality through deeper insight, in many cases where the dominant epistemological stance has been reflective practice a set of broadly humanistic values appear to offer the acid test of reality checking.

We also believe that SSM and reflective practice are built on dialectical[6] epistemological assumptions. SSM can be viewed as a "top down" strategic intervention into an organizational system. SSM seeks to achieve consensual decision making about organizational change, based on explicit examination of individual worldviews. In this respect we believe its approach to knowledge generation is to deconstruct[7] perceived reality and then to reconstruct this reality into a shared construction (worldview). Reflective practice by comparison tends to construct a view of reality through reflection, which is then deconstructed through abstraction and reconstructed in practice.

Our search then becomes for a framework that can work with the tensions of construction, deconstruction and reconstruction in a way that recognizes the creative tension and genuine complexity of these forces. This we hope to achieve through a collaborative project we are working on where we intend to use our preferred epistemological stances in an integrated way. This we hope may become the subject of further more formalized research.

[6] We use dialectical in the context of a struggle between opposing forces as developed by Morgan in his critique of the Marxist Dialectic, in Images of Organization (1997).

[7] Our understandings of construction, deconstruction and reconstruction are that they are cyclical and interwoven processes with no clear beginning or end, in this sense we have artificially reinforced their separateness for effect.

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